UC240 UltraSync Communicator Installation Guide for 2X-A/2X, KFP-A, and ZP2-A/ZP2 Fire Alarm Control Panels

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Content

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Caution: Caution messages advise you of possible equipment damage. They tell you which actions to take or to avoid in order to prevent the damage.

Note: Note messages advise you of the possible loss of time or effort. They describe how to avoid the loss. Notes are also used to point out important information that you should read.

Installation

Scope

This document describes the installation of the UC240 UltraSync Communicator for Carrier 2X-A/2X, KFP-A, and ZP2-A/ZP2 fire alarm control panels.

Although the UC240 supports multiple interfaces to fire alarm panels, this document will focus on the hardware interface only – the dial capture and serial interfaces are not discussed and their use is not recommended at this time.

As the UC240 is not sold in the United Kingdom, information in this document is not applicable for UK customers.

Note: For all other information on the UC240 UltraSync Communicator, including interface connections, programming, and technical specifications – refer to the UC140/UC240 UltraSync Communicator Installation Sheet (P/N 466-5558-EN REV A or later).

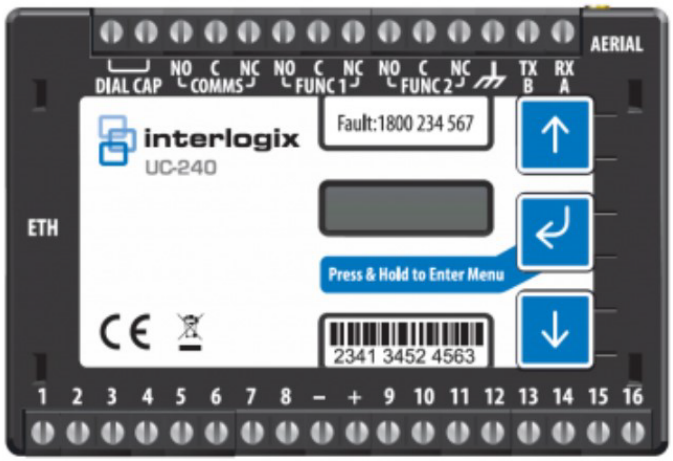
Description

The UC240 UltraSync Communicator is a dual path (IP and SIM 4G/2G mobile technology) alarm signalling unit for transmitting signals from a customer's fire alarm control panel to a central monitoring station via the Carrier UltraSync secure transmission system.

Once registered with the Carrier UltraSync portal, the UC240 allows notifications to be sent to:

- Central Monitoring Stations (CMS)
- Email addresses
- Supported mobile apps (IOS and Android)

Figure 1: UC240 Communicator



Installation

Before installation

The UC240 must first be registered with the Carrier UltraSync portal to operate to send notifications.

UC240 installation location

The UC240 UltraSync Communicator should be installed in a separate enclosure immediately adjacent to the fire alarm control panel (this is required as there is no dual path for the power supply to the device).

Note: We recommend using the SMB-DIN2 enclosure to house the UC240 (included with the UC240 in 2010-2-UC240-KIT).

Install the UC240 onto the underside of the SMB-DIN2 lid using the adhesive strips provided (see Figure 5 on page 4).

The wireless aerial should be mounted outside the SMB-DIN2 enclosure, entering the enclosure via a gland.

See “Installation examples” on page 4 for example installation figures.

UC240 wiring

Caution: Fire rated cable is recommended for all interface wiring between the fire alarm control panel and the UC240. Fire rated IP cabling must be used to connect the UC240 to the local site LAN.

See “Wiring” on page 5 for wiring connection diagrams.

The SMB-DIN2 enclosure should be connected via a mechanical gland to the fire alarm control panel to provide mechanical protection for the cabling between the panel and the UC240.

All cables should be fed into the SMB-DIN2 via glands or conduits.

If direct glanding is not possible, interface cables should be enclosed in conduits to provide mechanical protection.

Once all wiring is completed, secure the lid to the SMB-DIN2 using the screws provided.

System wiring

The following wiring options with and without EN 54-21 compliance are available.

Table 1: System wiring options

EN 54-21 compliant	Description	Compatible control panels
Yes [1]	Fire routing relay output via 2010-2-PIB board as output to the UC240.	Large cabinet 2X-A/2X, KFP-A, ZP2-A/ZP2 control panels with fire routing and fire protection controls (FB2, FB models).
Yes	Fire relay output as fire routing	Any 2X-A/2X, KFP-A, ZP2-A/ZP2 control panels with fire routing and fire protection controls (FB2, FB models).
No	Event reporting only – Fire relay output to the UC240.	Any 2X-A/2X, KFP-A, ZP2-A/ZP2 control panel variant.

[1] With fire routing delay and disable options

See “Wiring” on page 5 for wiring connection diagrams for each option.

Configuration and programming

The device can be programmed via the device interface or the UltraSync+ mobile app (available for Android and IOS mobile devices).

See “Configuration Utility configuration and UC240 programming” on page 8 for information on configuration and programming.

Installation examples

Figure 2: SMB-DIN2 enclosure

Figure 3: SMB-DIN2 lid screws

Figure 4: UC240 installation (DIN rail)

Figure 5: UC240 installation (inside lid)

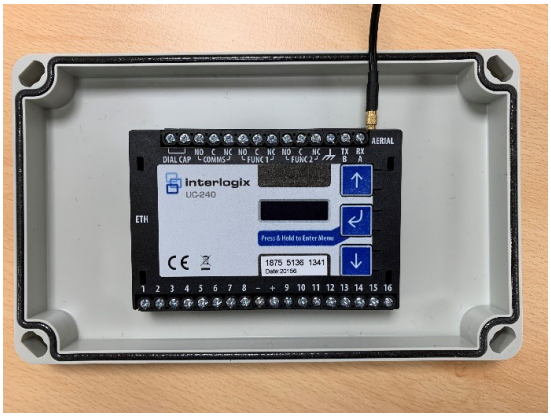


Figure 6: UC240 installation location

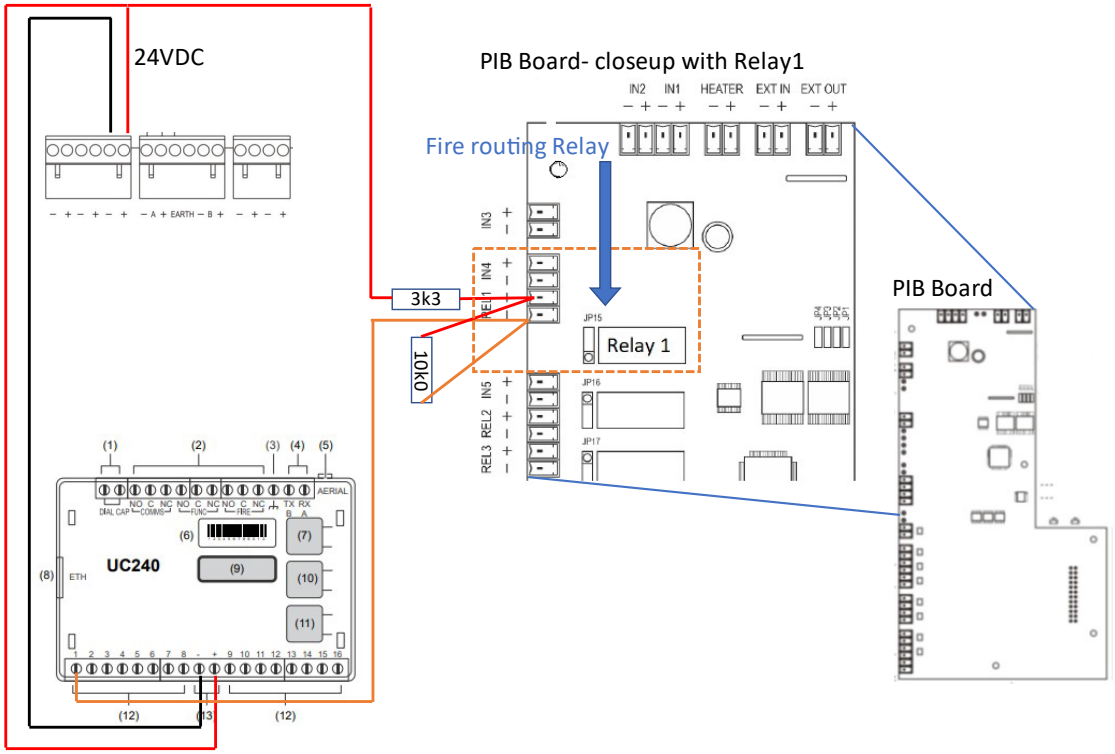
Figure 7: UC240 installation location

Wiring

EN 54-21 compliant option (2010-2-PIB with fire routing delay and disable options)

This option is only compatible with large cabinet control panels with fire routing and fire protection controls (FB, FB2 models). A 2010-2-PIB Peripherals Interface Board is required (not supplied).

Figure 8: EN 54-21 compliant option (2010-2-PIB)



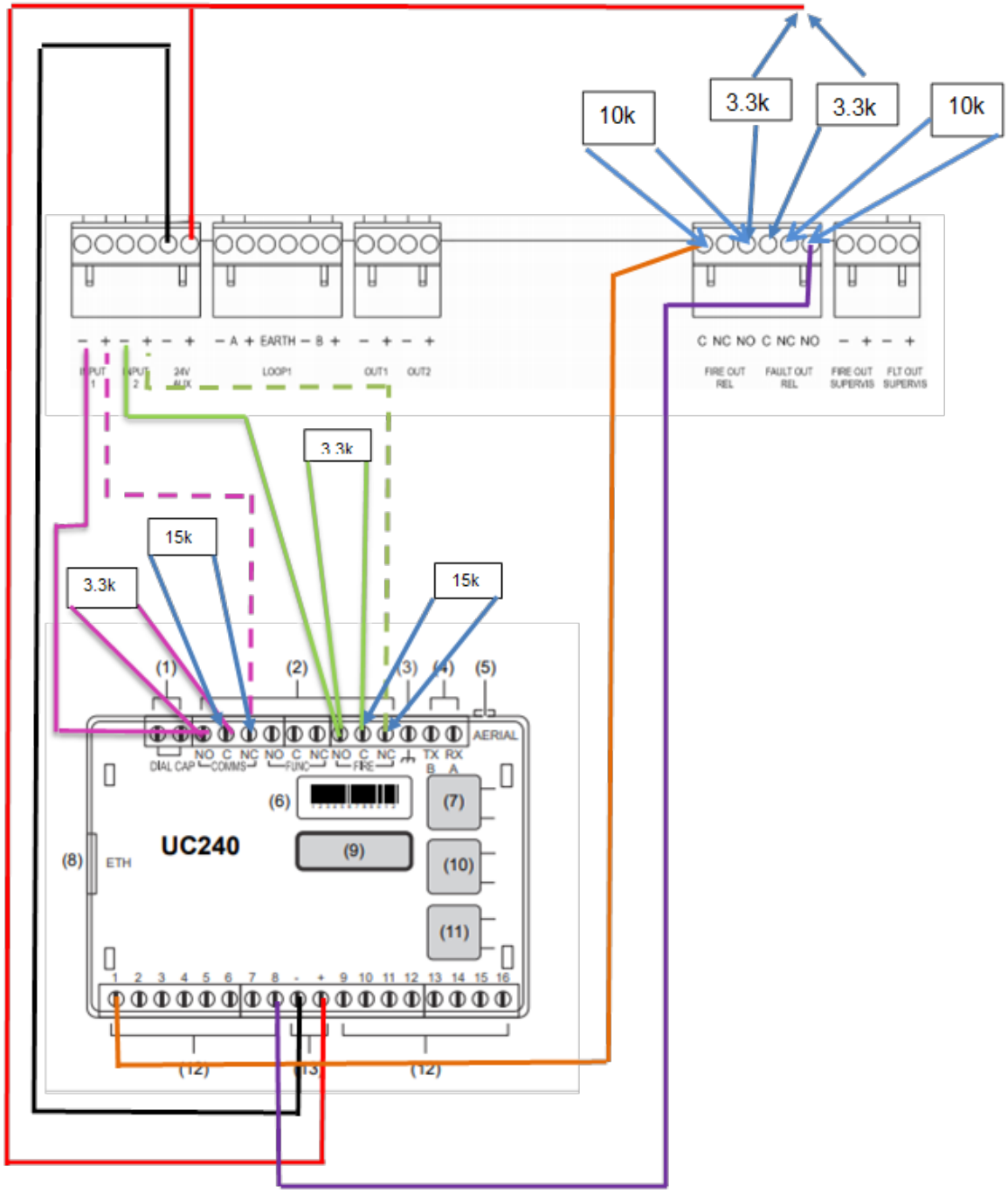
Notes:

- The 2010-2-PIB REL1 relay must be set to normally open (NO) – this requires the relay jumper configuration to be changed from the default switched relay output setting (see the 2010-2-PIB Peripherals Interface Board Installation Sheet for more details).
- See Figure 9 on page 6 for interfacing fault input.
- See “Fire routing delay configuration for the 2010-2-PIB” on page 9 for fire routing delay configuration.

EN 54-21 compliant option (fire relay output as fire routing)

This option is compatible with any 2X-A/2X, KFP-A, ZP2-A/ZP2 control panel with fire routing and fire protection controls (FB2, FB models).

Figure 9: EN 54-21 compliant option (fire relay output as fire routing)



Non-EN 54-21 compliant option: Panel inputs, fire and fault relay outputs

Event reporting only. This option is compatible with any 2X-A/2X, KFP-A, ZP2-A/ZP2 control panel variant.

Wiring is the same as shown in Figure 9 on page 6 but the Input 2 connection (green) from the UC240 is not required.

Configuration Utility configuration and UC240 programming

Configuration Utility configuration

Programmable inputs

Configure the control panel programmable inputs as shown below.

For EN 54-21 compliant installations, configure programmable inputs 1 and 2. For non-EN 54-21 compliant installations, only input 1 can be configured.

Table 2: Input 1 (for EN 54-21 and non-EN 54-21 installations)

Parameter	Configuration
OpMode	External Fault
Control	Enabled
Description	UltraSync Dialer Fault
Zone	None

Figure 10: Configuration Utility Input 1 configuration

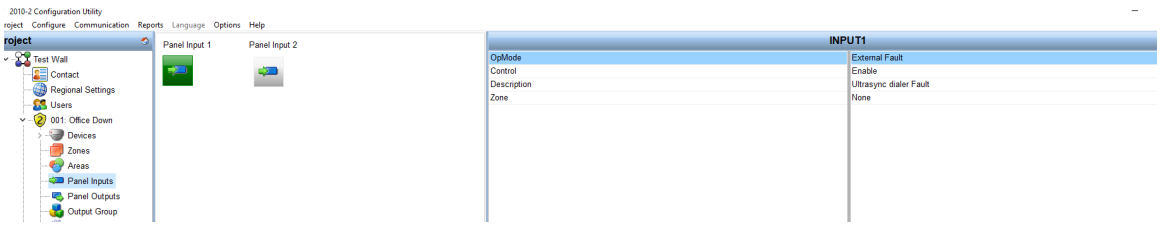
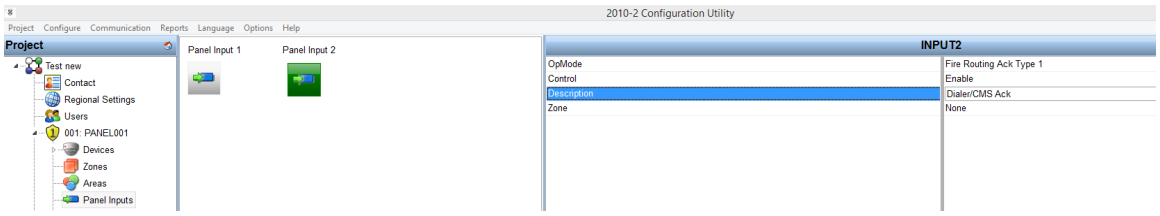


Table 3: Input 2 (only for EN 54-21 installations)

Parameter	Configuration
OpMode	Fire Routing Ack Type 1
Control	Enabled
Description	Dialer/CMS Ack
Zone	None

Figure 11: Configuration Utility Input 2 configuration

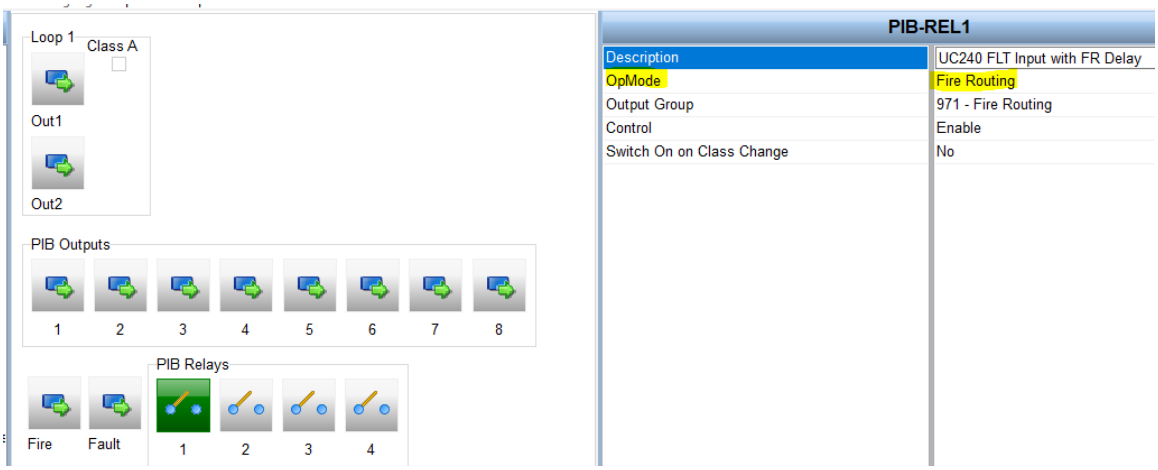


Fire routing delay configuration for the 2010-2-PIB

Note: This option is only available for EN 54-21 compliant installations.

First configure the 2010-2-PIB relay 1 (Panel Outputs > PIB Relays) as shown below.

Figure 12: Configuring the 2010-2-PIB relay



Next configure the required fire routing delay (in seconds) in the Zone Configuration window (Group ID 971), as shown below. The delay must be configured for each zone.

Figure 13: Configuring the fire routing delay in the Zone Configuration window

UC240 quick programming guide

First ensure that the unit is registered in the UltraSync Portal.

Use the ↑ (up) and ↓ (down) buttons to navigate the menu and the ↵ (Enter) button to confirm a selection.

1. Power up the unit.

   Before proceeding, wait 5 minutes to ensure that both paths are registered on the network.

2. Press ↵ for three seconds.

   The following step configures the UC240 inputs1 and 8. The default values are Alarm (input1) and Fault (input8) – these values should not be changed. The unit only needs to learn the standby status for the inputs.

3. Go to Config > Inputs > Pin Learn and hold down ↵ for 3 seconds to save.
4. Go to Network > Web-Pass Code (this must be 8 digits)
5. Go to Output Type and change the Output1 setting to Single Path Fault. Press ↵ for 3 seconds to save.
6. Also in Output Type, change the Output3 setting to Fire Ack. Press ↵ for 3 seconds to save.
7. Write down your SID number and Web Pass Code in a safe place.

Note: For EN 54-21 compliant installations, the Service Grade setting should be “Enhance Grade 4 Dual Path” (see Figure 20 on page 12).

Figure 14: Web pass code location

Figure 15: Programming menus

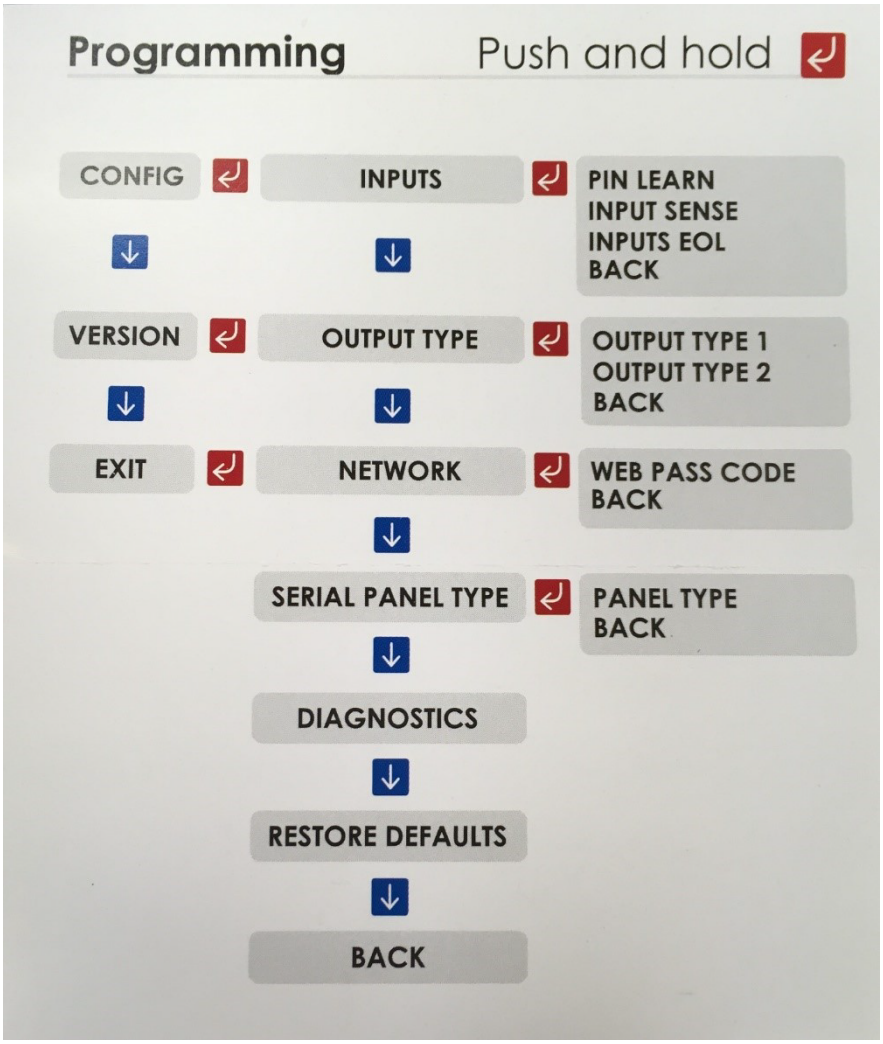
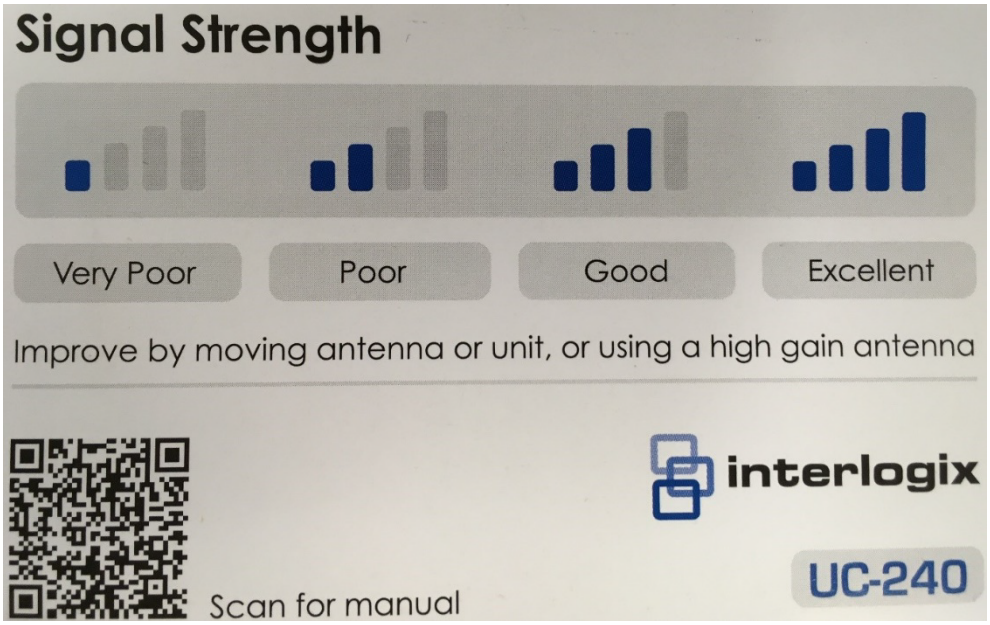


Figure 16: Signal strength



UC240 commissioning checklist

Figure 17: Path: Mobile Registered

Figure 18: Mobile1 Strength

Figure 19: Mobile1 Operator

Figure 20: Service Grade

Figure 21: Path: Ethernet Registered

Mapping events

By default the UC240 Communicator reports events as if it is connected to an intrusion alarm panel. The events received at the central monitoring station (CMS) shown in the table below must be mapped to the CMS automation software to indicate Fire Alarm events instead of the default Burglar Alarm events The Mapping column provides information on the proposed reporting codes to emulate.

Table 4: Mapping alarm reporting from a fire alarm control panel

Item	Panel	Test Event	Input to UC240	Transmission Path	CMS Setting in Portal	CMS Event Received	Mapping
1	2X/2X-A, KFP-A, or ZP2/ZP2-A	Fire Alarm	PIN 1	IP	Surgard CID	E323901 R323901	E323901 should be E110901 (Fire Alarm).
2				SIM 2/4G			R323901 should be R110901 (Restoral).
3				IP	Surgard SIA	BA901 BR901	BA901 Should be FA901 (Fire Alarm).
4				SIM 2/4G			BR901 Should be FR901 (Restoral).
5		Fault	PIN 8	IP	Surgard CID	E323908 R323908	E323908 should be E300908 (System Trouble).
6				SIM 2/4G			R323908 should be R300908 (Alarm Relay).
7				IP	Surgard SIA	BA908 BR908	BA908 Should be FT908 (Fire Trouble).
8				SIM 2/4G			BR908 Should be FR908 (Fire Restoral).