# Honeywell | MasterLink Software Application R500.1



# MasterLink Software Application User's Guide 80-1058 | 1.0 | 2017

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# **1 About MasterLink Software Application**

MasterLink R500.1 Software Application is a configuration and diagnostic software designed for Electronic Volume Corrector EC 350 and Cloud Link 4G Modem. The primary purpose is to configure, calibrate and download data from EC 350 and MasterLink Software Application R500.1. MasterLink R500.1 Software Application is supported on Windows environment and is also available to download from Apple iStore and Google play store.

CHAPTER 1

# 1.1 Scope

This version of MasterLink Software Application has support for both Cloud Link 4G Modem and EC 350 Gas Volume Corrector devices only. It is recommended to use Suite SQL for Configuration and diagnostics of Mercury metering devices other than EC 350 and Cloud Link 4G Modem.

# 1.2 Features

Mobile version of MasterLink Software Application can be used to connect to EC 350 over BLE (Low Energy Bluetooth). The mobile app auto discovers a paired/added site (integrated EC 350 or stand alone Cloud Link) when the technician is within the BLE range, thus enabling the technician download predefined set of dashboard data based on auto download settings.

Windows version of Master Software application can be used to connect to EC 350 over Serial, IrDA, Messenger Modem and Cellular interface. MasterLink software enables a technician to download predefined set of dashboard data as soon as the application connects to the instrument based on the auto download settings.

Both EC 350 and Cloud Link 4G Modem can be configured as a single site allowing the user to perform configuration and collect diagnostic information under a single site.

Dashboard data is a quick summary of key parameters of a site. This includes critical instrument data, list of active alarms, power source information, audit trail data, configuration check, time sync and firmware details.

MasterLink Software Application allows users to:

- Define dashboard data (auto) download settings
- Provides a wizard based configuration and calibration approach
- Enable SSL encrypted communication with site Over the Air (OTA)
- Enable BLE security
- Secure critical site data
- Download audit, event and alarm log data
- Generate reports such as:
  - Item report
  - Site report
  - Calibration report
  - Short List report
  - Audit Trail reports
  - Event Log report
  - Alarm Log report
  - Activity Log report
  - Cellular Log report
  - Diagnostic Log report

- Perform Database Administrative tasks such as
  - CSD (Comma Separated Data) Conversion
  - Import/Export instrument data
  - Import/Export site data
- · Perform instrument and modem firmware updates
- Capture live data and plot graphs
- Plot graph over Audit Trail data
- Perform role based user administration for MasterLink software application
- Administer access privileges for device level functions by sending user table
- Configure communication settings
- · Perform offline log-in configuration and send to instrument when connected

# 1.3 Security Considerations

- It is recommended to use the Cloud Link 4G modem in integrated mode with EC 350 for better Bluetooth security during pairing
- For data protection, it is recommended to provide full privileges to the *ProgramData\Honeywell\MasterLink* Software Application folder only to appropriate MasterLink Software Application users
- All files transferred to an Android device for use by MasterLink Software Application must be deleted after use to ensure that there is no data loss / leak
- It is recommended to keep the Android phone or iPhone used for MasterLink Software Application updated with the security patches released by the respective platforms
- It is also recommended to enable SSL for secure communication with MasterLink Software Application R500.1

# 1.4 Technical Assistance

For further technical assistance, email at <u>RMG-TAC-Support@Honeywell.com</u>.

# 2 Installation

This chapter describes the installation of MasterLink Software Application software.

Related topics:

Interoperability with SuiteSQL

Before you install

Installing MasterLink Software Application with SQL Server Installing MasterLink Software Application with remote SQL Server

Installing MasterLink Software Application with SQLite

CHAPTER 2

# 2.1 Interoperability with SuiteSQL

MasterLink Software Application R500.1 can coexist with Suite SQL.

New MasterLink Software Application R500.1 can be used with either SQL database Server or SQLite database.

If a single data source is preferred with an existing MasterLink SQL installation, please choose SQL Server as a database option during MasterLink R500.1 installation.

# 2.2 Before you install

Here are the recommended system specifications:

|            | Windows Server 2008, 2008 R2 [32, 64 bit]                   |
|------------|---|
|            | Windows Server 2012 [64 bit], 2012 R2 support [64 bit]      |
| Windows    | Windows 7 [32, 64 bit]                                      |
| WINDOWS    | Windows 8 [32 bit, 64 bit]                                  |
|            | Windows 8.1 [32 bit, 64 bit]                                |
|            | Windows 10  |
|            | SQL Server 2008 [32, 64 bit]                                |
| SQL Server | SQL Server 2008R2 [32, 64 bit]                              |
| SQL Server | SQL Server 2012 [32 bit, 64 bit], 2012 SP2 [32 bit, 64 bit] |
|            | SQL Server 2014 [32 bit, 64 bit]                            |

| Screen Resolution | XGA (1024 x 768) WXGA(1280 x 800) WXGA+ (1440x900)<br>HD (1366 x 768) HD+ (1600 x 900) FHD (1920 x 1080) |
|-------------------|--|
| RAM               | 4GB or higher is recommended   |
| Storage           | 40 GB or higher is recommended   |
| Processor Speed   | Dual-core or higher is recommended   |

### **Mobile Recommendations**

### Android

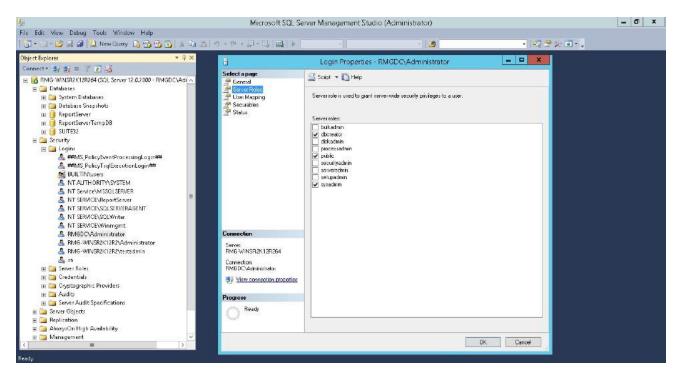
| Android OS                               | 4.3x, 4.4.0-4.4.4, 5.0.0-5.0.2, 5.1.x, 6.0 |
|--|--|
| RAM                                      | 1 GB onwards                               |
| Memory                                   | 8 GB onwards                               |
| Processor Speed                          | Dual-core 1 GHz onwards                    |
| Communication                            | BLE capability                             |
| General availability of Mail Cli-<br>ent | Required                                   |

### iOS

| OS                                       | 7.1.x, 8.4.x, 9.1.x, 10.1.x |
|--|-----------------------------|
| Memory                                   | 8 GB onwards                |
| Screen Size                              | 3.5 inches onwards          |
| RAM                                      | 1 GB onwards                |
| Processor Speed                          | Dual-core 1 GHz onwards     |
| Communication                            | BLE capability              |
| Android OS                               | 7.1.x Onwards               |
| Both 32 and 64 bit should be supported   | Yes                         |
| General availability of Mail Cli-<br>ent | Required                    |

#### **Other Prerequisites**

- SQL Server instance needs to be installed if MasterLink Software Application uses SQL Server as database.
  - SQL Server is not required if MasterLink Software Application uses SQLite as database.
- Users must have DBO access to the Database instance. This is to enable them to use an existing database instance or a network SQL database instance.
- The path for creating database files on a network needs to be created upfront if MasterLink Software Application uses remote database instance, and the path must not exist on the machine where the installer is running.
- For network installation of MasterLink Software Application database, the systems must be in the same domain, and domain administrative credentials are needed to create the database.
  - The domain administrator needs have access to the path where the user intends to create the database files.
  - The domain administrator also needs to have System Admin permissions to create and administer the database.



• If you are using a database instance on your network, you need to have domain user permission.

# 2.3 MasterLink Software Application Installation with SQL Server

### Prerequisites:

If you are using SQL Server, then a SQL Server instance must be installed before installing MasterLink Software Application.

Administrative Privileges are required to install the application.

1. Launch the installer.

The MasterLink Software Application - InstallShield Wizard appears.

| 🛃 MasterLink - InstallShield | Wizard  |
|------------------------------|---|
| 2                            | Welcome to the InstallShield Wizard for<br>MasterLink   |
|                              | The InstallShield(R) Wizard will install MasterLink on your computer. To continue, dick Next. |
|                              | WARNING: This program is protected by copyright law and international treaties.               |
|                              | < Back Next > Cancel  |

The License Agreement page appears.

| 📸 MasterLink - InstallShield Wizard   |  |  |  |
|---|--|--|--|
| License Agreement Please read the following license agreement carefully.  |  |  |  |
| END USER LICENSE AGREEMENT  |  |  |  |
| IMPORTANT: READ THIS END USER LICENSE AGREEMENT ("LICENSE") CAREFULLY BEFORE INSTALLING OR<br>USING THE SOFTWARE (AS DEFINED BELOW) ACCOMPANYING THIS LICENSE. THIS LICENSE IS A BINDING<br>AND ENFORCEABLE LEGAL AGREEMENT BETWEEN THE BUYER AND HONEYWELL INTERNATIONAL INC.<br>("HONEYWELL"). YOU ACKNOWLEDGE YOU ARE BINDING THE BUYER, AND REPRESENT YOU HAVE THE<br>AUTHORITY TO DO SO, OR IF YOU DO NOT HAVE THE AUTHORITY, YOU WILL BE PERSONALLY LIABLE FOR<br>ANY DAMAGES RESULTING FROM A BREACH OF THIS LICENSE. HONEYWELL LICENSES THE SOFTWARE TO<br>BUYER ONLY UPON THE CONDITION THAT BUYER ACCEPTS ALL OF THE TERMS AND CONDITIONS<br>CONTAINED IN THIS LICENSE. BY OPENING THE SEALED SOFTWARE PACKAGE, INDICATING ASSENT<br>ELECTRONICALLY, OR DOWNLOADING, INSTALLING, COPYING, OR USING THE SOFTWARE, BUYER<br>REPRESENTS THAT IT READ, UNDERSTANDS AND AGREES TO BE BOUND BY THE TERMS AND CONDITIONS<br>OF THIS LICENSE. IF BUYER DOES NOT AGREE TO THE TERMS AND CONDITIONS |  |  |  |
| I accept the terms in the license agreement     Print     I do not accept the terms in the license agreement  |  |  |  |
| InstallShield < Back Next > Cancel  |  |  |  |

3. Click I accept the terms in the license agreement and then click Next.

The Database Selection page appears.

| Database Selection<br>Please select the type of database for installation |   | と      |
|---|---|--------|
|   | Select the type of Database for installation: |        |
|   | Sqlite DB                                     |        |
| stallShiek  | < Back Next >                                 | Cancel |

By default, SQL DB Server is selected.

If you choose to continue with a *SQL DB Server* for installation, then you will see the following page (as shown in step 4), where you need to select the database server instance.

#### 4. Click **Next** to continue.

The Database Server page appears.

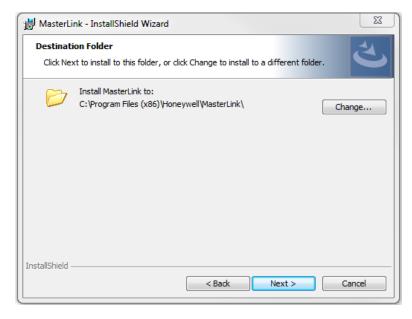
| MasterLink - InstallShield Wiz                   | zard                |           | X     |
|--|---------------------|-----------|-------|
| Database Server<br>Select database server and au | thentication method |           | と     |
| Database server that you are in:                 | stalling to:        | ▼ Brow    | se    |
|  |                     |           |       |
|  |                     |           |       |
| stallShield                                      |                     |           |       |
| Stalionicia                                      | < Back              | Vext > Ca | ancel |

#### 5. Click Next.

The *Database Folder* page appears. Browse and select the folder where you need to install MasterLink Software Application and database files.

| 😸 MasterLi   | ink - InstallShield Wizard  | 23   |  |
|--|---|------|--|
| Database Folder<br>Click Next to install to this folder, or click Change to install to a different folder. |   |      |  |
|  | Install MasterLink database to:<br>C:\ProgramData\Honeywell\MasterLink Char | ige  |  |
|  |   |      |  |
| InstallShield -  | < Back Next > Ca  | ncel |  |

The Destination folder page appears, displaying information about the default destination folder.



### 7. Click Next.

The Ready to install the Program page appears.

| 討 MasterLink - InstallShield Wizard  | x  |
|--|----|
| Ready to Install the Program The wizard is ready to begin installation.                                      | 3  |
| Click Install to begin the installation.   |    |
| If you want to review or change any of your installation settings, click Back. Click Cancel exit the wizard. | to |
| InstallShield < Back Cance   | 2  |

8. Click Install to continue.

|   | g MasterLink<br>gram features you selected are being installed.   |
|---|---|
| ß | Please wait while the InstallShield Wizard installs MasterLink. This may take several minutes.<br>Status: |
|   |   |

9. Finally, click **Finish** to complete.

| 4 | InstallShield Wizard Completed  |
|---|---|
|   | The InstallShield Wizard has successfully installed MasterLink.<br>Click Finish to exit the wizard. |
|   | Show the Windows Installer log  |
|   | Show the Windows Installer log  |

Note: Select the check box to view the Installer log.

# 2.3.1 Installing MasterLink Software Application with remote SQL Server

### Prerequisites:

If you are using SQL Server, then a SQL Server instance needs to be installed before installing MasterLink Software Application on Windows 8/8.1 or higher machines.

1. Right-click Setup file and then click Run as administrator.

The MasterLink Software Application - InstallShield Wizard appears.

| 2 | Welcome to the InstallShield Wizard for<br>MasterLink   |
|---|---|
|   | The InstallShield(R) Wizard will install MasterLink on your computer. To continue, dick Next. |
|   | WARNING: This program is protected by copyright law and international treaties.               |
|   |   |

The License Agreement page appears.

| 😸 MasterLink - InstallShield Wizard  |
|--|
| License Agreement Please read the following license agreement carefully.   |
| END USER LICENSE AGREEMENT   |
| IMPORTANT: READ THIS END USER LICENSE AGREEMENT ("LICENSE") CAREFULLY BEFORE INSTALLING OR<br>USING THE SOFTWARE (AS DEFINED BELOW) ACCOMPANYING THIS LICENSE. THIS LICENSE IS A BINDING<br>AND ENFORCEABLE LEGAL AGREEMENT BETWEEN THE BUYER AND HONEYWELL INTERNATIONAL INC.<br>("HONEYWELL"). YOU ACKNOWLEDGE YOU ARE BINDING THE BUYER, AND REPRESENT YOU HAVE THE<br>AUTHORITY TO DO SO, OR IF YOU DO NOT HAVE THE AUTHORITY, YOU WILL BE PERSONALLY LIABLE FOR<br>ANY DAMAGES RESULTING FROM A BREACH OF THIS LICENSE. HONEYWELL LICENSES THE SOFTWARE TO<br>BUYER ONLY UPON THE CONDITION THAT BUYER ACCEPTS ALL OF THE TERMS AND CONDITIONS<br>CONTAINED IN THIS LICENSE. BY OPENING THE SEALED SOFTWARE PACKAGE, INDICATING ASSENT<br>ELECTRONICALLY, OR DOWNLOADING, INSTALLING, COPYING, OR USING THE SOFTWARE, BUYER<br>REPRESENTS THAT IT READ, UNDERSTANDS AND AGREES TO BE BOUND BY THE TERMS AND CONDITIONS<br>OF THIS LICENSE. IF BUYER DOES NOT AGREE TO THE TERMS AND CONDITIONS OF THIS LICENSE THENDO |
| I accept the terms in the license agreement     Print     I do not accept the terms in the license agreement   |
| InstallShield < Back Next > Cancel   |

3. Click I accept the terms in the license agreement and then click Next.

The Database Selection page appears.

| 🛃 Master      | Link - InstallShield Wizard   | ×      |
|---------------|---|--------|
|               | <b>se Selection</b><br>select the type of database for installation | と      |
|               | Select the type of Database for installation:                       |        |
|               | SQL DB Server   |        |
|               | Sqlite DB   |        |
|               | ·   |        |
| InstallShield | < Back Next >   | Cancel |

By default, SQL DB Server is selected.

If you choose to continue with a *SQL DB Server* for installation, then you will see the following page (as shown in step 4), where you need to select the database server instance.

### 4. Click Next.

The Database Server page appears.

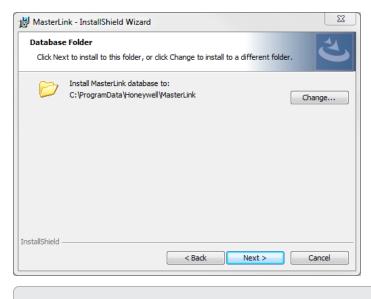
| Database Server          |                |              |   | 44     |
|--------------------------|----------------|--------------|---|--------|
| Select database server a | and authentic  | ation method |   | C      |
| Database server that you | are installing | to:          |   |        |
| localhost                |                |              | • | Browse |
|                          |                |              |   |        |
|                          |                |              |   |        |
|                          |                |              |   |        |
|                          |                |              |   |        |
|                          |                |              |   |        |
| stallShield              |                |              |   |        |

You can browse and select a database on your network.

| 🙀 MasterLink - InstallShield Wizard  |                | × |
|--|----------------|---|
| From the list of servers below, select the databa<br>would like to target. | ase server you |   |
| (local)  |                |   |
| (local)\SQLEXPRESS   |                |   |
| (localdb)\v11.0<br>HPSIE1ACMBV1  |                |   |
| HPSIE1ACMBV1   |                |   |
| HPSIE1AOPTVBLD2  |                |   |
| HPSIE1APTBLD1  |                |   |
| HPSIE1APTBLD1\SQLSER2014STD<br>HPSIE1APTBLD2                               |                |   |
| HPSIE1APTBLD3  |                |   |
| HPSIE1APTBLD4  |                |   |
| HPSIE1APTBLD7  |                |   |
| HPSIE1APTBLD7\SQLSER2014STD<br>HPS-IE1A-S003TO                             |                |   |
| HPS-IE1A-5003TO\ESX2K8R2   |                |   |
| HPS-IE1A-S003TO\SQL2K8R2   | <b>•</b>       |   |
|  |                |   |
|  |                |   |
| InstallShield  |                | - |
| ОК   | Cancel         |   |
|  |                |   |

Note: If you are using a database instance on your network, you need to have domain user permission.

The *Database Folder* page appears. Click on **Change** and enter the path on the remote machine where user intends to create the Database files. The path must not exist on the machine where the installer is running



Note: The path selected on remote machine should not exist on remote machine.

6. Click Next.

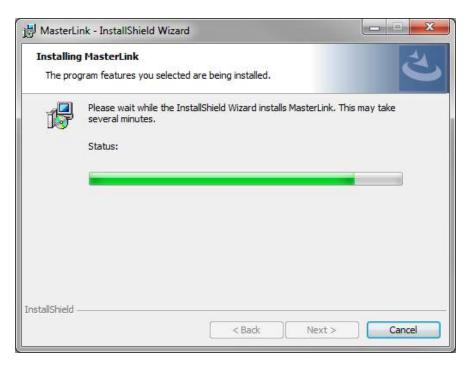
The *Destination folder* page appears, displaying information about the default destination folder. The path selected on remote machine should not exist on current machine where installer is running

| 😸 MasterLi      | ink - InstallShield Wizard  | 23 |
|-----------------|---|----|
|                 | tion Folder<br>ext to install to this folder, or click Change to install to a different folder. | 4  |
|                 | Install MasterLink to:<br>C:\Program Files (x86)\Honeywell\MasterLink\ Change                   |    |
| InstallShield - | < Back Next > Cance   | 1  |

The Ready to install the Program page appears.

| MasterLink - InstallShield Wi                  | izard                       |                                 | ×        |
|--|-----------------------------|---------------------------------|----------|
| Ready to Install the Progra                    | m                           |                                 | 1        |
| The wizard is ready to begin in                | nstallation.                |                                 |          |
| Click Install to begin the install             | ation.                      |                                 |          |
| If you want to review or chan exit the wizard. | ge any of your installation | n settings, click Back. Click C | ancel to |
|  |                             |                                 |          |
|  |                             |                                 |          |
|  |                             |                                 |          |
|  |                             |                                 |          |
| nstallShield                                   |                             |                                 |          |
| is callor inclu                                | < Back                      | Install                         |          |

8. Click Install to continue.



### 9. Click Finish to complete.

| 4 | InstallShield Wizard Completed  |
|---|---|
|   | The InstallShield Wizard has successfully installed MasterLink.<br>Click Finish to exit the wizard. |
|   | Show the Windows Installer log  |
|   | < Back Finish Cancel  |

Note: Select the check box to view the Installer log.

# 2.4 Installing MasterLink Software Application with SQLite

1. Right-click Setup file and then click Run as administrator.

The MasterLink Software Application - InstallShield Wizard appears.

| 🛃 MasterLink - InstallSl | nield Wizard  |
|--------------------------|---|
| 2                        | Welcome to the InstallShield Wizard for<br>MasterLink   |
|                          | The InstallShield(R) Wizard will install MasterLink on your computer. To continue, dick Next. |
|                          | WARNING: This program is protected by copyright law and international treaties.               |
|                          | < Back Next > Cancel  |

The License Agreement page appears.

| HasterLink - InstallShield Wizard  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| License Agreement Please read the following license agreement carefully.   |  |  |  |  |  |  |
| END USER LICENSE AGREEMENT   |  |  |  |  |  |  |
| IMPORTANT: READ THIS END USER LICENSE AGREEMENT ("LICENSE") CAREFULLY BEFORE INSTALLING OR<br>USING THE SOFTWARE (AS DEFINED BELOW) ACCOMPANYING THIS LICENSE. THIS LICENSE IS A BINDING<br>AND ENFORCEABLE LEGAL AGREEMENT BETWEEN THE BUYER AND HONEYWELL INTERNATIONAL INC.<br>("HONEYWELL"). YOU ACKNOWLEDGE YOU ARE BINDING THE BUYER, AND REPRESENT YOU HAVE THE<br>AUTHORITY TO DO SO, OR IF YOU DO NOT HAVE THE AUTHORITY, YOU WILL BE PRESONALLY LIABLE FOR<br>ANY DAMAGES RESULTING FROM A BREACH OF THIS LICENSE. HONEYWELL LICENSES THE SOFTWARE TO<br>BUYER ONLY UPON THE CONDITION THAT BUYER ACCEPTS ALL OF THE TERMS AND CONDITIONS<br>CONTAINED IN THIS LICENSE. BY OPENING THE SEALED SOFTWARE PACKAGE, INDICATING ASSENT<br>ELECTRONICALLY, OR DOWNLOADING, INSTALLING, COPYING, OR USING THE SOFTWARE, BUYER<br>REPRESENTS THAT IT READ, UNDERSTANDS AND AGREES TO BE BOUND BY THE TERMS AND CONDITIONS<br>OF THIS LICENSE. IF BUYER DOES NOT AGREE TO THE TERMS AND CONDITIONS OF THIS LICENSE THEND DO |  |  |  |  |  |  |
| I accept the terms in the license agreement     Print     I do not accept the terms in the license agreement   |  |  |  |  |  |  |
| InstallShield < Back Next > Cancel   |  |  |  |  |  |  |

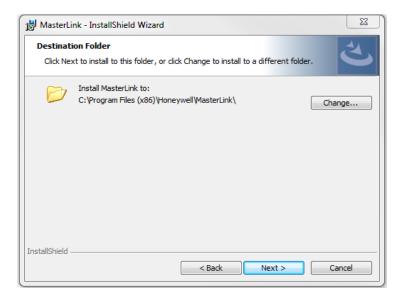
3. Click I accept the terms in the license agreement and then click Next.

The Database Selection page appears.

| Database Selection<br>Please select the type | of database for installation     | と      |
|--|----------------------------------|--------|
| Select the typ                               | pe of Database for installation: |        |
| Ø  | SQL DB Server                    |        |
| ۲  | Sqlite DB                        |        |
|  |                                  |        |
| nstallShield                                 | < Back Next >                    | Cancel |

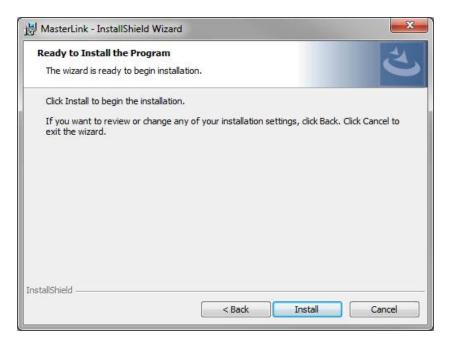
By default, SQL DB Server is selected. User is required to select SQLite DB. By default, SQL DB Server is selected. User is required to select SQLite DB

The Destination folder page appears, displaying information about the default destination folder.



### 5. Click Next.

The Ready to install the Program page appears.



6. Click Install to continue.

|   | g MasterLink<br>gram features you selected are being installed.   |
|---|---|
| P | Please wait while the InstallShield Wizard installs MasterLink. This may take several minutes.<br>Status: |
|   |   |
|   |   |

7. Click **Finish** to complete.

| Vizard has successfully installed M<br>the wizard. | lasterLink.             |
|--|-------------------------|
|  |                         |
| Windows Installer log                              |                         |
|  | e Windows Installer log |

Note: Select the check box to view the Installer log.

# 3.1 Post Installation Steps

 To log on to MasterLink application, users need access to C:\ProgramData\Honeywell\Masterlink. By default, all users under Users group has the required privileges. If a user falls under any other user group, then administrator should give "Full Control" privileges on folder "C:\ProgramData\Honeywell\Masterlink" for that particular user group.

| eneral                             | Sharing     | Security             | Previous Versions | Customize |
|------------------------------------|-------------|----------------------|-------------------|-----------|
| Object r                           | name: C     | :\Program            | Data\Honeywell\Ma | asterLink |
| <u>G</u> roup a                    | rusernan    | nes:                 |                   |           |
| SA CF                              | REATOR      | WNER                 |                   |           |
| SY SY                              | STEM        |                      |                   |           |
|                                    |             |                      | D7N6C2\Administra | ators)    |
| St Us                              | ers (IE1FL  | T1D7N6C              | 2\Users)          |           |
| - 2                                | 8           |                      |                   | -         |
| To change permissions, click Edit. |             | c Edit.              | <u>E</u> dit      |           |
| Domioo                             | ions for Us |                      | Allow             | Denv      |
| -                                  |             | sers                 | Allow             | Deny      |
| Full control                       |             | ~                    |                   |           |
| Modify                             |             |                      | ~                 |           |
| Read & execute                     |             |                      | 1                 |           |
| List folder contents               |             |                      | ~                 |           |
| Read                               |             | ~                    |                   |           |
| Write                              | 10          |                      | ~                 |           |
| For spe                            | cial permis | sions or ad          | vanced settings,  | Advanced  |
| click Ad                           | lvanced.    |                      |                   | Mulanced  |
|                                    |             | and the state of the |                   |           |
|                                    | DOUL ACCE   | SS CONITOL (         | and permissions   |           |

2. If SQL server is used as a database while installing the MasterLink application, then all users who will use the application must be provided DBO access on SUITE32 database.

# 3.2 Software/Hardware Compatibility

This version of MasterLink software works with EC350 and CloudLink 4G Modem devices.

| Instrument         | Hardware Version | Firmware Version |
|--------------------|------------------|------------------|
| EC350              | Rev E            | 1.1032           |
| CloudLink 4G Modem | Rev D            | 1.0001           |

# 4 MasterLink Software Application User Interface

This chapter describes the steps of getting started with MasterLink Software Application . This chapter also explains the user interface along with the different features that are available in separate tabs.

Related topics: Getting Started Sites Dashboard View /Edit Calibrate Read Data Live Data Administration Settings Security

**CHAPTER 4** 

# 4.1 Getting Started

On launching the MasterLink Software Application, you will see a splash screen followed by a screen to log on.



## 4.1.1 User Creation and Activation Process

To start using MasterLink Application, one must create a Site Administrator user who can in turn create multiple users with different privileges based on the business requirements.

### 4.1.1.1 Site Administrator Creation

The Site Administrator should get a MasterLink license from Honeywell Process Solutions. This license key can be used to register a Site Administrator in the MasterLink Application. Contact <u>TAC team</u> to get your license key.

## 4.1.1.2 Creating Users

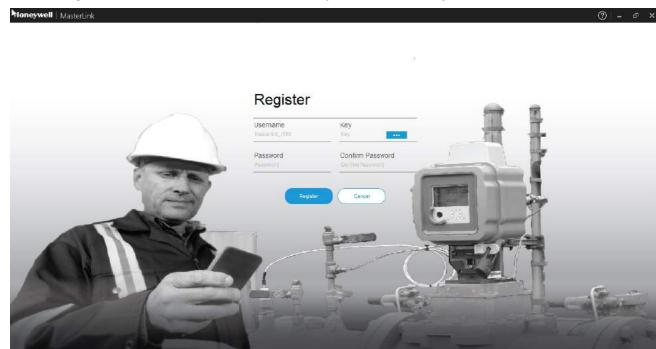
Once site administrator is registered, they can create new users using <u>Security</u> feature. To know more on passkey generation refer to <u>User Configuration</u>.

For individual user, the generated license key must be emailed to the respective users allowing them to register and start using MasterLink application.

### 4.1.1.3 User Registration

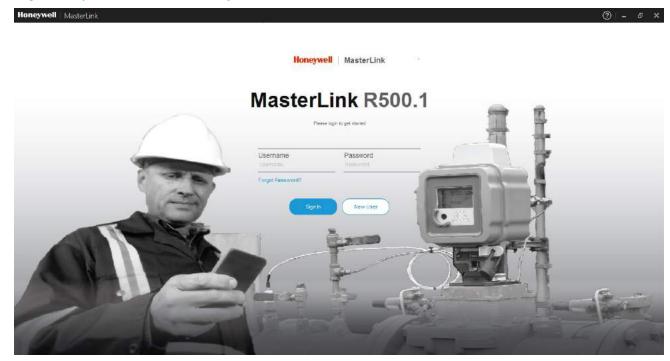
For a first time user, click **New User** and register. User is required to register with license key provided by the site Administrators. The **Username** you enter while registering must match with the user name used while creating the license key.

### Enter the login details, browse and select the license key, and then click **Register**.



The Login screen appears.

Log on with your credentials. Click Sign In.



The following screen is displayed:

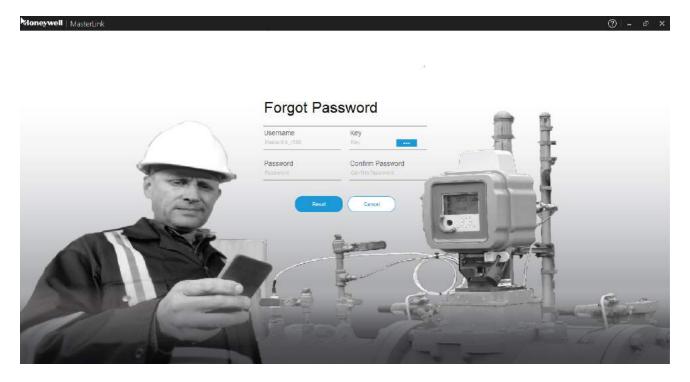
| Honeywell               | Masterlink                             |                             |                               |         | 0                 | 🕅 🖗 🕅 🕅 🕅     | - 0           | × |
|-------------------------|--|-----------------------------|-------------------------------|---------|-------------------|---------------|---------------|---|
| Deshboard               |  |                             |                               |         |                   |               |               |   |
| <b>2</b><br>57#         |  |                             |                               |         |                   |               |               |   |
| (S)<br>View' Edit       |  |                             |                               |         |                   |               |               |   |
| Calibratio              |  |                             |                               |         |                   |               |               |   |
| Baad Data               |  |                             | YOU ARE OFFLI                 | NE      |                   |               |               |   |
| $\otimes$               |  |                             | Currently no devices are conr | nected. |                   |               |               |   |
| Live Date<br>Administer |  |                             | Connect to a site.            |         |                   |               |               |   |
| Ø<br>Settings           |  |                             |                               |         |                   |               |               |   |
| Security                |  |                             |                               |         |                   |               |               |   |
| 49                      |  |                             |                               |         |                   |               |               |   |
| O<br>Connect O          | Not Connected   📮 –   –   Release: R50 | 00.1 Build Version: 9.2.3.0 |                               |         | Comm Monitor   Se | nd Capture Bu | itter to File |   |

Refer **MasterLink Software Application Installation Guide** for understanding the prerequisites and installation instructions.

#### 4.1.1.4 Forgot Password

If users forget their password they can reach out to the site Administrator for a new passkey. Once the key is received, users can reset their passwords by clicking the **Forgot Password** link. The Forgot Password screen appears.

Enter your username, browse and select the license key, and finally enter your new password. Click **Reset** to login with the new password.



## 4.2 Sites

The 'Sites' screen lists all sites configured in the MasterLink application. A Site refers to:

- Integrated EC 350 (EC 350 with Cloud Link 4G Modem)
- Standalone EC 350
- Cloud Link 4G Modem

The user can also add a new Site, as well as edit or remove an existing Site. From the 'Sites' screen, users can connect to a device deployed on the field.

This section describes the steps to configure and add a site to MasterLink Software Application. It also explains how to connect and communicate with existing sites.

**Note:** In Coexistence scenario, any Cloud Link related sites that are added using New Master link will be displayed as "Unknown" sites in MasterlinkSQL.

Related topics:

Direct Connect

Add Site

Connecting to a Site

## 4.2.1 Direct Connect

The Direct Connect feature lets the application connect to a site which is physically connected to a computer.

The Direct Connect functionality works based on the serial port or IrDA settings configured under <u>Settings > Com</u>munications <u>Setup</u>.

To connect a device:

- 1. Physically connect the instrument using a serial or IrDA interface.
- 2. Configure the required communication settings, go to Settings > Communications Setup
- 3. Click Connect located at the bottom left, and then connect to an instrument using the Direct Connect pop-up.

| Honeywell                           | MasterLink  | ⑦   ② admin        | - 6 X         |
|-------------------------------------|---|--------------------|---------------|
| Deshiboard                          |   |                    |               |
| <b>2</b><br>51+                     |   |                    |               |
| (S)<br>Viewe <sup>r</sup> Edit      |   |                    |               |
| O<br>Taillies                       | Direct Connect 🛞  |                    |               |
| Beed Date                           | Device Type : EC 350 +<br>User (D : *   |                    |               |
| Cive Dats                           | Access Code : *   |                    |               |
| Administer                          | Connect Cancol  |                    |               |
| Settings                            |   |                    |               |
| ©<br>Suitings<br>Scauthy<br>Scauthy |   |                    |               |
| ÷?                                  |   |                    |               |
| Comment / D A                       | lot Connected   📮 -   -   Release: R500.1 Build Version: 9.2.3.0 Comm Monitor | or Send Capture Bu | inter to File |

- 4. Select the device type (EC 350, Cloud Link 4G Modem, or Integrated EC 350)
- 5. Type a **User ID** and **Access Code** and click **Connect**. (User ID and Access code is provided by System Administrator).
- 6. After connecting to an instrument users must manually add it to the site list.

#### 4.2.2 Add Site

In the 'Site Management' screen, you can configure and connect to site.

A Site refers to:

- Integrated EC 350 (EC 350 with Cloud Link 4G Modem)
- Standalone EC 350
- Cloud Link 4G Modem

Site can be connected and configured over the following interfaces based on deployment (device type):

- Modem
- Serial
- Internet
- IrDA

|                   | ec350site   | and the second sec |  | DA  |
|-------------------|---|--|--|---|
|                   | EC 350  |  |  |   |
|                   | Stand Alone   |  |  |   |
| Instrument Type   | FC 350 ·  | Internet/Phone   | None   |   |
| Site Name *       | ec350site   |  | UDP SSL  |   |
| Site Location     | hyd   | Site Phone/IP<br>Address   |  |   |
| Site ID *         |   | SSL Private Key  |  |   |
| Sile ID 2*        | 0000000   | Modem ID   | 0  |   |
| User ID *         | 0   | Modern Port  | None   |   |
| Instrument Access | *****   | Post Modern<br>Command   |  |   |
|                   | Site Name *<br>Site Lossion<br>Site ID *<br>User ID * | EC 350         Stand Alone         Instrument Type         Site Name*         site Location         hyd         Site ID*         B8890000         User (D*)         InstrumentAccess   | EC 350         Stand Alone         Instrument Type         Site Name*         ec350site         Site Name*         Site Location         hyd         Site ID*         Bite Location         Site ID 2*         Bite ID 3*         Bite ID 4*         Bite ID 5*         Bite ID 5*         Bite ID 5* | EC 350       Senal Internet In         Instrument Type       fC 359       Internet/Phone       None         Site Name*       ec350eite       Internet/Phone       None         Site Name*       ec350eite       Internet/Phone       None         Site Location       hyd       Site Phone/IP<br>Address       Site Phone/IP<br>Address         Site ID*       B0000000       SSL Private Key       SSL Private Key         Site ID 2*       B0000000       Modern ID       0         User ID*       0       Modern Port       Hone |

Note: Before adding a new site, ensure that you have configured your communication settings under <u>Settings ></u> Communications Setup. Click Add Site to create a new site or a field device. This function is used to add site information to the Site List.

| Hone                       | ywell   Maste               | erLink                             |                            |               |        |   | ()   Q | admin | ] 🖷 | ъ х |
|----------------------------|-----------------------------|------------------------------------|----------------------------|---------------|--------|---|--------|-------|-----|-----|
|                            | Site Managem                | ent                                |                            |               |        |   |        |       |     |     |
| Site<br>Site<br>Viewr Edit |                             | C350 +<br>loud Link<br>grated Mode |                            |               |        |   |        |       |     |     |
| Ocalibrate                 | instrument Type             | EC350 + Cloud Link •               | InternetPhone              | None          | 1.     |   |        |       |     |     |
| 6                          | Site Name *                 | 13 <del></del>                     |                            | III vor III s | si.    |   |        |       |     |     |
| Read Data                  | Site Location               |                                    | Site Phone/IP<br>Address * |               |        |   |        |       |     |     |
| Live Data                  | Site ID *                   | R                                  | SSL Private Key            | 7             |        |   |        |       |     |     |
| Administer                 | Site ID 2 *                 |                                    | Modem ID                   | 0             |        | Configure the site details and click Save |        |       |     |     |
| Ø                          | User ID *                   |                                    | Modern Port                | None          |        |   |        |       |     |     |
| Settings<br>Security       | Instrument Access<br>Code * | 3 <u></u>                          | Post Modem<br>Command      |               |        |   |        |       |     |     |
| Discontect                 | Connected                   | (EC 350) 🔲 ec350site               |                            | Save          | Cancel | Build Version: 9.2.3.0 Comm Mon           |        |       |     |     |

While entering your site information, you must provide a Site Name, Site ID1 and ID2, and Instrument Access Code before the entry is accepted. Ensure the correct Instrument Type is selected. The instrument type can be **EC 350**, **Cloud Link**, and **integrated EC 350 + Cloud Link**.

Click Save to add site.

Click Cancel to abort this entry and return to the Site Management.

| Honeywell                       | MasterLink   |   | <b>k</b>                           |   | ⑦   ② admin                                   | – ø ×         |
|---------------------------------|--|---|------------------------------------|---|---|---------------|
| Deshboard                       | Site Management  | Filt  | er or Search Si                    | ite Al                                  | 7 Q. Search site                              |               |
| Site<br>Site<br>View' Edit      | C 350 Stand Abne   |   | ec350site<br>EC 350<br>Stand Alone | Coni                                    | At EC 350<br>Cloud Link<br>EC350 + Cloud Link | DA            |
| Casterate<br>Sales<br>Read Data |  | Instrument Type<br>Site Name *<br>Site Location | 40 353 +<br>ec350site              | Internet/Phone<br>Site Phone/IP         | None  | •<br>SSL      |
| Live Date                       |  | Site ID 2 *                                     | 88800000<br>88800000               | Address<br>SSL Private Key<br>Modern ID | 0   |               |
| Sertings<br>Security            |  | User ID *<br>Instrument Access<br>Cade *        | 0<br>                              | Modern Port<br>Post Modern<br>Command   | Nime  | *             |
| Ø                               | Not Connected   💭 –   –   Release: R500.1 Build Version: 9.2.3.0 | Pdu site  |                                    | Comm Monitor                            | Send Capture B                                | utter to File |

Note: It is recommended to use cellular modems instead of land-line modems for more secure communication.

For sites using the Communications / Special Connection setup (which use TCP/IP modems), enter the following details based on the selection of Internet/Phone dropdown:

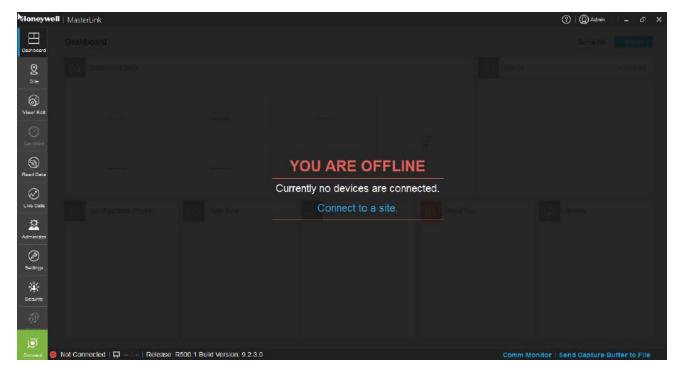
- If IPv4 is selected, enter IP address and port number in the respective fields.
- If a Land Line Modem is used, user should provide the site phone number in the Site Phone / IP Address field.

After adding the site, the new site appears in the list of sites.

|    | Management         |                        |                   |                   |   |                    |                        | V | Q Search site |           |
|----|--------------------|------------------------|-------------------|-------------------|---|--------------------|------------------------|---|---------------|-----------|
|    | CL_Device1         |                        | cloudlink 10      | 1                 |   | device1            | $\overline{\boxtimes}$ |   | device10      |           |
| 1  | Cloud Link         | Stand Alone            | Cloud Link        | Stand Alone       | Ŧ | EC 350             | Stand Alone            | Ŧ | EC 350        | Stand Ak  |
|    | device2            | $\overline{\boxtimes}$ | device20          | X                 |   | device3            | ×                      |   | Device4       | 7         |
|    | EC 350             | Stand Alone            | EC 350            | Stand Alone       | 7 | EC 350             | Stand Alone            | 7 | EC 350        | Stand Alc |
|    | Device7            |                        | Device8           | 1                 |   | device81           |                        |   | devicec120    | r         |
|    | EC 350             | Stand Alone            | EC 350            | Stand Alone       | Ŧ | EC 350             | Stand Alone            | 1 | Cloud Link    | Stand Alc |
|    | EC_CL_Device5      |                        | EC_CL_Device6     | <b>x</b>          |   | Varun EC350        | $\overline{\boxtimes}$ |   |               |           |
|    | EC350 + Cloud Link | ntegrated Mode         | EC350 + Cloud Lin | k Integrated Mode | Ŧ | EC350 + Cloud Link | Integrated Mode        |   |               |           |
| i  |                    |                        |                   |                   |   |                    |                        |   |               |           |
|    |                    |                        |                   |                   |   |                    |                        |   |               |           |
| 65 |                    |                        |                   |                   |   |                    |                        |   |               |           |
|    |                    |                        |                   |                   |   |                    |                        |   |               |           |
| 8  |                    |                        |                   |                   |   |                    |                        |   |               |           |

## 4.2.3 Connecting to a Site

When you log on to MasterLink Software Application and if you are not connected to a site or a device, you will see the following screen.



Click on the Site tab or the Connect to a Site link to get started.

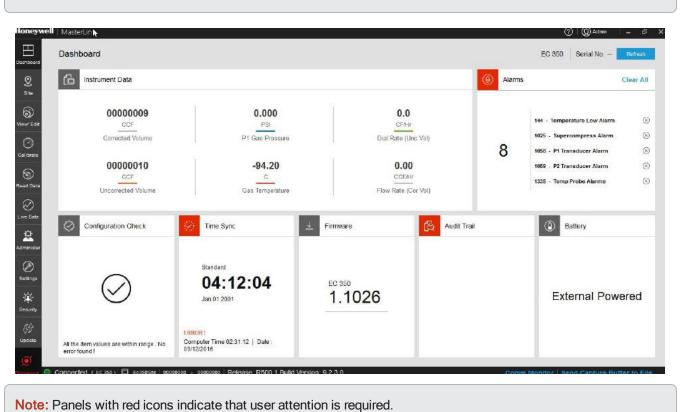
Configured sites can be connected using the 'Site Management' screen of MasterLink Software Application.

| Site Management     Cased Link     Site Management     Site Management     Site Cased Link     Site Cased Link <th>Honeywell   MasterLink</th> <th></th> <th>⑦   ② Admin   = r<sup>p</sup> ×</th>  | Honeywell   MasterLink  |  | ⑦   ② Admin   = r <sup>p</sup> ×          |
|---|---|--|---|
| Image: Second secon |   |  | All 💎 🛛 Q. Search site                    |
| Sealings<br>Sealinty  | Site   Site   Site   Site   Viewr Edit   Site   Site |  |   |
| Add 5ie       Comm Monitor   Send Capture Buffer to Fi       Comm Monitor   Send Capture Buffer to Fi   | ø   | and the second s | Comm Monitor ⊡Send Capture Butter to File |

Following interfaces can be used to connect a site based on deployment (device type configured).

- Modem EC 350 EC 350
- Serial EC 350 EC 350 or EC 350 CloudLink
- Internet Integrated EC 350, EC 350 EC 350 or EC 350 CloudLink
- IrDA EC 350 EC 350 or Integrated EC 350

Note: To connect an instrument through serial interface or modem configure the communication settings in the <u>Set</u>tings tab. After successfully connecting to the device, the dashboard starts downloading the data.



#### Note: It is recommended that the user waits till the dashboard data is loaded.

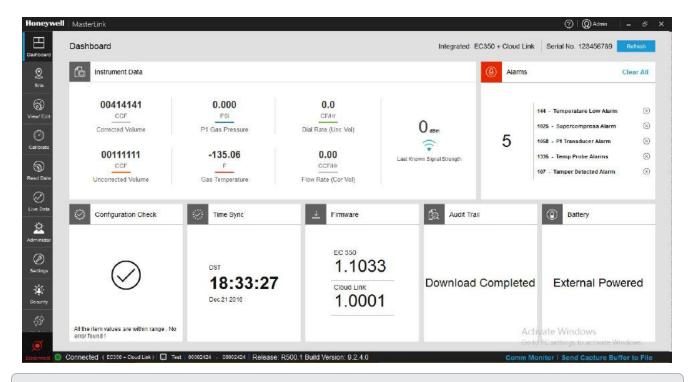
## 4.3 Dashboard

On successful site connection, dashboard data gets loaded automatically based on the 'Auto Download Settings'.

Dashboard has various panels that show current data from the connected site. The dashboard automatically reads and displays the following data:

- Critical instrument data
- Last call details (when MasterLink Software Application R500.1 is used)
- Active alarms
- Configuration checks based on the item template file
- Time Sync
- Firmware
- Audit Trail data
- Battery status

Using Data Download Settings, you can configure the dashboard data and as per your requirement.



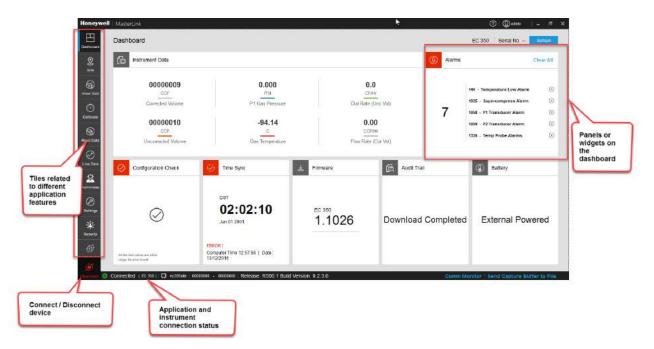
Note: The instrument data can vary based on the connected device type.

The dashboard has various panels containing instrument data, organized in panels. User can further drill down to see relevant data by clicking on respective panels.

## 4.3.1 User Interface

User Interface consists of the following sections:

- Tiles related to the application features include:
  - Dashboard
  - Site
  - View/Edit
  - Calibrate
  - View Data
  - Live Data
  - Administrator
  - Settings
  - Security
  - Updates

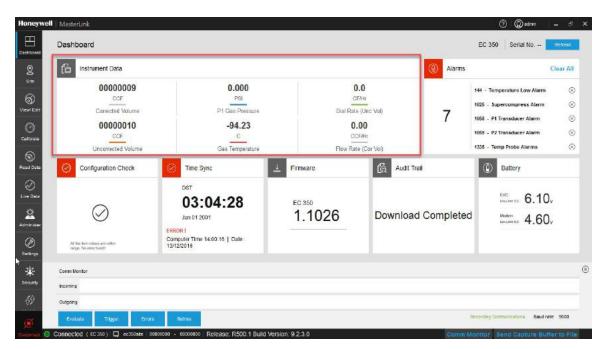


- Header contains application information and user options
- Footer contains the following information:

|                             | The icons displayed on the footer is used to illustrate the following:                                     |
|-----------------------------|--|
| laana                       | Not connected to any site  |
| Icons                       | Connecting to a site   |
|                             | Connected to a site  |
| Release number              | R500.1   |
| Build version               | 9.2.4.0  |
| Comm Monitor                | Displays all the communications (command/responses) between MasterLink application and the connected site. |
| Send Capture Buffer to File | Allows the user to save all the communication into a file for analysis.                                    |

## 4.3.2 Instrument Data

The Dashboard shows current instrument data from the connected site. This data is read from the instrument and displayed under the *Instrument Data* widget.



On clicking any value, further details are displayed.

| Honeywell      | MasterLink R500.1   |                          |                      |                           |               |                         | 0 0                                   |
|----------------|---|--------------------------|----------------------|---------------------------|---------------|-------------------------|---------------------------------------|
| Deshboard      | Dashboard   |                          |                      |                           |               | Integrated EVC + MiCell | Senal No 12343234                     |
| Q<br>Site      | Instrument Data   |                          |                      |                           |               | () Alarms               |                                       |
| (S)<br>Vew Edt | 80.48 ccr   | 60.93 pst                | 1 O<br>Corrected Vol |                           | _             |                         | Pressure High 123/15 15-65            |
| $\odot$        | Corrected Volume  | P1 Pressure              | Item Code            | Description               | Value         | 0.5                     | Pressure Low Unit's 22:50             |
| Calibrate      |   |                          | 000                  | Corrected Volume          | 0000100 (m3)  | 05                      | Pressure Low UTINS 12:00              |
| 9              | 59.03 ccf   | 58.2 ⊧                   | 113                  | High Res Cor Value        | 100.8739 (m3) |                         | Pressure Low UITINS 12:00             |
| Read Data      | Uncorrected Volume  | Gas Temperature          | 043                  | Total Correction Factor   | 0.9075        |                         |                                       |
| $\oslash$      | Uncorrected volume  | Gas remperature          | 116                  | Squared Super             | 1.0000        |                         | Pressure Low 111/15 12:09 (8)         |
| Live Data      | and the second se | and the second           | 053                  | Specific Gravity          | 0.62          |                         |                                       |
| 2              | Configuration Check   | Time Sync                | 054                  | % N2                      | 0.42 (%)      | Trail                   | Battery                               |
| Administer     |   |                          | 055                  | % CO2                     | 0.01 (%)      |                         |                                       |
| Ø              |   | Standard                 | 140                  | Energy                    | 134 (Therms)  |                         |                                       |
| Settings       | $\bigcirc$  |                          |                      | Close                     |               | 000/                    | EVC<br>LINE LINE 6.10                 |
| Security       | $\bigcirc$  | 3:24:1                   |                      | _                         |               | 00%                     |                                       |
| Security       |   | March 1, 2016            |                      | Modem 1.0                 | 4             |                         | Modem 4.60v                           |
|                |   |                          |                      | 1.0                       | T             |                         | LOW LOWE ED 4.00V                     |
|                |   |                          |                      |                           |               |                         |                                       |
| ~              | All the dam values are within<br>tange. No error found!   | Actual Time 1/20-14   Ex | ne. 03/02/2016       | Recommended version (EVC) |               | ems are downloaded      |                                       |
| Disconnect     | Connected (EC 350)  |                          | 1.0.1                |                           | 100           | . Comm'N                | Ionitor   Send Capture Buffer to File |

## 4.3.3 Alarms

MasterLink a l ⑦ Q admin onev 田 Active Alarms **2** 5110 Active Alarms List 6 144 - Temperature Low Alarm 1025 - Supercompress Alar 1058 - P1 Transducer Alarm đ A A 01/01/01 00:00 01/01/01 00:00 01/01/01 00:00 lew/Ed () Calibrat 1059 - P2 Transducer Alarm 1335 - Temp Probe Alarms 104 - System Alarms D 01/01/01 00:00 01/01/01 00:00 01/01/01 00:00 107 - Tamper Delected Alarm 11/25/16 16:45 A Ø 2 doninist Ø Sattings R500 1 Build Version: 9.2.3

User can drill down to alarm and event history by clicking on the number of active alarms displayed on the dashboard.

Individual alarms can be cleared by clicking 🔏

All active alarms can be cleared at once, by clicking Clear All.

User can access alarms and event log reports from the Dashboard.

| port Name:   |  | og Report  |  |  |  | Alarm Log Report  |    |             |                    |
|--|--|--|--|--|--|---|----|-------------|--------------------|
| port Selectio  | ns: 1 site ,F  | rom : 10-12-2016   | 07:19:58 To  | : 21-12-2016 16:41:47  |  |   |    | Site info : | 00000000:00000000  |
| e ID: 00   Si  | te Name: ec3   | 50site   Site Loc  | ation: hyd   |  |  |   |    |             |                    |
| Date   | Time   | Alarm Type   | Item #   | Alarm Desc   | Alarm Value  | Alarm Limit   |    |             |                    |
| 12/10/2016   | 07:19:58   | Alarm  | 99   | Battery Low Alarm  | 3.092  | 4.600   |    |             |                    |
| 01/01/2001   | 00:00:02   | Alarm  | 107  | Tamper Detected Alarm  | 11111111   | 00000000  |    |             |                    |
| 01/01/2001   | 00:00:02   | Alarm  | 1058   | P1 Transducer Alarm  | 8  | 00000000  |    |             |                    |
| 01/01/2001   | 00:00:02   | Alarm  | 1059   | P2 Transducer Alarm  | 8  | 00000000  |    |             |                    |
| 01/01/2001   | 00:00:02   | Alarm  | 1335   | Temp Probe Alarms  | 4  | 00000000  |    |             |                    |
| 01/01/2001   | 00:00:02   | Alarm  | 144  | Temperature Low Alarm  | -94.56   | -37.22  |    |             |                    |
| 01/01/2001   | 00:00:02   | Alarm  | 1025   | Supercompress Alarm  | 10   | 0000000   |    |             |                    |
| 01/01/2001   | 00:00:31   | Alarm Ack  | 144  | Temperature Low Alarm  | -94.11   | -37.22  |    |             |                    |
| 01/01/2001   | 00:00:31   | Alarm Ack  | 1025   | Supercompress Alarm  | 10   | 0000000   |    |             |                    |
| 01/01/2001   | 00:00:31   | Alarm Ack  | 1058   | P1 Transducer Alarm  | 8  | 0000000   |    |             |                    |
| 01/01/2001   | 00:00:31   | Alarm Ack  | 1059   | P2 Transducer Alarm  | 8  | 0000000   |    |             |                    |
| 01/01/2001   | 00:00:31   | Alarm Ack  | 1335   | Temp Probe Alarms  | 4  | 0000000   |    |             |                    |
| 01/01/2001   |  | Alarm Ack  | 107  | Tamper Detected Alarm  | 1111111  | 0000000   |    |             |                    |
|  |  |  | <u>600 - 00000</u>   | 000   Release: R500.1 Bi   | Back<br>uild Version: 9  | Preview Print   | Co | mm Monit    | tor   Send Capture |
| nt Destination<br>nected (E<br>asterLink   |  |  |  | 000   Release: R500.1 Bt   |  | 230   | Co | mm Monif    | tor Send Capture   |
| nected (E<br>asterLink<br>fort Name:<br>fort Selectio  | C 350)   💭 (<br>Alarm Li<br>ns: 1 site ,F  | ec350site   000001   | 000 - 00000<br>07:19:58 To   | 200   Release: R500 1 Bu   |  |   | Co |             |                    |
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| nected ( E<br>asterLink<br>ort Name:<br>ID: 0 0   Si<br>Date   | Alarm Li<br>Alarm Li<br>ns: 1 site ,F<br>te Name: ec3<br>Time  | ec350site   000000<br>og Report<br>rom : 10-12-2016<br>50site   Site Loc   | 100 - 00000<br>107:19:58 To<br>ation: <b>hyd</b>   | : 21-12-2016 16:41:47  | uild Version: 9  | 230<br>Alarm Log Report   | Co |             | ⑦   @ Admin        |
| ected ( E<br>asterLink<br>ort Name:<br>ort Selectio<br>ID: 0 0   Si<br>bate<br>12/10/2016  | Alarm Li<br>Alarm Li<br>ns: 1 site ,F<br>te Name: ec3<br>Time  | ec350site   000000<br>og Report<br>rom : 10-12-2016<br>50site   Site Loc<br>Alarm Type   | 100 - 00000<br>107:19:58 To<br>ation: <b>hyd</b><br>Item #   | : 21-12-2016 16:41:47<br>Alarm Desc  | Alarm Value<br>3.092   | 2 3 0<br>Alarm Log Report   | Co |             | ⑦   @ Admin        |
| asterLink<br>ort Name:<br>ort Selectio<br>ID: 0 0   Si<br>hate<br>12/10/2016   | Alarm Li<br>Alarm Li<br>ns: 1 site ,F<br>te Name: ec3<br>Time<br>07:19:58  | ec350site 000000<br>og Report<br>rom : 10-12-2016<br>50site   Site Loc<br>Alarm Type<br>Alarm  | 000 - 00000<br>07:19:58 To<br>ation: hyd<br>Item #<br>99   | : 21-12-2016 16:41:47<br>Alarm Desc<br>Battery Low Alarm   | Alarm Value<br>3.092   | 2.3.0<br>Alarm Log Report<br>Alarm Limit<br>4.600   | Co |             | ⑦   @ Admin        |
| ected (E<br>isterLink<br>ort Name:<br>ort Selectio<br>ID: 0 0   Si<br>late<br>2/10/2016<br>1/01/2001   | Alarm Li<br>Alarm Li<br>ns: 1 site, F<br>te Name: ec3<br>Time<br>07:19:58<br>00:00:02<br>00:00:02  | og Report<br>rom : 10-12-2016<br>50site   Site Loc<br>Alarm<br>Alarm<br>Alarm  | 00 - 00000<br>07:19:58 To<br>ation: <b>hyd</b><br>107<br>1058  | 21-12-2016 16:41:47 Alarm Desc Battery Low Alarm Tamper Detected Alarm P1 Transducer Alarm   | Alarm Value<br>3.092<br>11111111<br>8  | 2.3.0<br>Alarm Log Report<br>Alarm Limit<br>4.600<br>00000000                                   | Co |             | ? Q Admin          |
| ected ( E<br>sterLink<br>ort Name:<br>ort Selectio<br>ID: 0 0   Si<br>late<br>2/10/2016<br>1/01/2001<br>1/01/2001  | Alarm Li<br>Alarm Li<br>Stee, F<br>te Name: ec3<br>Time<br>07:19:58<br>00:00:02<br>00:00:02<br>00:00:02  | og Report<br>rom : 10-12-2016<br>50site   Site Loc<br>Alarm Type<br>Alarm<br>Alarm<br>Alarm  | 000 - 00000<br>07:19:58 To<br>ation: <b>hyd</b><br><b>Item #</b><br>99<br>107<br>1058<br>1059                        | 21-12-2016 16:41:47<br>Alarm Desc<br>Battery Low Alarm<br>Tamper Detected Alarm<br>P1 Transducer Alarm<br>P2 Transducer Alarm  | Alarm Value<br>3.092<br>1111111  | 2.3.0<br>Alarm Log Report   | Co |             | ⑦   @ Admin        |
| ected ( E<br>sterLink<br>ort Name:<br>ort Selectio<br>ID: 0 0   Si<br>late<br>2/10/2016<br>11/01/2001<br>11/01/2001<br>11/01/2001  | Alarm Li<br>Alarm  | og Report<br>rom : 10-12-2016<br>50site   Site Loc<br>Alarm Type<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm  | 000 - 00000<br>07:19:58 To<br>ation: <b>hyd</b><br>107<br>1058<br>1059<br>1335                                       | 21-12-2016 16:41:47 Alarm Desc Battery Low Alarm P1 Transducer Alarm P2 Transducer Alarm Temp Probe Alarms   | Alarm Value<br>3.092<br>11111111<br>8<br>8<br>4  | 2 3 0<br>Alarm Log Report   | Co |             | ⑦   @ Admin        |
| ected ( E<br>sterLink<br>ort Name:<br>ort Selectio<br>ID: 0 0   Si<br>ate<br>2/10/2016<br>11/01/2001<br>11/01/2001<br>11/01/2001   | Alarm L<br>Alarm L<br>S 1 site ,F<br>te Name: ec3<br>7 ime<br>07:19:58<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02   | og Report<br>rom : 10-12-2016<br>50site   Site Loc<br>Alarm Type<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm   | 000 - 00000<br>07:19:58 To<br>ation: <b>hyd</b><br>107<br>1058<br>1059<br>1335<br>144                                | 21-12-2016 16:41:47<br>Alarm Desc<br>Battery Low Alarm<br>Tamper Detected Alarm<br>P1 Transducer Alarm<br>P2 Transducer Alarm<br>Temp Probe Alarms<br>Temperature Low Alarm  | Alarm Value<br>3.092<br>11111111<br>8<br>8<br>4<br>4<br>-94.56   | 2 3 0<br>Alarm Log Report<br>Alarm Limit<br>4.600<br>00000000<br>00000000<br>00000000<br>000000 | Co |             | ? Q Admin          |
| ected ( E<br>asterLink<br>ort Name:<br>ort Selectio<br>ID: 0 0   Si<br>hate<br>12/10/2011<br>01/01/2001<br>01/01/2001<br>01/01/2001<br>01/01/2001  | Alarm L<br>Alarm L<br>1 site ,F<br>te Name: ec3<br>Time<br>07:19:58<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02  | ec350site   000000<br>og Report<br>rom : 10-12-2016<br>50site   Site Loc<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm   | 000 - 00000<br>07:19:58 To<br>ation: <b>hyd</b><br>107<br>1058<br>1059<br>1335<br>144<br>1025                        | 21-12-2016 16:41:47<br>Alarm Desc<br>Battery Low Alarm<br>Tamper Detected Alarm<br>P1 Transducer Alarm<br>P2 Transducer Alarm<br>Temp Probe Alarms<br>Temperature Low Alarm<br>Supercompress Alarm   | Alarm Value<br>3.092<br>11111111<br>8<br>8<br>4<br>-94.56<br>10  | 2 3 0<br>Alarm Log Report<br>Alarm Limit<br>4 600<br>00000000<br>00000000<br>00000000<br>000000 | Co |             | ? Q Admin          |
| ected (E<br>sterLink<br>ort Name:<br>ort Selectio<br>ID: 0 0   Si<br>ate<br>2/10/2016<br>11/01/2001<br>11/01/2001<br>11/01/2001<br>11/01/2001<br>11/01/2001  | Alarm L<br>Alarm L<br>1 site ,F<br>te Name: ec3<br>07:19:58<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02  | ec350site   000000<br>og Report<br>rom : 10-12-2016<br>50site   Site Loc<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm  | 000 - 00000<br>07:19:58 To<br>ation: hyd<br>107<br>1058<br>1059<br>1335<br>144<br>1025<br>144                        | 21-12-2016 16:41:47<br>Alarm Desc<br>Battery Low Alarm<br>Tamper Detected Alarm<br>P1 Transducer Alarm<br>P2 Transducer Alarm<br>Temp Probe Alarms<br>Temperature Low Alarm<br>Supercompress Alarm<br>Temperature Low Alarm                        | Alarm Value           3.092           11111111           8           4           -94.56           10           -94.11  | 2 3 0 Alarm Log Report Alarm Limit 4 600 0000000 0000000 0000000 0000000 00000                  | Co |             | ⑦   @ Admin        |
| nected (E           asterLink           ort Name:           ort Selectio           ID: 0 0   Si           Date           D1/01/2001           D1/01/2001           D1/01/2001           D1/01/2001           D1/01/2001           D1/01/2001           D1/01/2001           D1/01/2001           D1/01/2001  | Alarm L<br>Alarm L<br>1 site ,F<br>te Name: ec3<br>07:19:58<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02  | ec350site 000000<br>og Report<br>rom : 10-12-2016<br>50site   Site Loc<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm                      | 000 - 00000<br>07:19:58 To<br>ation: hyd<br>107<br>1058<br>1059<br>1335<br>144<br>1025<br>144<br>1025                | 21-12-2016 16:41:47<br>Alarm Desc<br>Battery Low Alarm<br>Tamper Detected Alarm<br>P1 Transducer Alarm<br>P1 Transducer Alarm<br>P2 Transducer Alarm<br>Temp Probe Alarms<br>Temperature Low Alarm<br>Supercompress Alarm<br>Temperature Low Alarm | Alarm Value           3.092           11111111           8           4           -94.56           10           -94.11           10   | 2.3.0<br>Alarm Log Report<br>Alarm Limit<br>4.600<br>00000000<br>00000000<br>00000000<br>000000 | Co |             | ⑦   @ Admin        |
| ected ( E<br>asterLink<br>ort Name:<br>ort Selectio<br>12/10/2016<br>11/01/2001<br>11/01/2001<br>11/01/2001<br>11/01/2001<br>11/01/2001<br>11/01/2001  | Alarm L<br>Same and the second<br>Alarm L<br>Alarm L<br>1 site ,F<br>te Name: ec3<br>Time<br>07:19:58<br>07:19:58<br>07:19:58<br>07:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:00<br>0:0 | ec350site 000000<br>og Report<br>rom : 10-12-2018<br>50site   Site Loc<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm             | 000 - 00000<br>07:19:58 To<br>ation: hyd<br>1058<br>1059<br>1335<br>144<br>1025<br>144<br>1025                       | 21-12-2016 16:41:47 Alarm Desc Battery Low Alarm Tamper Detected Alarm P1 Transducer Alarm P2 Transducer Alarm Temperature Low Alarm Supercompress Alarm Temperature Low Alarm Supercompress Alarm P1 Transducer Alarm                             | Alarm Value           3.092           11111111           8           -94.56           10           -94.11           10           8   | 2.3.0<br>Alarm Log Report Alarm Limit 4.600 0000000 0000000 0000000 0000000 00000               | Co |             | ⑦   @ Admin        |
| ected ( E<br>asterLink<br>ort Name:<br>ort Selectio<br>int Selectio<br>i | Alarm L<br>Same and the second<br>Alarm L<br>Alarm L<br>1 site ,F<br>te Name: ec3<br>Time<br>07:19:58<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00                           | ec350site 000000<br>og Report<br>rom : 10-12-2018<br>50site   Site Loc<br>Alarm Type<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm Ack<br>Alarm Ack<br>Alarm Ack<br>Alarm Ack | 000 - 00000<br>07:19:58 To<br>ation: hyd<br>1059<br>1059<br>1335<br>144<br>1025<br>144<br>1025<br>144<br>1025<br>144 | 21-12-2016 16:41:47<br>Alarm Desc<br>Battery Low Alarm<br>Tamper Detected Alarm<br>P1 Transducer Alarm<br>P2 Transducer Alarm<br>P2 Transducer Alarms<br>Supercompress Alarm<br>Supercompress Alarm<br>P1 Transducer Alarm<br>P1 Transducer Alarm  | Alarm Value           3.092           11111111           8           4           -94.56           10           -94.11           10           8           30           30           111 | 2.3.0<br>Alarm Log Report Alarm Limit 4.600 0000000 0000000 0000000 0000000 00000               | Co |             | ⑦   @ Admin        |
| nected (E           asterLink           nort Name:           nort Selectio           ID: 0 0   Si           Date           D1/01/2001           D1/01/2001           D1/01/2001           D1/01/2001           D1/01/2001           D1/01/2001           D1/01/2001  | Alarm L<br>Same and the second<br>Alarm L<br>Alarm L<br>1 site ,F<br>te Name: ec3<br>Time<br>07:19:58<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00:02<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00:00<br>00                           | ec350site 000000<br>og Report<br>rom : 10-12-2018<br>50site   Site Loc<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm<br>Alarm             | 000 - 00000<br>07:19:58 To<br>ation: hyd<br>1058<br>1059<br>1335<br>144<br>1025<br>144<br>1025                       | 21-12-2016 16:41:47 Alarm Desc Battery Low Alarm Tamper Detected Alarm P1 Transducer Alarm P2 Transducer Alarm Temperature Low Alarm Supercompress Alarm Temperature Low Alarm Supercompress Alarm P1 Transducer Alarm                             | Alarm Value           3.092           11111111           8           -94.56           10           -94.11           10           8   | 2.3.0<br>Alarm Log Report Alarm Limit 4.600 0000000 0000000 0000000 0000000 00000               | Co |             |                    |

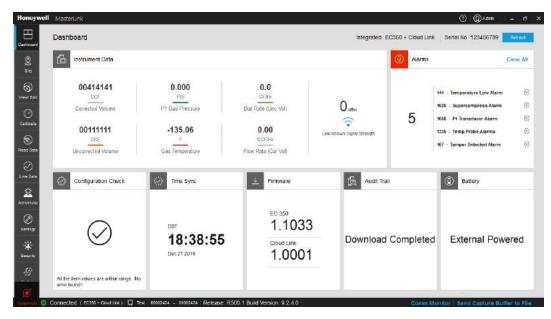
Refer Auto Download Settings page for more details.

## 4.3.4 Configuration Check

After connecting to the instrument, application compares values of items defined in the template with actual values in the instrument and reports the status of Config check widget on Dashboard. User can correct the values from the drilldown screen.

| Description<br>Corrected Volume<br>Uncorrected Volume | Default<br>9 | Actual   |  |
|---|--------------|----------|--|
| CONTRACTOR OF THE REPORT                              | 9            | 0        |  |
| Uncorrected Volume                                    |              | 0        |  |
|   | 4            | 00000000 |  |
| Ch-A Pulses Waiting                                   | 24           | 00090800 |  |
| Base Pressure   | 12           | 14.7300  |  |
| Atmospheric Pressure                                  | 45           | 14,7300  |  |
|   |              |          |  |
|   |              |          |  |

When all the values are corrected, the Config Check widget reports status as 'All Items found are within range'.

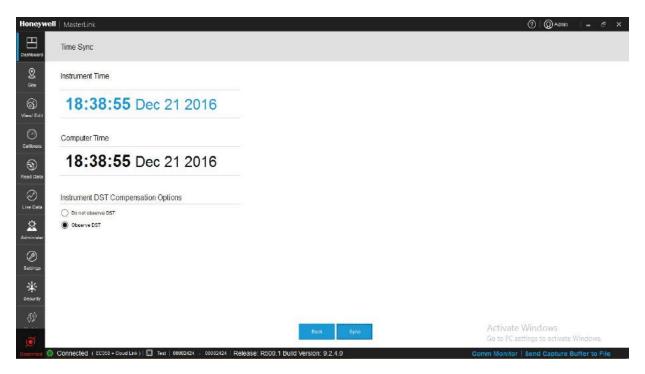


Read more: Item Template Configuration

### 4.3.5 Time Sync

'Time Sync' page provides a user configurable option to enable/disable auto time synchronization of the connected device with your PC.

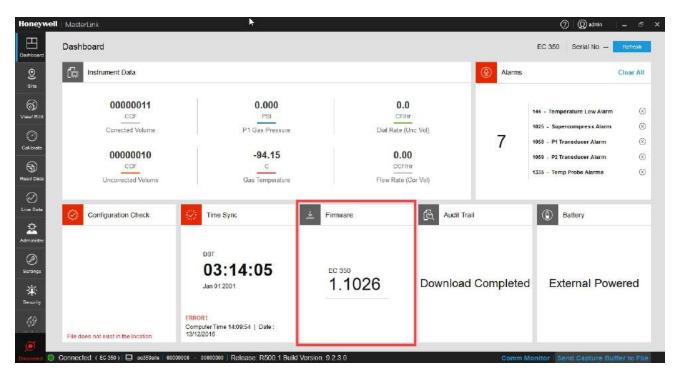
Alternatively, time can be synchronized manually by clicking on Sync.



Time difference trigger point is taken into account when application reports time synchronization status.

Refer Time Sync Properties page for more details.

# 4.3.6 Firmware Update



Dashboard reports the current firmware revision/version(s) loaded in the instrument(s).

Firmware versions can be upgraded using the firmware drill down screen.

| Update             |                   |                      |        |                    |        |  |
|--------------------|-------------------|----------------------|--------|--------------------|--------|--|
| EVC 1.1026         | Modem Certificate |                      |        |                    |        |  |
|                    |                   |                      |        | Step               | Status |  |
| Firmware Filename: | File Location:    |                      | Browse | Validate FW file   | Status |  |
|                    |                   |                      |        | Send Firmware      |        |  |
|                    |                   |                      |        | Validate Firmware  |        |  |
| Versions           |                   | Selected Firmware De | tails  | Sync date and time |        |  |
| Current Firmware   | 1.1026            | Firmware Type        |        |                    |        |  |
| Loader             | 2.0012            | New Firmware         |        |                    |        |  |
|                    |                   |                      |        |                    |        |  |
|                    |                   |                      |        |                    |        |  |
|                    |                   |                      |        |                    |        |  |
|                    |                   |                      |        |                    |        |  |
|                    |                   |                      |        |                    |        |  |
|                    |                   |                      |        |                    |        |  |
|                    |                   |                      |        |                    |        |  |
|                    |                   |                      |        |                    |        |  |
|                    |                   |                      |        |                    |        |  |

The Update screen consists of three tabs:

- EC 350 Firmware Upgrade
- Cloud Link 4G Modem
- Certificate

The current firmware version details are displayed on the relevant update screen. The firmware file to be used can be browsed and version of the firmware to be upgraded is displayed under 'Selected Firmware Details' section.

Browse and select the required firmware file to be uploaded and observe application displays the information of firmware file selected under 'Selected Firmware Details' section.

The new firmware is transferred to the instrument and then installed.

**Note:** MasterLink Software Application R500 Application (Windows & Mobile) supports firmware upgrade to the EC 350 and Cloud Link 4G Modem, only if the devices have the following firmware versions:

Cloud Link 4G Modem: 1.0001

EC 350: 1.1032

It is not recommended to perform a firmware upgrade, unless the devices are running on the versions mentioned above.

## 4.3.7 Audit Trail

As soon as you connect an instrument to MasterLink Software Applications, Audit Trail data from the instrument is automatically downloaded.

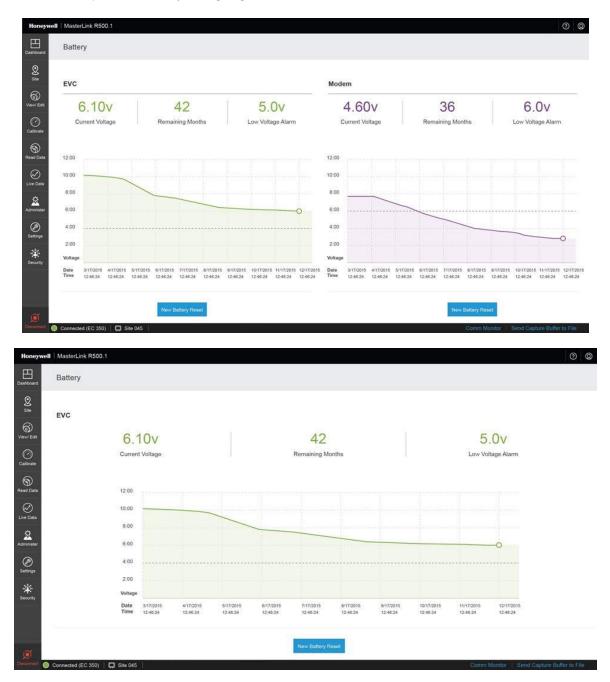
| Item File Audit T                           |                      |                      |                         |                     |                               | L or area         | L. A. Barrison and     |                     |                     |                     |                      |
|---|----------------------|----------------------|-------------------------|---------------------|-------------------------------|-------------------|------------------------|---------------------|---------------------|---------------------|----------------------|
|   | rail Alarm           | Logs   Even          | t Logs   Dia            | ignostic Logs       | Cellular Logs                 | Snortlist         | Activity Log           | 1                   |                     |                     |                      |
|   |                      |                      |                         |                     | Audit Tr                      | ail Report        |                        |                     |                     |                     |                      |
| Report Name: Auc<br>Report Selections: 1 si | lit Trail Report     | 12 10 07:15:00 To 1  | 0016 10 10 14:00        | -0.2                |                               |                   |                        | Site info :         | 0000000:00000000    | ✓ Log #: 1          | •                    |
| Report Selections. 1 si                     | le , Floil 2010-1    | 12-10 07.15.00 10.   | 2010-12-13 14.32        | .02                 |                               |                   |                        |                     |                     | 209 // .            |                      |
| Site ID: 0 0 Log1   Site N                  | lame: ec350site      | Site Location: hy    | 1                       |                     |                               |                   |                        |                     |                     |                     |                      |
|   | Incremen             | Incremen             | P1<br>Interval          | Interval            | Battery                       | Correcte          | Uncorrec               | P1 Gas              | Gas                 | Case                | Batte                |
| Log Date and Time                           | tal Cor<br>Vol (CCF) | tal Unc<br>Vol (CCF) | Avg<br>Press<br>(PSI-G) | Avg Gas<br>Temp (C) | Voltage<br>Reading<br>(VOLTS) | d Volume<br>(CCF) | ted<br>Volume<br>(CCF) | Pressure<br>(PSI-G) | Temperat<br>ure (C) | Temperat<br>ure (C) | Low<br>Limit<br>(VOL |
| 12/10/2016 7:15:00 AM                       | 0                    | 0                    | .000                    | -94.24              | 3.091                         | 9                 | 10                     | .000                | -94.25              | 22.11               | 4.600                |
|   |                      |                      |                         |                     |                               |                   |                        |                     |                     |                     |                      |
|   |                      |                      |                         |                     |                               |                   |                        |                     |                     |                     |                      |
|   |                      |                      |                         |                     |                               |                   |                        |                     |                     |                     |                      |
|   |                      |                      |                         |                     |                               |                   |                        |                     |                     |                     |                      |
|   |                      |                      |                         |                     |                               |                   |                        |                     |                     |                     |                      |
|   |                      |                      |                         |                     |                               |                   |                        |                     |                     |                     |                      |
|   |                      |                      |                         |                     |                               |                   |                        |                     |                     |                     |                      |

Refer Auto Download Settings for more details.

## 4.3.8 Battery

While connecting to the site, application reads the type of power source (Battery or External). If battery powered, voltage is displayed on Dashboard.

Dashboard battery drill down is not allowed if the site is externally powered. However, if the site is battery powered the Dashboard drill down plots the battery voltage against time.

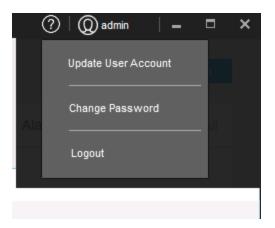


**Note:** For integrated EC 350 power source type is displayed based on EVC but not on MasterLink Software Application R500.1.

#### 4.3.9 Update User Account

If privileges associated with user role are modified, then the respective user account needs to be updated with a new passkey shared by administrator.

Click on username and select Update User Account.



The Update User Account pop-up appears.

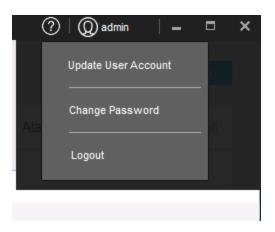
| Username         |   |  |
|------------------|---|--|
| Admin            |   |  |
| Current Password | ł |  |
| XXXXXXXXXXXXX    |   |  |
| Key              |   |  |
| Кеу              |   |  |
|                  |   |  |

Update user account using the new key sent by the administrator.

### 4.3.10 Change Password

Password of an existing user can be changed using the Change Password option.

Click on user-name and select Change Password.



The Change Password pop-up appears.

| ange Password    |        |       | $\otimes$ |
|------------------|--------|-------|-----------|
| Current Password |        |       | -         |
| New Password     |        |       | -         |
| Confirm Password |        |       | -         |
|                  | Change | Close |           |

Type current password, and then the new password. You also need to confirm your new password by typing it again.

After you finish making the required changes, click **Change** to save the changes.

## 4.4 View and Edit

This tab has the functionalities performing various interactions with device such as read/write item, read item file etc.

**Related topics:** 

Configure by Item

Configure by Group

Send Item File

Manage Logging Configuration

Manage User Table

Manage Shortlist

## 4.4.1 Configure by Group

MasterLink Software Application must be connected to an instrument for this function to work. 'Configure by Group' tab displays groups categorized by items corresponding to connected instrument.

Instrument items (which vary per type of instrument) can be grouped by function. The 'Configure by Group' tab displays the item values that apply to the type of connected instrument after grouping them by function. For example, all items related to pressure calibration are displayed on one screen.

When connected to an instrument, you can click on the **Read** button to read item values from the connected instrument.

To change item values:

- 1. Click on the desired function group (panel on left) to see the group items (panel on right).
- 2. Select an item by clicking the check box next to it.
- 3. Enter a value for the selected item number, and click on Write button.

| Honeywell               | MasterLink                     |             |           | 9              | 5                           |                           |         |        | ()<br>()             | *n  = ∂ X                   |
|-------------------------|--------------------------------|-------------|-----------|----------------|-----------------------------|---------------------------|---------|--------|----------------------|-----------------------------|
| Deshtoord               | View/ Edit                     |             |           |                |                             |                           |         |        |                      |                             |
| <b>2</b><br>30 <b>•</b> | Contigure by Group             | lonfigure b | yttem   1 | Send Item File | Logging Configuration   Man | age User Table   Manage t | hortist | I      | Q Search item b      | y number or description     |
| 69                      | Volume & Energy                | Þ           | Volume 8  | L Energy       |                             |                           |         |        | Read Barr Write      | tem Expant                  |
| View' Edit              | Correction Factors             |             |           | Item Number    | Description                 | Value                     |         | Unit   |                      | N                           |
| 0                       | P1.Pressure                    | _           |           | 000            | Corrected Volume            | 00000011                  |         | COF    | Read item            |                             |
| Celibrate               | Firesaue                       |             |           | 002            | Uncorrected Volume          | 00000010                  |         | COF    | values               | Write item<br>values to the |
| 9                       | P1 Pressure Calibration        | - 21        |           | 113            | Hi Res Cor Vol              | 11.0000                   |         | CCF    | from the             | connected                   |
| Read Data               | Temperature                    | - F         |           | 892            | HI Res Unc Vol              | 0.0090                    |         | CCF    | connected<br>device  | device                      |
| $\otimes$               |                                |             |           | 090            | Cor Volume Units            | CCF                       | •       | -      |                      |                             |
| Live Data               | Temperature Calibration        |             |           | 096            | Corr Vol # of Digits        | 8 Digits                  | *       | _      |                      |                             |
| 2                       | Flow & D(a) Rates              | 2           |           | 092            | Unc Volume Units            | CCF                       | •       | -      |                      |                             |
| idminisler              | Site Information               | 1           |           | 097            | Unc Val # of Digits         | 8 Digita                  |         | -      |                      |                             |
| $\oslash$               |                                | 10          |           | 098            | Neter Index Rate            | 10 CF                     |         | -      |                      |                             |
| Settings                | P1 Pressure and Temperature St | atistics    |           | 114            | Neter Scaling Factor        | 1.000000                  |         | _      |                      |                             |
| *                       | Volume and Flow Statistics     | ×.          |           | 433            | Volume Input Mode           | LF-UWB/instrument Drive   |         |        |                      |                             |
| Security                | Data & Tana Garda              | b.          |           | 432            | Weter Model                 | Other                     | •       |        |                      |                             |
| <i>69</i>               | Date & Time Config             | P           |           | 439            | Weter Displacement (CF)     | 1.009000                  |         | CF/rev |                      |                             |
| -                       | Audit Trail Log Configuration  | ×.          |           | 434            | Daily Backup Volume         | 00000000                  |         | COF    |                      |                             |
| JO .                    | Connected (EC350) D 6035       | Ŧ           |           |                |                             |                           | -       | 10000  | Monitor   Spod Cantu | v                           |

## 4.4.2 Configure by Item

MasterLink Software Application must be connected to an instrument for this function to work as different instruments have different items and groups categorized. 'Configure by Item' tab displays all items corresponding to connected instrument and by default, all items are sorted by item number.

An item can be searched with Item number or description. The check box must be checked in order to read/write value (s) of any item.

To change item values:

- 1. Select an item by clicking on the check box next to it.
- 2. Enter a value for the item number.
- 3. Click Write Item after making the changes. This will write the new item value to the connected instrument.

| Configur | re by Group   C | configure by Item   Send Item F | File Logging Configuratio | n   Manage User Tabi   | e   Manage Shortlist         |                             |
|----------|-----------------|---------------------------------|---------------------------|--|------------------------------|-----------------------------|
|          |                 |                                 |                           |  |                              | Q. Search Item by number or |
|          | Item Number     | Description                     | Value                     | Unit   | Read                         | Tem Write Tem Advance       |
|          | 000             | Corrected Volume                | 00000012                  | CEF  |                              |                             |
|          | 002             | Uncorrected Volume              | 00000010                  | CCF  | Read item values             | Write item value:           |
|          | 005             | Ch-APulses Waiting              |                           |  | from the<br>connected device | to the connected            |
|          | 006             | Ch-B Pulses Waiting             |                           | e de la companya de l | connected device             | device                      |
|          | 007             | Ch-C Pulses Waiting             |                           | -  |                              | -                           |
|          | 008             | P1 Gas Pressure                 | 0.000                     | PSI  |                              |                             |
|          | 010             | P1 High Alarm Limit             | 1422335.                  | PSI  |                              |                             |
|          | 011             | P1 Low Alarm Limit              | -71.117                   | PSI  |                              |                             |
|          | 012             | P1 Cal Atmos Pressure           |                           | PSI  |                              |                             |
|          | 013             | Base Pressure                   | 1234.000                  | PSI  |                              |                             |
|          | 014             | Atmospheric Pressure            | 14.6960                   | PSI  |                              |                             |
|          | 015             | Press used at P1-Zero           |                           | PSI  |                              |                             |
| -        | 040             | Owner word at D# Owner          |                           | 001  |                              |                             |

Sliding the mouse over the column divider until a cross is displayed, then dragging it to the desired width can resize the column widths. Use the up/down arrows or across arrows for full viewing of all data fields.

Note: Selecting a check box against an item after modifying the search criteria would refresh the previous selections.

Click on Advance Options and select Raw Item Access to modify the value of an item.

O Connected (EC 350) 📮 ac350ata 000000000 - 00000000 Release R500 1 Build Version 9.2.3.0

| View/ I   | Edit           |                              |                        |            |                          |           |                                       |              |
|-----------|----------------|------------------------------|------------------------|------------|--------------------------|-----------|---------------------------------------|--------------|
| Configure | e by Group   C | onfigure by Item Send Item F | le Logging Configurati | tion   Mar | nage User Table   Manage | Shortlist |                                       |              |
|           |                |                              |                        |            |                          |           | Q Search item<br>Read Item Write Item | Advance Opt  |
|           | Item Number    | Description                  | Value                  |            | Unit                     |           |                                       | Raw Item Acc |
|           | 111            | Temperature Factor Mode      | Fixed                  | •          |                          |           |                                       | Shut Down    |
|           | 112            | P1 Transducer Type           | Gauge                  | v          |                          |           |                                       |              |
|           | 113            | Hi Res Cor Vol               | 387.7509               |            | CF                       |           |                                       |              |
|           | 114            | Meter Scaling Factor         | 1.000000               |            |                          |           |                                       |              |
|           | 116            | Squared Supercompress        | 0.9999                 |            |                          |           |                                       |              |
|           | 118            | Reference Number 1           |                        |            |                          |           |                                       |              |
|           | 119            | Reference Number 2           |                        |            |                          |           |                                       |              |
|           | 120            | Calibration Date P1 Press    | 1/1/0001               | <u></u>    | MM-DD-YY                 |           |                                       |              |
|           | 121            | Calibration Date Temp        | 1/1/0001               | <u></u>    | MM-DD-YY                 |           |                                       |              |
|           | 122            | Firmware Version             | 1.1102                 |            |                          |           |                                       |              |
|           | 127            | Instrument Type Code         |                        |            |                          |           |                                       |              |
|           | 130            | Scroll List Item 1           |                        |            |                          |           |                                       |              |
|           |                |                              |                        |            |                          |           |                                       |              |

Search for a particular item either by number or description.

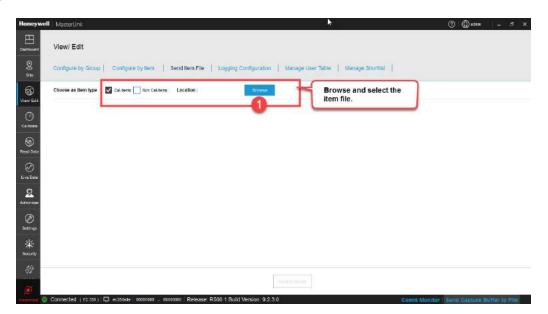
|    | View/ I |             |                                 |          |                 |   |
|----|---------|-------------|---------------------------------|----------|-----------------|---|
| .0 |         |             | onfigure by item   Soud Item Fi |          |                 | Manage User-Table   Manage Bhotlast   Q Search room by numbers  |
|    |         | -           |                                 |          |                 | - Neas Eam - Mats Eam - Advance   |
| -  |         | Item Humber | Description                     | Value    |                 | Unit  |
|    |         | 111         | Temperature Factor Mode         | Fixed    | *               |   |
|    |         | 112         | P1 Transducer Type              | Gauge    | Raw Item Access | s 🛞   |
|    |         | 113         | Hi Res Cor Val                  | 387.7509 | Item Number *   | 114   |
|    |         | 114         | Meter Scaling Factor            | 1.00000  |                 |   |
|    |         | 116         | Squared Supercompress           | 0.9999   | Value           | 2   |
|    |         | 118         | Reference Number f              |          |                 | and the second se |
|    |         | 119         | Reference Number 2              |          |                 | Read item White item  |
|    |         | 120         | Calibration Date P1 Press       | 1/1/0001 |                 | MM-DD-YY  |
|    |         | 121         | Calibration Date Temp           | 1/1/0001 | (iii)           | ND4-DD-YY   |
|    |         | 122         | Firmware Version                | 1.1182   |                 |   |
|    |         | 127         | Instrument Type Gode            |          |                 |   |
|    |         | 130         | Scroll Listitem 1               |          |                 | 1 miles   |
| 1  | 1       |             |                                 |          |                 |   |

Clicking on Shut down will shut down the device.

### 4.4.3 Send Item File

An Item File stores the current instrument's item code values on your computer in a file. You can configure different items corresponding to an instrument in an 'Item File' and then send it to the device.

Click **Browse** and select the item file. (.IE3 for EC 350, .ICL for Cloud Link 4G Modem, .ECL for EC 350 + Cloud Link 4G Modem)



View the values configured for different item numbers.

| View/ Edit   |                                 |                     |                             |                   |                         |               |                  |         |
|--------------|---------------------------------|---------------------|-----------------------------|-------------------|-------------------------|---------------|------------------|---------|
| Configure by | Group Configure by Item         | Send Item File Ma   | inage Logging Configuration | Manage User Table | Manage Shortlist        | Q Search item | by number or des | criptic |
| Location: We | 10nt3ks015\RMG\MasterLinkR500.1 | E1_Build_9_Nov_2015 | Browse                      |                   |                         |               |                  |         |
| Item Number  | Item Description                | Value               | Unit                        | Item Number       | Item Description        | Value         | Unit             |         |
| 0000         | Corrected Volume                | 00242990            | CF                          | 0013              | Excess TCal Change %    | 2,0000        | CF               |         |
| 0002         | Uncorrected Volume              | 00266559            | CF                          | 0014              | Total Correction Factor | 1.0000        | CF               |         |
| 0005         | Ch-A pulses waiting             | 00000000            | (4)                         | 0015              | Press Correction Factor | 1.0000        | -                |         |
| 0006         | Ch-B pulses waiting             | 00000000            | -                           | 0016              | Temp Correction Factor  | 1.0000        | -                |         |
| 0007         | Ch-C pulses waiting             | 00000000            | PSI                         | 0017              | Aux Correction Factor   | 1.0000        | PSI              |         |
| 0008         | P1 gas pressure                 | 13.775              | PSI                         | 0018              | Unsquared Supercompress | 1,0000        | PSI              |         |
| 0010         | P1 high alarm limit             | 99999.99            | PSI                         | 0019              | Battery Voltage Reading | 2.372         | PSI              |         |
| 0011         | P1 low alarm limit              | -1.000              | PSI                         | 0020              | Battery Low Volt Limit  | 4.600         | PSI              |         |
| 0012         | P1 Cal atmos pressure           | 0.0000              | PSI                         | 0021              | Shutdown Voltage Limit  | 4.000         | PSI              |         |
| 0012         | P1 Cal atmos pressure           | 0.0000              | PSI                         | 0021              | Shutdown Voltage Limit  | 4.000         | PSI              |         |
| 0012         | P1 Cal atmos pressure           | 0.0000              | PSI                         | 0021              | Shutdown Voltage Limit  | 4.000         | PSI              |         |
| 0012         | P1 Cal atmos pressure           | 0.0000              | PSI                         | 0021              | Shutdown Voltage Limit  | 4.000         | PSI              |         |
| 0012         | P1 Cal atmos pressure           | 0.0000              | PSI                         | 0021              | Shutdown Voltage Limit  | 4.000         | PSI              |         |

Click Send to Device to send the Item File to the connected field instrument.

# 4.4.4 Logging Configuration

Using MasterLink Software Application software, an instrument can be configured to contain as many as 5 independent logs, each with its own collection of item values and collection (sample) frequency. Each log can be configured to collect values for up to 20 items.

| Configure by Grou     | p   Configure by Item   Send Item File  | Logging Configuration   Manage User Table   Man | age Shortlist |       |
|-----------------------|---|---|---------------|-------|
| Select Items          | Allocate Log Memory   | Log Configuration Up Down                       | <b>N</b>      |       |
| appropriate items lis | <ul> <li>mover to the Log Configuration tree and drop it onto the<br/>t or</li> <li>ired item to add to the selected items list.</li> </ul> | □ 目 Audit Trail Logs                            | 100           | Log 1 |
| ltem Number           | Description   | © 5 minutes v                                   | 80 -          |       |
| 0                     | Corrected Volume  | - 58 tems (11 of 20)                            | -             |       |
| 2                     | Uncorrected Volume  | 225 - Incremental Cor Vol                       |               |       |
| 113                   | Hi Res Cor Vol  | () 225 - Incremental Vinc Val                   | 60-           |       |
| 892                   | Hi Res Unc Vol  | O 206 - P1 Interval Avg Press                   |               | Log 4 |
| 90                    | Cor Volume Units  | (*) 200 - Fri Merval Avg Gas Temp               | 40 -          |       |
| 96                    | Corr Vol # of Digits  | (*) 48 - Battery Votage Reading                 | - 1           |       |
| 92                    | Unc Volume Units  | (7) 0 - Corrected Volume                        | -             | Log 5 |
| 97                    | Unc Vol # of Digits   | (3 2 - Uncorrected Volume                       | 20            |       |
| 98                    | Meter Index Rate  | (7) 8-P1 Gas Pressure                           |               |       |
| 114                   | Meter Scaling Factor  | A serie construction                            | - <u>1</u>    |       |

View items by number sorts all items supported by the connected instrument. View items by function sorts all items related to the function / group. Users can also click on the headers (item number and description) to sort the list of item numbers. Filter text-box can be used to search item by number or description. Time interval displayed in the 'Log Configuration' tree can be right clicked to configure the period at which log records are recorded.

From the 'Select Items' tab, drag and drop or double click the desired items from the Select Items list over to the log configuration tree.

| Configure by Grou     | p   Configure by item   Send item File  | Logging Configuration   Manage User Tat                                       | ole   Manage Shortlist |       |
|-----------------------|---|---|------------------------|-------|
| Select Items          | Allocate Log Memory   | Log Configuration U   | Ip Down 🕅              |       |
| appropriate items lis | -<br>m over to the Log Configuration tree and drop it onto the<br>st or<br>ired item to add to the selected items list. | 三 III Audit Trail Logs  | 100                    | Logi  |
| Item Number           | Description   | S minutes v   | 80 -                   |       |
| 226                   | Incremental Unc Vol   | - 58 tems (11 of 20)  | -                      |       |
|                       |   | 🔿 225 - Incremental Cor Vol   | 60 -                   | Log 2 |
|                       |   | ② 225 - Incremental line Vol  |                        | Log 4 |
|                       |   | 💛 206 - P1 Interval Avg Press   | 40 -                   |       |
|                       |   | <ul> <li>48 - Battery Votage Reading</li> <li>0 - Corrected Volume</li> </ul> | ہ -<br><br>20 –        | Log 5 |
|                       |   | O 2 - Uncorrected Volume  |                        |       |
|                       |   | 🗇 8 - P1 Gas Pressure   |                        |       |

The order of the items in the Log Configuration list determines the order in which the values are stored and thus the order in which they will later appear in a report. Items in the list can be moved up and down to change the order.

The selected items from a log can be removed by clicking 🤿

The configuration can be saved for future references to a configuration file (\*.cnfg) with the **Save setup to file** button. It can later be retrieved with the **Read setup from file** button. Only \*.cnfg files can be read; item files (\*.ie3) are not compatible.

In the 'Allocate log memory' tab, configure the percentage of available memory which can be allocated to each log.

| Configure by G | sroup   Co | nfigure by Ite | m Send  | Item File | Logging Configuration   Manage User Table   | Manage Shortlist    |       |
|----------------|------------|----------------|---------|-----------|---|---------------------|-------|
| Select Items   | Allo       | cate Log Me    | emory   | -         | Log Configuration 0p  | Dewn 🗑              |       |
|                | Percent    | Days           | Records | Enable    | Audit Trail Logs     In Log1  | · 100               | Log 1 |
| Log 1          | 20.0 🔻     | 10             | 2898    | 2         | - 18 Log2<br>(7) 10 minutes -   | 80 -                |       |
| Log 2          | 15.0 +     | 18             | 2609    |           | Terms (9 of 20)     (3) 225 - Incremental Cor Vol                                       | 60-                 | Logi  |
| Log 3          | 10.0 •     | 16             | 1581    | 2         | <ul> <li>3 228 - Incremental Linc Vol</li> <li>3 208 - P1 Interval Avg Press</li> </ul> | -<br>-<br>-<br>- 04 |       |
| Log 4          | 5.0 🔹      | 33             | 790     | 7         | (2) 207 - Interval Avg Gas Temp<br>(2) 48 - Battery Voltage Reading                     |                     |       |
| Log 5          | 50.0 •     | 7905           | 7905    | ~         | 0 - Corrected Volume     (?) 6 - P1 Gas Pressure  | 20 –<br>-<br>-      |       |

#### Note: The sum total of memory allocated for all logs must be equal to 100%.

The consequence of a particular allocation setting is reflected in the number of day's worth of data as well as the number of records that can be written before overwriting will occur. The smaller a log's allocation, the less data it will be able to store. When the limit is reached, the oldest records will be overwritten with the newer ones.

#### Note: A log's interval setting will impact days, but not record numbers.

The Enable check-boxes may be used to suspend data collection for one or more logs. A log's existing records will not be affected when the log is disabled.

Ensure that the device is connected to MasterLink Software Application. Click **Send to Instrument** to push the log configuration to the device. A few seconds will be required for the transfer. A window should appear indicating 'Successfully Configured'.

Click Read setup from Device to read logging configuration settings from the connected instrument.

Attention: When you change the log configuration by modifying the memory allocation, all existing logs will be erased.

Attention: It is recommended to save the item file and log configuration file before changing the memory allocation of the logs.

#### 4.4.5 Manage User Table

Access to an instrument can be controlled by defining users and assigning them Passcodes with defined privileges. Start by creating a role, then assign the role to the user and define Passcode.

Click on **Open** and load an existing saved .UTE (Manage User Table) file.

|        |         |          | Add User | Delete<br>Role Nar | tester Droilean                        | Add Role              | Update              |
|--------|---------|----------|----------|--------------------|--|-----------------------|---------------------|
| Enable | User ID | Password | Role     | • teste            | tester - Privilege<br>Modify Open Hems | Modify Event tems     | Modify Sealed Items |
|        | 3       | •••••    | tester   | • Tech             | <br>Can Read Event Log                 | Can Change User Table | HMI Level 2 Access  |
|        |         |          | ~        |                    | <br>HMI Level 3 Access                 | Cloud Link Write      |                     |
|        |         |          | 2        | QA.                | <br>Current Privilege 65609            |                       |                     |
|        |         |          |          |                    | 1                                      |                       |                     |
|        |         |          |          |                    |  |                       |                     |
|        |         |          |          | 1                  |  |                       |                     |
|        |         |          |          |                    |  |                       |                     |

To configure a user table:

1. Start by creating a role. To create a role, click Add Role. The Add New Role pop-up window appears. assign a name to the role, and then assign user privileges. Click Add to complete.

| Add New Role |     |        | 1 | $\otimes$ |
|--------------|-----|--------|---|-----------|
| Add Role *   |     |        |   |           |
| Privilege    | 0   |        |   |           |
|              | Add | Cancel |   |           |

Based on the privileges assigned to the role, the value of the privilege changes or vice-versa.

|              |                        | Add Role Update Dele                     | te |
|--------------|------------------------|--|----|
| Role Name    | Technitian - Privilege |  |    |
| Technitian 🕨 | Modify Open Items      | Modify Event Items Modify Sealed Items   |    |
|              | Can Read Event Log     | Can Change User Table HMI Level 2 Access |    |
|              | HMI Level 3 Access     | Cloud Link Write                         |    |
|              | Current Privilege 8    |  |    |
|              |                        |  |    |

- 2. Click the check box under previleges to assign permissions to the role.
- 3. After a role is created, click Add User to create a new user.
- 4. After updating the privileges, click **Update** to save the changes.

The following privileges can be granted:

- Modify Open Items
- Modify Event Items
- Modify Sealed Items
- Can Read Event Log
- Can Change User table
- HMI Level 2 Access
- HMI Level 3 Access
- CloudLink Write

#### To add a user:

1. Click Add User to add new users.

| Add New User | $\otimes$  |
|--------------|------------|
| User ID      | 11         |
| Password     | •••••      |
| Role         | Manager 🔹  |
|              | Add Cancel |

2. User IDs and Passcodes are used to login to an instrument. When creating a user account, assign User ID, and a Passcode, and assign a role to the new user.

- 3. Valid User IDs are 0 through 99 (decimal numeric). Valid passcodes are 00000 through 99999 (decimal numeric). The Passcode must be 5 digits in length.
- 4. Assign a role or change the role of an existing user by selecting a different role from the **Role** drop-down.
- 5. Click Add to complete the process of adding a new user.

Click Save As to save a copy of the user table created. This user table is encrypted and saved in .UTE format.

Click on Send to Device to send a user table to the connected instrument.

### 4.4.6 Manage Shortlist

A Shortlist is the same as the standard Item list (stores the current instrument's item values), except that you can customize it to include required items.

| Honeywell       | MasterLink                             |   |        | 0                        | (Q) admin          | -        | d₽ ×   |
|-----------------|--|---|--------|--------------------------|--------------------|----------|--------|
|                 | View/ Edit                             |   |        |                          |                    |          |        |
| 2<br>98-        | Configure by Group   Configu           | rre by litem   Send Item File   Logging Configuration   Manage User Table | Ma     | anage Shortlist          |                    |          |        |
| Vauri Edit      | Shortlist item file download configura | iton  |        | <i>u</i> :               |                    |          |        |
| 0               | Instrument Type                        | Hems  |        | Selected Rema            |                    |          |        |
| Calibrate       | EC 350                                 | 0 - Corrected Volume  |        | 0 - Corrected Volume     |                    |          |        |
| କ୍ତ             | Cloud Link                             | 2 - Uncorrected Yoluma  |        | 8 - Ch-8 Pulses Weiting  |                    |          |        |
| Read Dote       | EC350 + Cloud Link                     | 5 - Ch-A Pulses Walting   |        |                          |                    |          |        |
| $\otimes$       |  | 6 - Ch-S Pulses Waking  | 3      |                          |                    |          |        |
| Live Date       |  |   | 101    |                          |                    |          |        |
| 2               |  | 201 No. 201 Oracle State (201   | ove A3 |                          |                    |          |        |
| Administer      |  | 10 – Pt High Alacit Limit   |        |                          |                    |          |        |
| 0               |  | 11 - P1 Lew Alarm Lind  |        |                          |                    |          |        |
| Settings        |  | 12 - Pf CelAtrop Pressure   |        |                          |                    |          |        |
| · 🔆<br>Security | 0                                      | 14 - Atmospheric Pressure   |        |                          |                    |          |        |
| 100000          |  |   |        |                          |                    |          | 4      |
| <i>(</i> }      | e D Alista Da • Site                   | ID2 ATSN Da *   |        | Read actup from the      | Serve setup to fi  |          | Same . |
| (I) Sh          | e ID All Sto Da • Site                 | U2 ALDELA   |        | Histo Security From Tile | Serve set up to th |          | Save   |
| Deserved (O     | Connected (EC 359) 📮 ec350ab           | a 00040000 - 00004000 Release: R500.1 Build Version: 9.2.3.0              |        | Comm Monitor 5em         | d Gasture B        | utter to | File   |

To create a Shortlist:

- 1. Start by selecting the instrument type.
- 2. The items displayed in the 'Items' column are populated based on the selected instrument type.
- 3. Use the Add button to move selections to the Selected Items pane.
- 4. Items listed in the 'Selected Items' column will be printed using Shortlist Report.

The Save option, saves the Shortlist to the database.

The Save Setup to file option exports the shortlist.

**Note:** By default, instrument specific short lists are created (all sites). Use the Site ID 1 and Site ID 2 drop-downs to create site specific short lists. The short list files are named as <SiteID1>\_<SiteID2>\_yymmddhhmmss.CE3 file. Example: 44571111\_44571111\_161214120204

You can save and download the Shortlist as a file for later use. You can also read an existing Shortlist file.

**Note:** By default all shortlist files are stored in *C*:\*ProgramData*\*Honeywell*\*MasterLink Software Application* \*ShortListFiles*.

# 4.5 Calibrate

**Related topics:** 

Pressure Calibration

Temperature Calibration

### 4.5.1 Pressure Calibration P1

This procedure is used to calibrate the pressure transducer to a pressure calibration standard.

#### UNDERSTANDING PRESSURE CALIBRATION:

This is a simple two-point calibration. First, calibrate pressure at a low scale pressure and then again at a high scale pressure. Each time, adjust the pressure calculated by the instrument to match the reading from your pressure standard (reference standard calibrator). Adjusting the low scale pressure is called "Zero Calibration" while adjusting the high scale pressure is called "Span Calibration." Span calibration actually uses some of the information determined from performing the zero calibration. For this reason, you will need to at least "sample" a low scale pressure before you can begin the span calibration. Sampling occurs when you indicate that the pressure is ready to be averaged.

#### BEFORE STARTING THE PRESSURE CALIBRATION:

Make certain that the following items have been verified for correctness:

- Pressure Calibrator
- Pressure Unit Code (unit of measure)
- Transducer Serial Number (assigned at the factory)
- Type of Transducer (gauge or absolute)

P1 Calibration table displays current Calibration pressure and two previous pressure values along with Calibration date in mm-dd-yy format. Current span Calibration pressure and two previous pressure values are also displayed.

#### To calibrate pressure:

- 1. Apply a zero reference pressure (low range) to the P1 pressure transducer of the instrument, and wait for the instrument to stabilize.
- 2. Click Average Now to apply a zero reference pressure to the instrument.

| Calibrate         Pressure 1 Zero Calibration         Pressure 1 Zero Calibration         Pressure 1 Zero Calibration         Apply any term reference, pressure in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and work for the orthogenee in the instrument's pressure input and the instrumen  | _   |  |  |  |                  |                |  |                                 |   |  |                         |
|--|---|--|--|--|------------------|----------------|--|---------------------------------|---|--|-------------------------|
| Pressure 1.2km California     Pressure 1.2km California    Pressure 1.2km California Pressure 1.2km California Pressure 1.2km California Pressure 1.2km California Pressu  | Calibrate   |  |  |  |                  |                |  |                                 |   |  |                         |
| Ren husser       Nois   | P1 Calibration  | P2 Calibration Tempe   | erature Calibrat   | ion  |                  |                |  |                                 |   |  |                         |
| 13       Base Pressure       14.6660       P0         14       Arcoganese Pressure       1000       P0         15       Catabrace Pressure       1000       P0         16       Catabrace Pressure       1000       P0         18       Catabrace Pressure       1000       P1         19       Catabrace Pressure       1000       P0         19       Catabrace Pressure       1000       P1         19       Catabrace Pressure       1000       P1         10       Catabrace Pressure       1000       P1         20       Catabrace Pressure       1000       P1         21       Catabrace Pressure       1000       P1         22       Catabrace Pressure       1000       P1         23       Mon PCat Panth PS Base Base Base Panth PS Base Pressure Pressure Panth PS Base Pressure Pant   | Pressure 1 Zero   | Calibration  |  |  |                  |                |  |                                 |   |  |                         |
| 13       Base Pressave       14.660       PE         14       Athogs are fires and in 1600       PE         13       Calibrate Pri-Size       17.201       PE         14       Athogs are fires and in 1600       PE       Interviewer and Pri-Size       17.201         14       Calibrate Pri-Size       4.664       PE       Interviewer and Pri-Size       17.201       PE         14       Calibrate Pri-Size       4.664       PE       Interviewer and Pri-Size       17.201       PE         14       Calibrate Pri-Size       4.664       PE       Interviewer and Pri-Size       Interviewer and Pri-Size <th>Item Humber</th> <th>Description</th> <th>Value</th> <th>Unit</th> <th></th> <th>يىس</th> <th>Apply any 'zero n</th> <th>eference' pre</th> <th>ssure to the ins</th> <th>tument's pressur</th> <th>e input and wait for th</th>  | Item Humber   | Description  | Value  | Unit   |                  | يىس            | Apply any 'zero n                      | eference' pre                   | ssure to the ins  | tument's pressur   | e input and wait for th |
| 14       Amonganess Pressure       1.0000       PRI         17       Catabraste Prison       1.100       PRI         18       CallPres (Prison       1.101       PRI         19       CallPres (Prison       1.000       PRI         20       CallPres (Prison       1.000       PRI         21       CallPres (Prison       1.000       PRI         22       CallPres (Prison       0.000       PRI         23       Min PCal Painto H%       0.0000       PRI         24       Brows FGE (Prison       PRI       PRI         23       Min PCal Painto H%       0.0000       PRI         24       Brows FGE (Prison       PRI       PRI         25       PRI Pressure Units       PRI       PRI         24       Brows FGE (Prison       PRI       PRI         25       PRI Pressure Units       PRI       PRI         26       Brows FGE (Prison       PRI Pressure CallPrison       PRI Pressure CallPrison         27       CallPrison       PRI Pressure CallPrison       PRI Pressure CallPrison       PRI Pressure CallPrison         28       CallPrison       PRI Pressure CallPrison       PRI Pressure CallPrison       PRI Pressure CallPrison   | 13  | Base Pressure  | 14.6960  | PSI  | 1                | TIT            | to stabilize before                    | e pressing th                   | e AVERAGE NO  | W button. After th   | ne laveraiged pressure  |
| 10       Collinear 11 - Colling 11 - Collin   | 14  | Atmosphene Pressure  | 1 0000   | PSI  |                  | 240            |  |                                 |   |  |                         |
| 13       Caltree2 Pri-Zeo       -4.0014       PSI         20       Caltree1 Pri-Zeo       5.960  | 17  | Calibration P1-Zero  | -1.7918  | PSI  |                  |                | Live Pressure                          |                                 | 0.35064   | PSI  |                         |
| 13       Calinder Pr-Clean       40014       Fis         24       Calinder Pr-Clean       8806   | 18  | Cal Prev-1 P1-Zero   | -1.B145  | PSI  |                  |                |  | -10 - 10                        |   |  |                         |
| 21       Cut Prev1 PHSpan       19600  | 19  | Cal Prev-2 P1-Zero   | -0.0014  | PSI  |                  |                |  | Average                         | lane Cha  | (13) e (   |                         |
| 22       CAP Prev2PI-Span       1000          23       Min PCa Point Drff %       50000          24       Breess PCal Change %       1000          87       P1 Prevaule Units       P3          112       P1 Transdueri Tys       9 wage          112       P1 Transdueri Tys       9 wage          000       rger Generor         Commonitor in the instruction of the instruc   | 20  | Calibration P1-Span  | 0.9966   |  |                  |                |  |                                 |   |  |                         |
| 23         Mn POal Point bit %         50.000  | 21  | Cal Prev-1 P1-Span   | U.9989   |  |                  |                |  |                                 |   |  |                         |
| 24         Excess PC4: Dhange %         2.000            87         P1 Pressure Units         P3            112         P1 Transdour Type         0 orgo         orgo           112         P1 Transdour Type         0 orgo         orgo           Corrected ( to 2001)         except ( orgonome - corrected ( to 2001)         Release: RS00 1 Build Variation: 0.2.0.0         Corrected ( to 2001)  | 22  | Cal Prev-2 P1-Span   | 1.0000   |  |                  |                |  |                                 |   |  |                         |
| 83       P1 Pressure tunis       P3  | 23  | Min PCal Point Diff %  | 50.0000  |  |                  |                |  |                                 |   |  |                         |
| 112       P1 Transdate it Type       9wage   | 24  | Excess PCal Change %   | 2.0000   |  |                  |                |  |                                 |   |  |                         |
| 112       P1 Transdate it Type       9wage   | 1993  | P1 Pressure Units  | 1.000.000.000  |  |                  |                |  |                                 |   |  |                         |
| Connected (KSW0)   Connected (KS | 2003  |  |  | 222  |                  |                |  |                                 |   |  |                         |
| Apply any two reference pressure to the instance it is ins                        |   |  |  | e: R500.1 Build V  |                  | en Collection  |  |                                 | Comm  | -  |                         |
| Item Number         Description         Write         Unit           13         Base Pressure         1234 000         PSI           14         Atmosphanic Pressure         14 6660         PSI           17         Calibration P1-Zero         0.0000         PSI           18         Cali Prev-1 P1-Zero         0.0000         PSI           19         Calibration P1-Span         0.0000         PSI           20         Calibration P1-Span         1.0000            21         Calibration P1-Span         1.0000            22         Calibration P1-Span         1.0000            23         Min PCal Point Diff %         50.0000            24         Excess PCal Change %         25.0000            87         P1 Pressure Units         PSI  | MasterLink  |  |  | e R500 1 Build √   |                  | en Collection  |  |                                 | Comm  | -  |                         |
| 13       Base Pressure       1234 000       PSI         14       Atmospheric Pressure       14 6960       PSI         17       Calibration P1-Zero       0.0000       PSI         18       Cal Prev-1 P1-Zero       0.0000       PSI         19       Cal Prev-2 P1-Zero       0.0000       PSI         20       Calibration P1-Span       1.0000          21       Cal Prev-2 P1-Span       1.0000          22       Cal Prev-2 P1-Span       1.0000          23       Min PCal Point Diff %       50.0000          87       P1 Pressure Units       PSI  | MasterLink<br>Calibrate   | ٤  |  |  |                  | er (eltination |  |                                 | Comm  | -  |                         |
| 13     Base Pressure     124 000     PSI       14     Atmosphalic Pressure     14 6960     PSI       17     Calibration P1-Zero     0.0000     PSI       18     Cal Prev-1 P1-Zero     0.0000     PSI       19     Cal Prev-2 P1-Zero     0.0000     PSI       20     Calibration P1-Span     1.0000        21     Cal Prev-1 P1-Span     1.0000        22     Cal Prev-2 P1-Span     1.0000        23     Min PCal Point Diff %     50.0000        87     P1 Pressure Units     PSI   | MasterLink<br>Calibrate<br>P1 Calibration   | P2 Calibration   Tempo   |  |  |                  | en ( chimmon   |  |                                 | Comm  | -  |                         |
| 14     Atmosphrant Pressure     14.6660     PGI       17     Cellbration P1-Zero     0.0000     PSI       18     Call Frev-1 P1-Zero     0.0000     PSI       19     Call Prev-2 P1-Zero     0.0000     PSI       20     Cellbration P1-Span     1.0000        21     Call Frev-1 P1-Span     1.0000        22     Call Frev-2 P1-Span     1.0000        23     Min PCal Point Diff %     50.0000        24     Excess PCal Change %     25.0000        87     P1 Pressure Units     PSI   | MasterUnk<br>Calibrate<br>P1 Calibration<br>Pressure 1 Zero   | P2 Calibration   Tempo<br>Celibration  | erature Celibrat   | uon  |                  |                |  |                                 |   | 0  | ) (Q) admit             |
| N         Example         Force         F  | MasterLink Calibrate P1 Calibration Pressure 1 Zero Item liumber  | P2 Calibration Tempo<br>Celibration<br>Description   | erature Colibrat<br>Volue  | ION  <br>Unit  |                  |                | to stabilize before                    | e pressing th                   | voure to the inte   | Contraction of the second                                  | ) (Q) edmit             |
| 19         Call Prev-2 P1-Zero         0 0000         PSI           20         Call Oracle P1-Span         1 0000            21         Call Prev-1 P1-Span         1 0000            22         Call Prev-2 P1-Span         1 0000            23         Min PCal Prev-2 P1-Span         1 0000            24         Excess PCal Change %         25.0000            87         P1 Pressure Units         P31  | MasterLink<br>Calibrate<br>P1 Calibration<br>Pressure 1 Zero<br>Item Number<br>13   | Calibration Tempo<br>Calibration<br>Description<br>Base Pressure   | Velue<br>1234.000  | ion  <br>Unit<br>PSI   |                  |                | to stabilize before                    | e pressing th                   | voure to the inte   | Contraction of the second                                  | ) (Q) edmit             |
| 19         Call Prev-2 P1-Zero         0.0000         P31         P1000 match           20         Call braton P1-Span         1.000          Dates           21         Call Frew-1 P1-Span         1.000          Dates           22         Call Frew-2 P1-Span         1.000          Dates           23         Min PCal Point Diff %         50.000          Dates           24         Excess PCal Change %         25.0000          Dates           87         P1 Pressure Units         P31          Dates  | MasterLink<br>Calibrate<br>P1 Calibration<br>Pressure 1 Zero<br>Item Number<br>13<br>14   | P2 Calibration Tempo<br>Cellbration<br>Description<br>Base Pressure<br>Atmospheric Pressure  | Velue<br>1234.000  | ion  <br>Unit<br>PSJ<br>PSJ  |                  |                | to stabilize befor<br>press the NEXT b | e pressing th<br>autton to ente | ssare to the int<br>e AVERAGE HO<br>r a new ZERO o              | turment's pressu<br>W botton, Arter tr<br>af point.        | ) (Q) edmit             |
| 21         Cal Prev-1 P1-3pan         1.0000            22         Cal Prev-2 P1-Span         1.0000            23         Min PCal PointDiff %         50.0000            24         Excess PCal Change %         25.0000            87         P1 Pressure Units         P3t   | MasterLink<br>Calibrate<br>P1 Calibration<br>Pressure 1 Zero<br>Item Number<br>13<br>14<br>17                                     | P2 Calibration Tempo Calibration Description Base Pressure Amesphane Pressure Calibration P1-Zero  | Verue         1234 000           14 6960         0.0000  | ton  <br>brut<br>PSI<br>PSI  |                  |                | to stabilize befor<br>press the NEXT b | e pressing th<br>autton to ente | ssare to the int<br>e AVERAGE HO<br>r a new ZERO o              | turment's pressu<br>W botton, Arter tr<br>af point.        | ) (Q) edmit             |
| 21         Cal Prev-1 P1-Span         1.0000   | Mastertink Calibrate P1 Calibration Pressure 1 Zero Item liumber 13 14 17 18  | P2 Calibration P2 Calibration Celibration Description Base Pressure Atmospheric Pressure Celibration P1-Zero Cel Prevs1 P1-Zero Cel Prevs1 P1-Zero   | Velue<br>1234.000<br>14.6560<br>0.0000   | ton Unit<br>PSI<br>PSI<br>PSI  | Persion: 9.2.3.0 |                | to stabilize befor<br>press the NEXT b | e pressing th<br>outton to ente | scare in the Inn<br>4 AVERAGE HO<br>4 a new ZERO C<br>Averaging | turnent's pressu<br>W button, After th<br>al point.<br>PSI | ) (Q) edmit             |
| 22         Cal Prev2P1-Span         1.000            23         Min PCal Point Diff %         50.0000            24         Excess PCal Change %         25.0000            87         P1 Pressuré Units         P3I   | MasterLink Calibrate P1 Calibration Pressure 1 Zero Item liumber 13 14 17 18 19   | Calibration Tempo<br>Calibration Description<br>Base Pressure<br>Atmospheric Pressure<br>Calibration P1-Zero<br>Cal Prev-1 P1-Zero<br>Cal Prev-2 P1-Zero   | Volue<br>1234.000<br>14.6560<br>0.0000<br>0.0000   | ton Unit<br>PSI<br>PSI<br>PSI  | Version: 9.2.3.0 |                | to stabilize befor<br>press the NEXT b | e pressing th<br>outton to ente | scare in the Inn<br>4 AVERAGE HO<br>4 a new ZERO C<br>Averaging | turnent's pressu<br>W button, After th<br>al point.<br>PSI | ) (Q) edmit             |
| 23         Min PCal Point Diff %         50.000            24         Excess PCal Change %         25.000            87         P1 Pressuré Units         P3I  | MasterLink Calibrate P1 Calibration Pressure 1 Zero Rem Number 13 14 17 18 19 20  | Calibration Tempe<br>Calibration Description<br>Base Pressure<br>Atmospheric Pressure<br>Calibration P1-Zero<br>Cal Prev-1 P1-Zero<br>Cal Prev-2 P1-Zero<br>Calibration P1-Span  | Velue<br>1234.000<br>14.6960<br>0.0000<br>0.0000<br>0.0000<br>1.0000                                 | uon Uont<br>PSI<br>PSI<br>PSI<br>PSI<br>PSI  | Version: 9.2.3.0 |                | to stabilize befor<br>press the NEXT b | e pressing th<br>outton to ente | scare in the Inn<br>4 AVERAGE HO<br>4 a new ZERO C<br>Averaging | turnent's pressu<br>W button, After th<br>al point.<br>PSI | ) (Q) edmit             |
| 24         Excess PCal Change %         25.0000            87         P1 Pressure Units         P31  | Masterfunk<br>Calibrate<br>P1 Calibration<br>Pressure 1 Zero<br>Item Number<br>13<br>14<br>17<br>18<br>19<br>20<br>21             | P2 Calibration     Tempe Cellbration     Bescription     Base Pressure     Atmospheric Préssure     Calibration P1-Zero     Calibration P1-Zero     Calibration P1-Zero     Calibration P1-Span     Cellbration P1-Span  | Velue<br>1234.000<br>14.6960<br>0.0000<br>0.0000<br>1.0000<br>1.0000                                 | una l<br>Unat<br>PSJ<br>PSJ<br>PSJ<br>PSJ<br>PSJ<br>PSJ<br>PSJ<br>PSJ                | Version: 9.2.3.0 |                | to stabilize befor<br>press the NEXT b | e pressing th<br>outton to ente | scare in the Inn<br>4 AVERAGE HO<br>4 a new ZERO C<br>Averaging | turnent's pressu<br>W button, After th<br>al point.<br>PSI | ) (Q) edmit             |
| 87 P1 Pressure Units P31   | Masteriunk<br>Calibrate<br>P1 Calibration<br>Pressure 1 Zero<br>item Humber<br>13<br>14<br>17<br>18<br>19<br>20<br>21<br>22       | P2 Calibration Tempo Calibration      Description      Base Pressure      Atmospheric Pressure      Calibration P1-2ero      Calibration P1-2ero      Calibration P1-2ero      Calibration P1-Span      Cal Prev-1 P1-Span      Cal Prev-2 P1-Span      Cal P1-Span      Cal P1-Span      Cal P1-Span      Cal P1-Span | Volue<br>1234.000<br>14.6960<br>0.0000<br>0.0000<br>1.0000<br>1.0000<br>1.0000<br>1.0000             | ion  <br>Unive<br>PSJ<br>PSJ<br>PSJ<br>PSJ<br>PSJ<br>PSJ<br>PSJ<br>PSJ<br>PSJ<br>PSJ | Version: 9.2.3.0 |                | to stabilize befor<br>press the NEXT b | e pressing th<br>outton to ente | scare in the Inn<br>4 AVERAGE HO<br>4 a new ZERO C<br>Averaging | turnent's pressu<br>W button, After th<br>al point.<br>PSI | ) (Q) edmit             |
|  | MasterLink<br>Calibrate<br>P1 Calibration<br>Pressure 1 Zero<br>Item Number<br>13<br>14<br>17<br>18<br>19<br>20<br>21<br>22<br>23 |  | Velue<br>1234.000<br>14.6960<br>0.0000<br>0.0000<br>1.0000<br>1.0000<br>1.0000<br>1.0000<br>59.0000  | tion  <br>Unit<br>PSI<br>PSI<br>PSI<br>PSI<br>PSI<br>                                | Version: 9.2.3.0 |                | to stabilize befor<br>press the NEXT b | e pressing th<br>outton to ente | scare in the Inn<br>4 AVERAGE HO<br>4 a new ZERO C<br>Averaging | turnent's pressu<br>W button, After th<br>al point.<br>PSI | ) (Q) edmit             |
| 112 P1 Transducer Type None  | Masteriunk Calibrate P1 Calibration Pressure 1 Zero Item liumber 13 14 17 18 19 20 21 22 23 24                                    | P2 Calibration     Tempo       Calibration     Tempo       Calibration     Description       Base Pressure     Atmospheric Pressure       Atmospheric Pressure     Calibration P1-Zero       Calibration P1-Zero     Calibration P1-Zero       Calibration P1-Zero     Calibration P1-Span       Calibration P1-Span     Calibration P1-Span       Cal Prev-1 P1-Span     Calibration P1-Span       Calibration P1-Span     Calibration P1-Span  | Value<br>1234 000<br>14 6960<br>0.0000<br>0.0000<br>1.0000<br>1.0000<br>1.0000<br>1.0000<br>2.5.0000 | tion  <br>PSI<br>PSI<br>PSI<br>PSI<br>PSI<br>PSI<br>PSI<br>PSI<br>PSI<br>PSI         | Version: 9.2.3.0 |                | to stabilize befor<br>press the NEXT b | e pressing th<br>outton to ente | scare in the Inn<br>4 AVERAGE HO<br>4 a new ZERO C<br>Averaging | turnent's pressu<br>W button, After th<br>al point.<br>PSI | ) (Q) edmit             |

The averaged pressure appears.

3. Click **Change** to enter a zero cal point.

| eywell    | Master⊔nk         |                        |                 |                |                  |        | ⊘∣©Admin – ć  |
|-----------|-------------------|------------------------|-----------------|----------------|------------------|--------|---|
| l<br>•ard | Calibrate         |                        |                 |                |                  |        |   |
|           | P1 Calibration    | P2 Calibration   Tempo | erature Calibra | tion           |                  |        |   |
| e att     | Pressure 1 Zero ( | Calibration            |                 |                |                  |        |   |
|           | Item Humber       | Description            | Value           | Unit           |                  | يس     | Apply any 'zero reference' pressure to the instrument's pressure input and wait for the instru- |
| )<br>ato  | 13                | Base Pressure          | 14,000          | DCI            |                  | YIY    | to stabilize before pressing the AVERAGE NOW button. After the everaged pressure is displa      |
| si .      | 14                | Atmospheric Pressure   | 1 Chang         | je Pressure Ca | alibration Value |        | in to enter a new zero/ car point:  |
| )<br>Data | 17                | Calibration P1-Zero    | -1              |                | Reference Pressu | e      | 8.35064 PSI   |
|           | 18                | Cal Prev-1 P1-Zero     | -1              |                | 0.35064          | 951    |   |
| )<br>oata | ing.              | Cal Prev-2 P1-Zero     | :a              |                |                  |        | Average Dow: Change   |
|           | 20                | Calibration P1-Span    | 5.03            |                | ERROR I Apply    | Gencel |   |
| 501       | 21                | Cal Prev-1 P1-Span     | 1 Source        |                | 1412             | -      |   |
|           | 22                | Cal Prev-2 P1-Span     | 1.0000          |                |                  |        |   |
| )<br>197  | 23                | Min PCal PointD(#%)    | 58.0000         | -              |                  |        |   |
|           | 24                | Excess PCal Change %   | 2 0000          |                |                  |        |   |
| Ç.<br>Hiy | 87                | P1 Pressure Units      | PSI             |                |                  |        |   |
| 0.00      | 112               | P1 Transducer Type     | Gauge           |                |                  |        |   |

4. Change the value to accurately match the zero reference pressure applied to the pressure transducer. Click **Apply**.

|   | Calibrate         |                       |                  |      |   |        |           |              |                                       |               |                          |                      |
|---|-------------------|-----------------------|------------------|------|---|--------|-----------|--------------|---------------------------------------|---------------|--------------------------|----------------------|
|   | P1 Calibration    | P2 Calibration Temps  | erature Calibrat | tion |   |        |           |              |                                       |               |                          |                      |
|   | Pressure 1 Zero ( | Calibration           |                  |      |   |        |           |              |                                       |               |                          |                      |
|   | Item Number       | Description           | Value            | Unit |   | July . | Apply     | any 'zero re | ference' pressure                     | to the instru | ment's pressure input ar | nd wait for the inst |
|   | 13                | Base Pressure         | 14.6960          | PSI  |   |        |           |              | pressing the AV<br>itton to enter a n |               | button. After the averag | ed pressure is disp  |
|   | 14                | Atmospheric Pressure  | 1.0000           | PSI  |   | 111    |           | 1            |                                       |               |                          |                      |
|   | 17                | Calibration P1-Zero   | -1.9424          |      | _   |        | $\otimes$ | ressure      | 0.1                                   | 965           | PSI                      |                      |
|   | 18                | Cal Prev-1 P1-Zero    | -1.7918          |      | Success I<br>Zero Calibration Successful. |        |           |              |                                       |               |                          |                      |
|   | 19                | Cal Prev-2 P1-Zero    | -1.8146          |      |   |        |           |              | Average Now                           | Change        |                          |                      |
|   | 20                | Calibration P1-Span   | 0.9966           |      |   |        |           | ]            |                                       |               |                          |                      |
| , | 21                | Cal Prev-1 P1-Span    | 0.9989           |      |   |        |           |              |                                       |               |                          |                      |
|   | 22                | Cal Prev-2 P1-Span    | 1.0000           |      |   |        |           |              |                                       |               |                          |                      |
|   | 23                | Min PCal Point Diff % | 50.0000          |      |   |        |           |              |                                       |               |                          |                      |
|   | 24                | Excess PCal Change %  | 2.0000           |      |   |        |           |              |                                       |               |                          |                      |
|   | 87                | P1 Pressure Units     | PSI              |      |   |        |           |              |                                       |               |                          |                      |
|   | 112               | P1 Transducer Type    | Gauge            |      |   | -      |           |              |                                       |               |                          |                      |

5. Click **Span Calibration.** Apply a high pressure such that the pressure applied is at least 50% more than the zero reference pressure. Wait for the pressure reading displayed on the Pressure 1 dialog box to exceed the zero reference pressure by 50%.

**Note:** For example, if the zero reference pressure on a 100 PSI transducer equals 0.00 PSI, then the span reference pressure must be between 50.00 and 100.00 PSI. If the zero reference pressure on a 600 PSI transducer equals 0.00 PSI, then the span reference pressure must be between 300.00 and 600.00 PSI.

| Calibrate   |                         |                  |      |   |       |  |  |                           |   |
|-------------|-------------------------|------------------|------|---|-------|--|--|---------------------------|---|
| P1 Calibrat | on P2 Calibration Temps | erature Calibrat | ion  |   |       |  |  |                           |   |
| Pressure 1  | Zero Calibration        |                  |      |   |       |  |  |                           |   |
| Item Num    | ber Description         | Value            | Unit |   | July  | Apply any 'zero re                       | eference' pressure to th                       | e instrumen               | t's pressure input and wait for the instru      |
| 13          | Base Pressure           | 14.6960          | PSI  | 1 | (1)   | to stabilize before<br>press the NEXT bi | pressing the AVERAG<br>utton to enter a new ZE | E NOW butt<br>RO cal poin | on. After the averaged pressure is displa<br>t. |
| 14          | Atmospheric Pressure    | 1.0000           | PSI  |   | · • · |  |  |                           |   |
| 17          | Calibration P1-Zero     | -1.9424          | PSI  |   |       | Live Pressure                            | 0.2053   |                           | PSI   |
| 18          | Cal Prev-1 P1-Zero      | -1.7918          | PSI  |   |       |  |  |                           |   |
| 19          | Cal Prev-2 P1-Zero      | -1.8146          | PSI  |   |       |  | Average Now                                    |                           |   |
| 20          | Calibration P1-Span     | 0.9966           |      |   |       |  |  |                           |   |
| 21          | Cal Prev-1 P1-Span      | 0.9989           |      |   |       |  |  |                           |   |
| 22          | Cal Prev-2 P1-Span      | 1.0000           |      |   |       |  |  |                           |   |
| 23          | Min PCal Point Diff %   | 50.0000          |      |   |       |  |  |                           |   |
| 24          | Excess PCal Change %    | 2.0000           |      |   |       |  |  |                           |   |
| 87          | P1 Pressure Units       | PSI              |      |   |       |  |  |                           |   |
| 112         | P1 Transducer Type      | Gauge            |      | - |       |  |  |                           |   |

6. Click Apply.

7. After the pressure stabilizes, click **Average Now**. MasterLink Software Application averages the reading and displays the average pressure.

| Calibrate      |                           |                 |                 |  |                             |                       |                             |                |
|----------------|---------------------------|-----------------|-----------------|--|-----------------------------|-----------------------|-----------------------------|----------------|
| P1 Calibration | P2 Calloration   Tempe    | cature Calibrat | tion ]          |  |                             |                       |                             |                |
| Pressure 1 Spa | n Calibration             |                 |                 |  |                             |                       |                             |                |
| Item Number    | Description               | Value           | Unit            | sec a  | naly a pressure reference i | hat exceeds that zero | reference by atles it 50% a | nd wait for th |
| 18             | Cal Prev-1 P1-Zero        | -1.9424         | PBI             | - {   } "  | stalsi lize.                |                       |                             |                |
| 19             | Cal Prev-2 P1-Zero        | Restor          | e Line Pressure |  | $\otimes$                   | 120.0046              | PSI                         |                |
| 20             | Calibration P1-Span       | 0.              |                 | ess, first restore normal line pressure<br>turn to calibration click Recalibration | to the                      |                       |                             |                |
| 21             | Cal Prev-1 P1-Span        | 0.              | P1 Gas Pres     | sure : 100.0046 PSI  | Avera                       | ellow Coxee           |                             |                |
| 22             | Cal Prov 2 P1-Span        | .0              | -               |  |                             |                       |                             |                |
| 23             | Min PCal Point Diff %     | 50              | Recalifira      | ste Done   |                             |                       |                             |                |
| 24             | Excess PCal Change %      | 2 0000          | 1777            |  |                             |                       |                             |                |
| 87             | P1 Pressure Units         | PSI             | 1777            |  |                             |                       |                             |                |
| 112            | P1 Transducer Type        | Gauge           |                 |  |                             |                       |                             |                |
| 120            | Calibration Date Pt Press | 12-22-16        | MM-DD-YY        |  |                             |                       |                             |                |
| B7             | P1 Pressure Units         | PSI             |                 |  |                             |                       |                             |                |
| 112            | P1 Transducer Type        | Oauge           |                 | *  |                             |                       |                             |                |

8. To complete the calibration process, restore the normal line pressure to the instrument, and then click **Done**.

9. For Recalibration, click Recalibrate and repeat the same process.

## 4.5.2 Pressure Calibration P2

P2 Calibration contains different calibration items. The procedure would be same as performed for P1 calibration.

| Honeywell               | MasterLink         |                              |                 |                   |                |            |            |                    |   | ? Q Admin = #   | ×        |
|-------------------------|--------------------|------------------------------|-----------------|-------------------|----------------|------------|------------|--------------------|---|---|----------|
| Dashboard               | Calibrate          |                              |                 |                   |                |            |            |                    |   |   |          |
| ©<br>Site               | P1 Calibration     | P2 Calibration Temper        | ature Calibrati | on                |                |            |            |                    |   |   |          |
| <b>G</b><br>Viewe∕ Edit | Pressure 2 Zero (  | Calibration                  |                 |                   |                |            |            |                    |   |   |          |
| Ø                       | Item Number        | Description                  | Value           | Unit              |                | ~          |            | Apply any 'zero re | ference' pressure to the instru                           | ument's pressure input and wait for the instrum           | hent     |
| Calibrate               | 13                 | Base Pressure                | 14.6960         | PSI               |                | ^ <u>{</u> | ]}         |                    | pressing the AVERAGE NOW<br>atton to enter a new ZERO cal | button. After the averaged pressure is displaye<br>point. | ؛d,      |
| 9                       | 14                 | Atmospheric Pressure         | 1.0000          | PSI               |                | - `        | <b>•</b> • |                    |   |   |          |
| Read Data               | 23                 | Min PCal Point Diff %        | 50.0000         |                   |                |            |            | Live Pressure      | 100.006   | PSI   |          |
|                         | 24                 | Excess PCal Change %         | 2.0000          |                   |                |            |            |                    |   |   |          |
| C<br>Live Data          | 407                | P2 Transducer Type           | Gauge           |                   |                |            |            |                    | Average Now Chang   |   |          |
|                         | 408                | P2 Pressure Units            | PSI             |                   |                |            |            |                    |   |   |          |
| Administer              | 410                | Calibration Date P2 Press    | 12-14-16        | MM-DD-YY          |                |            |            |                    |   |   |          |
|                         | 414                | Calibration P2-Zero          | -1.9972         | PSI               |                |            |            |                    |   |   |          |
| Ø<br>Settings           | 415                | Cal Prev-1 P2-Zero           | -1.7918         | PSI               |                |            |            |                    |   |   |          |
|                         | 24                 | Excess PCal Change %         | 2.0000          |                   |                |            |            |                    |   |   |          |
| Security                | 87                 | P1 Pressure Units            | PSI             |                   |                |            |            |                    |   |   |          |
|                         | 112                | P1 Transducer Type           | Gauge           |                   |                | Ŧ          |            |                    |   |   |          |
| Ч£                      |                    |                              |                 |                   |                |            |            |                    |   |   |          |
| Ĩ                       |                    |                              |                 |                   | Done           |            | ation      |                    |   |   |          |
| Disconnect 🔵            | Connected r EC 350 | )) 🔲 EC350   00000000 - 0000 | 0000   Release  | : R500.1 Build Ve | rsion: 9.2.3.0 |            |            |                    | Comm N  | Aonitor   Send Capture Buffer to Fil                      | <u> </u> |

# 4.5.3 Temperature Calibration

### UNDERSTANDING TEMPERATURE CALIBRATION

This is a simple two-point calibration. First, calibrate the gas temperature sensor at a low scale temperature and then again at a high scale temperature. Each time, adjust the temperature calculated by the instrument to match the reading from your reference standard calibrator.

Adjusting the low scale temperature is called "Zero Calibration" while adjusting the high scale temperature is called "Span Calibration." A low temperature source, usually an ice bath (32 °F) is used to determine the Temperature Zero Calibration. A higher temperature source is used to determine the Temperature Span Calibration (gain). The default Calibration Parameters require the Span Temperature exceed the Zero Temperature by at least 10% of the instrument's temperature range.

Span calibration actually uses some of the information determined from performing the zero calibration. For this reason, you will need to at least "sample" a low scale temperature before you can begin the span calibration. Sampling occurs when you indicate that the temperature is ready to be averaged.

#### To calibrate temperature:

- 1. Insert the temperature probe of the instrument, along with an accurately calibrated thermometer into a low temperature bath or dry well, which provides the temperature zero reference. Wait for the temperature reading displayed on the Temperature Calibration dialog box to be stabilized.
- 2. Click **Average Now**. MasterLink Software Application averages the reading and displays the average temperature.

| 1  | Calibrate        |                       |                |          |         |                                      |                                  |                                       |
|----|------------------|-----------------------|----------------|----------|---------|--------------------------------------|----------------------------------|---------------------------------------|
| it | P1 Calibration   | P2 Calibration Temp   | erature Calibr | ration   |         |                                      |                                  |                                       |
|    | Temperature Zero | Calibration           |                |          |         |                                      |                                  |                                       |
|    | Item Number      | Description           | Value          | Unit     | July    |                                      |                                  | bration bath and wait for the tempera |
| a  | 31               | Case Temperature      | 22.84          | c        | î (l    | reading to stabilize be temperature. | fore accepting or changing the t | emperature to match the zero referen- |
|    | 34               | Base Temperature      | 15.56          | C        | · · · · | •                                    |                                  |                                       |
|    | 35               | Calibration T-Zero    | -0.9719        | C        |         | Live Temperature                     | -18.39                           | F                                     |
|    | 35               | Cal Prev-1 T-Zero     | -0.9019        | С        |         |                                      | Average Novy Chenge              |                                       |
| or | 37               | Cal Prev-2 T-Zero     | -0.8599        | С        |         |                                      | Average Now Shirings             |                                       |
|    | 38               | Calibration T-Span    | 1.0000         |          |         |                                      |                                  |                                       |
|    | 39               | Cal Prev-1 Temp-Span  | 1.0000         |          |         |                                      |                                  |                                       |
|    | 40               | Cal Prev-2 Temp-Span  | 1.0000         | 200      |         |                                      |                                  |                                       |
|    | 41               | Min TCal Point Diff % | 10.0000        |          |         |                                      |                                  |                                       |
|    | 42               | Excess TCal Change %  | 2.0000         |          |         |                                      |                                  |                                       |
|    | 89               | Temperature Units     | с              |          | 101     |                                      |                                  |                                       |
| 2  | 121              | Calibration Date Temp | 09-16-16       | MM-DD-YY | *       |                                      |                                  |                                       |

| Calibrate   |   |   |                    |             |                    |  |              |                                       |                                  |  |                      |
|---|---|---|--------------------|-------------|--------------------|--|--------------|---------------------------------------|----------------------------------|--|----------------------|
| P1 Calibration  | P2 Calibration   Temp   | perature Calibr   | ration             |             |                    |  |              |                                       |                                  |  |                      |
| Temperature Zero  | o Calibration   |   |                    |             |                    |  |              |                                       |                                  |  |                      |
| Item Number   | Description   | Value   | Unit               |             | Jec.               | losert the temperat                        | une sensor i | n e kovitemp                          | erature calita                   | ation bath and w                                   | ait for the          |
| 31  | Case Temperature  | 22.84   | C                  | -           | -(1)               | reading to stabilize<br>temperature.       | before acce  | apting or char                        | nging the ter                    | nperature to mat                                   | ch the aer           |
| 34  | Base Temperature  | 15.56   | С                  |             | 4.                 |  |              |                                       |                                  |  |                      |
| 35  | Calibration T-Zero  | -0.9719   | С                  | $\cap$      |                    | Live Temperature                           |              | Averaging                             |                                  | F  |                      |
| 35  | Cal Prev-1 T-Zero   | -0.9019   | C                  | U           |                    |  | -            |                                       |                                  |  |                      |
| 37  | Cal Prev-2 T-Zero   | -0.8699   | С                  | Please wait |                    |  | Avere        | ge Now                                |                                  |  |                      |
| 38  | Calibration T-Span  | 1.0006  |                    | Particip    |                    |  |              |                                       |                                  |  |                      |
| 39  | Cal Prev-1 Temp-Span  | 1.0000  | . <del>112</del>   | Dancel      |                    |  |              |                                       |                                  |  |                      |
| 40  | Cal Prev-2 Temp-Span  | 1.0000  | -                  |             |                    |  |              |                                       |                                  |  |                      |
| 41  | Min TCal Point Diff %   | 10.0000   | 100                |             |                    |  |              |                                       |                                  |  |                      |
| 42  | Excess TCal Change %  | 2.0000  |                    |             |                    |  |              |                                       |                                  |  |                      |
| 89  | Temperature Units   | С   |                    |             |                    |  |              |                                       |                                  |  |                      |
|   |   |   |                    |             |                    |  |              |                                       |                                  |  |                      |
| 121<br>onnected ् स्ट ३४<br>MasterLink<br>Calibrate   | Calibration Date Temp   | 09-16-16  | MM-DD-YY           |             | ar (thilinathar    | _  | -            | Comr                                  | n Neniter                        | Send Cept  |                      |
| onnected ( =c.3s<br>MasterLink  | a) 🟳 essement dondocad -  |   | lease R500 1 Build |             | n (dateanar        |  |              | Сотл                                  | n Monitor                        |  |                      |
| nniected ( ec. ss<br>MasterLink<br>Calibrate  | o) [2] ecisiene (ocioocoo -<br>P2 Calibration   Tem   | onnonana Re   | lease R500 1 Build |             | ar 2 defenser      | -  |              | Comr                                  | n Monitor                        |  |                      |
| nnecled ( ec.as<br>MasterLink<br>Calibrate  | o) [2] ecisiene (ocioocoo -<br>P2 Calibration   Tem   | onnonana Re   | lease R500 1 Build |             | a ( Minner )       |  |              |                                       |                                  | @   @ s  | dmio                 |
| mnected ( EC 35<br>MasterLink<br>Calibrate<br>11 Calibration  <br>emperature Zero   | o) [] ec3edate occorcor -<br>P2 Calibration Temp<br>o Calibration   | perature Calibr   | lease R500 1 Build |             |                    | Inset the temperat<br>reading to stabilize |              | n a luo temp                          | etature califa                   | () () a  | amio<br>Hait for the |
| Innected ( EC 35<br>MasterLink<br>Calibrate<br>1 Calibration  <br>emperature Zero<br>Item Number  | o) [] ecselere econocoe - P2 Calibration   Temp o Calibration Description   | perature Calibr<br>Value  | lease R600.1 Build |             |                    |  |              | n a luo temp                          | etature califa                   | () () a  | amio<br>Hait for the |
| Innected ( EC 35<br>MasterLink<br>Calibrate<br>1 Calibration  <br>emperature Zero<br>Rem Number<br>31   | o) [] ecisience doublood - P2 Calibration Temp o Calibration Description Case Temperature   | perature Calibr<br>Value<br>22.84   | Tation             |             | $\hat{\mathbf{Q}}$ | reading to stabilize                       |              | n a luo temp                          | etature califa                   | () () a  | amio<br>Hait for the |
| Innecled ( EC 35<br>MasterLink<br>Calibrate<br>1 Calibrate<br>1 Calibration  <br>mem Rumber<br>31<br>34   | O) [] ecisies deviation -     P2 Calibration ] Temp     Calibration ]     Description     Case Temperature     Base Temperature   | perature Calibri<br>Value<br>22.84<br>15.55   | ration             |             | $\hat{\mathbf{Q}}$ | reading to stabilize<br>temperature.       |              | n a low temp                          | etature califa                   | (2) (2) at<br>ation beth and a<br>nperature to mat | amio<br>eait for the |
| Innected ( EC 35<br>MasterLink<br>Calibrate<br>In Calibration  <br>In Calibratio  <br>In Calibration  <br>In Calibration  <br>In Calibration  <br>In  | 0)     Clipic ecisibase     000000000       P2 Calibration     Temp       0 Calibration     Temp       0 Calibration     Case Temperature       Base Temperature     Calibrator T-Zero  | value         22.84           15.55         -0.9719   | ration             |             | $\hat{\mathbf{Q}}$ | reading to stabilize<br>temperature.       |              | n e loo temp<br>apting or char<br>-20 | etature califa                   | (2) (2) at<br>ation beth and a<br>nperature to mat | amio<br>eait for the |
| Annected ( EC 35<br>MasterLink<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibration<br>Calibration<br>Calibration<br>Calibration<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibr        | 0)     Calibration     Temp       P2 Calibration     Temp       0 Calibration     Temp       0 Calibration     Calibration       Description     Case Temperature       Base Temperature     Calibrator T-Zers       Calibrator T-Zers     Calibrator T-Zers       Calibrator T-Zers     Calibrator T-Zers  | 00003000         Re           perature Calibr         Value           22.84         15.58           -0.9719         -0.9019           -0.8599         -0.8559                                 | ration             |             | $\hat{\mathbf{Q}}$ | reading to stabilize<br>temperature.       | before acce  | n e loo temp<br>apting or char<br>-20 | etature calita<br>riging the ter | (2) (2) at<br>ation beth and a<br>nperature to mat | amio<br>eait for the |
| Innected ( ECSS<br>MasterLink<br>Calibrate<br>1 Calibration  <br>1 Calibration  <br>1 Calibration  <br>31<br>34<br>35<br>35<br>37<br>38   | 0)     []]     ec3state     00000000     -       P2 Calibration     Temp       b Calibration     Temp       b Calibration     Calibration       Case Temperature     Ease Temperature       Calibration T-Zero     Calibraton T-Zero       Calibrator T-Zero     Calibrator T-Span  | second control         Residence           perature Calibrit         Value           22.84         15.56           -0.9719         -0.9019           -0.8699         1.0000                   | lease R500.1 Build |             | $\hat{\mathbf{Q}}$ | reading to stabilize<br>temperature.       | before acce  | n e loo temp<br>apting or char<br>-20 | etature calita<br>riging the ter | (2) (2) at<br>ation beth and a<br>nperature to mat | amin<br>eait for the |
| Annecled ( EC 35<br>MasterLink<br>Calibrate<br>1 Calibration  <br>emperature Zero<br>item Number<br>31<br>34<br>35<br>35<br>37<br>38<br>39  | a) Description Description Description Case Temperature Base Temperature Calibration T-Zero Calibration T-Zero Calibration T-Zero Calibration T-Span Calibration Calibration T-Span Calibration Cal | 00000000         Re           perature Calibri         Value           22.84         15.56           -0.9719         -0.9019           -0.8599         1.0000           1.0000         1.0000 | Tation             |             | $\hat{\mathbf{Q}}$ | reading to stabilize<br>temperature.       | before acce  | n e loo temp<br>apting or char<br>-20 | etature calita<br>riging the ter | (2) (2) at<br>ation beth and a<br>nperature to mat | amio<br>eait for the |
| Annecled ( EC 35<br>MasterLink<br>Calibrate<br>Emperature Zero<br>Item Number<br>31<br>34<br>35<br>35<br>37<br>38<br>39<br>40   | a)  b)  b)  b)  b)  b)  b)  b)  b)  b)  b   | 00000000         Res           perature Calibr         Value           22.84         15.56           -0.9719         -0.8599           1.0000         1.0000           1.0000         1.0000  | ration             |             | $\hat{\mathbf{Q}}$ | reading to stabilize<br>temperature.       | before acce  | n e loo temp<br>apting or char<br>-20 | etature calita<br>riging the ter | (2) (2) at<br>ation beth and a<br>nperature to mat | amio<br>eait for the |
| Annecled ( 50.35<br>MasterLink<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrat | <ol> <li>Calibration</li> <li>P2 Calibration</li> <li>Temp </li> <li>Calibration</li> <li>Description</li> <li>Case Temperature</li> <li>Base Temperature</li> <li>Calibration T-Zero</li> <li>Cal Prev-1 T-Zero</li> <li>Cal Prev-2 T-Zero</li> <li>Cal Prev-2 T-Zero</li> <li>Cal Prev-1 Temp-Span</li> <li>Cal Prev-2 Temp-Span</li> <li>Min TCal Point Diff %</li> </ol>  | 00000000         Res           perature Calibr         Value           22.84         15.56           -0.9019         -0.8599           1.0000         1.0000           1.0000         1.0000  | ration             |             | $\hat{\mathbf{Q}}$ | reading to stabilize<br>temperature.       | before acce  | n e loo temp<br>apting or char<br>-20 | etature calita<br>riging the ter | (2) (2) at<br>ation beth and a<br>nperature to mat | amio<br>eait for the |
| Annecled ( 50 as<br>MasterLink<br>Calibrate<br>En Calibrate<br>Emperature Zero<br>Item Number<br>31<br>34<br>35<br>35<br>37<br>38<br>39<br>40<br>41<br>42   | 0)       Clipic ecisibation       000000000         P2 Calibration       Temp         0 Calibration       Description         Case Temperature       Base Temperature         Base Temperature       Calibration T-Zero         Calibration T-Zero       Calibration T-Zero         Cal Prev-1 T-Zero       Calibration T-Span         Cal Prev-2 Temp-Span       Min TCal Point Diff %         Excess TCal Change %       Excess TCal Change %   | 00000000         Res           perature Calibr         22.84           15.55         -0.9719           -0.8599         1.0000           1.0000         1.0000           1.0000         2.0000 | Tation             |             | $\hat{\mathbf{Q}}$ | reading to stabilize<br>temperature.       | before acce  | n e loo temp<br>apting or char<br>-20 | etature calita<br>riging the ter | (2) (2) at<br>ation beth and a<br>nperature to mat | amio<br>eait for the |
| Annecled ( 50.35<br>MasterLink<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrate<br>Calibrat | <ol> <li>Calibration</li> <li>P2 Calibration</li> <li>Temp </li> <li>Calibration</li> <li>Description</li> <li>Case Temperature</li> <li>Base Temperature</li> <li>Calibration T-Zero</li> <li>Cal Prev-1 T-Zero</li> <li>Cal Prev-2 T-Zero</li> <li>Cal Prev-2 T-Zero</li> <li>Cal Prev-1 Temp-Span</li> <li>Cal Prev-2 Temp-Span</li> <li>Min TCal Point Diff %</li> </ol>  | 00000000         Res           perature Calibr         Value           22.84         15.56           -0.9019         -0.8599           1.0000         1.0000           1.0000         1.0000  | ration             |             | $\hat{\mathbf{Q}}$ | reading to stabilize<br>temperature.       | before acce  | n e loo temp<br>apting or char<br>-20 | etature calita<br>riging the ter | (2) (2) at<br>ation beth and a<br>nperature to mat | amio<br>Hait for the |

3. Click **Next** to the change the value to accurately match the temperature measured by the calibrated thermometer placed in the low temperature bath. Click **Apply**.

| Contraction         Sector       Temperature Zero Calibration         Sector       Temperature Calibration         Sector       Cale Temperature       Cale Temperature         Sector       Cale Temperature       Cale Temperature       Cale Temperature         Sector       Cale Temperature       Cale Temperature       Cale Temperature       Cale Temperature         Sector       Cale Temperature   | sdmin - C >              | ⑦   ② admin            |  | Þ                   |                    |                 |                |                       | 🖩   MasterLink   | oneywell         |
|--|--------------------------|------------------------|--|---------------------|--------------------|-----------------|----------------|-----------------------|------------------|------------------|
| Reference Pressure       150 43       F         38       Calibration 1-Span       100         39       Calibration 1-Span       100         39       Calibration 1-Span       100         39       Calibration 1-Span       100         41       Min TCal Point Diff %       100000         42       Excess TCal Chaipe %       20000         43       Temperature 1-Span       1000         44       Biose Temperature 1-Span       100         41       Min TCal Point Diff %       100000         42       Excess TCal Chaipe %       20000         43       Temperature 1-Span       10000         43       Temperature 1-Span       10000         44       Min TCal Point Diff %       100000         43       Temperature 1-Span       10000         44       Min TCal Point Diff %       100000         42       Excess TCal Chaipe %       20000         43       Temperature Units       C         43       Temperature Units       C   |                          |                        |  |                     |                    |                 |                |                       | Calibrate        |                  |
| Cantered Terms Provide Calibration T-Span 1000<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector<br>Sector |                          |                        |  |                     |                    | ration          | erature Calibr | P2 Calibration Temp   | P1 Calibration   | G)<br>Geor' Edit |
| 31       Case Temperature       228         24       Base Temperature       158         25       Calibration T-Zero       0.03         36       Calibration T-Zero       0.03         37       Calibration T-Zero       0.03         38       Calibration T-Jpan       1.00         39       Calibration T-Jpan       1.00         41       Min TCal Point Diff %       100000         42       Bices TCal (Change % 20000   |                          |                        |  |                     |                    |                 |                | Calibration           | Temperature Zero |                  |
| 31     Case Temperature     223       34     Base Temperature     155       35     Calibration T-Zero     0.3       36     Calibration T-Zero     0.3       37     Calibration T-Span     1.00       38     Calibration T-Span     1.000       39     Cal Prev-1 Temp-3pan     1.000       41     Min TCal Point Diff %     10.000       42     Bicess TCal Change %     2.0000       38     Temperature Units     C   | wait for the temperature | ubation beth and wait  | perature sensor in a low temperature calif.  | Josef the terminer  |                    | Unit            | Value          | Description           | Item Number      | 0                |
| 34         Base Temperature         156           35         Calibration T-Zero         0.37           36         Calibration T-Zero         0.38           37         Calibration T-Span         100           38         Calibration T-Span         100           39         Calibration T-Span         1000           41         Min TCal Point Diff %         10.000           42         Excess TCal Change %         20000           88         Temperature Units         C  | tch the zero reference   | temperature to match t | tilize before accepting or changing the ter  | reading to stabiliz | A.                 |                 | 22.8           | Case Temperature      | 31               |                  |
| 35         Calibration T-Zero         0.37         Calibration T-Zero         0.38           36         Calibration T-Zero         0.39         158         r           37         Calibration T-Span         1.00   |                          | F                      | and a second sec | Ç                   | alibration Value   | nge remperature | 15.5 Char      | Base Temperature      | 34               |                  |
| 3.5         Call Prev 7 Factor         -0.8           37         Call Prev 7 T-span         -0.08           38         Calloration T-Span         1.00           39         Call Prev 7 Temp-8pan         1.000x           40         Call Prev 2 Temp-9pan         1.000x           41         Min TCal Point Daff %         10.0000  |                          |                        | 100,70   |                     | Reference Pressure |                 | -0.9.5         | Calibration T-Zero    | 35               |                  |
| 37         Call Prev2 Temp-Span         1.00           38         Call Intration T-Span         1.00           39         Call Prev2 Temp-Span         1.000           40         Call Prev2 Temp-Span         1.000           41         Min TCall Point Diff %         10.0000           42         Excess TCal Change %         2.0000           89         Temperature Units         C   |                          |                        | Average Now Change   |                     | 158 F              |                 | -0.90          | Cal Prev-1 T-Zero     | 35               | -                |
| 38         Calibration 1-3pan         1.0         ENRICHI         Acros         Carrent           39         Cal Frev-1 Temp-3pan         1.00   |                          |                        | 71   |                     |                    |                 | -0.86          | Cal Prev-2 T-Zero     | 37               |                  |
| Section         39         Call Prev2 Temp-Span         1.000ar           40         Call Prev2 Temp-Span         1.0000            41         Min TCal Point Diff %         10.0000            42         Excess TCal Change %         2.0000            89         Temperature Units         C   |                          |                        |  | Cancel              | HII Apply          |                 | 1.00           | Calibration T-Span    | 38               |                  |
| 40         Cal Prev2 Temp-9pan         1.000            41         Min TCal Point Diff %         10.000            42         Excess TCal Change %         2.0000            89         Temperature Units         C  |                          |                        |  |                     |                    |                 | 1.00           | Cal Prev-1 Temp-Span  | 39               |                  |
| Security         41         Interference         Occurs           42         Excess TCal Change %         2.0000            89         Temperature Units         C   |                          |                        |  |                     |                    | -               | 1.0000         | Cal Prev-2 Temp-Span  | 40               |                  |
| 42         Excess TCal Change %         20000            89         Temperature Units         C  |                          |                        |  |                     |                    | 100             | 10.0000        | Min TCal Point Diff % | 41               |                  |
| Uedote 09 Perioperature Official C   |                          |                        |  |                     |                    |                 | 2.0000         | Excess TCal Change %  | 42               |                  |
|  |                          |                        |  |                     |                    |                 | с              | Temperature Units     | 89               |                  |
|  |                          |                        |  |                     | *                  | MM-DD-YY        | 09-16-16       | Calibration Date Temp | 121              |                  |
| Done States Herman   |                          |                        |  |                     | Done               |                 |                |                       |                  | -                |
| Comm Monitor - Send Capture     Comm Monitor - Send Capture     Comm Monitor - Send Capture  |                          |                        |  |                     |                    |                 |                |                       |                  |                  |

Note: On entering incorrect values, an error message is displayed.

| neywell      | MasterLink      |                       |                 |        |   |                      |                       |                              | ()   () A                  | dimin 📜 🗗             |
|--------------|-----------------|-----------------------|-----------------|--------|---|----------------------|-----------------------|------------------------------|----------------------------|-----------------------|
| thboard      | Calibrate       |                       |                 |        |   |                      |                       |                              |                            |                       |
| Q<br>Bite    | P1 Calibration  | P2 Calibration Temp   | perature Calibr | ration |   |                      |                       |                              |                            |                       |
| 🛐<br>ar Edit | Temperature Spa | n Calibration         |                 |        |   |                      |                       |                              |                            |                       |
|              | Item Number     | Description           | Value           | Unit   |   | يىر                  | Set the temperature i | nput to exceed the zero re   | ference temperature by atl | east 15% of the rated |
| 🕐            | 31              | Case Temperature      | 74.45           | F      |   | • {   } •            | emperature range a    | nd wait for the reading to s | tabilize.                  |                       |
| _            | 34              | Base Temperature      | 60.01           | F      |   | - <b>3</b> • C       |                       | 157.02                       | F                          |                       |
| Data         | 35              | Calibration T-Zero    | -1.3859         | F      | Marria                                  | (                    | emperature            | 157.02                       | F                          |                       |
|              | 36              | Cal Prev-1 T-Zero     | -1.4949         | F A    | Warning<br>Attempting to write unaccept | able data value to a |                       | Average Now Cł               | hange                      |                       |
| Data         | 37              | Cal Prev-2 T-Zero     | 0.0545          | F      | particular Item number (form            | at or range issues). |                       |                              |                            |                       |
|              | 38              | Calibration T-Span    | 1.0039          |        |   | _                    |                       |                              |                            |                       |
| 🚰<br>inister | 39              | Cal Prev-1 Temp-Span  | 1.0006          |        |   |                      |                       |                              |                            |                       |
|              | 40              | Cal Prev-2 Temp-Span  | 1.0000          |        |   |                      |                       |                              |                            |                       |
| 9            | 41              | Min TCal Point Diff % | 10.0000         |        |   |                      |                       |                              |                            |                       |
| tings        | 42              | Excess TCal Change %  | 2.0000          |        |   |                      |                       |                              |                            |                       |

4. Click Span Calibration. Insert the temperature probe of EC 350 and the calibrated thermometer into a high temperature bath, which provides the temperature span reference. The temperature reading displayed on the Temperature Calibration dialog box must exceed the zero reference temperature by at least 15% to proceed with span calibration.

| Honeywell          | MasterLink      |                       |                 |        |   |           |                 |                                  | ? Q Admin | – <i>-</i> ×    |
|--------------------|-----------------|-----------------------|-----------------|--------|---|-----------|-----------------|----------------------------------|-----------|-----------------|
| Dashboard          | Calibrate       |                       |                 |        |   |           |                 |                                  |           |                 |
| Q<br>Site          | P1 Calibration  | P2 Calibration   Temp | perature Calibr | ration |   |           |                 |                                  |           |                 |
| (Gj)<br>View∉ Edit | Temperature Spa | n Calibration         |                 |        |   |           |                 |                                  |           |                 |
| $\bigcirc$         | Item Number     | Description           | Value           | Unit   |   |           |                 | put to exceed the zero referen   |           | 5% of the rated |
| Calibrate          | 31              | Case Temperature      | 74.45           | F      | 1   | temper    | rature range an | d wait for the reading to stabil | ize.      |                 |
| •                  | 34              | Base Temperature      | 60.01           | F      |   |           | mperature       | 156.91                           | F         |                 |
| Read Data          | 35              | Calibration T-Zero    | -1.4949         | F      |   | $\otimes$ | in portaidro    |                                  |           |                 |
|                    | 36              | Cal Prev-1 T-Zero     | 0.0545          | F 📿    | Success I<br>Span Calibration Successful. |           |                 | Average Now Change               |           |                 |
| Live Data          | 37              | Cal Prev-2 T-Zero     | 0.0545          | F      | opan oanstation oaccoola.                 |           |                 |                                  |           |                 |
|                    | 38              | Calibration T-Span    | 1.0039          |        |   |           |                 |                                  |           |                 |
| Administer         | 39              | Cal Prev-1 Temp-Span  | 1.0006          |        |   |           |                 |                                  |           |                 |
|                    | 40              | Cal Prev-2 Temp-Span  | 1.0000          |        |   |           |                 |                                  |           |                 |
| Settings           | 41              | Min TCal Point Diff % | 10.0000         |        |   |           |                 |                                  |           |                 |
|                    | 42              | Excess TCal Change %  | 2.0000          |        |   |           |                 |                                  |           |                 |

5. After the reading stabilizes, click Average Now.

MasterLink Software Application averages the reading and displays the average temperature.

6. Click **Change**. Change the value to accurately match the temperature measured by the calibrated thermometer placed in the high calibration bath. Finally click **Apply**.

| Calibrate        |                       |                 |                  |                   |        |                      |                      |                |                         |               |
|------------------|-----------------------|-----------------|------------------|-------------------|--------|----------------------|----------------------|----------------|-------------------------|---------------|
| P1 Calibration   | P2 Calibration Temp   | perature Calibr | ration           |                   |        |                      |                      |                |                         |               |
| Temperature Zero | o Calibration         |                 |                  |                   |        |                      |                      |                |                         |               |
| Rem Number       | Description           | Value           | Unit             |                   | July.  | losed the temperat   | ture sensor in a law | temperature ca | libration bath and wait | for the terry |
| 31               | Case Temperature      | 22.8            | -<br>Temperature | Calibration Value | TIX    | reading to stabilize |                      | e changing the | temperature to match I  | he zero refer |
| 34               | Base Temperature      | 15.5            | ige ieniperature | Calibration value |        | e.                   | -                    | 56.43          | F                       |               |
| 35               | Calibration T-Zero    | -0.93           |                  | Reference Pressu  | re     |                      |                      |                |                         |               |
| 36               | Cal Prev-1 T-Zero     | -0.90           |                  | 158               | F      |                      | Average Nov          | Chinge         |                         |               |
| 37               | Cal Prev-2 T-Zero     | -0.86           |                  |                   | _      | 0                    | -                    |                |                         |               |
| 38               | Calibration T-Span    | 1.00            | - <u>i</u> ii    | RROR ( Apply      | Cancel |                      |                      |                |                         |               |
| 39               | Cal Prev-1 Temp-Span  | 1.00            |                  |                   |        |                      |                      |                |                         |               |
| 40               | Cal Prev-2 Temp-Span  | 1.0000          |                  |                   |        |                      |                      |                |                         |               |
| 41               | Min TCal Point Diff % | 10.0000         | 127              |                   |        |                      |                      |                |                         |               |
| 42               | Excess TCal Change %  | 2.0000          |                  |                   |        |                      |                      |                |                         |               |
| 89               | Temperature Units     | С               |                  |                   |        |                      |                      |                |                         |               |
| 121              | Calibration Date Temp | 09-16-16        | MM-DD-YY         | +                 |        |                      |                      |                |                         |               |

7. To complete the calibration process, first restore normal line temperature to the instrument, and then click **Done**.

| P1 Calibration     P2 Calibration     Temperature Calibration       Temperature Zero Calibration     Volue     Unit       31     Case Temperature     22.92       34     Base Temperature     22.92       35     Calibration T-Zero     0       36     Calibration T-Zero     0       37     Calibration T-Span     1       39     Calibration T-Span     1.000       40     Cal Free-2 Temp-3pan     1.000  |   | Calibrate        |                        |                 |   |  |                             |                           |                                      |
|--|---|------------------|------------------------|-----------------|---|--|-----------------------------|---------------------------|--------------------------------------|
| Item Number         Description         Value         Unit           31         Cese Temperature         22.92         C         reading to stabilize before accepting or changing the temperature calibration beth and an reading to stabilize before accepting or changing the temperature to mathematic temperature.           34         Base Température         17         Restore Température         Image: Temperature temperature temperature to mathematic temperature temperature to mathematic temperature.           35         Calibration T-Zero         0         To Complete the Calibration process. Test rescue normal the temperature to the instrument and then tick Done. To return to calibration. Clock Recelluration           36         Calibration T-Zero         0           37         Cal Prev-2 T-Zero         0           38         Calibration T-3pan         1           39         Cal Prev-1 Temp-3pan         1.0000 |   | P1 Calibration   | P2 Calibration   Tempo | erature Calibra | ation                                   |  |                             |                           |                                      |
| 31     Case Temperature     22.92     C       34     Base Temperature     11       35     Calibration T-Zero     0       36     Calibration T-Zero     0       37     Calibration T-Span     1       39     Calibration T-Span     1.0000  | 1 | Temperature Zero | Calibration            |                 |   |  |                             |                           |                                      |
| 31     Case Temperature     22 62     C       24     Base Temperature     17       25     Calibration T-Zero     0       36     Calibration T-Zero     0       37     Calibration T-Zero     0       38     Calibration T-Span     1       39     Calibration T-Span     1.0000  |   | Item Number      | Description            | Value           | Unit                                    | يبين   | losed the temperature senso | r in a low temperature ca | sibration bath and wait for the temp |
| 35     Calibration T-Zero     0       36     Cal Prev-1 T-Zero     -0       37     Cal Prev-2 T-Zero     -0       38     Calibration T-Span     1000   |   | 31               | Case Temperature       | 22.92           | C                                       |  |                             |                           |                                      |
| 35     Calibration T-Zero     0       36     Cal Prev-1 T-Zero     0       37     Cal Prev-2 T-Zero     0       38     Calibration T-Span     1         39     Cal Prev-1 Temp-Bpan     1.000  |   | 34               | Base Temperature       | 1 Resto         | re Temperature                          | 1  | $\otimes$                   | 168.02                    | 1                                    |
| 37     Cal Prev-2 T-Zero       38     Calloration T-Span       39     Cal Prev-1 Temp-3pan   |   | 35               | Calibration T-Zero     | 0.2             | To Complete the C<br>instrument and the | alibration process, first restore normal line tempera<br>n click Done To return to calibration ,Click Recalibr | ature to the                | 100.21                    | -/                                   |
| 38     Calibration T-Span     Recisitional     Done       39     Cal Prev-1 Temp-Bpan     1.0000   |   | 35               | Cal Prev-1 T-Zero      | -0              |   | Temperature 156.9 F  | Ave                         | ngeNov drage              |                                      |
| 38         Calibration T-Span         1           39         Cal/Frev-1 Temp-Span         1.0000         —   |   | 37               | Cal Prev-2 T-Zero      | -0              |   | Treasure and Treasure of   |                             |                           |                                      |
|  |   | 38               | Calibration T-Span     | : 1             |   | PROCEDUTIONS   |                             |                           |                                      |
| 40 Cal Prev-2 Temp-Span 1.000  |   | 39               | Cal Prev-1 Temp-Span   | 1.0000          | -                                       |  | · · · ·                     |                           |                                      |
|  |   | 40               | Cal Prev-2 Temp-Span   | 1.0000          | —                                       |  |                             |                           |                                      |
| 41 Min TCal Point Diff % 10.0000   |   | 41               | Min TCal Point Diff %  | 10.0000         |   |  |                             |                           |                                      |
| 42 Excess TCal Change % 2.0000   |   | 42               | Excess TCal Change %   | 2.0000          | _                                       |  |                             |                           |                                      |
| 89 Temperature Units C —   |   | 89               | Temperature Units      | C               | -                                       |  |                             |                           |                                      |
| 121 Colibration Date Terms 01.01.01 MULDD VV   |   | 121              | Calibration Date Temp  | 01-01-01        | MM-DD-YY                                | -  |                             |                           |                                      |

Note: Supported temperature range: -40 °C to 70 °C

8. For Recalibration, click Recalibrate and repeat the same process.

### 4.6 Read Data

The Read data functionality is now re-designed to read and report data from the same screen. Users can read the logs from the instrument and can also generate reports.

In integrated mode

- When connected to integrated EC 350 over IrDA, logs from MasterLink Software Application R500.1 cannot be downloaded.
- When connected through TCP/IP all logs can be downloaded

In EC 350 mode

• When connected to EC 350 tabs corresponding to cellular logs and diagnostic logs are disabled.

Related topics:

Item File

Audit Trail

Alarm Logs

Event Logs

Diagnostic Logs

Cellular Logs

**Shortlist** 

Activity log

### 4.6.1 Item File

Use the 'Item File' tab to read the item numbers and their current values from the instrument. An Item File stores the connected site instrument's item values in a file (\*.IE3 for EC 350, \*.ICL for Cloud Link 4G Modem, \*.ECL for EC 350 + Cloud Link 4G Modem).

Item file can be read (online) from the connected instrument or can be viewed (offline) from a stored item file.

| Honeywell       | MasterLink 🔿 🕲 Admin 🖕 🗸 🛪   |
|-----------------|--|
| Deshboard       | Read Data  |
| 8<br>5110       | Item File   Audif Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular Logs   Shortlist   Activity Log |
| G)<br>View/Edit | Item File Name: Item Report  |
| 0               | Sites  |
| Calibrate       | Read data from:<br>Connected Ste   |
| Road Data       | Report data tram:  |
| Administer      |  |
| Ø<br>Sattings   |  |
| ÷⊈:<br>S≖carity |  |
| ¢£              | Read Raw Iten File View Edits Report View Edits Report View Edits Report                                       |
| ø               | Competed ( #0.350.1 🗖 acistose   0000000   Delease: D500.1 Build Version: 0.2.3.0                              |

Click View Item Report to generate and preview Item report

| Honeywell                   | MasterLink   | <b>N</b>   | ()   (Q) admin                           |
|-----------------------------|--|--|--|
| Deshboard                   | Read Data  |  |  |
| 2<br>50=                    | tem File   Audit Trail   Alarm Logs   Event Logs         | Diagnostic Logs   Célillar Logs   Shortlist   Activity Log               |  |
|                             | Item File Name Item Report                               |  | Report Options                           |
| 0                           | Sites  | Item File  |  |
| Collorate                   | Read data from:  |  |  |
| 9                           | Ennected Site  | Reading item File  |  |
| Read Date                   | Report data from;  | $\bigcirc$   |  |
| Reed Data                   | Selective mile File Location                             |  |  |
|                             |  | Please wait  |  |
| Administer<br>Ø<br>Sectings |  | Aboit  |  |
|                             |  |  |  |
| Sectings                    |  |  |  |
| *                           |  |  |  |
| Security                    |  |  |  |
| 4ŷ                          |  |  |  |
| 12.00                       |  | Read Raw Rent File View ten Report View Statistics Proved Colored Proven |  |
| JØ                          | Connected ( 50 359 ) 🗍 #c350ste 00000000 - 00000000 Rele | ase: R500 1 Build Version: 9.2.3.0                                       | Comm Monitor Send Capture Butter to File |

The Item File report appears.

| tem File                 | Audit Trail   Alarm Logs       | Event Logs          | Diagnostic Logs   Ce          | Iular Logs   Shortlist   .    | Activity Log           |                    |                           |
|--------------------------|--------------------------------|---------------------|-------------------------------|-------------------------------|------------------------|--------------------|---------------------------|
| tem File<br>Report Name: | Item Report                    |                     |                               |                               |                        |                    |                           |
| Site ID: 0000000         | 0 00000000   Site Name: ec350s | te   Serial Number. | Firmware Version 1.1026   Ite | m File Name: EC350_00000000_1 | 61213163938JE3         |                    |                           |
| ltem Number              | Item Description               | Item Value          | Item Units                    | ttem Number                   | Item Description       | Item Value         | Item Units                |
| 0000                     | Corrected Volume               | 00000011            | CCF                           | 1052                          | P1 Transducer Enable   | Yes                | ( ) ( ) ( ) ( ) ( ) ( ) ( |
| 0002                     | Uncorrected Volume             | 0000010             | CCF                           | 1053                          | P2 Transducer Enable   | Yes                |                           |
| 0005                     | Ch-APulses Walting             | 00000005            |                               | 1055                          | T1 Temp Probe Enable   | Yes                |                           |
| 0006                     | Ch-8 Pulses Waiting            | 00000004            |                               | 1056                          | LCD Display On Time    | 06 00 00           | 10000                     |
| 0007                     | Ch-C Pulses Waiting            | 00000017            |                               | 1057                          | LCD Display Off Time   | 18 00 00           |                           |
| 0008                     | P1 Gas Pressure                | 0.000               | PSI                           | 1058                          | P1 Transducer Alarm    | 8                  |                           |
| 0010                     | P1 High Alarm Limit            | 1422335.            | PSI                           | 1059                          | P2 Transducer Alarm    | 8                  |                           |
| 0011                     | P1 Low Alarm Limit             | -71.117             | PSI                           | 1061                          | Battery Pack Type      | Alkaline (4 Cells) |                           |
| 0012                     | P1 Cal Atmos Pressure          | 170.6803            | PSI                           | 1062                          | Tamper Status          | Tamper Detected    | ()                        |
| 0013                     | Base Pressure                  | 1234.000            | PSI                           | 1063                          | Extern Supply Alarm Tm | 00 00 00           | ()                        |

Export or Print the data.

Click View Site Report under Item File tab to generate site report.

| Read Data         |                               |              |                        |                         |                      |             |  |
|-------------------|-------------------------------|--------------|------------------------|-------------------------|----------------------|-------------|--|
| Nem File   A      | udil Trat   Alarm Logs        | Event Logs   | Diagnostic Logs        | Celtular Logs   :       | Shortlist   Activity | rtag        |  |
| Site Report       |                               |              |                        |                         |                      |             |  |
| Report Name II    | am Rapod                      |              |                        |                         |                      |             |  |
| Sile ID: 00000000 | 00000000 Site Name: ec350site | Serial Numbe | r."" Firmware Version: | 1026 Item File Name: EC | 350 00000000 16121   | 3163938.IE3 |  |
|                   |                               |              |                        |                         |                      |             |  |
| Volume            |                               |              |                        |                         |                      |             |  |
| ltem Number       | Item Description              | Stern Value  | Kem Unita              |                         |                      |             |  |
| 0000              | Corrected Volume              | 00000011     | COF                    |                         |                      |             |  |
| 0002              | Uncorrected Volume            | 00000010     | CCF                    |                         |                      |             |  |
| 0090              | Cor Volume Units              | CCF          | -                      |                         |                      |             |  |
| 0092              | Unc Volume Units              | CCF          | <del></del> )          |                         |                      |             |  |
| 0096              | Con Vol # of Digits           | 8 Digits     | -                      |                         |                      |             |  |
| 0097              | Unc Val # of Digits           | 8 Dígits     |                        |                         |                      |             |  |
| 0090              | Meter Index Rate              | 10 CF        | 70                     |                         |                      |             |  |
| 0113              | Hi Res Cor Vol                | 11.0000      | CCF                    |                         |                      |             |  |
| Pressure          |                               |              |                        |                         |                      |             |  |
|                   |                               |              |                        |                         |                      |             |  |

Click View Calibration Report under item file tab to view calibration report.

| Read Data        |                               |                   |                  |                             |                 |                      |    |  |
|------------------|-------------------------------|-------------------|------------------|-----------------------------|-----------------|----------------------|----|--|
| Item File A      | udit Trail   Alarm Logs       | Event Logs        | Diagnosti        | : Logs   Cellular Lo        | ogs Shortlist   | Activity Log         |    |  |
|                  |                               |                   |                  |                             |                 |                      |    |  |
| Calibration Re   | noq                           |                   |                  |                             |                 |                      |    |  |
| Report Name: It  | •                             |                   |                  |                             |                 |                      |    |  |
| Site ID: 0000000 | 00000000   Site Name: ec350si | te   Serial Numbe | r: ""   Firmware | Version: 1.1026   Item File | Name: EC350_000 | 00000_161213163938.I | E3 |  |
| Volume           |                               |                   |                  |                             |                 |                      |    |  |
| Item Number      | Item Description              | Item Value        | Item Units       |                             |                 |                      |    |  |
| 0000             | Corrected Volume              | 00000011          | CCF              |                             |                 |                      |    |  |
| 0002             | Uncorrected Volume            | 00000010          | CCF              |                             |                 |                      |    |  |
| 0113             | Hi Res Cor Vol                | 11.0000           | CCF              |                             |                 |                      |    |  |
| Pressure         |                               |                   |                  |                             |                 |                      |    |  |
| Item Number      | Item Description              | Item Value        | Item Units       |                             |                 |                      |    |  |
| 0008             | P1 Gas Pressure               | 0.000             | PSI              |                             |                 |                      |    |  |
| 0013             | Base Pressure                 | 1234.000          | PSI              |                             |                 |                      |    |  |
| 0014             | Atmospheric Pressure          | 14.6960           | PSI              |                             |                 |                      |    |  |
| 0017             | Calibration P1-Zero           | 0 0000            | PSI              |                             |                 |                      |    |  |
|                  | Adobe PDF                     | -                 |                  |                             |                 |                      |    |  |

Note: Application must be connected to an instrument to perform this operation.

## 4.6.2 Audit Trail

| Construction II Construction March Construction March II Constr |   |   |
|---|---|---|
| Audit Trail Name: Audit Trail Report  |   | Graph Options Report Options  |
| Sites & Logs  | Date Range  |   |
| Read data from Connected Site Report data from Selected Sites Select Sites  | Select dates to use when this report is printed.  Today  Yesterday  This Month Last Month Diswnbrad 12/10/2016 07:15:00 Last N Days 1   | Date Range Options Stort Labeet Date 6 Start of Day Time 00:00:00 Exclude data a Todays and time 00:00:00 |
| Log selection   | Since:         13-12-2016         00.00.00           From/To         08-12-2016         00.00.00           13-12-2016         10.00.00         00.00           Constants         23:59:59         Constants Date Plange |   |

Use the 'Audit Trail' tab to view and download Audit Trail data from the instrument.

Application must be connected to an instrument to view Audit Trail reports.

Relate the steps highlighted in the image above with the steps below:

- Start by selecting the site. Logs can be read from a connected site (online), or can be retrieved from exiting list of sites (offline). The connected site will be selected by default. For selecting multiple sites use Select Sites option.
- 2. Select the log or select Check All
- 3. Select the Date Range
- 4. Click View to view Audit Trail Report.

If required, click on **Report Options** to view or add more information in the report.

Audit Trail Report can be viewed without Summary - This function is used to provide a full report (without summary) of the audit trail data that pertains to a particular instrument.

| Honeywe         | II   MasterLink R500.1   |                                 |     |                    | 00                |
|-----------------|--|---------------------------------|-----|--------------------|-------------------|
| Dashboard       | Read Data  |                                 |     |                    |                   |
| Q<br>Site       | Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular | Logs   Shortlist   Activity Log | k   |                    |                   |
| (i)<br>Vew Edit | Audit Trail Name: Audit Trail Report   | 7                               |     | Audit Trail Report | Without Summary 👻 |
| $\odot$         | Options  | Units Selections                |     |                    | Ŷ                 |
| Calibrate       | Use User Text  | · · ·                           | ~   | ×                  | ~                 |
| Read Data       | User Text  |                                 | ~]  | ~                  | ·                 |
| ⊘<br>Live Data  | Start of gas day should be included  | · · ·                           | ~ [ | ~                  | ~                 |
| 2               | Beginning of report  | ×.                              | ~   | ~                  | ~                 |
| Administer      | End of report  |                                 | ~   | ~                  | - 3               |
| Settings        |  | -                               |     |                    |                   |
| Security        |  |                                 |     |                    |                   |
|                 |  |                                 |     |                    | ×                 |
| ø               | - Back:  | Nitew                           |     |                    |                   |

Relate the steps highlighted in the image above with the steps below:

- 1. Start by checking Use User Text, and entering the name of the report.
- 2. Select whether start of gas day is to be included in Beginning of report or towards the End of Report.
- 3. Select the Units Selections.
- 4. Click View.

The Audit Trail Report appears based on selected criteria.

| Item File   Audit Ti     | rail   Alarm        | Logs   Ever         | nt Logs   Di     | agnostic Logs       | Cellular Log       | s   Shortlist        | Activity Log    |                    |                   |                    |             |
|--------------------------|---------------------|---------------------|------------------|---------------------|--------------------|----------------------|-----------------|--------------------|-------------------|--------------------|-------------|
|                          |                     |                     |                  |                     | 0.160              |                      |                 |                    |                   |                    |             |
| Report Name: Aud         | I1 Trail Report     |                     |                  |                     | Audit T            | rail Report          |                 |                    |                   |                    |             |
| Report Selections: 1 si  |                     | 11-01 00:00:00 To   | 2016-11-30 23:5  | 9:59                |                    |                      |                 | Site info :        | 00000000:00000000 | • <b>•</b> Log#: * | 1 •         |
| Site ID: 0 0 Log1 Site N | ame: ec350site      | Site Location In    | rd               |                     |                    |                      |                 |                    |                   |                    |             |
|                          |                     |                     | P1               | I                   | -                  |                      |                 |                    |                   | T.                 | -           |
| Log Date and Time        | Incremen<br>tal Cor | Incremen<br>tal Unc | Interval<br>Avg  | Interval<br>Avg Gas | Battery<br>Voltage | Correcte<br>d Volume | Uncorrec<br>ted | P1 Gas<br>Pressure | Gas<br>Temperat   | Case<br>Temperat   | Batt<br>Low |
| -                        | Vol (CCF)           | Vol (CCF)           | Press<br>(PSI-G) | Temp (C)            | Reading<br>(VOLTS) | (CCF)                | Volume<br>(CCF) | (PSI-G)            | ure (C)           | ure (C)            | (VC         |
| 11/25/2016 4:10:00 PM    | 0                   | 0                   | .000             | -94.17              | 4.591              | 9                    | 321322          | .000               | -94.17            | 24.18              | 46          |
| 11/25/2016 4 15:00 PM    | 0                   | 0                   | .000             | -94 16              | 4 591              | 9                    | 321322          | .000               | -94.12            | 24.20              | 4.6         |
| 11/25/2016 4:20:00 PM    | 0                   | 0                   | .000             | -94.17              | 4.586              | 9                    | 321322          | .000               | -94.26            | 24.23              | 4.6         |
| 11/25/2016 4:25:00 PM    | 0                   | 0                   | .000             | -94.17              | 4.586              | 9                    | 321322          | 000                | -94.14            | 24.23              | 4.6         |
| 11/25/2016 4 30:00 PM    | 0                   | 0                   | .000             | -94.17              | 4.588              | 9                    | 321322          | 000                | -94.19            | 24.23              | 4.6         |
| 11/25/2016 4.35:00 PM    | 0                   | 0                   | .000             | -94.16              | 4.588              | 9                    | 321322          | .000               | -94.09            | 24.28              | 4.6         |
| 11/25/2016 4:40:00 PM    | 0                   | 0                   | .000             | -94.16              | 4.587              | 9                    | 321322          | .000               | -94.16            | 24.33              | 4.60        |
|                          |                     |                     |                  |                     |                    |                      |                 |                    |                   |                    |             |

You can choose to Export or Print the data.

### 4.6.2.1 Audit Trail Graphs

The Audit Trail Graph function displays selected report items in graph format. It is recommended that items with numeric values are used for plotting the graph.

| MasterLink                |                                     |                  |   |                                |                 |           |                | ⑦   ② Admin   -           |
|---------------------------|-------------------------------------|------------------|---|--------------------------------|-----------------|-----------|----------------|---------------------------|
| Read Data                 |                                     |                  |   |                                |                 |           |                |                           |
| Item File   Au            | dit Trail   Alarm Logs   Ev         | ent Logs   Diage | nostic Logs   Cellular  | Logs   Shortlist               | Activity        | Log       | ľ.             |                           |
|                           |                                     |                  |   |                                |                 |           |                |                           |
| Audit Trail Na            | me: Audit Trail Report              |                  |   |                                |                 |           |                | Graph Options Report Opti |
| Sites & Logs              |                                     |                  |   | Date Range                     |                 | _         |                |                           |
| Read data from:           |                                     |                  |   | Select dates to use            | when this repor | t is prin | ted:           | Date Range Optio          |
| Connected Ste             |                                     |                  |   | 🔿 Today                        |                 |           |                | Sort Latest 0             |
| Report data from:         |                                     |                  |   | O Yesterday                    |                 |           |                | Start of Day T            |
| 1.1.1                     |                                     |                  |   | <ul> <li>This Month</li> </ul> |                 |           |                | 00:00:00                  |
| Selected Sites            | EC350 + Cloud Link 00000123 - 00000 | 123 Select Stes  |   | C Last Month                   |                 |           |                | Exclude o                 |
|                           | EC 350 0000000 - 00000000           |                  |   | - lincelast                    |                 |           |                | Todays end bn             |
|                           |                                     |                  |   | Dewnload 🤍                     |                 |           |                | 00:00:00                  |
|                           |                                     |                  | (1)   | 🔿 Last N Days                  | 1               |           |                |                           |
| -                         |                                     |                  | ~   | Since                          | 21-12-2016      | 雦         | 00:00:00       |                           |
| Log selection             |                                     |                  | Check All   | From/To                        | 01-08-2015      | Î         | 00:00:00       |                           |
| Contraction of the second | -                                   |                  | and the second se |                                | 21-12-2016      | Î         | 23:59:59       |                           |
| 🖌 Log 1                   | Log 2 Log 3                         | Log 4            | Log 5   |                                | Cal             | oulate D  | ate Range      |                           |
|                           |                                     |                  |   |                                |                 | *******   | 100 C 100 C 10 |                           |

Relate the steps highlighted in the image above with the steps below:

- 1. Start by selecting the site from the Site and Logs section.
- 2. Select one log out of 5 logs.
- 3. Select the Date Range

Select the date range. Select the check box next to the date range choice.

- Selecting today, will report data from 12-hours up to the time the report is begun.
- Choosing Yesterday will print from a 24-hour span up to the time the report is begun.
- This Month reports only the data for the current month.
- The Last Month reports back 30 days.
- If Last N Days is chosen, enter the number of days.
- When selecting either Since or From/To, date and time fields appear on the screen for input.

Click **Graph Options** to customize the audit trail graph.

| Audit Trail Graph  |       |      |              |                      |
|--------------------|-------|------|--------------|----------------------|
| Y Axis Item        | Y Min | YMax | Color        | Line Style           |
| Corrected Volume * | 0     | 100  | 🔴 Red 🛛 🔻    | Solid Line(Vedium) + |
| Uncorrected Volume | 0     | 100  | 🔵 Blue 🗸 🗸   | Solid Line(Medium) + |
| P1 Gas Pressure *  | 0     | 100  | Green +      | Solid Line(Medium) * |
| Gas Temperature •  | 0     | 100  | 😑 Orange 🔹 🔹 | Solid Line(Medium) • |
|                    |       |      |              | 6                    |
|                    |       |      |              |                      |

Relate the steps highlighted in the image with the steps below:

- 1. Configure the Y-Axis item, Y Min, Y Max, Color and Line Style
- 2. Select the required option from the Log selection

#### Audit Trail Graph - Y Axis Item

Toggle-click on the box to select/deselect the item(s) to graph. The items chosen will be displayed on the actual graph when the Preview button is clicked.

#### Audit Trail Graph - Y Min

This option sets the values for the minimum Y scale (vertical scale). To change these defaults, click on that field and enter the new value.

#### Audit Trail Graph - Y Max

This option sets the values for the maximum Y scale (vertical scale). To change these defaults, click on that field and enter the new value.

#### Audit Trail Graph - Color

For each of the 4 items, click on the down arrow next to the color fields for selectable options, then click on the selection. The color selections and item titles will be displayed on the actual graph legend when Preview is clicked.

#### Audit Trail Graph - Line Style

For each of the 4 items, click on the down arrow next to the line style field for selectable options, then click on the selection. Dashed or dotted line styles will not be noticeable on data lines unless the data points are fairly far apart.

#### Log Selection

- Each item on separate graph Checking this box will draw one item per graph. If this is unchecked, more
  than one item will be drawn on a graph. A graph can have two Y scales (vertical); one on each side. If two
  items have the same unit of measure, they can share a Y scale. The Y scales are located along the left and
  right sides of the graph.
- Show data points on lines Data lines may be drawn with or without dots
- 3. Click Show Graph. The Audit Trail Graph appears based on the selected criteria.

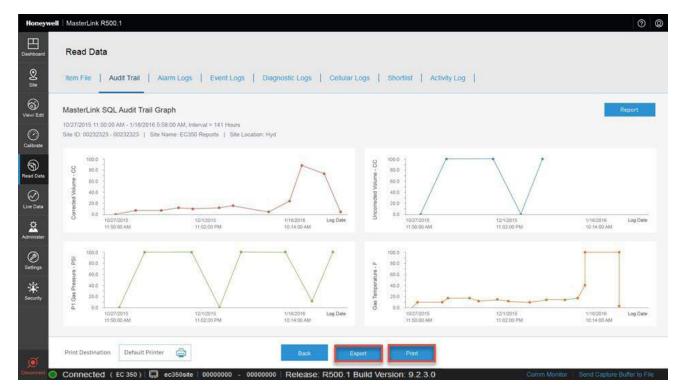
#### Audit Trail Graph - Save Setup

Click this button to save the Audit Trail Graph Setup configuration. These defaults can be reused when you click the Load Setup button. The default file extension is .ags and is saved in the installation designated file folder for report/-graph files.

#### Audit Trail Graph: Load Setup

Click this button to load the Audit Trail Graph Setup configuration which is previously saved to file with the "Save Setup" feature. The file is saved in the installation designated file folder for report/graph files.

After selecting a file, click the Open button to proceed with this function or Cancel to return to the currently displayed graph setup.



After customizing the graph, finally click Show Graph to view Audit Trail Graph.

You can choose to Export or Print the data.

### 4.6.3 Alarm Logs

Use the 'Alarm Logs' tab to read and view all alarm activity data from a connected instrument. An Alarm Log record is defined as any alarm activity, which includes new alarms, alarms acknowledged as well as alarms that have been cleared. Alternatively, you can choose to select a list of sites and then generate a report.

### 4.6.3.1 For Selected sites

| <u>®</u><br>5110 | Item File   Audit Trail   Alarm | Logs   Event Logs   Diagnostic Logs | Cellular Logs   Shortlist | Activity Log          | 1          |   |                      |
|------------------|---------------------------------|-------------------------------------|---------------------------|-----------------------|------------|---|----------------------|
| 3)<br>√ =an      | Alarm Logs   Name   Alarm Log R | Report                              |                           |                       |            |   | Report Optione       |
| 3                | Sites                           |                                     | Date Range                |                       |            |   |                      |
| librate          | Read data from:                 | 6                                   | Select dates to use       | when this report is p | inted:     |   | Date Range Options   |
| Ð                | Connected Site                  |                                     | 1) O Today                |                       |            |   | Sort Latest Date Fir |
| d Data           | Report data from:               |                                     | O Yesterday               |                       |            |   |                      |
| $\odot$          | O Selected Sites                | theoret titles                      | O This Month              |                       |            |   |                      |
| - Dete           |                                 |                                     | C Last Month              |                       |            |   |                      |
| Ċ.               |                                 |                                     | O Since Last<br>Download  | 12/10/2016 07:1       | 158        |   |                      |
| ninister         |                                 |                                     | 🔿 Läst N Days             | 1                     |            |   |                      |
| Ð                |                                 |                                     | Since                     | 21-12-2016            | 7.         |   |                      |
| ttings           |                                 |                                     | From/To                   | 01-12-2016            |            |   |                      |
| ¢:               |                                 |                                     |                           | 21-12-2016            | 23:59:59   |   |                      |
| starity          |                                 |                                     |                           |                       | Date Hange | 2 |                      |

Start by selecting sites.

| Honeywe          | II MasterLink                  |  |          |                         |                    |                   | (      | 곗 🔘 admin 🛛 🗕 🗗 🗙 |
|------------------|--------------------------------|--|----------|-------------------------|--------------------|-------------------|--------|-------------------|
| Dashboard        | Read Data                      |  |          |                         |                    |                   |        |                   |
| <u>©</u><br>5110 | Item File   Audit Trail   Alar | m Logs   Event Logs  | Diagnost | ic Logs   Cellular Logs | Shortlist   Activi | ly Log            |        |                   |
| (G)<br>View/Edit | Selected Sites                 |  |          |                         |                    |                   |        |                   |
| 0                | Instrument 💽 Select Al         | Sile List  |          |                         |                    | Selected Sites    |        |                   |
| Calibrate        | V EC 350                       | Site ID +  | Туре     | Site Name               |                    | Site ID +         | Туре   | Site Name         |
| 0                | Cloud Link                     | 00000000-00000000  | EC 350   | ec350site               |                    | 0000000 - 0000000 | EC 350 | ec350site         |
| Read Data        | EC350 + Cloud Link             |  |          |                         |                    |                   |        |                   |
| $\otimes$        |                                |  |          |                         |                    |                   |        |                   |
| Live Dete        |                                |  |          |                         | Add Al             |                   |        |                   |
| Administer       |                                |  |          |                         | Remove At          |                   |        |                   |
| Ø<br>Settings    |                                |  |          |                         |                    |                   |        |                   |
| <u>ж</u>         |                                |  | Г        |                         |                    | 7                 |        |                   |
| Security         |                                |  | S        | elect the instrument    | and the site       |                   |        |                   |
| 6P               |                                |  | _        | GK Car                  | cel                | -                 |        |                   |
| ø                |                                | and a second |          |                         |                    |                   |        |                   |

Select the date range of the report and then click **View**. The Alarm Logs appear based on your selected criteria. You can choose to **Preview** or **Print** the data.

| em File                       | Audit Trail  | Alarm Log                   | is   Eve      | ent Logs   Diagnostic I | ogs   Ce    | llular Logs   Short | tlist Activity Log |    |                             |  |
|-------------------------------|--------------|-----------------------------|---------------|-------------------------|-------------|---------------------|--------------------|----|-----------------------------|--|
|                               |              |                             |               |                         |             | Alarm Log Report    |                    |    |                             |  |
| eport Name:<br>eport Selectio |              | og Report<br>From 2016-11-0 | 1 00 00 00 Te | 0 2016-11-30 23 59 59   |             |                     |                    | 51 | te info : 00000000.00000000 |  |
|                               |              |                             |               |                         |             |                     |                    |    |                             |  |
| ite ID: 00 Si                 | le Name: ec3 | 50site   Site Loc           | ation: hyd    |                         |             |                     |                    |    |                             |  |
| Date                          | Time         | Alarm Type                  | Item #        | Alarm Desc              | Alarm Value | Alarm Limit         |                    |    |                             |  |
| 11/25/2016                    | 16:53:15     | Alarm Ack                   | 1058          | P1 Transducer Alarm     | 8           | 0000000             |                    |    |                             |  |
| 11/25/2016                    | 16:53:15     | Alarm Ack                   | 1025          | Supercompress Alarm     | 10          | 00000000            |                    |    |                             |  |
| 11/25/2016                    | 16:53:15     | Alarm Ack                   | 104           | System Alarms           | 16384       | 00000000            |                    |    |                             |  |
| 11/25/2016                    | 16:53:15     | Alarm Ack                   | 1059          | P2 Transducer Alarm     | 8           | 00000000            |                    |    |                             |  |
| 11/25/2015                    | 16:53:15     | Alarm Ack                   | 107           | Tamper Detected Alarm   | 11111111    | 00000000            |                    |    |                             |  |
| 11/25/2016                    | 16:53:15     | Alarm Ack                   | 1335          | Temp Probe Alarms       | 4           | 0000000             |                    |    |                             |  |
| 11/25/2016                    | 16.53.14     | Alarm Ack                   | 144           | Temperature Low Alarm   | -94.13      | -37.22              |                    |    |                             |  |
| 11/25/2016                    | 16:45:40     | Narm                        | 107           | Tamper Detected Narm    | 1111111     | 0000000             |                    |    |                             |  |
| 11/25/2018                    | 16 45 40     | Alarm                       | 104           | System Alarms           | 16384       | 0                   |                    |    |                             |  |
|                               |              |                             |               |                         |             |                     |                    |    |                             |  |

### 4.6.3.2 For Connected site

| Honeywell         | MasterLink   |                          |                         |              | ⊘   🔘 Admin   🗕 🗗 🗙                   |
|-------------------|--|--------------------------|-------------------------|--------------|---------------------------------------|
| Deshboard         | Read Data  |                          |                         |              |                                       |
| <u>0</u><br>5110  | Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular L | ogs   Shortlist          | Activity Log            | 1            |                                       |
| (i)<br>View/Edit  | Alarm Logs Name: Alarm Log Report  |                          |                         |              | Report Optione                        |
| 0                 | Sites  | Date Range               |                         |              |                                       |
| Colibrate         | Read data from:  | Select dates to use      | i when this report is p | rinted:      | Date Range Options                    |
| 9                 | Connected Ste  | 🔿 Today                  |                         |              | Sort Latest Date First                |
| Read Data         | Report data from:  | O Yesterday              |                         |              |                                       |
| $\otimes$         | O Selected Sites Benefities  | 🔿 This Month             |                         |              |                                       |
| Live Deta         |  | 🔿 Last Month             |                         |              |                                       |
| 2                 |  | O Since Last<br>Dewnload | 12/10/2016 07:1         | 8:58         |                                       |
| Administer        |  | 🔿 Last N Days            | 1                       |              |                                       |
| Ø                 |  | O Since                  |                         | 00:00:00     |                                       |
| Settings          |  | From/To                  |                         | 00:00:00     |                                       |
| <b>读</b>          |  |                          | 21-12-2016              | 23:59:59     |                                       |
| Security          |  |                          |                         | : Date Range | 2                                     |
| - <del>(</del> f) |  |                          |                         |              |                                       |
| 14                |  | /ew 3                    |                         |              |                                       |
| , e               | Connected (EC 350)   |                          | _                       |              | Monitor   Send Capture Buffer to File |

Select the date range of the report and then click **View**. The Alarm Logs appear based on your selected criteria. Choose to **Preview** or **Print** the data.

|  | r,                               |                             |               |  |               |                  |                    |     |           |   |              |
|--|----------------------------------|-----------------------------|---------------|--|---------------|------------------|--------------------|-----|-----------|---|--------------|
| Item File                              | Audit Trail                      | Alarm Log                   | ps   Eve      | nt Logs   Diagnostic I                     | Logs   Ce     | llular Logs   Sh | ortlist   Activity | Log |           |   |              |
|  |                                  |                             |               |  |               | Alarm Log Rep    | ort                |     |           |   |              |
| Report Name<br>Report Selection        |                                  | og Report<br>From 2016-11-0 | 1 00 00 00 Te | 2016-11-30 23 59 59                        |               |                  |                    |     | Site info | 000000000000000000000000000000000000000 | 100 <b>-</b> |
|  |                                  |                             |               |  |               |                  |                    |     |           |   |              |
|  |                                  | 50site   Site Loc           | TRANSFORM     | 1022002000                                 |               | 1200002002       |                    |     |           |   |              |
| Date 11/25/2016                        | Time<br>16:53:15                 | Alarm Type<br>Alarm Ack     | Item #        | Alarm Desc<br>P1 Transducer Alarm          | Alarm Value   | Alarm Limit      |                    |     |           |   |              |
| 11/25/2016                             |                                  | Alarm Ack                   | 1056          | Supercompress Alarm                        | 10            | 00000000         |                    |     |           |   |              |
|  |                                  | Alarm Ack                   | 1025          | System Alarms                              | 16384         | 00000000         |                    |     |           |   |              |
|  | 201111                           | Alarm Ack                   | 1059          | P2 Transducer Alarm                        | 8             | 00000000         |                    |     |           |   |              |
| 11/25/2016                             | 16:53:15                         |                             |               |  |               |                  |                    |     |           |   |              |
|  |                                  | Alarm Ack                   | 107           | Tamper Detected Alarm                      | 11111111      | 00000000         |                    |     |           |   |              |
| 11/25/2016                             | 16:53:15                         |                             | 107<br>1335   | Tamper Detected Alarm<br>Temp Probe Alarms | 11111111<br>4 | 00000000         |                    |     |           |   |              |
| 11/25/2016<br>11/25/2016               | 16:53:15<br>16:53:15             | Alarm Ack                   |               |  | 4             |                  |                    |     |           |   |              |
| 11/25/2016<br>11/25/2016<br>11/25/2016 | 16:53:15<br>16:53:15<br>16:53:14 | Alarm Ack<br>Alarm Ack      | 1335          | Temp Probe Alarms                          | 4<br>-94.13   | 0000000          |                    |     |           |   |              |

## 4.6.4 Event Logs

Use the 'Event Logs' tab to read event data from a connected instrument. An "event" documents an item change in the instrument or an instrument download.

**Note:** This log is different from the Activity Log because that log mainly focuses on software activity (and some firmware activity) where the Event Log function records activity that is directly linked to and maintained by the instrument.

| Honeywei                     | l MasterLink   |   | ⊘ 🔘 admin 📔 🗗 🗙                            |
|------------------------------|--|---|--|
| Deshboard                    | Read Data  |   |  |
| 2<br>5119                    | Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cel        | alar Logs   Shortlist   Activity Log              |  |
| (G)<br>View/Edit             | Event Logs Name: Event Log Report  |   | Report Options                             |
| 0                            | Sites  | Date Range  |  |
| Colibrate                    | Read deta from:  | Select dates to use when this report is printed;  | Date Range Options                         |
| 9                            | Connected Ste  | 🔘 Today   | Sort Latest Date First                     |
| Road Data                    | Report data from:  | Yesterday   |  |
| $\otimes$                    | Selected Sites     Select Sites  | C This Month                                      |  |
| Live Data                    |  | Last Month     Since Last     12/09/2016 04:12:20 |  |
| 2                            |  | Download  |  |
| Administer                   |  | C Last N Days 1                                   |  |
| <ul> <li>Sattings</li> </ul> |  | From/To     08-12-2016     10 00:00               | -  |
| E3                           |  | 13-12-2016 fm 23:59:59                            |  |
| ÷⊈:<br>S≠turity              |  | Colculate Date Range-                             |  |
| 49<br>-                      |  |   | 2  |
| 100                          | Γ  | Vew 3   |  |
| ø                            |  |   |  |
| Disconnect 🥥                 | Connected (EC 350) 💭 ac350ata 00000000 - 00000000 Release R500 1 Build Version 9 | 23.0  | Comm Monitor   Send Capture Buffer to File |

Relate the steps highlighted in the image above with the steps below:

1. Event Logs can be read from a connected site. Alternatively, user can select a site from the available list of sites and then generate a report.

| Item File   Audit Trail | Alarm Logs   Event Logs | Diagnostic Lo | gs   Cellular Logs | Shortlist   Activ                       | ty Log           |      |           |
|-------------------------|-------------------------|---------------|--------------------|---|------------------|------|-----------|
| Selected Sites          |                         |               |                    |   |                  |      |           |
| Instrument 💟 Sei        | ect Al Sile List        |               |                    |   | Selected Sites   |      |           |
| EC 350                  | Site ID +               | Туре          | Site Name          |   | Site ID +        | Туре | Site Name |
| Cloud Link              | 00000000-00000000       | EC 350        | ec350site          |   | 0000000-00000000 |      |           |
| 2 EC350 + Courd Link    |                         |               |                    | Add Al<br>Add Al<br>Remove<br>Remove Al |                  |      |           |
|                         |                         |               |                    |   |                  |      |           |

- 2. Select the date range of the report.
- 3. Click View. The Event Logs appear based on your selected criteria.

| Report Name:    | Event Lo     | g Report        |                 |                        |        | Event Log   | Report   |          |         |          |                                 |
|-----------------|--------------|-----------------|-----------------|------------------------|--------|-------------|----------|----------|---------|----------|---------------------------------|
| Report Selectio | ns: 1sile,   | From 2016-12    | 2-08 00:00:00 T | 0 2016-12-13 23:59:59  |        |             |          |          |         |          | Site Info : 00000000000000000 + |
| ilte ID: 00 Si  | te Name: ec3 | 50site   Site L | ocation: hyd    |                        |        |             |          |          |         |          |                                 |
| Date            | Time         | Event#          | Item #          | Item/Event Description | UserID | Туре        | As Found | As Left  | CalUnit | Comm CRC | Calc CRC                        |
| 12/09/2016      | 04:12:20     | 3966            | 204             | Date                   | 0      | ltem Chg NC | 01-01-01 | 12-09-16 | 0       | 992C     | 992C                            |
| 12/09/2016      | 02.31.28     | 3967            | 203             | Time                   | 0      | Item Chg NC | 04 12 20 | 02 31 28 | 0       | DD3D     | DD3D                            |
|                 |              |                 |                 |                        |        |             |          |          |         |          |                                 |
|                 |              |                 |                 |                        |        |             |          |          |         |          |                                 |
|                 |              |                 |                 |                        |        |             |          |          |         |          |                                 |
|                 |              |                 |                 |                        |        |             |          |          |         |          |                                 |
|                 |              |                 |                 |                        |        |             |          |          |         |          |                                 |

4. Preview or Print the data.

# 4.6.5 Diagnostic Logs

Use the 'Diagnostic Logs' tab to read diagnostic data from a Cloud Link 4G Modem.

Diagnostic logs are applicable to Cloud Link 4G Modem only and would be available when connected to Cloud Link 4G Modem or in integrated mode.

| Honeywell        | MasterLink R500.1   |                        |                              | () 0 - ଟ ×             |
|------------------|---|------------------------|------------------------------|------------------------|
| Dashboard        | Read Data Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular Li | ogs   Shortlist        | Activity Log                 |                        |
| (i)<br>View Edit | Diagnostic Logs Name: Diagnostic Log Report   |                        |                              |                        |
| 0                | Sites   | Date Range             |                              |                        |
| Cuttonete        | Read data from:   | Select dates to use    | when this report is printed: | Date Range Options     |
| 9                | Connected Ster  | Today                  |                              | Sort Latest Date First |
| Read Data        | Report data from  | O Yesterday            |                              |                        |
| Cive Data        | Selected Stes   | C This Month           |                              |                        |
| 2                |   | Since Last<br>Downtest | 09/28/2016 19:56:21          |                        |
| Administer       |   | 🔿 Last N Days          | 1                            |                        |
| Ø                |   | O Since                | 9/28/2016 00.00:00           |                        |
| Settings         |   | C From/To              | 9/23/2016 00:00:00           |                        |
| ж÷               |   |                        | 9/28/2016 23:59:59           |                        |
| Security         |   |                        | Coloris in Data Range        |                        |
| <i>\$</i> \$     |   |                        |                              |                        |
| Update           |   | View                   |                              |                        |
| ø                |   | and the second         |                              |                        |

You can read Diagnostic logs from the currently connected site. Alternatively, you can choose to select a list of sites and then generate a report.

| Bead Data   |   |                          |            |                        |
|---|---|--------------------------|------------|------------------------|
| 8 Item File   Audit Trail   Alarm Logs   Event Logs | Diagnostic Logs   Cellular Logs   Shortlist | Activity Log             | i' I       |                        |
| Diagnostic Logs Name: Diagnostic Log Report         |   |                          |            |                        |
| Sites   | Date Range                                  |                          |            |                        |
| Read data from:                                     | Select dates to use                         | when this report is prin | ited:      | Date Range Options     |
| Somected Star                                       | Today                                       |                          |            | Sort Latest Date First |
| sd Date Report data from                            | C Yesterday                                 |                          |            |                        |
| Select Stes Select Stes                             | O This Month                                |                          |            |                        |
| e Data  | C Last Month                                |                          |            |                        |
| <u>\$</u>   | Since Last<br>Download                      | 09/28/2016 19:56:21      |            |                        |
| niniste   | C Last N Days                               | 1                        |            |                        |
| 9   | ) Since                                     | 9/28/2016                | 00.00:00   |                        |
| lings   | C From/To                                   | 9/23/2016                | 00:00:00   |                        |
| ж   |   | 9/28/2016                | 23.59.59   | -                      |
| Se curity   |   | Calculate C              | alle Russe | (2)                    |
| 69  |   | Tab.                     |            |                        |

Relate the steps highlighted in the image above with the steps below:

- 1. Start by selecting the required site(s).
- 2. Then select the date range, and finally click View to read the Diagnostic log report.
- 3. You can also choose to Export or Print the data.

### 4.6.6 Cellular Logs

Use the 'Cellular Logs' tab to read cellular data from a connected Cloud Link 4G Modem. Cellular Logs contain cellular connectivity and communication data of the connected modem.

| Honeywell  | MasterLink R500.1   |                        |                  |          |             | 0 | Q          | ÷ (      | 5 X       |
|------------|---|------------------------|------------------|----------|-------------|---|------------|----------|-----------|
|            | Read Data Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs   Cellular Lt | ogs   Shortlist        | Activity L       | og       | 61          |   |            |          |           |
| 5110       | Cellular Logs Name: Cellular Log Report   |                        |                  |          |             |   |            |          |           |
| 0          | Silles  | Date Range             |                  |          |             |   |            |          |           |
|            | Read data from:   | Select dates to use    | when this report | is print | ed.         | c | Nate Range | Options  |           |
| 9          | Connected Ste   | Today                  |                  |          |             |   | Sort L     | atest Da | ite First |
|            | Report data from:   | O Yesterday            |                  |          |             |   |            |          |           |
| $\odot$    | Selected Sites  | O This Month           |                  |          |             |   |            |          |           |
| Live Data  |   | 🔿 Last Month           |                  |          |             |   |            |          |           |
| 2          |   | Since Last<br>Download | 09/28/2016 20    | 03:30    |             |   |            |          |           |
| Administer |   | 🔿 Lost N Days          | 1                |          |             |   |            |          |           |
| Ø          |   | ) Since                | 9/28/2016        | 鎆        | 00.00.00    |   |            |          |           |
| Sattings   |   | C From/To              | 9/23/2016        | 鎆        | 00.00.00    |   |            |          |           |
| <u>ж</u> . |   |                        | 9/28/2016        | 餔        | 23.59.59    |   |            |          |           |
| Security   |   |                        | Gath             |          | to Nation : |   |            |          |           |
| GD         |   |                        | 1                |          |             |   |            |          |           |
| Update     |   | /ew                    |                  |          |             |   |            |          |           |
| 100        |   |                        |                  |          |             |   |            |          |           |

You can read Cellular logs from the currently connected site. Alternatively, you can choose to select a list of sites and then generate a report.

| Decoded      | Read Data  |   |                           |            |                       |
|--------------|--|---|---------------------------|------------|-----------------------|
| 2<br>5110    | Item File   Audit Trail   Alarm Logs   Event Logs   Diag | nostic Logs   Cellular Logs   Shortlist | Activity Log              | 0          |                       |
| (<br>)/ Edit | Cellular Logs Name Cellular Log Report                   |   |                           |            |                       |
| 0            | Sites  | Date Range                              |                           |            |                       |
| lationate    | Read data from:  | Select dates to use                     | e when this report is pri | inted.     | Date Range Options    |
| 9            | Connected Sto  | Today                                   |                           |            | Sort Latest Date Firs |
| ad Deta      | Report data from   | O Yesterday                             |                           |            |                       |
| $\oslash$    | Selected Stes     Select Stes                            | C This Month                            |                           |            |                       |
| ve Data      |  | C Last Month                            |                           |            |                       |
| 2            |  | Since Last<br>Downland                  | 09/28/2016 20:03:3        | 0          |                       |
| ninister     |  | C Lost N Days                           | 1                         |            |                       |
| 0            | V  |   | 9/28/2016                 | 00:00:00   |                       |
| attings      |  | C From/To                               | 9/23/2016                 | 00:00:00   |                       |
| ф.           |  |   | 9/28/2016                 | 23.59.59   |                       |
| Security .   |  |   | GattyMate                 | Dote Renge | 2                     |
| 49           |  |   |                           |            |                       |

Relate the steps highlighted in the image above with the steps below:

- 1. Start by selecting the required site
- 2. Then select the date range, and finally click **View** to read the Cellular log report.
- 3. You can also choose to Export or Print the data.

### 4.6.7 Shortlist

| Item File   Audit Trail   Alarm Logs   Event Logs | Diagnostic Logs   Cellular Lo | gs   Shortlist    | Activity Lo       | g [        |          |            |            |
|---|-------------------------------|-------------------|-------------------|------------|----------|------------|------------|
| Shortlist Name Shortlist Report                   |                               | -                 |                   |            |          | 3          | port Oplic |
| Sites   | 0                             | Date Range        |                   |            |          |            | 6          |
| Read data from:                                   | •                             | Select dates to ( | se when this repo | ort is pri | nted:    | Date Range |            |
| Connected Ste                                     |                               | 🔿 Today           |                   |            |          | Sori L     | atest Dat  |
| 🔿 Select tem file                                 | Bernete                       | 🔿 Yesterday       |                   |            |          |            |            |
| 2   |                               | 🔿 This Month      |                   |            |          |            |            |
| Report data from:                                 |                               | C Last Month      |                   |            |          |            |            |
| Selected Sites                                    | Select Sites                  | 🔿 Last N Day      | 1                 |            |          |            |            |
|   |                               | ) Since           | 13-12-2016        | 箘          | 00:00:00 |            |            |
|   |                               | € From/To         | 08-12-2016        | 1          | 00:00:00 |            |            |
| 0   |                               | 1.040             | 13-12-2016        | 1          | 23:59:59 |            |            |
| Report item from:                                 |                               |                   | Calco             | late Oab   | e Range  |            |            |
| Select Shortilist tem file                        | Babasak                       |                   |                   |            |          |            |            |

The Shortlist Template created using <u>Manage Shortlist</u> tab can be used to generate report for the corresponding shortlist.

Relate the steps highlighted in the image above with the steps below:

- 1. Select the site list or the item file.
- 2. Select the dates to use when the report is printed.
- 3. Click **Report Options** to enter user text. Check *Use User Text*, type the text that should appear in the report in the **User Text** box.
- 4. Click **View** to view the shortlist report.

| 4  | a  |                                     |                  |              |                         |        |      |  |
|--|--|-------------------------------------|------------------|--------------|-------------------------|--------|------|--|
| Item File  | Audit Trail Alarm Logs Eve                 | ent Logs   Diagnosti                | c Logs Shortlist | Activity Log |                         |        |      |  |
| Shortlist<br>Report Name:<br>Report Selectio<br>From:<br>To: | 04/08/2015 10:43:00<br>04/13/2015 10:43:00 |                                     | 72               |              |                         |        |      |  |
| Site ID: 00000   | Item Description                           | eports   Site Location: Hy<br>Value | Unit             | Item Number  | Item Description        | Value  | Unit |  |
| 0000   | Corrected Volume                           | 00242990                            | CF               | 0013         | Excess TCal Change %    | 2.0000 | CF   |  |
| 0002   | Uncorrected Volume                         | 00266559                            | CF               | 0014         | Total Correction Factor | 1.0000 | CF   |  |
| 0005   | Ch-A pulses waiting                        | 00000000                            |                  | 0015         | Press Correction Factor | 1.0000 | -    |  |
| 0006   | Ch-B pulses waiting                        | 00000000                            | -                | 0016         | Temp Correction Factor  | 1.0000 | - 22 |  |
| 0007   | Ch-C pulses waiting                        | 00000000                            | PSI              | 0017         | Aux Correction Factor   | 1.0000 | PSI  |  |
| 8000   | P1 gas pressure                            | 13.775                              | PSI              | 0018         | Unsquared Supercompress | 1.0000 | PSI  |  |
| 0010   | P1 high alarm limit                        | 99999.99                            | PSI              | 0019         | Battery Voltage Reading | 2.372  | PSI  |  |
|  | P1 low alarm limit                         | -1.000                              | PSI              | 0020         | Battery Low Volt Limit  | 4.600  | PSI  |  |
| 0011   |  | 0.0000                              | PSI              | 0021         | Shutdown Voltage Limit  | 4.000  | PSI  |  |

You can choose to **Preview** or **Print** the data.

**Note:** In Shortlist report, firmware version and serial number are not be displayed until the user selects Firmware version (**item #122**) and serial number (**item#62**) in Shortlist.

## 4.6.8 Activity Log

Use the 'Activity log' tab to read data on software activity.

Select the date range of the report and then click **Report Options**.

| Honeywell        | MasterLink          |                |             |              | N.          |                |             |                |               |           |         |       |         |         | (        | ) (    | ) admin | 13     | 5       | × |
|------------------|---------------------|----------------|-------------|--------------|-------------|----------------|-------------|----------------|---------------|-----------|---------|-------|---------|---------|----------|--------|---------|--------|---------|---|
| Deshboard        | Read Data           |                |             |              |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
| 2<br>510         | Item File           | Audit Trail    | Ala         | erm Logs   E | vent Logs   | Diagnostic L   | ogs         | Cellular Loj   | gs   S        | Shortlist | Activit | y Log |         |         |          |        |         |        |         |   |
| (G)<br>View/Edit | Activity Log        | Name: A        | ctivity Li  | og Report    |             |                |             |                |               |           |         |       |         |         |          |        |         | Report | Options |   |
| 0                | Date Range          |                |             |              |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
| Colibrate        | Select dates to use | when this repo | ort la prin | fledt        |             |                | Date        | Range Option   | 18            |           |         |       |         |         |          |        |         |        |         | - |
| 9                | 🔿 Today             |                |             |              |             |                |             | Sort Latest Da | ste First     |           |         |       |         |         |          |        |         |        |         |   |
| Read Data        | O Vesterday         |                |             |              |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
| $\oslash$        | 🔿 This Month        |                |             |              |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
| Live Dete        | 🔿 Last Month        |                |             |              |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
| 2                | 🔿 Last N Days       | 1              |             |              |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
| Administer       | 🔿 Since             | 13-12-2016     |             | 00:00:00     |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
| Ø                | From/To             | 08-12-2016     | Î           | 00:00:00     |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
| Sattings         |                     | 13-12-2016     |             | 23:59:59     |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
| ېنې.<br>Becarity | 1                   | Gak            | culate Dri  | te Rongo     |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
|                  |                     |                |             |              |             |                |             |                |               |           |         |       |         |         |          |        |         |        |         |   |
| €£               |                     |                |             |              |             |                |             |                | Carlos Carlos |           |         |       |         |         |          |        |         |        |         |   |
| ø                |                     |                |             |              |             |                |             | V              | lew .         |           |         |       |         |         |          |        |         |        |         |   |
| Decoment (0)     | Connected ( EC      | 350) 📮 ad      | :350eite    | 0000000 - 00 | 00000 Relea | se: R500 1 Bui | ild Version | 9.2.3.0        |               |           |         | _     | <br>Con | im Moni | tor   Se | end Ca | pture i | Buffer | to File | 8 |

Customize the report in the **Report Options** page.

| Honeywel                    | MasterLink  |  | 🕜 🔘 admin 🛛 🗕 🗗 🗙                     |
|-----------------------------|---|--|---------------------------------------|
| Deshboard                   | Read Data   |  |                                       |
| <u>©</u><br>5110            | Item File   Audit Trail   Alarm Logs   Event Logs   Diagnostic Logs | Cellular Logs   Shortlist   Activity Log   |                                       |
| )<br>View/Edit              | Activity Log Name: Activity Log Report                              |  |                                       |
| 0                           | Options   |  |                                       |
| Calibrate                   | Use User Text   | Sort Order<br>+ Activity: Date<br>+ Activity: Type   |                                       |
| Outors                      | Messages to include   | Activity Type     Activity Description     Activity Duration   |                                       |
| Administer<br>Ø<br>Sattings | Display Activity Duration in<br>Winutes<br>Seconds                  |  |                                       |
| ېنې:<br>Security            |   |  |                                       |
| <del>ÇD</del>               |   | Sack View  |                                       |
|                             | Connected (EC 350)  | 2004 (C) 200 | Monitor   Send Capture Buffer to File |

Relate the steps highlighted in the image above with the steps below:

- 1. Start by checking Use User Text. Type the text that should appear in the report in this box.
- 2. Select the Messages to include. There are 3 options for message reporting.
- 3. Select the Display Activity Duration in.
- 4. Select the **Sort Order**. This list shows the data columns that will be used in the report. Double click on the data type to change the sort order for that column: + (ascending) or (descending).
- 5. Finally click View to view activity log report.

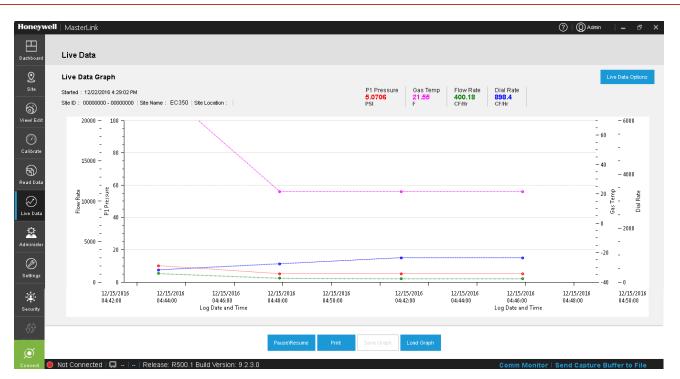
## 4.7 Live Data

The Live Data Graph function will graph data read directly from connected instruments.

- The computer/laptop must be connected to an instrument in order to display a live graph.
- You select which items to graph as well as other graph configuration items.
- The 'Live Data Graph' screen will display previously selected actual graph items in two graph sections when this function first begins. The device adjusts the upper and lower limits for each items from the settings provided.

| Live Data Grap                | h            |                    |           |                   |         |        |                  |              |              |                     |
|-------------------------------|--------------|--------------------|-----------|-------------------|---------|--------|------------------|--------------|--------------|---------------------|
| ltem to Graph                 |              |                    |           |                   |         |        | Graph Configura  | ation        |              |                     |
| Y Axis Item                   | Y Min        | Y Max              | Alarm Low | Alarm High        | Graph I | lumber | Y Axis Item      | Color        |              | Line Style          |
| P1 Pressure                   | 0            | 100                | -71.117   | 1422335           | 4       | -      | P1 Pressure      | O Blue       | ( <b>4</b> ) | Solid Line(Thick)   |
| Gas Temp                      | -40          | 170                | -37.22    | 73.89             | 4       |        | Gas Temp         | Green        | ÷            | Solid Line(Thick) • |
| Case Temp                     | -40          | 170                | 22.06     | 27.63             | .1      |        | Case Temp        | Orange       | •            | Solid Line(Thick)   |
| <ul> <li>Flow Rate</li> </ul> | 0            | 500                | 0         | D                 | 1       | *      | Flow Rate        | 🔴 Magenta    | •            | Solid Line(Thick) + |
| Dial Rate                     | 0            | 20000              | 0         | 0                 | 1       | •      | Dial Rate        | 🔴 Red        | •            | Solid Line(Thick) • |
| P2 Pressure                   | 0            | 100                | -1        | 99999.99          | 1       |        | P2 Pressure      | Ellack       | *            | Solid Line(Thiol) 👻 |
| Log selection                 |              | Show Deta Point or |           | Draw alarm ines   |         |        | Reading Interval | X.Axis Width |              |                     |
| Cach liern on se              | parace graph | Show Data Point of |           | Linaw alarm lines |         |        | 2 Seconds        | 15 Seconds   |              |                     |

Click Show Graph to view the graph.



Click **Save Graph** to save the Live Graph Setup. By default, .LGV file is saved in the *C*:\*Pro-gramData*\*Honeywell*\*MasterLink Software Application* \*LiveGraphSettings* folder.

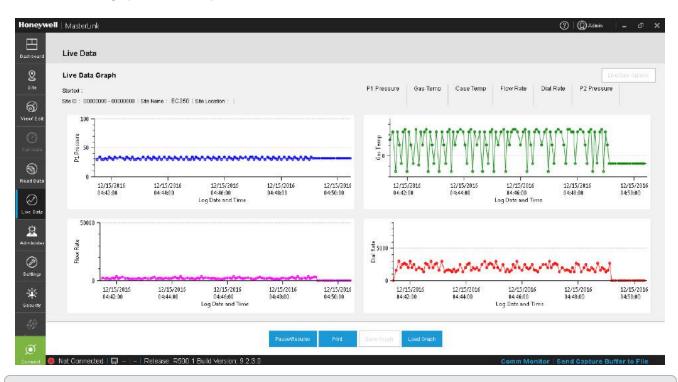
You can view graphs offline as well.

| Honeywel              | I   MasterLink  |              |       |             |            |           |           | 0            | Q Admin –         | ₽ ×  |
|-----------------------|---|--------------|-------|-------------|------------|-----------|-----------|--------------|-------------------|------|
| Dashboard             | Live Data   |              |       |             |            |           |           |              |                   |      |
| Site                  | Live Data Graph Started : Site ID : -  Site Name :  Site Location : |              |       | P1 Pressure | Gas Temp   | Case Temp | Flow Rate | Dial Rate    | P2 Pressure       |      |
| Calibrate             |   |              |       |             |            |           |           |              |                   |      |
| Read Data             |   |              |       |             |            |           |           |              |                   |      |
| Contraction Live Data |   |              |       |             |            |           |           |              |                   |      |
| Administer            |   |              |       |             |            |           |           |              |                   |      |
| ©<br>Settings         |   |              |       |             |            |           |           |              |                   |      |
| Security              |   |              |       |             |            |           |           |              |                   |      |
| €£                    |   | PauseVResume | Print | Save Graph  | Load Graph |           |           |              |                   |      |
| Connect               | Not Connected 🔲 Release: R500.1 Build Version: 9.2.3.0              |              |       |             |            |           | Comm Mo   | nitor   Rond | Capture Buffer to | File |

Click Load Graph to load saved graphs.

| Honeywel   | l   MasterLink  |                                |  | ⑦ ② Admin – ⊡ ×                 |
|--|---|--------------------------------|--|---------------------------------|
| Dashboard  | Live Data   |                                |  |                                 |
| Site   | Live Data Graph Storied : Site ID : - Site Name : Site Location : | Cryanice  Very New Folder      | ← 4 Search LiveGraphValues   | Flow Rate Dial Rate P2 Pressure |
| California<br>California<br>Read Date<br>Live Date<br>Administer |   |                                | Date modified         Type           12/15/2015 6:11 PM         LGV File           12/16/2015 10:05         LGV File           12/16/2015 10:07         LGV File           12/15/2016 4:33 PM         LGV File           12/12/2015 4:33 PM         LGV File           12/12/2015 20:04         LGV File |                                 |
| Sertings<br>Security   |   | File name: PausotResume Print. | Cancel   |                                 |

Select the desired graph and click **Open**.



Attention: Load Graph is disabled when we have an active connection to the instrument. Please disconnect from the instrument to use this option.

### Items to Graph

The availability of items depends on the instrument linked to the computer. Toggle-click on the box to select/deselect the item(s) to graph. The default values for the minimum and maximum Y scale (vertical scale) correspond to the alarm limits. To change these defaults, click on that field and enter the new value.

**Note:** You can select numbers in the Graph Number column to group the items together. For example, if you want to view the Gas temperature and the Case temperature on the same graph, you can assign a value of 1 for both the items, and they will be displayed on the same graph. If you do not assign a graph number, then all 4 items will be displayed on the same graph. Viewing all 6 inputs is possible in 2 or more graphs.

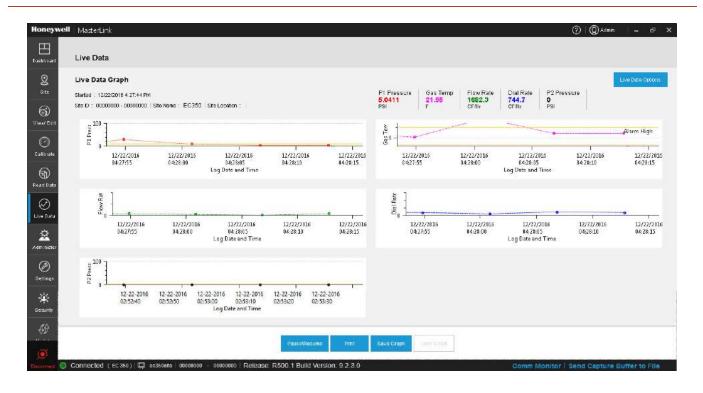
### **Graph Configuration**

Pressure 1, Pressure 2, Gas Temperature, Case Temperature, Dial Rate, and Flow Rate items are available for graph configuration. For each of the 6 items, click on the down arrow next to the color or line style fields for selectable options, then click on the selection. Dashed or dotted line styles will not be noticeable on data lines unless the data points are fairly far apart. Toggling this box next to the following options on the Live Graph Setup dialog screen can activate other selections that affect the display of the graph.

### Log selection

1. Each item on separate graph: Checking this box will draw one item per graph. If this is unchecked, more than one item will be drawn on a graph. A graph can have two Y scales (vertical); on each side. If two (up-to 4) items have the same unit of measure, they can share a Y scale. The Y scales are located along the left and right side of the graph.

| Honeywell  | MasterLink         |             |                      |              |                  |              |                                 |                   |   |                    | ? Q Admin    | -          | ъ×   |
|------------|--------------------|-------------|----------------------|--------------|------------------|--------------|---------------------------------|-------------------|---|--------------------|--------------|------------|------|
| Dashboard  | Live Data          |             |                      |              |                  |              |                                 |                   |   |                    |              |            |      |
| Q<br>Site  | Live Data Graph    | 1           |                      |              |                  |              |                                 |                   |   |                    |              |            |      |
| 63         | Item to Graph      |             |                      |              |                  |              | Graph Cor                       | nfiguration       |   |                    |              |            |      |
| View/Edit  | Y Axis Item        | Y Min       | Ү Мах                | Alarm Low    | Alarm High       | Graph Numl   | oer YAxis Item                  | Color             |   | Line Style         |              |            |      |
| $\odot$    | ✓ P1 Pressure      | 0           | 100                  | 10           | 100              | 1            | <ul> <li>P1 Pressure</li> </ul> | 🔴 Red             | • | Dot Line           | •            |            |      |
| Calibrate  | 🗸 Gas Temp         | -40         | 70                   | -22          | 122              | 1            | ▼ Gas Temp                      | 😑 Magenta         | • | Dash Dot Line      | •            |            |      |
| Ð          | 🗸 Case Temp        | -40         | 70                   | 69.79        | 81.21            | 1            | <ul> <li>Case Temp</li> </ul>   | 😑 Orange          | • | Solid Line(Thick)  | •            |            |      |
| Read Data  | ✓ Flow Rate        | 0           | 20000                | 0            | 0                | 1            | <ul> <li>Flow Rate</li> </ul>   | I Green           | • | Dash Dot Dot       | •            |            |      |
| $\oslash$  | ✓ Dial Rate        | 0           | 6000                 | 0            | 0                | 2            | <ul> <li>Dial Rate</li> </ul>   | 😑 Blue            | • | Dashed Line        | •            |            |      |
| Live Data  | ✓ P2 Pressure      | 0           | 100                  | 5            | 120              | 2            | <ul> <li>P2 Pressure</li> </ul> | • Black           | • | Solid Line(Thick)  | •            |            |      |
| Administer |                    |             |                      | a.           |                  |              |                                 |                   |   |                    |              |            |      |
| Ø          | Log selection      |             |                      |              |                  |              | Reading Inte                    | erval XAxis Width |   |                    |              |            |      |
| Settings   | Each item on sepa  | arate graph | Show Data Point on I | Lines        | Draw alarm lines |              |                                 |                   |   |                    |              |            |      |
| <u>نې</u>  |                    | 2.          | -                    |              |                  |              | 1 Se                            | econds 15 Seconds |   |                    |              |            |      |
| Security   |                    |             |                      |              |                  |              |                                 |                   |   |                    |              |            |      |
| ЧŶ         |                    |             |                      |              |                  |              |                                 |                   |   |                    |              |            |      |
|            |                    |             |                      |              |                  | Save         | Show Graph                      |                   |   |                    |              |            |      |
| <u>ر</u>   | Connected / EC 250 | 5 EC250     | 0000000 0000000      | Delegge: D60 | 1 Build Vora     | ion: 0.1.2.0 |                                 |                   |   | unun Billemiteru I | Fond Conturo | Dufferente | Til. |



- 2. Show data points on lines: Data lines may be drawn with or without dots.
- 3. Draw alarm lines: Check this box if the alarm lines are to be drawn on the graph.
- 4. **Reading Interval**: Enter a number for the Reading Interval (in seconds). This option controls the frequency with data is read from the instrument and thus, how often points are plotted. Please note that point-to-point spacing may vary somewhat due to rounding and screen resolution.
- 5. X-Axis Width: Enter a number for the X-Axis Width (in seconds). The X-axis is located across the bottom of the graph. This option controls the number of data points shown on the graph at one time. Please note that a slightly different number of data points may actually be shown due to rounding and screen resolution.

Click Show Graph to view the graph.

## 4.8 Administer

**Related topics:** 

Activity Log

Exporting Instrument Data

Importing Instrument Data

Item Template Configuration

## 4.8.1 Activity Log - Purge

Use Activity log - Purge to permanently delete the activity logs of the MasterLink software application. Please note that this log is different from the Event Log because this log mainly focuses on software activity (and some firmware activity) where the Event Log function records activity that is directly linked to and maintained within the instrument.

| Administer Activity Log   Export Instrument Data   Item Template Configuration               |                |
|--|----------------|
| Activity Log   Export Instrument Data   Import Instrument Data   Item Template Configuration |                |
|  |                |
| Administer Activity Log  |                |
| Manual Purge Automatic Purge   |                |
| Al Dates No Maximum  |                |
| Date Range: Maximum Log Size   |                |
| Start Date 13-12-2016 🖬 🔘 Number of Days 0   |                |
| End Date 14-12-2016 0 0  |                |
| Catoulato Date Range   | 1              |
| Purge activity logs between set dates Configure a logic to automatically logs                | purge activity |
| 1093   |                |

**Manual Purge** - This method requires that a date parameter be set. The default setting is *All Dates*. If this is set, every record in the activity log will be purged. To de-select this option and open the fields for starting and ending date entries, uncheck on the **All Dates** box. Enter the desired dates, or click the **Calculate Date Range** button to automatically retrieve the database starting and ending dates. After the date range has been set, click the **Purge Now** button to execute this function.

Automatic Purge - Although the default setting is No Maximum (which means that no records are removed until the manual method is executed), records may be automatically removed without user intervention. Records can be removed after the file has reached a set number of days or number of data records. To set one of these two limits, de-

select the No Maximum option by clicking on that radio button, and then select the radio button next to *Number of Days* or *Number of Data Records*. Next, enter the number of days for data records in the box for the option that was chosen. Finally click **Save**.

Click Purge Now, to manually remove activity logs.

| Honeywell                    | MasterLink  |                     | 🔿 🔘 admin 💷 🕾 🗙              |
|------------------------------|---|---------------------|------------------------------|
| Dashboard                    | Administer  |                     |                              |
| <u>©</u><br>5111             | Activity Log   Export Instrument Data   Import Instrument Data   Item Template Configura      | fion                |                              |
| (S)<br>View Ecit             | Administer Activity Log   |                     |                              |
| 0                            | Manual Purge  | Automatic Purge     |                              |
| Galiceate                    | Al Dates  | Ne Maximum          |                              |
| Head Data                    | Date Range. Warning   | 8                   |                              |
| $\otimes$                    | Start Date 13-12-2016 Are you sure you want to del records from the Activity Log:             | ete the specified 0 |                              |
| Live Date                    | End Date 14-12-2016   | ecords 0            |                              |
| Administer                   | Calculate Date Range  | Sava .              |                              |
| <ul> <li>Sattings</li> </ul> |   |                     |                              |
| ·\$.<br>Security             |   |                     |                              |
| <i>69</i>                    |   |                     |                              |
| and the second               | Purgel  | nuu -               |                              |
|                              | Connected ( 65 350 ) 🗔 sessaniu ( 00000000 - 00000000   Release: R500 1 Build Version 9.2.3.0 | Comm Monitor        | Send Capture Buffer to File  |
|                              |   | South Montor        | Country of the states of the |
| Honeywell                    | MasterLink  |                     | 🕜 🔘 admin 🛛 = 🗗 X            |
| Dashboard                    | Administer  |                     |                              |
| 2                            | Activity Log   Export Instrument Data   Import Instrument Data   Item Template Configura      | tion                |                              |

| Ustrosero       | 600000000000  |   |                 |  |
|-----------------|---|---|-----------------|--|
| 2<br>5:11       | Activity Log   Export Instrument Data   Import Ins  | drument Data   Item Template Configuration    | on I            |  |
| S)<br>View/East | Administer Activity Log                             | L <sub>3</sub>                                |                 |  |
| 0               | Manual Purge  |   | Automatic Purge |  |
| Calicrate       | Al Dates  |   | 🔘 No Maximum    |  |
| Read Data       | Date Range.   |   | 8               |  |
| $\oslash$       | Start Date 13-01-2016                               | Success I<br>Specified Activity Log records ( | 0<br>deleted.   |  |
| Live Date       | End Date 14-02-2016                                 |   | ecotds 0        |  |
| 2<br>Administer | Calculate Date Range                                | L   |                 | Save                                       |
| Ø<br>Settings   |   |   |                 |  |
| 藥               |   |   |                 |  |
| Security        |   |   |                 |  |
| 49              |   |   |                 |  |
| ø               |   | Purge No                                      |                 |  |
|                 | Connected ( EC 350 ) 🗔 ac350ata 00000000 - 00000000 | Release: R500 1 Build Version: 9 2 3 0        |                 | Comm Monitor   Send Capture Buffer to File |

## 4.8.2 Export Instrument Data

| Instrument Data                 | ment Data   Item   | Template Configuration  |  |  |  |  |
|---------------------------------|--|---|--|--|--|--|
| e   🔘 LAN   🔵 SQL Fie   🔘 SQ    | Lite   () CSV  |   |  | 🔿 Only Site Data 🌘   |  |  |
|                                 |  | 2 Browse  |  |  |  |  |
| Δ                               |  |   |  |  |  |  |
|                                 |  |   |  | Selected Sites   |  |  |
| Site ID +                       | Туре   | Site Name   |  | Stte ID +  | Туре   | Site Nam   |
| 00000000-0000000                | EC 350   | ec350site   |  | 00000000 - 00000000  | EC 350   | ec350si  |
|                                 |  |   | Add At   |  |  |  |
|                                 |  |   |  |  |  |  |
| Date Range:                     |  |   |  |  |  | Alic   |
| Start Date                      | 3-12-2016  | 00:00 End Date  | 13-12-2016   | 23:59:59   | 6  | Cilos  |
|                                 |  | ок  |  |  |  |  |
| ec350ete 00000000 - 00000000 Re | elease: R500 1 Build   | Version: 9.2.3.0  |  | 0  | mm Monitor   Send  | Capture Bu   |
|                                 | 4<br>Seect.AI<br>Site List<br>Site ID +<br>occoccco-occoccco<br>Occoccco-occoccco<br>Date Range:<br>Start Date | Stat List<br>Site List<br>Site ID + Type<br>00000000 EC 350<br>EC 350<br>Date Range:<br>Stat Date, 13-12-2016 100 000 | Stellat         Stellat           Stellat         Stellat           Stellat         Stellat           DoteRange:         Start Date           Start Date         13-12-2016           DoteGrange:         Start Date | SteelAl         Site List         Site II > 1         Type         Site II arms           00000000         00000000         EC 350         ec350site | Steet.Al         Site List         Selected Sites           Site List         Site ID *         Site ID *           0000000-00000000         EC 350         ec359site         Site ID *           0000000-00000000         EC 350         ec359site         Site ID *           Dotte Range:         Start Date         13-12-2016         Dotte Cange         2359:59 | Image:         Contract of the set |

The 'Export Instrument Data' tab can be used to export instrument data.

### Note: Export SQL option is disabled in Masterlink Application

Relate the steps highlighted in the image with the steps below:

- 1. Start by selecting select the export file type
  - LAN, SQL File, and Access File are not supported when MasterLink Software Application is installed with SQLite as database.
- 2. Select the location where you need the instrument data to be exported.
- 3. Select the type of data that.
- 4. Select instrument type.
- 5. A site list gets populated based on your selected instruments. Select the site(es) and use Add/Add All/remove/Remove All to add or remove sites.
- 6. Select the date range.

Click OK to export instrument data.

Elle

| Honeyw              | <b>vell</b> MasterLink               |                           |                        |   |                                  | 0                   | @admin _ & X               |
|---------------------|--------------------------------------|---------------------------|------------------------|---|----------------------------------|---------------------|----------------------------|
| Deschoord           | Administer                           |                           |                        |   |                                  |                     |                            |
| 8<br>514            | Activity Log   Export Instrumen      | t Data   Import Instit    | iment Data   Hem 1     | femplate Configuration  |                                  |                     |                            |
| 6)                  | File Type: 🔘 Access File   🕘 LA      | n   🔘 10. fie   🔘 9       | OLite () CSV           |   | 🔿 Only Site Data 🛛 🤅             | ) Instrument Data   |                            |
| View Edit           |                                      | D. L. M. L. M. L. M.      |                        |   |                                  | Log Data            |                            |
| ()<br>Calibrate     | Export to: C. Progra                 | amData\Honeywell\Masterli | inisginetestsgine      | Browse  |                                  | Shortlat Data       |                            |
|                     | Selected Sites                       |                           |                        |   |                                  |                     |                            |
| 6                   | Instrument 🔽 Select Al               | Site List                 |                        |   | Selected Sites                   |                     |                            |
| Read Date           | C 350                                | Site ID +                 | Туре                   |   | Site ID +                        | Type                | Site Name                  |
| $\otimes$           | Cloud Link                           | 00000000-00000000         | EC 350                 | Please wait   | 0000000-0000000                  | EC 350              | ec350site                  |
| Erve Dota           | EC350 + Cloud Link                   |                           |                        | Add   | 21                               |                     |                            |
| 2                   |                                      |                           |                        | Carcol  |                                  |                     |                            |
|                     |                                      |                           |                        |   |                                  |                     |                            |
| Ø<br>Betlings       |                                      |                           |                        |   |                                  |                     |                            |
|                     |                                      |                           |                        |   |                                  |                     |                            |
| searry              |                                      | Date Range:               |                        |   |                                  |                     | All Dates                  |
|                     |                                      | Start Date                | 13-12-2016 (1) 00.0    | 0:00 End Date 13-12-20  | 15 11 23.59.59                   |                     |                            |
| ())<br>}            |                                      |                           |                        |   |                                  |                     |                            |
| ø                   |                                      |                           |                        | OK  |                                  |                     |                            |
| Trittorimeas        | 🔘 Connected ( EC 350 ) 💭 ec350sie    | 0000000 - 00000000   R    | elease: R500.1 Build \ | ersion: 9.2.3.0   |                                  | Comm Monitor   Send | Capture Buffer to File     |
| Honeyv<br>©<br>site | vell MasterLink R500.1<br>Administer |                           |                        |   |                                  |                     | @Q - 5 >                   |
| (i)<br>View' Edit   | Activity Log Export Instrumen        | it Data ( Import inst-    |                        |   |                                  |                     |                            |
| Ø                   | File Type: Discourse 1. C. L         | a basa és                 | OLite                  |   | ) Only Sile Data () Instrument D | ita                 |                            |
| CHINNE              |                                      |                           |                        |   | Log Deb                          |                     |                            |
| 9                   | Expertito                            |                           |                        |   | Sho slat                         |                     |                            |
| Read Date           | Selected Sites                       |                           | MasterLinkSQL          |   | ⊗                                |                     |                            |
| Elvo Dato           | EC.350                               | Sile ID +                 | Type                   |   | 10 +                             | Туря                | Sile Tanse                 |
|                     | Chuid Link                           | 000004-000004             | Clou                   | $\langle \rangle$   | 33-440044                        |                     | 337733'448844              |
| Administer          | EC360 - Ebod Link                    | 337733 - 440044           | 21223                  | Export of Instrument Data Successful.   | 01-500001                        | Cloud Link          | 500001-600001              |
|                     |                                      | Secont - Roscon           | Clot                   | Constant Avenue Constant and Alexandree Constant and Alexandree Constant and Alexandree Constant and Alexandree | 05-400005                        | EC150 + Cloud Link  | 500005-600005              |
| Ø                   |                                      |                           | EC3                    | CR.   | 109-505000                       | EC350 + Crowd Link  | 500008 600003              |
| Settings            |                                      | 555000-655000             | EC350 + Cloud Link     | 500008 800008   |                                  | EC350 + Cloud Link  | 087587/786786              |
| ×                   |                                      | 967387 - 786786           | EC350 + Cloud Link     | 987987.786788   |                                  |                     |                            |
| Security            |                                      | 112233 - 112235           | EC-350                 | Tes/123/(5  |                                  |                     |                            |
| <i>5</i> 9          |                                      |                           |                        |   |                                  |                     |                            |
| Update              |                                      | Date Range                |                        |   |                                  |                     | At Onles                   |
|                     |                                      |                           |                        | 0.00 End Date 9/26/201  |                                  |                     | Concernence and the second |
|                     |                                      |                           |                        | The Lance   |                                  |                     |                            |
| ø                   |                                      |                           |                        |   |                                  |                     |                            |

## 4.8.3 Import Instrument Data

The 'Import Instrument Data' tab can be used to import instrument data.

| oneywell     | MasterLink                         | ×                        |              |                  |              |                                |                        |        | ⑦   ② admin   = 6 <sup>a</sup> |
|--------------|------------------------------------|--------------------------|--------------|------------------|--------------|--------------------------------|------------------------|--------|--------------------------------|
|              | Administer                         |                          |              |                  |              |                                |                        |        |                                |
|              | Activity Log   Export Instrument   | t Data   Import Inst     | rument Data  | Item Template Co | infiguration |                                |                        |        |                                |
| <u>ب</u>     | File Type: 🔘 Access File 🕴 🌒 LA    | N   🔘 SQL FHE   🔘 S      | SQLite 1     |                  |              | Only Site                      | Data 🔘 Instrument Data | 3      |                                |
| W Edit       | Import From: C:IProgramDatalHoneyw | ellWasterlinkiSqliteWLCo | ontig sqlite |                  |              |                                | Log Data               | -      |                                |
|              | Selected Sites                     |                          |              |                  |              |                                | -                      | 1      |                                |
| -            | istrument 🔽 Select All             | Site List                |              |                  |              |                                | Selected Sites         |        |                                |
|              | ✓ EC 350                           | Site ID +                | Туре         | Site Name        |              |                                | Site ID +              | Туре   | Site Name                      |
| ~            | Cloud Link                         | 00000000-0000000         | EC 350       | ec350site        |              |                                | 00000000-00000000      | EC 350 | ec350site                      |
| e Data       | C350 + Cloud Link                  |                          |              |                  |              | Add Al<br>Germon<br>Remove All |                        |        |                                |
| Ø<br>attings | 4                                  | 5                        |              |                  |              |                                |                        |        |                                |
| Saurity      |                                    | Date Range:              |              |                  |              |                                |                        |        | Al Dates                       |
| 5÷           |                                    | Start Date               | 13-12-2016   | 00.00.00         | End Date     | 13-12-2016                     | 23.59.59               | 6      | Coloniste Debi Kon             |
| <b>o</b> t   | Connected (EC 350) 📮 ec350ste      |                          |              |                  | ок           |                                |                        |        | Send Capture Buffer to File    |

Relate the steps highlighted in the image with the steps below:

- 1. Start by selecting select the import file type. SQL or SQLite
  - LAN, SQL File, and Access File are not supported when MasterLink Software Application is installed with SQLite as database.
- 2. Select the physical location of the file to be imported.
- 3. Select the type of data source.
- 4. Select the instrument type.
- 5. A site list gets populated based on selected instrument types. Select the site(es) and use Add/Add All/remove/Remove All to add or remove sites.
- 6. Select the date range.

Click OK to import instrument data.

| Honeyw           | ell MasterLink          |                |                           |              |                     |               |            |                            |            | 🖉 🔘 admi     | n ite o            | s ×  |
|------------------|-------------------------|----------------|---------------------------|--------------|---------------------|---------------|------------|----------------------------|------------|--------------|--------------------|------|
| Dashboard        | Administer              |                |                           |              |                     |               |            |                            |            |              |                    |      |
| <u>©</u><br>5118 | Activity Log   Expo     | d Instrument I | Data   Import Ins         | trument Data | Item Template       | Configuration |            |                            |            |              |                    |      |
| 6)               | File Type: 🔘 Access     | rie   🔘 can    | • saure   •               | SOLite       | 10                  |               | O Only S   | ite Data 🌘 Instrument Data |            |              |                    |      |
| View/Edit        |                         |                |                           |              |                     |               |            | Log Deta                   |            |              |                    |      |
| 0                | Import From: C \Program | 1DatalHoneywe  | II/Masterlini/(Sql/te/MLC | ondig.sqlite | Erawas              |               |            | Shortlist Deta             |            |              |                    |      |
| Calibrate        | Selected Sites          |                |                           |              |                     |               |            |                            |            |              |                    |      |
| 9                | Instrument              | Select Al      | Sile List                 |              |                     |               | $\otimes$  | Selected Sites             |            |              |                    |      |
| Read Data        | C 350                   |                | Site ID +                 | Typ          | Success I           |               | 0          | Site ID +                  | Туре       | Site flame   |                    |      |
| $\odot$          | Cloud Link              |                | 0000000 - 0000000         | EC           | Import Successi     | ul.           |            | 00000000 - 00000000        | EC 350     | ec350site    |                    |      |
| Live Date        | EC360 + Cloud Link      |                |                           |              |                     |               |            |                            |            |              |                    |      |
| 2                |                         |                |                           |              |                     |               | AddAl      |                            |            |              |                    |      |
| Administer       |                         |                |                           |              |                     |               | Remove A1  |                            |            |              |                    |      |
| COLUMN STORES    |                         |                |                           |              |                     |               |            |                            |            |              |                    |      |
| Ø                |                         |                |                           |              |                     |               |            |                            |            |              |                    |      |
| Sattings         |                         |                |                           |              |                     |               |            |                            |            |              |                    |      |
| ф.               |                         |                | Date Range;               |              |                     |               |            |                            |            | ,            | Al Dates           |      |
| Security         |                         |                | Start Date                | 12, 12, 2015 | 00 00 00            | End Date      | 13,12,2012 | 23 59 59                   |            | -            | Concernent Control |      |
| 49               |                         |                | Start Date                | the technic  |                     | End Date      | is access  | MM 123.05.55               |            |              |                    |      |
| and the second   |                         |                |                           |              |                     |               |            |                            |            |              |                    |      |
| ø                |                         |                |                           |              |                     | OK            |            |                            |            |              |                    |      |
| timment (        | Connected (EC 350)      | ec35Dalla 0    | 0000000 - 00000000        | Release: R50 | 0.1 Build Version 9 | 230           |            | Co                         | mm Monitor | Send Capture | Butter to F        | file |

## 4.8.4 Item Template Configuration

Item Template Configuration screen can be used to create and save a template containing item numbers (related to the device integrity) along with reference values.

| Honeywell        | MasterLink   |   |                      | 0                      | 🔘 Admin   🗕 🗗          | × |
|------------------|--|---|----------------------|------------------------|------------------------|---|
| Dashboard        | Administer   |   |                      |                        |                        |   |
| ©.<br>Site       | Activity Log   Export Instrument Data   In           | port Instrument Data Item Template Configuration    |                      |                        |                        |   |
| Gj<br>View/ Edit | Item Template Configuration                          |   |                      |                        |                        |   |
| Ø                | Instrument Type                                      | Items   |                      | Template Items         | Reference Value        |   |
| Calibrate        | EC 350   | 0 - Corrected Volume                                |                      | 90 - Cor Volume Units  | CCF -                  |   |
| Ð                | Cloud Link   | 2 - Uncorrected Volume                              |                      | 89 - Temperature Units | F •                    |   |
| Read Data        | EC350 + Cloud Link                                   | 5 - Ch-A Pulses Waiting                             |                      |                        |                        |   |
| $\odot$          |  | 6 - Ch-B Pulses Waiting                             |                      |                        |                        |   |
| Live Data        |  | 7 - Ch-C Pulses Waiting                             | Add                  |                        |                        |   |
| *                |  | 10 - P1 High Alarm Limit                            | Remove<br>Remove All |                        |                        |   |
| Administer       |  | 11 - P1 Low Alarm Limit                             | Reliove All          |                        |                        |   |
| Ø                |  | 12 - P1 Cal Atmos Pressure                          |                      |                        |                        |   |
| Settings         |  | 13 - Base Pressure                                  |                      |                        |                        |   |
|                  |  | 14 - Atmospheric Pressure                           |                      |                        |                        |   |
| Security         |  | 15 - Press used at P1-Zero                          |                      |                        |                        |   |
|                  |  | 16 - Press used at P1-Span                          | -                    |                        |                        |   |
|                  |  |   |                      |                        |                        |   |
| Site             | a ID All Site IDs • Site ID 2 00002424               | Ť   | Save Template File   |                        |                        |   |
| Disconnect 🔘     | Connected ( EC350 + Cloud Link )   🔲 Test   00002424 | - 00002424   Release: R500.1 Build Version: 9.2.4.0 |                      | Comm Monitor   Send    | Capture Buffer to File |   |

While MasterLink Software Application is connecting to an instrument, the values (default) from this template are compared with the values(actual) read from the instrument. If there is a mismatch, then an error is displayed on the *Dashboard - Config Check* widget, and drill down on the widget will display further details.

Refer Dashboard Configuration check for more details.

Start by selecting the instrument type. Based on the selected instrument type, the applicable items appear on the screen. Select and **Add** the required items to your list. Add a reference value for the selected items.

Click Save Template File to save a copy of the template that you just created.

| 8   | Item Template Config       | uration                   | ×        | -                    |                        | 7   🖗 Admin   🗕 🗗             |
|---|----------------------------|---------------------------|----------|----------------------|------------------------|-------------------------------|
| 🕀 🕀 = 🕈 퉬 a M                                   | Aasterlink + ItemTemplates | C Search itemTemplates    | P        |                      |                        |                               |
| Organize • New fold                             | der                        | 8=                        | - 0      |                      |                        |                               |
| 🔄 Recent places 🗠                               | Name                       | Date modified             | Туре     | the Constanting of   |                        |                               |
| 🖏 Homegroup                                     | EC350_CloudLink.TE3        | 12/21/2016 6:33 PM        | TE3 File | ate Configuration    |                        |                               |
| 🚇 This PC                                       |                            |                           |          |                      |                        |                               |
| Hesktop   |                            |                           |          |                      | Template Items         | Reference Value               |
| Downloads                                       |                            |                           |          | A                    | 90 - Cor Volume Units  | CCF                           |
| Pictures  |                            |                           |          |                      |                        |                               |
| 😹 Videos  |                            |                           |          |                      | 89 - Temperature Units | F                             |
| Local Disk (C:)                                 |                            |                           |          |                      |                        |                               |
| Backup (D:)<br>DVD Drive (E:) IR <sup>- V</sup> | <                          |                           | ,        |                      |                        |                               |
| File name:                                      |                            |                           | ~        | Add                  |                        |                               |
|   | template file (*.TE3)      |                           | ÷        | Remove<br>Remove All |                        |                               |
| Hide Folders                                    |                            | Save                      | Cancel   |                      |                        |                               |
| C/<br>Nings                                     |                            | 13 - Base Pressure        |          |                      |                        |                               |
|   |                            | 14 - Atmospheric Pressure | 1        |                      |                        |                               |
| ŧ.  |                            | 15 - Press used at P1-Zen | 3        |                      |                        |                               |
| curity  |                            | 16 - Press used at P1-Spa |          |                      |                        |                               |
| 50  |                            | ro - ribeo uesu di Piropa | 2        |                      |                        |                               |
| Site ID ALStell                                 | Ds + Site ID 2 0000242     | 4 <b>-</b>                |          | Save Template File   |                        | e Windows                     |
| )   |                            |                           |          |                      | Go to PC               | settings to activate Windows. |

**Note:** By default, instrument specific Item Templates are created (EC 350.TE3, Cloud Link.TE3, EC350\_ CloudLink.TE3). Use the Site ID 1 and Site ID 2 fields to create site specific Item templates. The item template files are named as <SiteID1>\_<SiteID2>.TE3 file. Ensure that the file is saved in *C:\ProgramData\Honeywell\MasterLink Software Application \ItemTemplates* folder.

| Administer                       |  |                              |                        |                 |
|----------------------------------|--|------------------------------|------------------------|-----------------|
| Activity Log   Export Instr      | ument Data   Import Instrument Data   Item Template Configurati  | on                           |                        |                 |
| Item Template Configuration      |  |                              |                        |                 |
| Instrument Type                  | llems  |                              | Template Itema         | Reference Value |
| EC 350                           | 0 - Corrected Volume   | Î                            | 90 - Cor Volume Units  | CCF             |
| Cloud Link<br>EC350 - Cloud Link | 2 - Uncorrected Volume   | $\otimes$                    | BO + Temperature Units | F               |
| 50<br>707                        | 6 - Ch-B Pulses     7 - Ch-G Pulses     7 - Ch-G Pulses     10 - P1 High Alarm Limt     11 - P1 Low Alarm Limt     12 - P1 Cal Atmos Pressure     13 - Bose Pressure     14 - Atmosphere Pressure     15 - Press used at P1-Zers | Fully<br>Remove<br>Romive Ab |                        |                 |
| ty                               |  |                              |                        |                 |

## 4.9 Settings

**Related topics:** 

**Communications Setup** 

Time-Sync Properties

Auto Download Settings

## 4.9.1 Communications Setup

| The 'Communications Setup' | tab can be used to de | fine the relevant | communication | settings requ | uired for connect | ing to |
|----------------------------|-----------------------|-------------------|---------------|---------------|-------------------|--------|
| the instrument.            |                       |                   |               |               |                   |        |

| Horeywell        | MasterLink             |                    |                       |                      |                     |             | Ø                   | 🔘 admin 🛛 🗕 🗗 🗙        |
|------------------|------------------------|--------------------|-----------------------|----------------------|---------------------|-------------|---------------------|------------------------|
| Site             | Settings               |                    |                       |                      |                     |             |                     |                        |
| (G)<br>View'Edit | Communication Set      | up   Time-Sync Pro | perties   Auto Down   | load Settings        |                     |             |                     |                        |
| O<br>Calibrata   | Communications S       | ietup              |                       |                      |                     |             |                     | Advanced Settings      |
| 9                | Serial Port Connection |                    | Modern Connection     |                      | Special Connection  |             |                     |                        |
| Read Data        | Connector              | Baud Rate          | Connector             | Baud Rate            | Connector           | Baud Rate   |                     |                        |
| $\otimes$        | сомз •                 | 9600 *             |                       | •                    |                     | •           |                     |                        |
| Live Data        | D IDA                  |                    | Modem Init String     | Dial Prefix          | Special Init String | Dial Prefix |                     |                        |
| 2                |                        |                    |                       |                      |                     |             |                     |                        |
| Administer       |                        |                    | Modern Type           | Dial Type            |                     |             |                     |                        |
| (2)<br>Settings  |                        |                    | Standard_Hayes_Compat | Tone *               |                     |             |                     |                        |
| Security         |                        |                    |                       |                      |                     |             |                     |                        |
| ¢\$              |                        |                    |                       |                      |                     |             |                     |                        |
| Update           |                        |                    |                       |                      |                     |             |                     |                        |
| 4                |                        |                    |                       |                      |                     |             |                     |                        |
| a                |                        |                    |                       |                      | OK                  |             |                     |                        |
|                  | Connected ( EC 350 )   | ac350site 00000000 | - 00000000 Release    | R500 1 Build Version | 9230                |             | Comm Monitor   Send | Capture Buffer to File |

Communication settings can be defined for:

- Serial Port
- Modem
- Special Connectivity option

**Serial Port Connection** type connects the PC directly to the instrument using a serial cable. Follow the steps to communicate using a serial port connection:

- 1. Connector: Select the COM port
- 2. Baud Rate: Select the applicable baud rate from the drop down list.
- 3. IrDA: Check IrDA only for IR communication and uncheck for serial communication

**Modem Connection** type connects the PC to a Hayes modem using POTS (plain old telephone service) to another Hayes modem then to the instrument. Follow the steps to communicate using a modem connection:

- 1. Connector: Select the COM port
- 2. Baud Rate: Select the applicable baud rate from the drop down list.

- 3. **Dial Prefix:** If required, enter a dial prefix. These characters will precede the site list phone number in the site list. This is commonly used to access an outside line (9,) or on a portable computer, to temporarily enter an area code without modifying the site list.
- 4. Modem Type: Select either Standard Hayes Compatible (default) or the Racal Radio Pad from the drop down list.
- 5. Dial Type: Select either Tone (default) or Pulse from the drop down list.
- 6. **Modem Init String**: Enter the modem initialization string. This string is modem specific.

**Note:** Please note that a description of the modem configuration settings are detailed in the operation manual that was supplied with modem. Please refer to modem manual and find the command that turns off error control. This command, following the command to reset the modem to factory defaults, is usually all that is needed for the modem initialization string.

Attention: For Racal Radio Pad configuration, set the Modem Init String to: &FQ0E0V0S0=0S12=0X0

**Special Connection** type can be used to support standard modems (i.e., a second standard modem), which may have special configuration requirements. In addition, they can support some models of wireless TCP/IP modems (CDPD modems for example.) They are connections that have modems on both the PC (host) and instrument ends. Follow the steps to communicate using a modem connection:

- 1. Connector: Select the COM port
- 2. Baud Rate: Select the applicable baud rate from the drop down list.
- 3. **Dial Prefix:** If required, enter a dial prefix. These characters will precede the site list phone number in the site list. This is commonly used to access an outside line (9,) or on a portable computer, to temporarily enter an area code without modifying the site list.
- 4. Special Init String: Select the special initialization string from the drop down list.

Click **Advanced Setup** to use default settings. These are additional settings used for serial connection for all Honeywell devices. If required, change these values to establish communication with 3rd Party devices.

| MasterLink strong<br>encourages the us |   | the default s | settings. |
|--|---|---------------|-----------|
| Parity                                 |   | Data Bits     |           |
| None •                                 | , | Bit8          | •         |
| Stop Bits                              |   |               |           |
| One 🔻                                  | , | Defaul        | t Setting |

The default settings will be automatically read and entered. Click on each of the drop-down boxes and select a choice from those lists.

The Default Setting check box will reset the parity, data bits, and stop bits to their original configuration.

**Note:** Please note that more description of the modem configuration settings are detailed in the operation manual that should have been supplied with modem.

After configuring the communications settings, click OK to save the changes.

## 4.9.2 Time-Sync Properties

'Time-Sync Properties' tab can be used to configure the Time Sync settings. The Time Sync function is used to synchronize instrument time with host time.

| Honeywell                 | MasterLink   | 🔿 🔘 admin 💷 🗗 🗙 |
|---------------------------|--|-----------------|
| Site                      | Settings   |                 |
| (G)<br>View/Edit          | Communication Setup   Time-Sync Properties   Auto Download Settings  | 1               |
| Calibrate                 | Time Sync Properties   |                 |
| Beed Date                 | Enable Time-Sync function  |                 |
| Live Data                 | Instrument DST Compensation Options Using the PC's date and time as the reference. MasterLink will adjust the instrument's triss to maintain Standard Time DST |                 |
|                           | Time Difference Trigger Point  |                 |
| ©<br>Settings<br>∰        | HH MM SS<br>0 : 2 : 0  |                 |
| Socurity<br>GGP<br>Update |  |                 |
| ø                         | Comported / FOSEN   🗖 actions   accordin - accordin   Delevere: D500 4 Build V   | ore in 2.2.0    |

To configure Time Sync properties:

- 1. Check Enable Time-Sync function
- 2. Select either Standard Time or DST.
- 3. View or modify **Time Difference Trigger Point**. A Time Sync will be triggered based on the time difference configured in this field.

Click OK to save the changes.

**Note:** It is recommended that for any change in settings, you need to disconnect and then reconnect the instrument, for the settings to take effect. You can verify time-sync from the dashboard.

## 4.9.3 Auto Download Settings

The 'Auto Download Settings' tab is used to configure the number of days for which dashboard data is loaded.

| ettings            |                 |                         |                  |                    |                 |  |
|--------------------|-----------------|-------------------------|------------------|--------------------|-----------------|--|
| mmunication Setup  | Time-Sync Prope | rties Auto Download Set | ttings           |                    |                 |  |
| to Download Settin |                 |                         |                  |                    |                 |  |
| to Download Setun  | iys             |                         |                  |                    | 1               |  |
| arm Log            |                 | Audit Trail             |                  | Event Log          | 121             |  |
| From Last Download | Max. of 35 Days | From Last Download      | Max. of 35 Diays | From Last Download | Max. of 35 Days |  |
| ) Number of Days   | 0 Days          | Number of Days          | 0 Days           | Number of Days     | 0 Days          |  |
|                    |                 |                         |                  |                    |                 |  |
|                    |                 |                         |                  |                    |                 |  |
|                    |                 |                         |                  |                    |                 |  |
|                    |                 |                         |                  |                    |                 |  |
|                    |                 |                         |                  |                    |                 |  |

Edit or modify the auto download settings for the following logs:

- Alarm
- Audit Trail
- Event

Check either From Last Download or Number of Days , enter the number of days and then click OK.

**Note:** Configure the Number of days as 0 to disable auto download of logs on dashboard.

## 4.10 Security and User Management

MasterLink supports a role based access control mechanism. A MasterLink administrator can create roles and assign permissions to the role. The administrator can then create users and assign roles to users. With this role based access mechanism, user is restricted to the operations that are associated with assigned role. This is a mechanism used to control access to different MasterLink operations.

User Management enables the utilities to secure the access to different MasterLink functionalities by its Technicians / operators. This should not be confused with the User Table functionality as User Table helps to manage access to device functionalities.

User Management is typically an administrative function. It allows an Administrator to

- Create Users who could log into MasterLink application
- Restrict the user's operation capabilities by assigning roles with specific privileges
- Group different operational privileges in terms of roles.

A role defines a set of permissions that are assigned to a user, which allow them to perform a set of actions. Example of a role could be "Level 1 Technician" who can only read information from the device using MasterLink and a "Level 2 Technician" who can read and write information. The created roles can then be assigned to different users needing similar access privileges.

**Related topics:** 

**User Configuration** 

**User Roles** 

## 4.10.1 User Roles

A roles is a collection of permissions that defines a function, such as the Administrator or a Field Service Engineer. Users who are placed in this role will inherit these permissions. Roles are created by users (usually administrators) and are used to group together privileges or other roles. They are a means of facilitating the granting of multiple privileges or roles to users.

On the 'User Roles' screen, you can view a list of all the roles configured in the system, and the list of users assigned to a selected role.

| Honeywell        | MasterLink                              |                          |  | 9              | 곗 🔘 admin 🛛 🗕 🗗 🗙          |
|------------------|---|--------------------------|--|----------------|----------------------------|
| 2<br>514         | User Management                         |                          |  | 5              |                            |
| (i)<br>View/Esit | User Configuration   User Roles         |                          |  |                |                            |
| Calibrate        | Admin_Role                              | Admin_Role               |  |                | 8                          |
| Read Date        | user                                    | Full Name Email<br>Admin | Last Accessed<br>12/12/2016 6:24:41 PM | De             | lete the<br>cted role      |
| Uve Data         |   |                          |  | _              | Modify the selected role   |
| 2<br>Administer  |   |                          |  |                |                            |
| @<br>Settings    |   |                          |  |                |                            |
| security         |   |                          |  |                |                            |
| (f)<br>Update    |   |                          |  |                |                            |
| <i></i>          |   |                          | Add Nev                                |                |                            |
|                  | Connected ( EC 350 ) 📮 ec350eite 000000 | 00 - 00000000 Release R5 | 00 1 Build Version, 9.2.3.0            | Comm Monitor S | end Capture Buffer to File |

To create a new role:

- 1. On the 'User Roles' screen, click Add New.
- 2. Type the name and description of the role.
- 3. Select the check-box next to a privilege to assign it to the current role.
- 4. Click Save.

|      | ×   |
|------|-----|
|      |     |
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|      |     |
|      |     |
| <br> | 1.1 |
|      |     |
|      |     |

The new role will appear in the list of roles on the 'User Roles' screen.

The following table explains the different privileges that can be assigned to a role:

| Privilege              | Description   |
|------------------------|---|
| Write Items            | Allows users to update item values in the devices               |
| Send Item File         | Allows users to update device configuration using item files    |
| Send Log Configuration | Allows users to update log configuration of the device          |
| Send User Table        | Allows users to update user access codes specific to the device |
| Calibration            | Allows users to perform tempearture and pressure calibration    |
| Firmware Download      | Allows users to perform firmware upgrades                       |
| Shut Down Device       | Allows users to shut down field devices                         |
| Generate Reports       | Allows users to generate MaterLink reports                      |
| Administer data        | Allows users to import and export device data into the database |

| Privilege        | Description  |
|------------------|--|
| Edit Audit Trail | Allows users to modify the Audit Trail data                |
| User Management  | Allows users to create and modify user accounts and roles. |

You can edit or delete an existing role.

To edit a role, select the role from the list of roles, and then click  $\underline{\mathscr{O}}$  on the top-right corner of the screen. You can then edit the role name, the description, and the role privileges.

To delete a role, select the role from the list of roles and then click  $\overline{R}$  on the top-right corner of the screen.

## 4.10.2 User Configuration

The 'User Configuration' screen shows a list of all existing MasterLink users and this screen also allows you to create new MasterLink users.

Attention: Before creating a new user, ensure that you have already created a user role, and necessary permissions are assigned to that role. To learn more about creating a new role, refer to the section on <u>Creating User</u> Roles.

To create a new user:

- 1. On the 'User Configuration' screen, click Add New.
- 2. Type the user name of the new user.
- 3. Select a role from the **Assigned Role** drop-down list. Roles configured in the <u>User Roles</u> tab, appear in this drop-down list. If you need to change permissions assigned to this role, or if you need to create a new role, then you can make the required changes in the <u>User Roles</u> tab.
- 4. Type a password for the user account, and then re-type it to confirm the password.
- 5. Click Save.

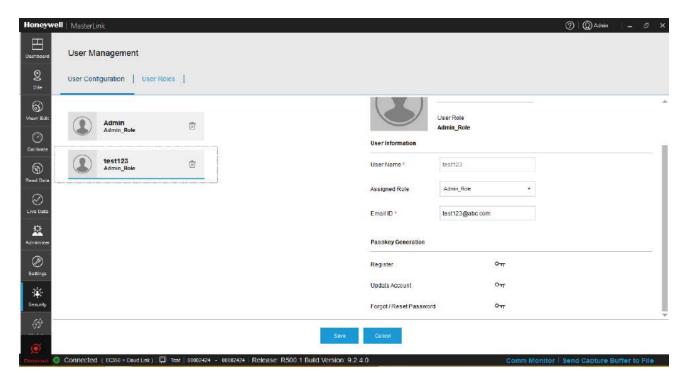
| Honeywell    | MasterLink                   |                          |                                |                      |           | 0                   | (Q) Admin   | - 6       | ×  |
|--------------|------------------------------|--------------------------|--------------------------------|----------------------|-----------|---------------------|-------------|-----------|----|
| Dashboard    | User Management              |                          |                                |                      |           |                     |             |           |    |
| Q<br>Site    | User Configuration User      | ser Roles                |                                |                      |           |                     |             |           |    |
| View/ Edit   | Add New User                 |                          |                                |                      |           |                     |             |           |    |
| Calibrate    | $\frown$                     | User Information         |                                | Password Information |           |                     |             |           |    |
| Read Data    |                              | User Name *              | test123                        | Password *           | ********* |                     |             |           |    |
| $\oslash$    |                              | Assigned Role            | Admin_Role •                   | Confirm Password *   | ****      |                     |             |           |    |
| Live Data    | Usemame                      | Email ID *               | test123@abc.com                |                      |           |                     |             |           |    |
| Administer   |                              |                          |                                |                      |           |                     |             |           |    |
| Settings     |                              |                          |                                |                      |           |                     |             |           |    |
| Security     |                              |                          |                                |                      |           |                     |             |           |    |
| <i>\$</i> \$ |                              |                          |                                | Save Discard         |           |                     |             |           |    |
| Disconnect   | Connected (EC350 + Cloud Lin | k) 🔲 Test 00002424 - 000 | 102424   Release: R500.1 Build | Version: 9.2.4.0     |           | Comm Monitor   Send | Capture Buf | fer to Fi | le |

The newly created user is added to the list of users.

### 4.10.2.1 Passkey Generation

A Passkey contains encrypted information of user name and privileges. For a user to be effected in other MasterLink instances a Passkey needs to be generated by the Administrator and sent to the user. The site Administrator can create the following passkey files:

- User Registration This is used to create license files to allow new users to register to the MasterLink application.
- Update Account This is to change privileges of an existing user. Privileges can be added/removed based on the business requirement.
- Forgot Password If a user forgets their password, site administrator can create passkey files allowing users to reset their password.



To generate a passkey:

- 1. On the User Configuration screen, select a user account to view details of the user.
- 2. Under Passkey Generation, click on the key icon next to the activity. You can generate the following keys:
  - Register: A key to register a new MasterLink user
  - Update Account: A key to update an existing MasterLink user account.
  - Forgot/Reset Password: A key to reset a forgotten or lost password.

- 3. Browse and select a location to save the passkey.
- 4. Send the passkey as an attachment to the user through an email.

| Assigned Role Tec<br>Email ID * Jan<br>Passkey Generation<br>Register<br>Update Account<br>Forgot / Reset Password   | nes<br>h<br>nes@honeywell.con<br>তন্য<br>তন্য<br>তন্য |            | ]               |                        |       |       |
|--|---|------------|-----------------|------------------------|-------|-------|
| Email ID * Jan<br>Passkey Generation<br>Register<br>Jpdate Account<br>Forgot / Reset Password<br>Suser Configuration<br>Suser Configuration<br>Suser Wenneywell + M<br>Organize * New folder | nes@honeywell.com<br>ா<br>ரா                          |            | ]               |                        |       |       |
| Passkey Generation<br>Register<br>Jpdate Account<br>Forgot / Reset Password<br>User Configuration<br>Organize + New folder   | ол<br>Ол  |            | ]               |                        |       |       |
| Register<br>Jpdate Account<br>Forgot / Reset Password  | ۳   |            |                 |                        |       |       |
| Jpdate Account<br>Forgot / Reset Password  | ۳   |            |                 |                        |       |       |
| Forgot / Reset Password  |   |            |                 |                        |       |       |
| User Configuration   | ол  |            |                 |                        |       |       |
| Organize - New folder  |   |            |                 |                        |       |       |
|  | asterlink > LicenseFiles                              |            | <b>- 4</b> 9 Si | earch License          | Files | ×     |
| 🔠 Recent Places 🔺  |   |            |                 |                        | 855 • | • @   |
| Creative Cloud Files   | Name  | No iten    | is match your s | Date modifi<br>search. | ied   | Туре  |
| Libraries     Documents     Pictures     Subversion     Vicleos  |   |            |                 |                        |       |       |
| 💭 Computer   |   |            |                 |                        |       |       |
| MyDrive_E842801 (\\ie1aw(  |   | <b>1</b> 1 |                 |                        |       |       |
| File name: James, passke<br>Save as type: PasskeyFile (*,  |   |            |                 |                        |       |       |
| Hide Folders   |   |            | -               | Save                   | . v-  | incel |

# 5 Update

You can use MasterLink Software Application to update the EVC or Modem firmware, and can also load the instrument with security certificates. This chapter describes the process of updating field instrument firmwares and loading security certificates.

**Related Topics:** 

EVC Firmware Update

Modem Firmware Update

Certificate Update

## 5.1 EVC Firmware Update

You can use MasterLink Software Application to upgrade EVC firmware.

To get started, browse and select the firmware file.

| Honeywell           | MasterLink R500.   | 1                    |                     |                    |                    |              | 0       | Q        | -        | e x  |
|---------------------|--------------------|----------------------|---------------------|--------------------|--------------------|--------------|---------|----------|----------|------|
| 0<br>Site           | Update             |                      |                     |                    |                    |              |         |          |          |      |
| ි<br>View' Edit     | EVC 1.1032         | Modem Certificate    | 1                   |                    |                    |              |         |          |          |      |
| 0                   |                    |                      |                     |                    | Step               | Status       |         |          |          |      |
|                     | Firmware Filename. | File Location        |                     | Browse             | Validate FW file   |              |         |          |          |      |
| 9                   |                    |                      |                     |                    | Send Firmware      |              |         |          |          |      |
| Reod Data           |                    |                      | 1001111001          |                    | Validate Firmware  |              |         |          |          |      |
| $\otimes$           | Versions           |                      | Selected Firmware D | etails             | Sync date and time |              |         |          |          |      |
|                     | Current Firmware   | 1.1032               | Firmware Type       |                    |                    |              |         |          |          |      |
| Administer          | Loader             | 3,1000               | New Firmware        |                    |                    |              |         |          |          |      |
|                     |                    |                      |                     |                    |                    |              |         |          |          |      |
| ی)<br>Settings      |                    |                      |                     |                    |                    |              |         |          |          |      |
| *                   |                    |                      |                     |                    |                    |              |         |          |          |      |
| Security            |                    |                      |                     |                    |                    |              |         |          |          |      |
| <b>€£</b><br>Update |                    |                      |                     |                    |                    |              |         |          |          |      |
| ~                   |                    |                      |                     | Statisticroate Res | et.                |              |         |          |          |      |
| (O)<br>Diseases     | Connected (EC 350) | G Ste 045 11111111-2 | 2222222             | 1                  |                    | Comm Monitor | Send Ca | pture Bi | iffer to | File |

Click **Start Upgrade** to upgrade the EVC firmware. As the firmware upgrade progresses, you can observe the status on the right pane.

## 5.2 Modem Firmware Update

You can use MasterLink Software Application to upgrade modem firmware.

To get started, browse and select the firmware file.

| Honeywell                    | MasterLink R500.1                 |                           |               |                    |        | 0 <b>Q -</b> e ×            |
|------------------------------|-----------------------------------|---------------------------|---------------|--------------------|--------|-----------------------------|
| 2<br>576                     | Update                            |                           |               |                    |        |                             |
| ි<br>View/ Edit              | EVC   Modem   Certificate         |                           |               |                    |        |                             |
| Ø                            |                                   |                           |               | Step               | Status |                             |
| Culturate                    | Firmware Filename: File Location: |                           | Browse        | Validate Firmware  |        |                             |
| 9                            |                                   |                           |               | Send Firmware      |        |                             |
| Read Data                    |                                   |                           |               | Validate Firmware  |        |                             |
| $\otimes$                    | Versions                          | Selected Firmware Details |               | Sync date and time |        |                             |
| Live Data                    | Current Firmware                  | New Firmware              |               |                    |        |                             |
| 2                            |                                   |                           |               |                    |        |                             |
| Administer                   |                                   |                           |               |                    |        |                             |
| <ul> <li>Settings</li> </ul> |                                   |                           |               |                    |        |                             |
| 滦                            |                                   |                           |               |                    |        |                             |
| Security                     |                                   |                           |               |                    |        |                             |
| <b>€</b> Ø<br>Updiste        |                                   |                           |               |                    |        |                             |
|                              |                                   |                           |               |                    |        |                             |
| ø                            | Connected (EC 350)                |                           | March Uppears | Resei              |        | Send Capture Buffer to File |

Click **Start Upgrade** to upgrade the Modern firmware. As the firmware upgrade progresses, you can observe the status on the right pane.

## 5.3 Upload Certificate

This tab is enabled if application is connected to EC 350 MasterLink Software Application R500.1 or integrated EC 350.

To enable SSL communication, **Security Enable** check box under certificate tab must be checked. Then upload a valid security certificate to the MasterLink Software Application R500.1 and host. These certificates can be self-signed or signed by a third party.

| Honeywell        | MasterLink R500.1     | 1)  | © Q            | - 6      | s x |
|------------------|-----------------------|---|----------------|----------|-----|
| 2<br>5 114       | Update                |   |                |          |     |
| ()<br>View' Edit | EVC   Modem           | Certificate                                       |                |          |     |
| 0                |                       | Siep Status                                       |                |          |     |
| Gallesiana       | Security Enable       | Validate Cartificate File                         |                |          |     |
| 9                | Start Date            | 9/15/2018 🛗 End Date 9/15/2017 🛗 Sand Certificato |                |          |     |
| Read Data        |                       | Validate Gertificate                              |                |          |     |
| Cive Date        | Certificate           |   |                |          |     |
| 2                | Certificate Type      | C lent Certificate                                |                |          |     |
| Administer       | Certificate File Name | File Lacation: Brewee                             |                |          |     |
| (2)<br>Settings  |                       |   |                |          |     |
| Security         |                       |   |                |          |     |
| -∜D<br>Updete    |                       |   |                |          |     |
|                  |                       |   |                |          |     |
| ø                |                       | Updata  |                |          |     |
| (Primore) 0      | Connected (EC 350)    | Gomm Monitor.   \$                                | Send Capture E | uffer to | Fde |

Select the certificate type from the dropdown.

Browse and select a certificate file.

The certificate can be a:

- Client Certificate,
- Server Certificate,
- Private Key, or
- Ca Certificate

Click Update to send the certificate to the instrument.

Loading certificates to a MasterLink Software Application R500.1

**Note:** It is Mandatory to load security certificates to Cloud Link using Serial interface. Renewal of certificates can be done using any of the supported interfaces.

- 1. The following order to must be followed to load certificates to Cloud Link:
  - Key Certificate
  - Client Certificate
  - Server Certificate
  - CA certificate
- 1. Configure SSL private key in Cloud Link (Item Number: 3086)
- 2. Enable SSL in Cloud Link (Item Number: 3017)
- 3. Restart Cloud Link
- 4. Make sure that Time Sync is applied after restart of Cloud Link. This step is not required if SIM card with static IP address is used.
- 5. Add/Edit site as IPv4 with SSL enable as shown in below screen.

Note: The IP address and the port number can vary based on the customer network settings.

- 6. Configure SSL Private Key. This key should match the one configured in Cloud Link (Item Number: 3086)
- 7. Configure IP address and port number.

| Internet/Phone             | IPv4 •              |
|----------------------------|---------------------|
|                            | UDP 🗸 SSL           |
| SSL Private Key            | *****               |
| Site Phone/IP<br>Address * | 192.168.1.1 : 40000 |

**Note:** Place the certificates (CA, Client and Private Key file) in *C:\ProgramData\Honeywell\MasterLink Software Application \Certificates*. Certificate names should match with following naming convention:

CA Certificate SiteId1\_SiteId2\_ca.pem

Client Certificate SiteId1\_SiteId2\_clientcertificate.pem

| Private Key file SiteId1 | _Siteld2 | _keyfile.pfx |
|--------------------------|----------|--------------|
|--------------------------|----------|--------------|

# 6 Troubleshooting scenarios

| Scenario    | 001  |
|-------------|--|
| Problem     | MasterLink Software Application stops communication with EVC over IrDA though Link is connected. |
| Environment | All OS   |
| Resolution  | Remove IrDA link and connect back.   |

| Scenario    | 002  |
|-------------|--|
| Problem     | Connection fails over serial.  |
| Environment | All OS   |
| Resolution  | <ul> <li>It could be mismatch of baud rate of MasterLink Software Application<br/>and device.</li> <li>It could be mismatch of comm port selection.</li> </ul> |

| Scenario    | 003   |
|-------------|---|
| Problem     | Load graph button is disabled when a user is connected to the site. |
| Environment | All OS  |
| Resolution  | Disconnect the instrument to activate the Load Graph button.        |

| Scenario    | 004  |
|-------------|--|
| Problem     | User is unable to view certain dash board and Instrument data when connected to Android mobiles. |
| Environment | All OS   |
| Resolution  | Double tap the item to view the details.   |

| Scenario    | 005   |
|-------------|---|
| Problem     | Application does not display device ID in "Add/Pair tab of MasterLink Software Application Android application once instrument session is timed out . |
| Environment | All OS  |
| Resolution  | Use Site Management screen to connect to the device.  |

| Scenario    | 006   |
|-------------|---|
| Problem     | Application does not display device ID in "Add/Pair tab of MasterLink Software Application Android application once instrument session is timed out . |
| Environment | All OS  |
| Resolution  | Use Site Management screen to connect to the device.  |

| Scenario    | 007   |
|-------------|---|
| Problem     | Item value/description is not completely visible in the Dashboard/Configure by Group screens. |
| Environment | All OS  |
| Resolution  | Tap the item value field to view the data   |

| Scenario    | 008  |
|-------------|--|
| Problem     | User is unable to abort send log configuration file transfer.                        |
| Environment | All OS   |
| Resolution  | The transfer would be completed in a minute. Please wait till the operation is done. |

| Scenario | 009   |
|----------|---|
| Problem  | Sometimes site id's are duplicated in Add/Pair site screen. |

| Environment | iOS and Android   |
|-------------|---|
| Resolution  | This issue usually happens if site ID's Cloud Link 4G Modem are changed after an instrument is paired with the mobile. Advised to not to change the site IDs of Cloud Link 4G Modem once they are installed in the field. |
|             | To resolve the issue:   |
|             | 1. Download any Bluetooth Low Energy app from App Store / Play Store  |
|             | 2. Scan for Cloud Link  |
|             | 3. Still you can see the Cloud Link site id as previous names.  |
|             | 4. Try to connect the Cloud Link  |
|             | 5. Scan once again. You will able to see new site id's  |
|             | 6. Now connect from MasterLink Software Application   |

| Scenario    | 010   |
|-------------|---|
| Problem     | In TCP/IP connection, the device is not responding  |
| Environment | All OS  |
| Resolution  | Then check the session timeout. By default the item is set to 30 seconds. Increase the session timeout. |

| Scenario    | 011  |
|-------------|--|
| Problem     | Device connectivity issue after a application is force closed or hanged  |
| Environment | All OS   |
| Resolution  | If the device is not connecting, wait for 10-15 minutes until the communication session timeout of Cloud Link expires. |

## 7 Glossary

### Α

### **Activity Log**

This function is used to quickly view the Activity Log on screen. Please note that this log is different from the Event Log because this log mainly focuses on software activity (and some firmware activity) where the Event Log function records activity that is directly linked to and maintained within the instrument.

### Alarm Log

The alarm log contains descriptions of all significant problems detected by the system

### Audit Trail

You can use the 'Audit Trail' tab to view and download Audit Trial data from the instrument. The term "Audit Trail" has different meanings in MasterLink Software Application that depend on the type of connected instrument.

### D

### DBO

Database Owner. dbo is the default schema in SQL Server. You can create your own schemas to allow you to better manage your object namespace.

### Diagnostic log report

Displays log files containing messages that record all types of events, including startup and shutdown information, errors, warning messages, and access information

#### Е

### **Event Log**

The Event Log records activity that is directly linked to and maintained within the instrument.

L

### Item File

An Item File stores the current instrument's item code values on your computer in a file.

\_\_\_\_\_

### Item Report

Displays comprehensive information for items

### Κ

### key

Passkey generated by the site Administrator

L

### Load Graph

Loads saved graphs when offline

### Log trigger

A log trigger is an action that caused a record to be written to the audit trail log in the instrument.

### S

### Serial port

Port of your system to which the device is connected

### Short List

A Short List is the same as the standard Item List (stores the current instrument's item code values), except that you can customize it.

### Site Report

Displays the number of workers/employees and work equipment at the construction site

### SSL

SSL (Secure Sockets Layer) is the standard security technology for establishing an encrypted link between a web server and a browser. This link ensures that all data passed between the web server and browsers remain private and integral.