

Local Remote Display for Hospitals

en



MFR40472-04



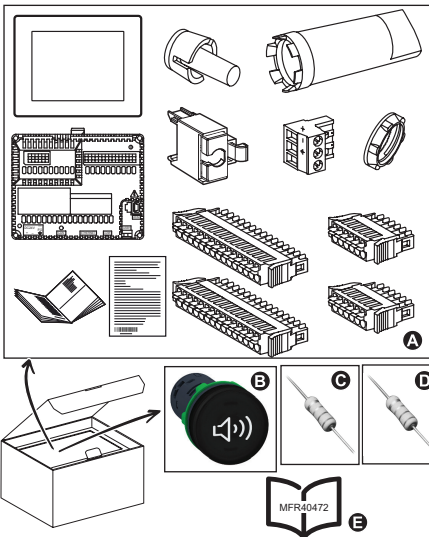
Schneider Electric

Vigilohm LRDH is designed for installation in Group 2 medical locations, such as operating theaters. It provides real-time information to medical staff about insulation faults and their location, transformer overload or overheating, the tripping of circuit breakers, and the status of medical gas or UPS.

Commercial reference **IMDLRDH**

1

www.se.com Local Remote Display for Hospitals (LRDH)



	Description	Commercial Reference / Part number / Range
A	HMI Controller	HMISCU8A5
B	Continuous Buzzer	XB5KSB
C	Resistor	39 kΩ 2 W
D	Resistor	2 MΩ 0.5 W
E	Instruction Sheet	MFR40472

Note: Do not use the product if it is damaged. Contact your Schneider Electric Customer Care representative or Support (www.se.com/support).

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Safety precautions



HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate Personal Protective Equipment (PPE) and follow safe electrical work practices. See NFPA 70E in the USA, CSA Z462 or applicable local standards.
- Turn off all power supplying this device and the equipment in which it is installed before working on the device or equipment.
- Always use a properly rated voltage sensing device to confirm that all powers are off.
- Treat I/O wiring connected to multiple devices as hazardous live until determined otherwise.
- Do not exceed the device's ratings for maximum limits.
- Do not use this device for critical control or protection applications where human or equipment safety relies on the operation of the control circuit.

Failure to follow these instructions will result in death or serious injury.

3

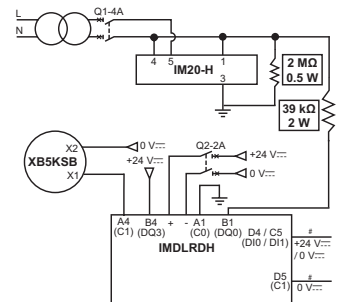
Installation

1. Install the HMI Controller.
2. Connect devices as per the configurations supported. Refer Section 4 for various configurations.

Note: Refer **Harmony SCU HMI controller quick reference guide (S1B90406)** for installation and wiring information.

3. Connect the 2 MΩ resistor between the pins 1 and 3 of the IM20-H.
4. Connect the buzzer between the power supply (0 V---) and pin A4 (C1) of the IMDLRDH.
5. Connect the power supply (+24 V---) to the pin B4 (DQ3) of the IMDLRDH.
6. Connect the 39 kΩ resistor between the pin 1 of the IM20-H and the pin B1 (DQ0) of the IMDLRDH.
7. Connect the pin A1 (C0) of the IMDLRDH to system ground.
8. Connect digital output from the application between the pins D4 (D10) or C5 (D11) and D5 (C1) of the IMDLRDH.

Note: IMDLRDH can detect 2 digital outputs from the application.

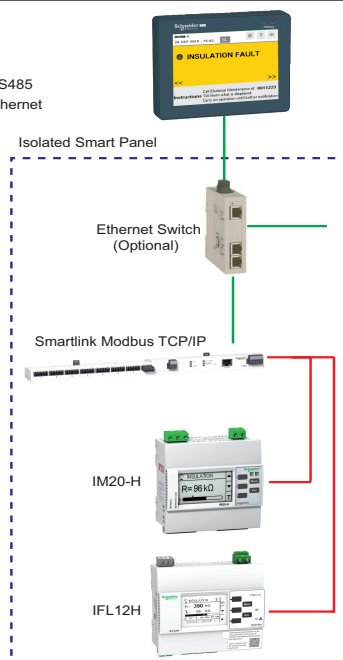


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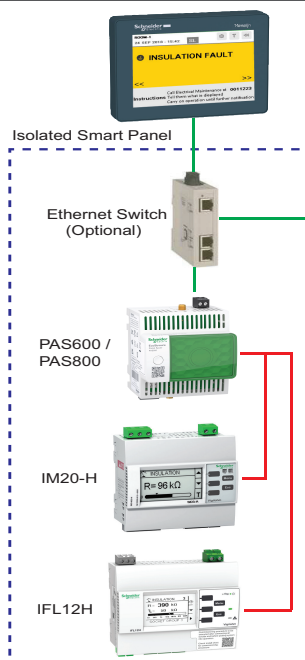
Solution architecture

A

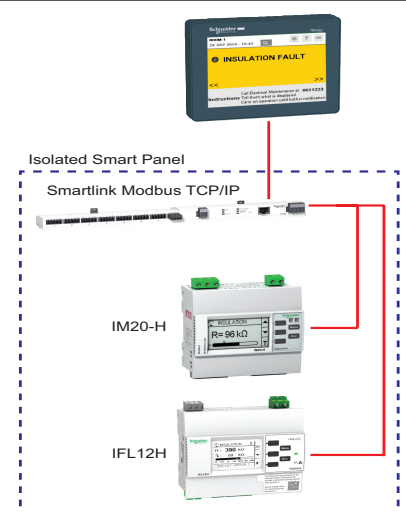
— RS485
— Ethernet



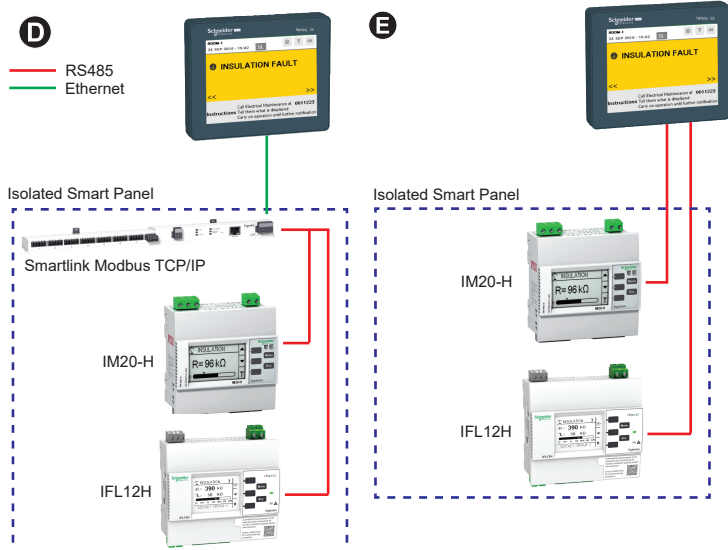
B



C



4 Solution architecture



Compatible Devices	Commercial reference
IM20-H ⁺¹	IMD-IM20-H
IFL12H ⁺²	IMDIFL12H
Smartlink	A9XMSB11 and A9XMEA08
EcoStruxure™ Panel Server Universal	PAS600
EcoStruxure™ Panel Server Advanced	PAS800

⁺¹: Firmware Version 2.3.0 or later

⁺²: Up to 4 devices

5 Configuration

Prerequisites:

- Ensure that the installation is complete as per section 3.
- Make note of the Modbus address of all connected devices. This information is required for configure the devices.

Note: To edit or enter any value, tap the editable value and a data entry keypad displays. Use this keypad to enter the desired value and tap the **Enter** button to validate.

Steps:

- Power ON the HMI controller.
The **Password** page displays.
Note: The default password is 0000.
- Enter the password and tap the **ok** button.
The **Change Password** page displays.
- Enter the new password and tap the **ok** button.
The **Settings** page displays.

Top the following parameters to select or enter values:

Parameter	Description	Default value	Allowed values
LANGUAGE	Select the language	English	English
ROOM	Enter the desired room name	ROOM-1	Length: 1 to 16 characters • Alphabets • Numerical • Special characters
COMM	Select the desired communication protocol	RS485	• RS485 • TCP/IP
Note: For TCP/IP, refer to TCP/IP configuration			
CABINET - 1			
IMD	Enter the Modbus address	0	1...247
IFL	Enter the Modbus address and the desired channel name	0 (Modbus Address) For channel names: IFL12H-1 : A1...A12 IFL12H-2 : B1...B12 IFL12H-3 : C1...C12 IFL12H-4 : D1...D12	Modbus Address: 1...247 Channel names: Length: 1 to 20 characters • Alphabets • Numerical • Special characters
SML	Enter the Modbus address	0	SML1 : 1...247 SML2 : 255
Tap and enable the configured channels.			
Note: SML1 refers to the A9XMSB11 and SML2 refers to A9XMEA08.			

Parameter	Description	Default value	Allowed values
DI	Select the desired configuration for digital inputs (DI-0, DI-1, DI-6 and DI-7) and enter the message.	Digital Input Configuration: Disable Alarm State Configuration: Low Message: For DI-0: DI-0 message For DI-1: DI-1 message For DI-6: DI-6 message For DI-7: DI-7 message	Digital Input Configuration: • Disable • Enable Alarm State Configuration: • Low • High Message: Length: 1 to 20 characters • Alphabets • Numerical • Special characters
MESSAGE	Configure the messages for both the panels. Note: You can configure 3 lines of message.	Call Electrical Maintenance at 00000. Tell them what is displayed. Carry on operation until further notification.	Length: 1 to 40 characters • Alphabets • Numerical • Special characters

Tap the following parameters to view the information:

Parameter	Description
ABOUT	Displays the product name, version, and the QR code. QR code reads the device web page.
ESC	Displays the Installation Ready message displays with green background.

- Tap and hold at bottom-right corner of the device to display the **HMI controller settings** page.

- Set the date/time of the HMI controller. Refer **Harmony SCU HMI controller hardware guide (EIO0000001232)** for date/time configuration.

Note: To update settings after connecting different devices, tap the icon.

TCP/IP configuration:

If you select TCP/IP communication protocol, perform the following steps:

- Enter the IP address of the gateway (Smartlink or PAS600).
- Tap the **Magelis-ip** button.

The **HMI controller settings** page displays.

- Enter the IP address of the IMDLRDH in the network settings. Refer **Harmony SCU HMI controller hardware guide (EIO0000001232)** for network configuration.

Note: All IP addresses should be in the same domain.

Insulation Test:

This will tests the insulation monitoring system in compliance with IEC60364-7-710. To perform insulation test, tap the icon on the top right corner.

The insulation test begins. A percentage bar is displays with the progress.

During self-test,

- An insulation fault is induced and the **INSULATION FAULT** message displays.
- The induced insulation fault is recovered and the **Installation Ready** message displays.

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Following are the list of message screens supported:

Note: Follow the instructions displayed whenever you see these message screens.

ROOM-1
21 NOV 2018 - 10:43

21/11/2018 - 10:43

INSULATION FAULT A1

Call Electrical Maintenance at 00112233
Tell them what is displayed
Carry on operation until further notification

This screen continues to display until the system recovers from the insulation fault.

ROOM-1
21 NOV 2018 - 10:57

21/11/2018 - 10:57

Transformer Overload Transformer Overheat

Call Electrical Maintenance at 00112233
Tell them what is displayed
Carry on operation until further notification

This screen continues to display until the system recovers from the transformer overload or overheat.

ROOM-1
21 NOV 2018 - 10:58

21/11/2018 - 10:58

Product error

IM20H IFL12H-1 IFL12H-2
IFL12H-3 IFL12H-4

Call Electrical Maintenance at 00112233
Tell them what is displayed
Carry on operation until further notification

Contact Schneider Electric customer care representative for support.

ROOM-1
21 NOV 2018 - 10:58

21/11/2018 - 10:58

System error

IM20H IFL12H-1 IFL12H-2
IFL12H-3 IFL12H-4

Call Electrical Maintenance at 00112233
Tell them what is displayed
Carry on operation until further notification

Check the ungrounded system for any issues. This screen continues to display until the system recovers from the error.

Switching buzzer off:

On any message, the buzzer turns ON. Tap the  icon to turn OFF the buzzer. If multiple messages are displayed, tap and hold the  and  icons to navigate and view all the displayed messages.

ROOM-1
23 APR 2019 - 10:48

23/04/2019 10:48

Digital Input-1 Fault

<<Configurable message>>

Call Electrical Maintenance at 00112233
Tell them what is displayed
Do not start operation before the fault is fixed

Check the connected devices for any issues. This screen continues to display until the issue is resolved.

To check the settings, tap and hold the  icon for 2 seconds and release it.

ROOM-1
25 APR 2019 - 10:55

25-04-2019 10:31

Circuit Breaker Tripped

2/3

Call Electrical Maintenance at 00112233
Tell them what is displayed
Do not start operation before the fault is fixed

To check the settings, tap and hold the  icon for 2 seconds and release it.

To identify the tripped channels of the connected device, tap on the Circuit Breaker Tripped message and the following screen displays:

ROOM-1
25 APR 2019 - 10:9

3/3

Smart Link-1

CH1 CH2 CH3 CH4 CH5 CH6
CH7 CH8

Smart Link-2

CH1 CH2 CH3 CH4 CH5 CH6
CH7 CH8 CH9 CH10 CH11

<< open close trip >>

ROOM-1
21 NOV 2018 - 10:57

21/11/2018 - 10:57

Communication error

IM20H IFL12H-1 IFL12H-2
IFL12H-3 IFL12H-4

Call Electrical Maintenance at 00112233
Tell them what is displayed
Carry on operation until further notification

To check the communication settings of the highlighted devices, tap and hold the  icon for 2 seconds and release it.

Note: If the existing communication error is not fixed within 1 minute, this message displays again.

Refer to the following documentation for further information:

Device	Commercial Reference	Title	Part Number
HMI Controller	HMISCU8A5	Harmony SCU HMI controller quick reference guide	S1B90406
		Harmony SCU HMI controller hardware guide	EIO0000001232
IFL12H	IMDIFL12H	Vigilohm IFL12H instruction sheet	QGH34270
		Vigilohm IFL12H user manual	7EN02-0407
IM20H	IMD-IM20-H	Vigilohm IM20-H instruction sheet	S1A40442
		Vigilohm IM20-H user manual	VIGED310023EN
Smartlink	A9XMSB11	Smartlink instruction sheet	S1B33423
	A9XMEA08	Smartlink instruction sheet	NVE12086
	A9XMSB11 / A9XMEA08	Smartlink user manual	DOCA0073EN
EcoStruxure™ Panel Server Universal	PAS600	Ethernet Gateway PAS600 Instruction sheet	GEX84977
EcoStruxure™ Panel Server Advanced	PAS800	Ethernet Gateway PAS800 Instruction sheet	BQT54848

Notices

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it.

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material. A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

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- This product must be installed, connected and used in compliance with prevailing standards and/or installation regulations.
- If this product is used in a manner not specified by the manufacturer, the protection provided by the product may be impaired.
- The safety of any system incorporating this product is the responsibility of the assembler/installer of the system.

As standards, specifications and designs change from time to time, always ask for confirmation of the information given in this publication.