



Sealing Guide

Release R210

PREFACE

General

A sealing facility of systems that is needed to ensure the accuracy of settings used for calculating volume/mass must not be allowed to be changed undetected. After verification by a legal metrology authority (e.g. NMI), the system settings of the CIU 888 can be locked and the system can be sealed by the authorized representative. By sealing the CIU 888, the LM authority states that the settings conform the national/local certifications, and that the system is allowed to be used to support LM certified applications for custody transfer, accounting and duties.

Purpose of this manual

The purpose of this manual is to provide information about sealing the CIU 888.

Target audience of this manual

This manual is primarily intended for:

- Representatives of the LM authorities who are responsible for sealing the CIU 888
- LM accredited users who are responsible for sealing the CIU 888
- Service technicians who are responsible for commissioning and configuring the CIU 888, and who may need to break the seal of the CIU 888 in order to change the configuration settings
- Other users who may need to break the seal of the CIU 888 in order to change the configuration settings

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Table of Contents

TABLE OF CONTENTS

Preface	i
General	i
Purpose of this manual	i
Target audience of this manual	i
Table of Contents	iii
CHAPTER 1 Sealing the CIU 888	1-1
1.1 Unlocking the configuration settings of the CIU 888	1-1
1.2 Verifying the LM relevant configurations settings of the CIU 888	1-2
1.3 Sealing the Entis Pro system connected to the CIU 888	1-5
1.4 Sealing the ENTIS system connected to the CIU 888	1-5
1.5 Calibrating the entities of the tanks associated with the CIU 888	1-6
1.5.1 Ambient temperature calibration through CIU 888 web interface	1-6
1.6 Locking the LM relevant configuration settings of the CIU 888	1-7
1.7 Sealing the CIU 888	1-8
APPENDIX A List of Abbreviations	A-1

Table of Contents

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CHAPTER 1 SEALING THE CIU 888

The procedure for sealing the CIU 888 consists of the following steps:

1. Unlocking the configuration settings of the CIU 888, see section 1.1
2. Verifying the LM relevant configurations settings of the CIU 888, see section 1.2
3. Sealing the Entis Pro system connected to the CIU 888, see section 1.3
4. Calibrating the entities of the tanks associated with the CIU 888, see section 1.5
5. Locking the LM relevant configuration settings of the CIU 888, see section 1.6
6. Sealing the CIU 888, see section 1.7

1.1 Unlocking the configuration settings of the CIU 888

The first step in the procedure for sealing the CIU 888, is unlocking both the LM relevant and the non-LM relevant configuration settings of the CIU 888. The configuration settings of the CIU 888 can be unlocked using the W&M lock key switch and the Configuration lock key switch located at the front of the CIU 888 (see FIGURE 1-1).

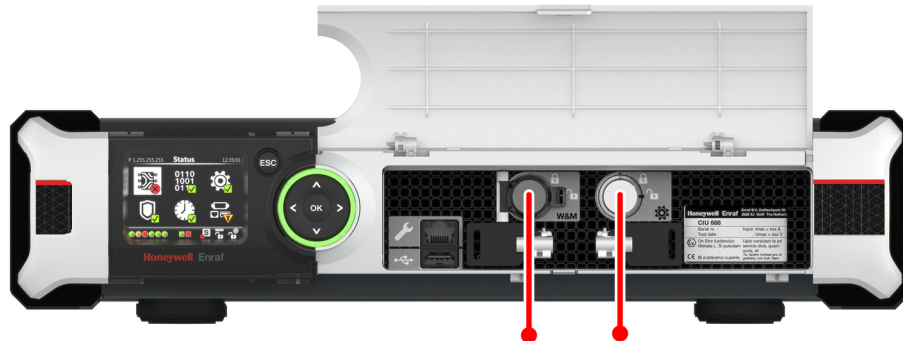


FIGURE 1-1

CIU 888: W&M lock key switch (left) and Configuration lock key switch (right)

To unlock the configuration settings, insert the key in the key switch and turn it clockwise. The status of the W&M lock key switch and the

Configuration lock key switch is displayed on the CIU 888 display (see FIGURE 1-2).



FIGURE 1-2

CIU 888 display: Configuration settings are unlocked

1.2 Verifying the LM relevant configurations settings of the CIU 888

It is recommended to verify the LM relevant configuration settings of the CIU 888. The purpose of verification is to establish that all LM relevant configuration settings stated in the certificate issued by the legal metrology authority (e.g. NMI) have been configured correctly. The LM configuration settings can be verified using the CIU 888 Web interface.

Perform the following steps to verify the W&M relevant configuration settings:

1. Connect a PC/laptop with a standard web browser, i.e. Internet Explorer 9 or 10, to the Service port of the CIU 888 using a Cat. 5 Ethernet cable (patch or crossover). The Service port is located at the front of the CIU 888 (see FIGURE 1-3).

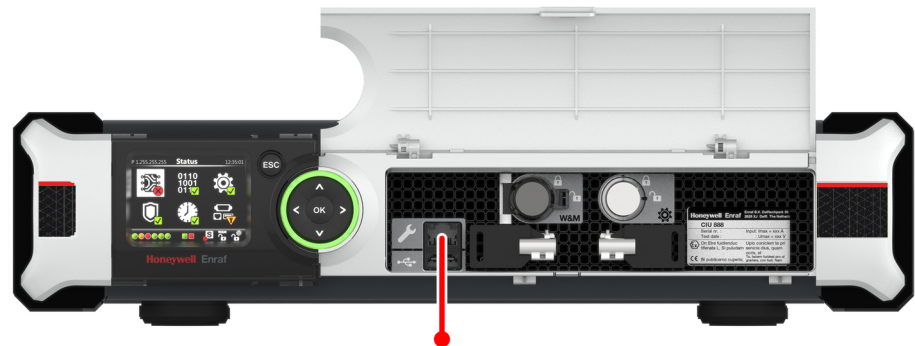


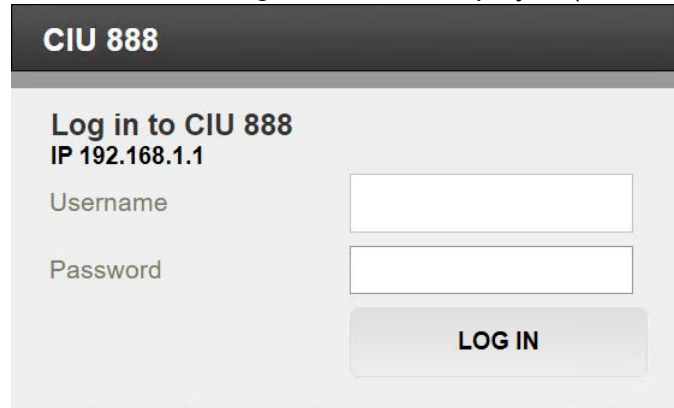
FIGURE 1-3

CIU 888: Service port

2. Launch the web browser.

Table of Contents

3. Enter the IP address of the CIU 888 in the address bar of the web browser. The IP address is **192.1681.1**. Next, press the **Enter** key. The *CIU 888 Login* window is displayed (see FIGURE 1-4).



CIU 888

Log in to CIU 888
IP 192.168.1.1

Username

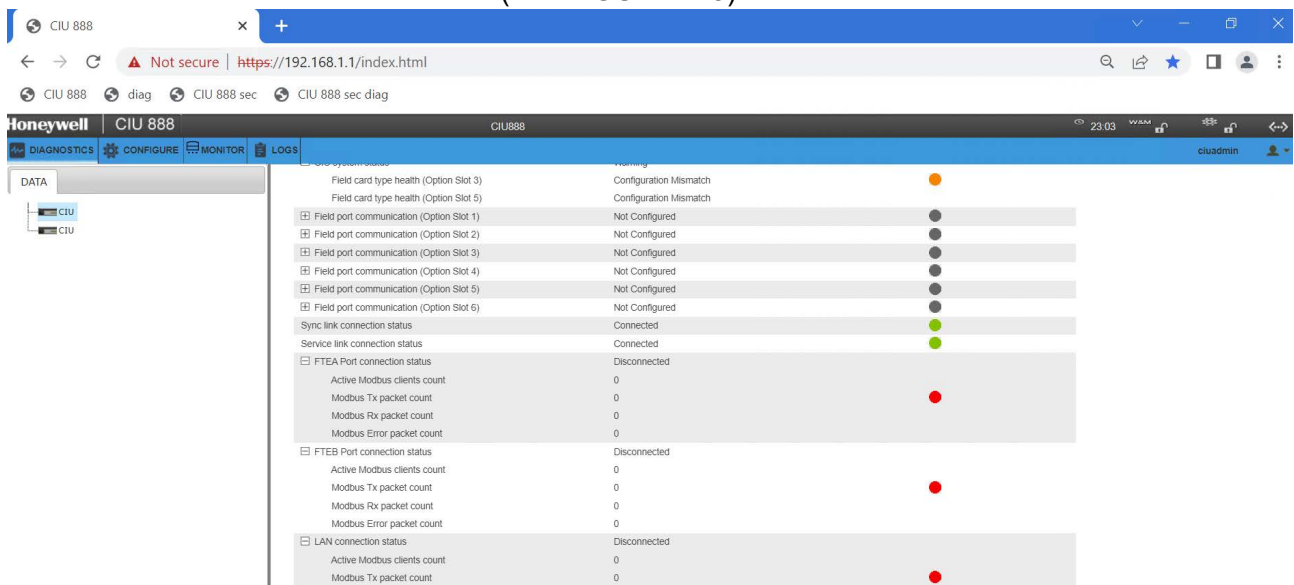
Password

LOG IN

FIGURE 1-4

CIU 888 Login window

4. Enter the username and password to log in to the CIU 888. The username is **ciudadmin**. Next, click **LOG IN**. After entering a valid username and password, the CIU 888 Web interface is displayed. The *Diagnostics* window is displayed by default (see FIGURE 1-5).



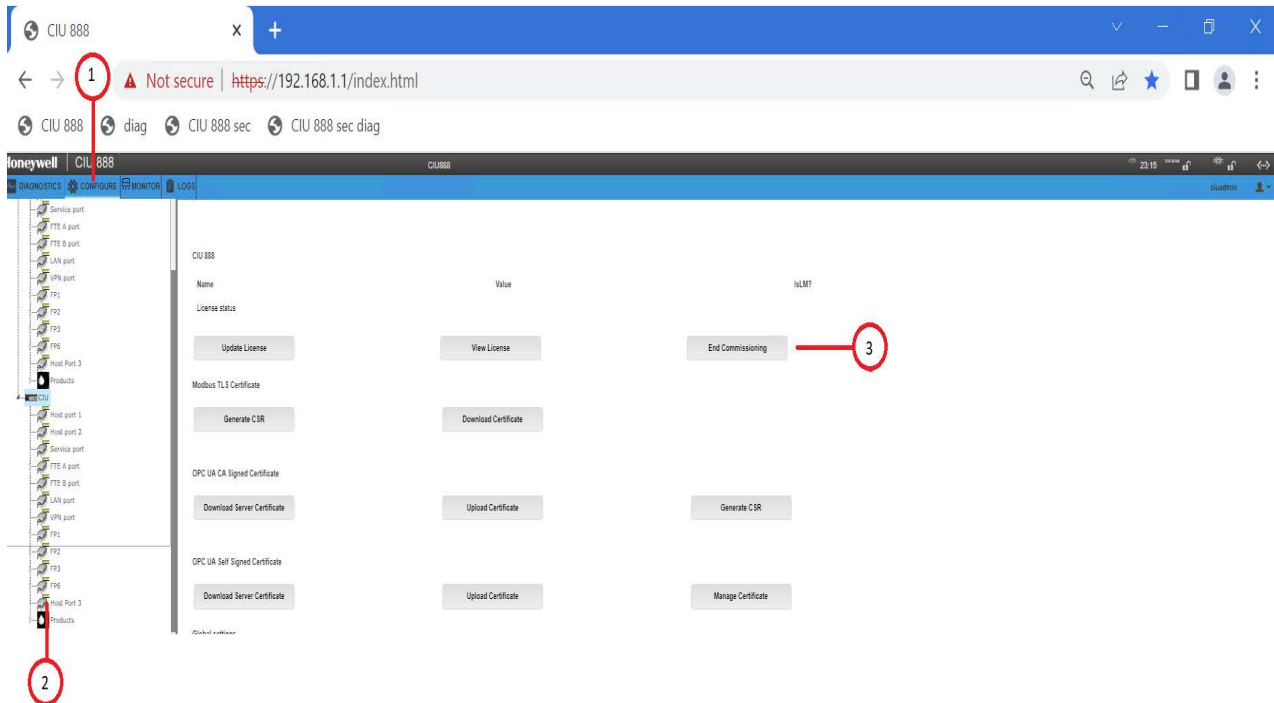
Category	Status	Indicator
Field card type health (Option Slot 3)	Configuration Mismatch	Yellow
Field card type health (Option Slot 5)	Configuration Mismatch	Yellow
Field port communication (Option Slot 1)	Not Configured	Grey
Field port communication (Option Slot 2)	Not Configured	Grey
Field port communication (Option Slot 3)	Not Configured	Grey
Field port communication (Option Slot 4)	Not Configured	Grey
Field port communication (Option Slot 5)	Not Configured	Grey
Field port communication (Option Slot 6)	Not Configured	Grey
Sync link connection status	Connected	Green
Service link connection status	Connected	Green
FTEA Port connection status	Disconnected	Red
Active Modbus clients count	0	Red
Modbus Tx packet count	0	Red
Modbus Rx packet count	0	Red
Modbus Error packet count	0	Red
FTEB Port connection status	Disconnected	Red
Active Modbus clients count	0	Red
Modbus Tx packet count	0	Red
Modbus Rx packet count	0	Red
Modbus Error packet count	0	Red
LAN connection status	Disconnected	Red
Active Modbus clients count	0	Red
Modbus Tx packet count	0	Red

FIGURE 1-5

CIU 888 Web interface: *Diagnostics* window

Table of Contents

5. Click **CONFIGURE** in the section menu bar.
The *Configure* window is displayed (see FIGURE 1-6).



1. CONFIGURE option
2. Site tree
3. Configuration settings

FIGURE 1-6

CIU 888 Web interface: *Configuration* window

The *Configuration* windows displays the global settings and internal SI units that have been configured for the CIU 888, and indicates for each global setting whether it is LM relevant or not. Furthermore, the *Configuration* window provides for each site element (tank, port, gauge) in the site tree an overview of the configuration settings. For each configuration setting the configured value is displayed, and whether the configuration setting is LM relevant or not.

6. Verify if all W&M relevant configuration settings have been configured correctly. Configuration settings that have not been configured correctly need to be re-configured.

NOTE: Refer to the *Configuration Manual CIU 888 (Part No. 4417593)* for more information about changing the configuration settings of the CIU 888.

1.3 Sealing the Entis Pro system connected to the CIU 888

Once the LM relevant configuration settings have been verified, the next step is to seal the Entis Pro system connected to the CIU 888. Sealing the Entis Pro system is required in order to proof that the software has not been changed.

Perform the following steps to seal the Entis Pro system:

1. Launch Entis Pro.
2. Log in using the *W&M accredited for verification* user account.
3. Set the following Entis Pro tasks to W&M approved:
 - Task Name
 - AboutTasks.exe
 - AboutTasks_ENU.dll
 - CiuPlusLinks.exe
 - CiuPlusLinks_ENU.dll
 - CrystalReports
 - DataModel_ENU.dll
 - Kernel
 - LabelControl
 - ObjectiveGrid
 - ProEssentials
 - ReportPrinting.exe
 - ReportPrinting_ENU.dll
 - TankDetail.exe
 - TankDetail_ENU.dll
 - TankDetail -P.rpt for **English language** (This template must be imported first via *About Tasks - Reports... - Import*)
 - TankDetails NL -P.rpt for **Dutch language** (This template must be imported first via *About Tasks - Reports... - Import*)
4. Seal the Entis Pro system.

Refer to the chapter 'About Tasks' in the *Configuration manual Entis Pro version 2.70x for Windows 7* (Part No. 4416381) for detailed information about sealing the Entis Pro system.

1.4 Sealing the ENTIS system connected to the CIU 888

Seal ENTIS system based on the procedure documented on "Apply / Verify Seal Application" ENTIS document (Part No. BA081-1976000).

1.5 Calibrating the entities of the tanks associated with the CIU 888

Once the Entis Pro / ENTIS system connected to the CIU 888 has been sealed, the next step is to calibrate the entities of the tanks associated with the CIU 888. If a tank is calibrated, it means that the tank has been accepted by the LM authorities for transfer.

Perform the following steps to calibrate the entities of the tanks associated with the CIU 888:

1. Launch Entis Pro.
2. Log in using the W&M accredited for verification user account.
3. Calibrate the required entities of each tank associated with the CIU 888.

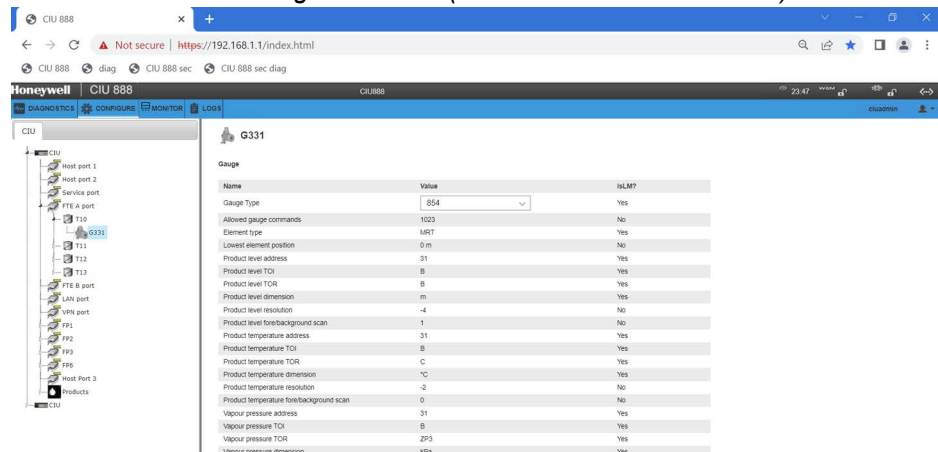
Refer to the section ‘How to calibrate’ in the *Users guide Entis Pro version 2.70x for Windows 7* (Part No. 4416380) for detailed information about calibrating tank entities.

1.5.1 Ambient temperature calibration through CIU 888 web interface

CIU 888 web interface provides option to calibrate/uncalibrate ambient temperature. If ambient temperature needs to be calibrated then use this option.

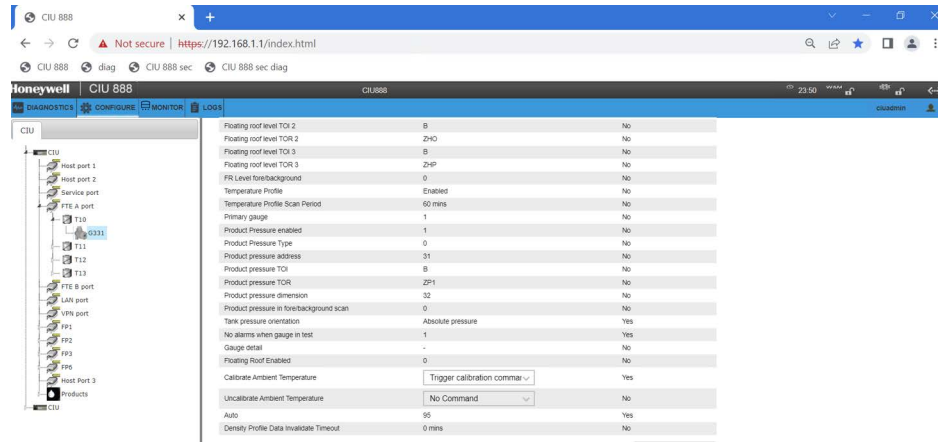
1. Login into CIU 888 web page using “ciudadmin” user account.
2. Select **CONFIGURE** tab.
3. On siteelement tree, select the gauge that is associated with the ambient temperature scan.

NOTE: *Ambient temperature scan is associated with the gauge associated to the first tank created in the configuration tool (CIU Service tool/Entsite Pro).*

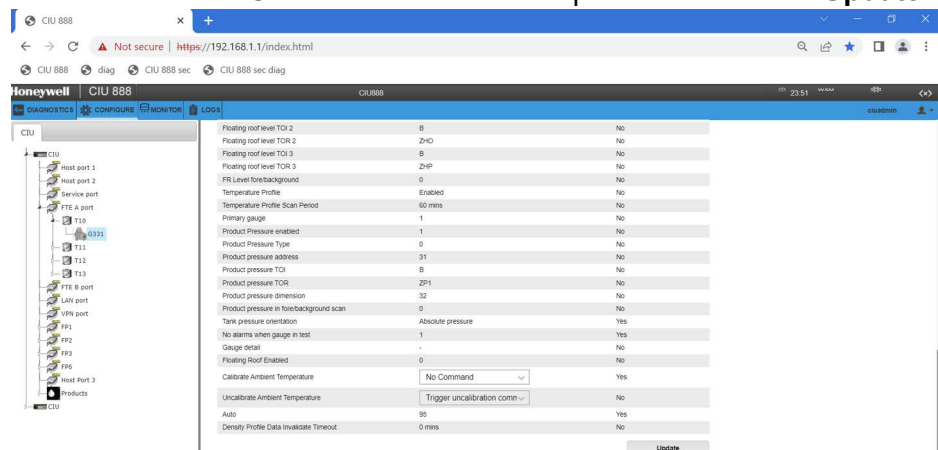


4. For ambient temperature calibration, select “Trigger calibration command” for “Calibrate Ambient Temperature” and click **Update**.

Table of Contents



5. For ambient temperature uncalibration, select “Trigger uncalibration command” for “Uncalibrate Ambient Temperature” and click **Update**.



1.6 Locking the LM relevant configuration settings of the CIU 888

Once the required entities of all tanks associated with the CIU 888 have been calibrated, the next step is locking the LM relevant configuration settings of the CIU 888:

Perform the following steps to lock the LM relevant configuration settings of the CIU 888:

Table of Contents

1. Open the cover of the W&M lock key switch. The W&M lock key switch is located at the front of the CIU 888 (see FIGURE 1-7).



FIGURE 1-7 CIU 888: W&M lock key switch



2. Insert the key into the W&M lock key switch and turn it counter-clockwise.
On the CIU 888 display, the status of the W&M lock key switch changes from  ("Unlocked") to  ("Locked") (see FIGURE 1-8).



FIGURE 1-8 CIU 888 display: W&M relevant configuration settings are locked

NOTE: The Configuration lock key switch can either be closed or left open.

3. Remove the key from the W&M lock key switch and store it.

1.7 Sealing the CIU 888

Once the LM relevant configuration settings of the CIU 888 have been locked, the CIU 888 can be sealed:

Perform the following steps to seal the CIU 888:

Table of Contents

1. Close the cover of the W&M lock key switch and seal the cover using a sealing wire (see FIGURE 1-9).



FIGURE 1-9

CIU 888: Cover of W&M lock key switch

2. Seal the cover of the CIU 888 in one of the following ways:
 - Attach a permanent self-adhesive seal/sticker to the cover of the CIU 888 as shown in FIGURE 1-10. The seal/sticker should be

attached to both the cover and the housing of the CIU 888. A seal/sticker will be provided when ordering the W&M certified option.



FIGURE 1-10

CIU 888: Example of location for seal/sticker

- Use a sealing wire to attach the cover of the CIU 888 to the fixing point at the back of the CIU 888 (see FIGURE 1-11).



FIGURE 1-11

CIU 888: Fixing point for sealing cover of CIU 888

The CIU 888 is now sealed and the W&M relevant configuration settings of the CIU 888 and of the calibrated tanks associated with the CIU 888 can no longer be changed without breaking the seal.

APPENDIX A LIST OF ABBREVIATIONS

Abbreviation	Description
CIU	Communication Interface Unit
IP	Internet Protocol
NMI	Netherlands Measurement Institute (Nederlands Meetinstituut)
PC	Personal Computer
SI Units	International System of Units (from French: Système International d'Unités)
W&M	Weights and Measures
LM	Legal Metrology

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For service-related questions, contact:

Technical Assistance Centre

Phone:

+1 800 423 9883 or

+1 215 641 3610

E-mail:

HFS-TAC-SUPPORT@honeywell.com

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Americas

Honeywell Enraf Americas, Inc.
1250 West Sam Houston Pkwy S.
Houston, TX 77042
USA
Phone: +1 (480) 293-2042
Email: enraf-us@honeywell.com

Asia Pacific

Honeywell Pte Ltd.
17 Changi Business Park Central 1
Singapore 486073
Phone: +65 6355 2828
Email: enraf-sg@honeywell.com

Europe, Middle East and Africa

Honeywell Enraf
Delftechpark 39
2628 XJ Delft the Netherlands
Phone: +31 (0)15 2701 100
Email: enraf-nl@honeywell.com

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