Notifier INSPIRE E10/E15
Fire Alarm Control Panels
Installation Instructions

CONTENTS

RELATED DOCUMENTS

In addition to this guide refer to:

- Operating Manual Notifier INSPIRE E10/E15 Control Panel (Part number HOP-338-9EN)
- Commissioning Manual Notifier INSPIRE E10/E15 Control Panel (Part number HOP-138-8EN)
- Notifier Cybersecurity Manual (EMEA) (Part number 4188-1122)
- Safety Information (Part number 4188-1123)

CONVENTIONS

Where appropriate, in this manual there are advisory warnings and cautions to remind you to consider safety at all times, especially when following the procedures described.

> (!) This symbol precedes a note that highlight important information that is normally hidden in the main text.

> ⚠ This symbol precedes information that warns of danger that may result in serious injury or death, also used in a caution to prevent damage to the equipment.

> EN54 ✓ This symbol precedes information about compliance with standard(s).

ABBREVIATIONS

ASD	Aspirating Smoke Detector
CIE	Control and Indicating Equipment
CPU	Central Processing Unit
CLSS	Connected Life Safety Services
E10	10U size Panel enclosure
E15	15U size Panel enclosure
EMC	Electromagnetic compatibility
FARE	Fire Alarm Routing Equipment
FAT	Feuerwehr-Anzeigetableau #
FBF	Feuerwehr-Bedienfeld #
FE	Functional Earth
FRE	Fault Routing Equipment
FPE	Fire Protection Equipment
HMI	Human-Machine Interface
IO or I/O	Input or Output
LED	Light emitting diode (light)
MCP	Manual call point
OC or O/C	Open circuit
RAL	European colour matching system
SC or S/C	Short circuit
SELV	Separated Extra Low Voltage
PE	Protective Earth
PELV	Protected Extra-Low voltage
PSU	Power Supply Unit
TPP	Third Party Protocol

For use only in Germany

Introduction

The purpose of this manual is to provide the user with all recommended procedure descriptions and full technical details for the successful installation and basic commissioning of Notifier INSPIRE Fire Alarm Control Panel based Fire Control System.

EQUIPMENT DESIGN

An Notifier INSPIRE E10/E15 panel, the Control and Indicating Equipment (CIE) including its integral Power Supply Equipment (PSE) design has been carried out in accordance with a quality management system, which incorporates a set of rules for the design of all elements of the CIE and PSE. The components of the CIE and PSE have been selected for the intended purpose, and are expected to operate within their specification when the environmental conditions outside the cabinet of the CIE comply with class 3k5 of EN 60721-3-3.

SYSTEM DESIGN AND PLANNING

It is assumed that the system, of which the Notifier INSPIRE E10/E15 equipment (Control and Indicating Equipment CIE) is a part, has been designed by a competent fire alarm system designer in accordance with the requirements of local codes of practice that are applicable.

The design drawings (also referred to As Fitted Drawings) should clearly show the positions of all the Notifier INSPIRE system equipment installation on site, these include panel, loop devices and external equipment that is part of the system.

> ⚠ Use the Loop and Battery Calculator Tool to make sure the chosen system setup and configuration will work in accordance with the Standards.

SYSTEM EQUIPMENT

The Notifier INSPIRE E10/E15 Control panel is designed for use with Notifier by Honeywell range of addressable detector, alarm devices, control and monitoring modules and addressable call points. It supports both OPAL and CLIP loop polling protocols. The CLIP devices are support through a license and a license is required for each CLIP loop circuit.

The design of each Notifier INSPIRE E10/E15 Control panel is based on a modular build concept which offers the user completely flexible system solutions. Each panel comprises separate build assemblies to simplify the installation process. The electronic components are contained within purpose built module enclosure specifically designed to simplify panel installation; various module options are available to meet different market requirements. There is space provision for two sealed lead-acid batteries in the respective panel builds.

There is room inside the enclosure to accommodate additional module carrier(s) and modules to build a system and for future system expansion. Additional modules are easy to install providing the recommended procedures described in this manual are followed.

To avoid inadvertent contamination of the panel's electronics, the manufacturer recommends that installation of the enclosure containing the electronics, the modules, only takes place after all other trades have completed their tasks.

PERSONNEL

Installation and maintenance of this product must be carried out only by suitably-qualified, trained and skilled electrical engineer.

HOW TO USE THIS GUIDE

This Installation Guide is intended to provide you with simple guidelines on how to install the Notifier INSPIRE E10/E15 Control panel quickly and safely.

The modular design of the Notifier INSPIRE E10/E15 Control panel offers configurations to meet the requirements of different markets. Thus, the installation procedures differ regarding the wall mounting of the enclosure and installation of optional modules where these markets demand operational compliance. Where further explanation is needed regarding these issues refer to the various appendices.

For each stage in the Notifier INSPIRE E10/E15 Control panel installation and initial commissioning power up procedures a brief description is given of its purpose with graphics to make the instructions easy to follow.

WARNINGS AND CAUTIONS

Procedures described in this manual include appropriate warnings and cautions to guide the user towards adopting safe and methodical work practices during the installation and commissioning phases.

You are alerted to any areas where high voltage is present, or where there may be a risk of damage to Control and Indicating Equipment (CIE) if the recommended procedures described in this manual are not followed.

Pre-installation Check List

Before installing a Notifier INSPIRE E10/E15 Fire alarm equipment you must first ensure that the following criteria have been met. Failure to do this may not only result in damage to the equipment, but may also cause problems when commissioning the equipment or adversely affect its performance.

DO'S AND DON'TS

◘ DO Ensure the operating ambient temperature where the panel is installed is in the range: -5°C to +40°C

◘ DO Ensure the panel is installed where the relative humidity is between: 5% and 95% non-condensing

◘ DO Ensure the panel is installed in an area where ingress of solids and liquid is not beyond IP30 rating

◘ DO NOT site the panel where there would be restricted access to the inside of the equipment and to the internal cabling and wiring connections points.

◘ DO NOT locate the panel where there are high levels of vibration or shock

TRANSIENT PROTECTION

This equipment contains transient-protection devices. Although no system is completely immune from lightning transients and interference and for a system to function correctly and to reduce susceptibility, this equipment must be earthed correctly.

As with all static sensitive electronic components this system may operate erratically or can be damaged if subjected to lightning-induced transients.

The use of overhead or outside aerial wiring is not recommended due to the increased susceptibility to nearby lightning strikes.

CHECKING YOUR PANEL FOR DAMAGE

It is important to check all supplied equipment for damage before proceeding with the installation!

Before attempting to install the Notifier INSPIRE E10/E15 Control panel, or other equipment, you must do the following:

01 After removing the Notifier INSPIRE E10/E15 Control panel, modules and other related equipment from its packaging, and before you proceed with installing it in its chosen location, check for any damage that may have occurred while in transit.
Note: In the unlikely event that any of the supplied Notifier INSPIRE E10/E15 Control panel items has been damaged, you MUST NOT install it but return it to your supplier, see the following section.

02 If you are satisfied that none of the supplied items has been damaged, you can now proceed with installation.

Refer to the relevant sections that apply to your installation/configuration requirements.

WHAT TO DO IF EQUIPMENT IS RECEIVED DAMAGED

If you have problems regarding the quality of any supplied order items including the Notifier INSPIRE E10/E15 Control panel, its ancillaries or items are missing, follow the procedure below.

01 DO NOT continue with the installation but contact your supplier for advice on what to do next. Similarly, if the product is found to be faulty during installation contact your supplier immediately.

02 To aid your supplier and the manufacturer, you are requested to quote the manufacturer's unique batch reference number which can be found on the packaging or inside the back box

03 Note all the details relevant to your complaint, date of receipt, packaging condition and forward it your supplier.

04 Where the product needs to be returned to your supplier, you are requested to use the original packaging, or suitable anti-static equivalent, wherever possible.

Installation Overview

The panel range is designed for mounting onto an internal wall of a protected building and is not suitable for mounting on to external wall.

01 Install the panel enclosure in accordance with the instructions to be found in this guide.

02 Bring the field wiring/cables through the recommended entry points on the backbox. Prepare all cable/wiring entry with appropriate fire industry-approved cable glands and label all field wiring correctly to aid termination.

03 Install a fire industry-approved, AC mains power supply isolator 'fused spur unit' close to the Notifier INSPIRE E10/E15 Panel. The mains supply cable must be brought into the enclosure, using a recommended cable entry point.

04 Use this guide for recommendations on how to install batteries inside the enclosure.

05 Once individual cables are checked make the wiring of each circuit. The battery link is fitted during the commissioning power up stage.

Cables

All wiring must comply with local wiring regulations. Note also the requirements for cabling and interconnection of a fire detection and alarm system. For information on wiring inputs and outputs refer to the appropriate module and wiring to their terminals.

CABLING INSTRUCTIONS

01 Cables must be brought into the enclosure using the 20 mm cable entry points provided on the top and rear of the panel enclosure. Ensure that all openings in the enclosure are closed before connecting power to the panel to prevent inadvertent access to hazardous voltages.

02 Tails must be of sufficient length to connect to the respective terminal at the commissioning stage.

03 Cables that are screened must be terminated at the panel enclosure and earthed at points provided on the top side. Only one end of the loop cable screen must be connected to the earth bar at the panel.

04 The mains supply must be via an unswitched 5A fused spur unit, mains supply must have a dedicated spur from the site distribution board with an over-current protection device rated at a maximum of 16 A.

05 The cable entry points on the extreme right-hand side must be used for mains cable entry. DO NOT route mains cable using any other cable entry points and ensure that the mains wiring is always separated from the low voltage wiring. It is good practice to always isolate the mains power at the external isolator equipment to make the panel safe when performing maintenance tasks involving the panel's electronic equipment.

06 All low voltage cables must have a minimum 300 V AC rating.

CABLE GLANDS

Fire-industry-approved, M20 cable glands must be used, that are made out of metal or having flammability class V-1 rating or better.

CABLE TERMINATIONS

This section provides guidance on where to bring cables into the Notifier INSPIRE E10/E15 Control Panel enclosure for ease of termination. Ensure the following requirements are met:

01 The mains supply must be brought into the Notifier INSPIRE E10/E15 Control panel such that the cable path to the Mains Terminals block is kept as short as possible.

02 All loop and ancillary cable terminations must be brought into the panel enclosure using cable entry points close to their final connection points to respective terminals to ensure tails are kept as short as possible. To facilitate this most modules can be fitted to the required slot location on the module carrier.

03 Some cable entry points must be left unused to provide adequate mains supply input/signal cable segregation.

QUALITY OF CABLE

It is vitally important that good quality cable is used and that correct installation techniques are followed. In general, the following cable installation requirements must be met:

01 All cable sections must be circular to allow effective cable clamping using the cable glands.

02 The cable must be screened (sheathed) to provide protection against Radio Frequency Interference (RFI) and the screen must be connected to earth at the panel (earthing points are provided on the inside enclosure top side).

03 Multiple earthing of the screen must be avoided. NOTIFIER's field products use insulated mounting bases and back boxes to achieve this. We recommend that this practice be continued if other connections are made. To achieve this with MICC cable may require the use of insulated cable glands at one end of the cable.

04 The cable screen must be continuous throughout the loop.

LOOP CABLE LENGTH

A loop circuit consists of devices such as detectors and modules. The length of a loop circuit cable used can be significantly affected by the loading of the device and module on a loop circuit. The length can be up to 3.5 Km and is determined by cable type and loop loading. Use the Loop Battery calculator in the Tool for accurate cable length.

RS485 CABLE

The RS485 communication cable used should be rated as suitable for up to 200mA in a short circuit condition.

RECOMMENDED CABLES

> ❗ The cable length of a loop circuit is precisely calculated using the Battery Standby Calculator feature in the 'CLSS Configuration tool'. The cable length is dependant on the loading of devices connected to each loop of a panel.

LOOP CABLES

> ❗ Always refer to the local code of practice and regional requirements when selecting the cable for wiring a fire system installation.

Enhanced cable is typically required for loop and spur sounder outputs circuits.
Standard cable may be adequate for other fire-related I/O provided there is diverse cable routing.

Manufacturer	Product Name	Cores and colour	Part Number	Type
AEI	MICC	2 x 1.5 mm² Red	2L1.5	Enhanced
AEI	Firetech ™	2 x 1.5 mm² Red	298-052	Standard
Prysmian [1]	Firetuf Plus ™	2 x 1.5 mm² Red	FTPLUS2E1.5RD	Enhanced
Prysmian [1]	Firetuf ®	2 x 1.5 mm² Red	FTZ2E1.5	Standard
Prysmian [1]	FP Plus ™	2 x 1.5 mm² Red	FP Plus 2x1.5 Red	Enhanced
Prysmian [1]	FP Plus Flex ™	2 x 1.5 mm² Red		Enhanced
Prysmian [1]	FP200 Gold ®	2 x 1.5 mm² Red	FP200 Gold 2x1.5 Red	Standard
Prysmian [1]	FP200 Gold ®	2 x 2.5 mm² Red	FP200 Gold 2x2.5 Red	Standard
Prysmian [1]	FP200 Plus ®	2 x 1.5 mm² Red	-	Enhanced

[1] Formally Draka 'n' - is normally 1 to represent 1 pair (2 pairs has 4 cores needed for wiring to FAT/FBF).
- these are cables approved for use in Italy. ™ - Trademark ® - Registered Trademark.

Manufacturer	Product Name	Cores and colour	Part Number	Type
Prysmian [1]	Firetuf ® FT30 (SAFFIRE)	2 x 1.5 mm^2 Red	FTES2EH	Standard
Prysmian [1]	Firetuf FP400 ® (Armoured)	2 x 1.5 mm^2 Black	-	Standard
-	Pyrolon 1.5 mm²	2 x 1.5 mm²	-	
Arrow	-	-	7-2-4S	Not rated
Ventcroft	NoBurn ® Plus	2 x 1.5 mm^2 Red	-	Enhanced
Ventcroft	NoBurn ® XP Premium	2 x 1.5 mm^2 Red	-	Standard
Ventcroft	NoBurn ® Platinum	2 x 1.5 mm^2 Red	-	Standard
LAPP KABEL	I-Y(ST)Y	'**n**' x 2 x 0.8 mm	-	Standard
LAPP KABEL	J-H(ST)H	2 x 2 x 0.8 mm	-	Standard
BETA CAVI	Notifier Italia #	2 x 0.5 mm^2 Red	FRHRR2050	–
BETA CAVI	Notifier Italia #	2 x 1 mm^2 Red	FRHRR2100	–
BETA CAVI	Notifier Italia #	2 x 1.5 mm^2 Red	FRHRR2150	–
BETA CAVI	Notifier Italia #	2 x 2.5 mm^2 Red	FRHRR2250	–

Notifier Italia cable 0.5 mm^2 or 1.0 mm^2 cables are used on small sites, 1.5 mm^2 is the standard cable and the 2.5 mm^2 is used where loop has more than 5-10 VAD devices or where the distance is above 1.500 m.

[1] Formally Draka   '**n**' – is normally 1 to represent 1 pair (2 pairs has 4 cores needed for wiring to FAT/FBF).
– these are cables approved for use in Italy. ^{TM} – Trademark ® – Registered Trademark.
A multi-core cable is suitable for RS232/RS485 application.
See next page for network cables.

NETWORK COPPER CABLES FOR ID2NET AND RS232/RS485

> (!) Always refer to the local code of practice and regional requirements when selecting the a cable for wiring a fire system installation. The cable length of a network circuit is precisely calculated using the Battery Standby Calculator feature in the 'CLSS Configuration tool'.

Cable Type	Recommended operating distance
Prysmian FP200 Flex (1.5 mm²)	850m
Draka Firetuf FDZ2ER (1.5 mm²/ 2.5 mm²)	1200m
AEI MICC 2L1.5 (1.5mm²)	1200m
AEI Firetec F2CxxE (1.00 mm² / 1.5 mm²)	1350m
Prysmian FP200 Gold (1.5 mm²)	1700m

LAPP KABEL J Y(ST)Y, n x 2 x ∅ 0.8 mm	1200m
LAAP KABEL J-H(SY)H, 2 x 2 ∅ 0.8 mm (halogen free)	1200m

NETWORK FIBRE CABLE AND DISTANCES FOR ID2NET

Cable type	Distance
Multi mode connector type ST 50/125um Fibre cable	Up to 2km

MAINS CABLE
The mains supply cable must be a standard fire resisting type and must meet PH30 classification.

EMC CONSIDERATIONS

Good quality fire industry cable must be used incorporating drain wires or screens. The drain wires or screens must be earthed within the enclosure. Use cable manufacturers recommendations for adequate earthing of the drain wires or screens along with the procedures in this document.

Mains Protective Earth

Ensure the mains cable earth wire ② colour green yellow, is securely connected to the mains terminal block connection marked Protective Earth 'PE'. Press the spring push button ① and insert the wires ② into the terminal block and release the spring button. Check the wire is secured to the terminal. The cable used for the primary supply must conform with the electrical wiring specifications of the country and to local requirements. Cable that connects to the FE terminal ⑤ on the enclosure must connect to the protective earthing rail (PE rail) within the power distributor panel, supplying power to the fire alarm control panel. It is recommended is that a single core or multi-strand cable is used that is 4mm^2 cross section and must be a standard fire resisting type to PH30 classification. Ensure the braided wire from the power cord inside the panel remains connected to the FE terminal ⑤.

Cable screen or drain wire connection to Functional Earth ③

Ensure each drain wire or cable screen is adequately grounded inside the enclosure each to a point on the Functional Earth bar. Use the earth screw and clamp provided to achieve the required earthing bond of each cable screen. Make sure the screws are tightened to gain low resistance contact for EMC purposes. Use adjacent cable entry points for incoming cables.

Back box to Door Functional Earth ④

Ensure the earth cable on the left-centre side of the backbox is secured to a spade connector on the door.
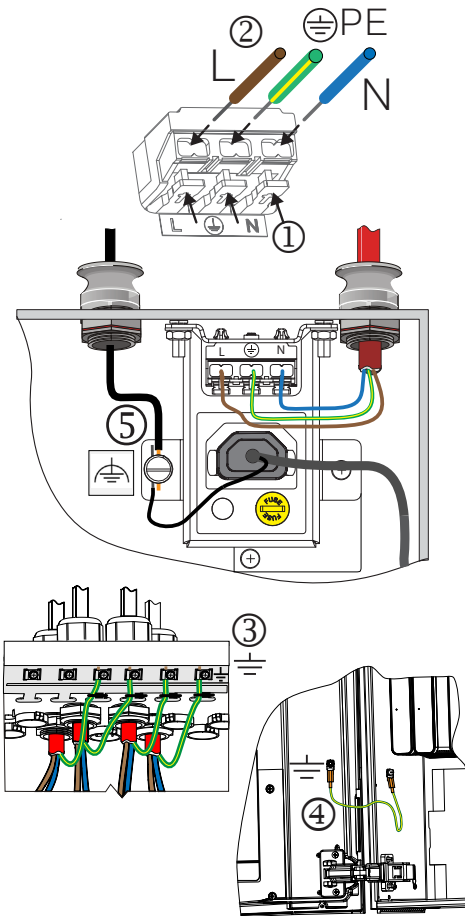
Panel Technical Data

STANDARDS

Designed to:
- EN54-2 (see also option with requirements clauses)
- EN54-4

PANEL FEATURES

- Display - 10" (25.4cm) Touch-screen graphical colour display, 1280(RGB)×800 pixels, with back illumination.
- An Inspire ID2NET network can have up to 3000 zones in any combination of Detection Zone (DZ),
  Alarm Zone (AZ) and Control Zone (CZ). A maximum of 3000 Network Zones per Site.
  In a mixed network, an ID3K panel can be configured to operate Local Zones (Panel Zones) of up to 255 Local
  Zones / ID3k panel. Such network can have Local Zones plus Network Zones with a combined maximum of up
  to 3000 Zones per Site.
  Note a number can be given to each zone, DZ, AZ and CZ, from a range 1 to 8192.
- System is approved to VdS2540 with 99 detectors + 99 modules, per loop using JYST ⌀ 0.8 mm. Please refer to
  calculation tool for maximum limits depending on cable type, cable length and loop load.
  - 318 OPAL devices per loop, i.e. up to 159 detectors and 159 modules
- Status Indicators - The following LED indicators are provided: FIRE, FAULT, SYSTEM FAULT, DISABLED, TEST,
  DELAY ACTIVE and POWER.
- On-screen Status indication of Alarm Devices, Fire Brigade equipment, Fire Protection Equipment and Fire
  Routing equipment.
- Controls - momentary - action push buttons are provided for the following functions:
  SILENCE/RESOUND, SILENCE BUZZER and RESET in addition to the on-screen buttons
- Buzzer to draw attention when an event has occurred. Buzzer volume: ≥60 dBA at 1m

MECHANICAL

◘ Overall dimensions of an E10 and E15 panel enclosures.
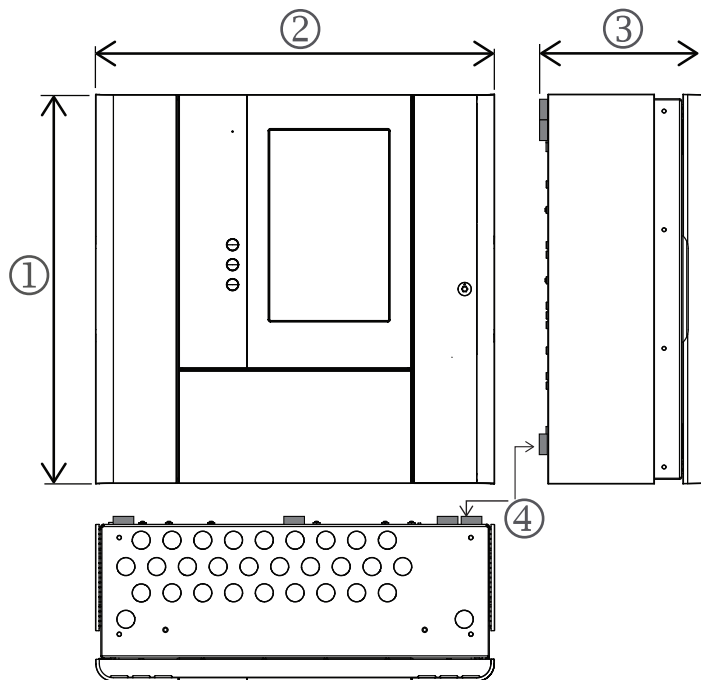
Notifier INSPIRE E10 Control panel range (with & without display)

①	Height	445 mm
②	Width	455 mm
③	Depth	190 mm with 8 mm spacers 196 mm with 14 mm spacers

Notifier INSPIRE E15 Control panel range (with & without display)

①	Height	665 mm
②	Width	455 mm
③	Depth	256 mm with 14 mm spacers

④	Spacer	14 mm only

◻ Total Weight of E10 and E15 panels

	Panel with 3 Modules as supplied but without batteries		Add weight of Batteries (2 required)		Add weight of additional Modules
E10 enclosure	11.3 kg (panel with display)	+	4.05 kg per 12 V, 12 Ah battery or 9 kg per 12 V 24 Ah battery	+	Approximately 200 g per Module, see Module data for precise weight.
	10.7 kg (panel without display)				
E15 enclosure	17.2 kg (panel with display)	+	9 kg per 12 V, 24 Ah battery or 14.2 kg per 12 V, 38 Ah battery		
	16.5 kg (panel without display)				

◻ Construction: Plastic front cover and metal enclosure

◻ Mounting Holes: Top 3 keyholes & Bottom 2 holes on the backbox

◻ 20mm Cable entries points: 30 (top), 16 (back) 26 (bottom)
   Use cable manufacturer recommended cable glands, that are made out of metal or V-1 class rated. Where unscreened cable is allowed then use suitable fire industry standard glands that provides IP30 protection.

◻ External connections via plug-in screw terminal blocks that accept 0.5 mm² to 2.5 mm² (14-22 AWG) wire

◻ Door and Side covers colour: RAL 7022, Semi-Gloss finish

◻ Backbox colour: RAL 9005, Matt fine sand texture finish

ELECTRICAL

The Panel's power supply equipment (PSE) provide power requirements of the local display and fitted modules and their external circuits. In addition, the panel contains a battery charger circuit for the mains-fail, back-up batteries. All the power is normally derived from an external AC mains power source. When the mains power supply is not available, the standby batteries automatically supply the power requirements for a limited period, this period being determined by the requirements of the local fire standards.

◘ Mains Voltage: 230 V AC Voltage Tolerance: -15%, +10% (195.5 V to 253 V) at 50 - 60 Hz.

◘ Incoming Mains Fuse (F1): T3.15 AS 250 V (5x20 mm HRC anti-surge fuse in the Mains terminal block)

◘ Mains Input Current: 1.15 A for the 240 W PSU and 2.3 A for the 480 W PSU

◘ Battery Charger Output Voltage: 27.2 V nominal at 20°C (temperature compensated and current limited)

◘ Power Supply Output Rating: 36 V, 6.7 A for 240 W PSU and 36 V, 13.3 A for 480 W PSU.

◘ Standby Batteries YUASA NP range Flame retardant: minimum 12 Ah *for E10 enclosure*, 24 Ah for both E10/E15 enclosures and maximum 38 Ah *battery is for E15 enclosure,* (2 x 12 V DC sealed lead- acid required)*.*

◘ Maximum Current drawn from the battery by the PSE when the main power source is disconnected: 11,5 A (@ 240 W PSU) 23 A (@ 480 W PSU)

◘ Battery circuit in-line fuse (F2): 25 A
◘ Battery current with mains disconnected is dependent on the system configuration and current during alarm.

◘ Battery charging Current: 0.8 A (12 Ah), 1.6 A (24 Ah) and 2.5 A (38 Ah)

❑ Battery end of discharge Voltage / Deep discharge protection : 21 V ($U_{batt\,min}$)

❑ Battery voltage at which outputs are switched off: 21 V

ENVIRONMENTAL

❑ Climatic Classification: 3K5, (IEC 721-2-3)

❑ Operating Temperature: -5 °C to +40 °C

❑ Relative Humidity: 5 % to 95 % non-condensing

❑ Height above sea level: 2000 m maximum

❑ Panel Sealing: IP30 (EN60529)

❑ EMC Emissions: EN61000-6-3 Residential, Commercial & Light Industry

❑ Immunity: EN50130-4 Alarm systems: Electromagnetic compatibility
Product family standard: Immunity requirements for components of fire, intruder and social alarm systems

❑ Safety: EN 62368-1.

EN54-4 DATA

	Notifier INSPIRE E10 panel with:		Notifier INSPIRE E15 panel with:	
	240W PSU (AC to DC converter)		480W PSU (AC to DC converter)	
12V BATTERY CAPACITY	**12 Ah**	**24 Ah**	**24 Ah**	**38 Ah**
Charger Input Current (maximum)	0.72 A	1.4 A	1.4 A	2.2 A
Charger Input Power	25.8 W	51.6 W	51.6 W	80.6 W
I min	0 A	0 A	0 A	0 A
I max a @ 24 V	8.9 A	7.8 A	7.8 A	16.6 A
I max b @ 24 V (max. 30min)	10 A	10 A	10 A	20 A
Ri max	220 mΩ	170 mΩ	170 mΩ	170 mΩ
UVLO (under voltage lock out)	UVLO occurs at 21 V			

⚠️ After panel power-down there may still be hazardous voltages present even after the display and indicators are extinguished.

PSU 240W AND 480W

The DIN rail mounted single-phase-input power supply provides a floating, stabilized and galvanically separated SELV/PELV output voltage.

> ⚠️ **The output of this PSU is for internal use and must not be used to power anything else.**

PSU 240W   **PSU 480W**

The PSU is an integral part of the panel, factory fitted inside the backbox and internally wired.
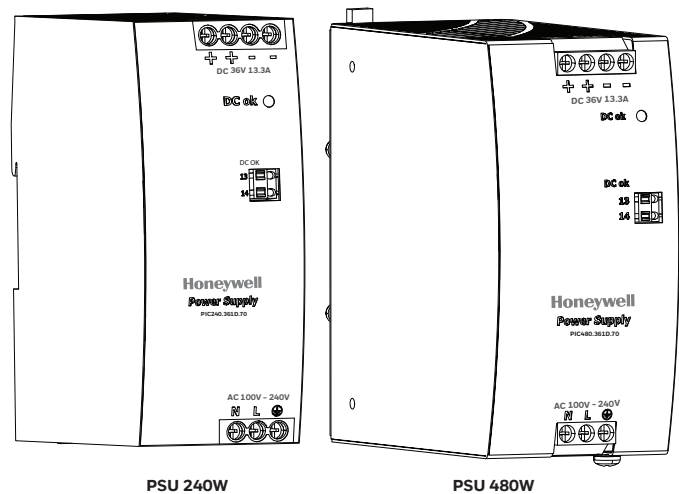
> ❗ Note the DC OK relay contact pins 13 and 14 on the PSU are not for general use.

	PSU for Notifier INSPIRE	
	E10 Panel	**E15 Panel**
Dimensions in mm	Height 124 x Width 49 x Depth 124	Height 124 Width 59 Depth 127 (without DIN-rail)
Weight	540 g	810 g
Mains input	230 V AC 50Hz typical	230 V AC 50Hz typical
Mains input current	1.15 A	2.3 A
Output	36.5Vdc ±1.5%	36.5 V DC ±1.5%
Output current	6.7 A < 55 ºC	13.3 A < 55 ºC
DC-OK LED	On – normal Off – < 29 V typical	On – normal Off – < 29 V typical
Mounting	DIN rail	

Notes to Installer

RECOMMENDATION

The installer must follow the general requirements of local code of practice relating to fire detection and alarm systems for buildings. The installer must also follow the relevant local wiring regulations.

PARTS FOR INSTALLATION LATER

To prevent the possibility of damage or dirt degrading the performance or appearance of the products, the installation of second fix parts such as doors, modules and battery must be delayed until all major building work in the area is complete. The installation of outstanding parts is usually carried out during system first power up during commissioning.

FIXTURE AND FITTINGS

It is the installers responsibility to provide adequate fixtures and fittings for the type of construction surface onto which a product is to be installed, whilst utilising the fixing points on the respective product. The mounting of the panel to a solid flat brick wall is described in the user guide.

As for other types of walls mounting an aid to this decision, the weight and overall size of each full assembly together with implications on cable entries and routing must be taken into consideration. All these procedures assume that the cable, gland, steel box and other related accessories are provided by the installer.

AS FITTED DRAWINGS

The installer must acquire site specific information from the interested parties, for details on the location of products for installation. The acquired information together with this guide and the relevant standards must be used to assist the work.

CABLE TYPE AND ROUTING

Appropriate attention must be given to ensure the correct cable type is installed in accordance with 'as fitted drawings', site specific information and recommendations of national standard and local regulations. The cables must be installed using cable manufacturers recommended fixing and accessories.

> ⚠ To ensure product safety, only use cables that are tested against standards IEC 60332-1-2 and IEC 60332-1-3 or IEC/TS 60695-11-21.

FIRE DETECTOR COVERS

Each fire detector may be supplied with a plastic dust cover. If supplied, the cover must be fitted to prevent dust and dirt from the building work contaminating the fire detector.

EARTH CONTINUITY

All earth connection points must be clean to provide a good electrical conductivity path. To maintain the earth continuity: all earth leads and fittings provided must be installed. The loop cable screen must be continued through each system device on the loop circuit, whether the earth is connected to the device or not.
Do not use any part of building structure for earthing.

POWER SUPPLY

The power to the system is derived from the mains and battery supplies. Before making changes to the installed equipment and associated wiring disconnect both mains and battery supplies to prevent inadvertent damage to system equipment.

MAINS SUPPLY

Connect the panel to the AC mains power supply via a separate mains isolator or a suitably rated circuit breaker. The rated voltage (e.g. 230 V AC) is specified on the panel type label. Mains supply to the panel must be via an unswitched 5A fused spur unit. All mains powered equipment must earthed.

Panel Parts

NOTIFIER INSPIRE PANEL RANGE

HOP-131-206   Fire Alarm Control Panel Notifier INSPIRE E10 6S 240W 10" 2-loop
HOP-134-412   Fire Alarm Control Panel Notifier INSPIRE E15 12S 480W 10" 2-loop

BATTERY (NOT SUPPLIED, OPTIONAL EXTRA)

NP38-12FR   YUASA NP Battery 38 AH-12V Flame Retardant   (for an E15 enclosure only)
NP24-12FR   YUASA NP Battery 24 AH-12V Flame Retardant   (for an E10 and E15 enclosures)
NP12-12FR   YUASA NP Battery 12 AH-12V Flame Retardant   (for an E10 enclosures only)

> ⚠ The batteries used within this product may only be replaced by batteries that are in compliance with IEC 60896-11, IEC 60896-21, IEC 60896-22, IEC 61056-1 and IEC 61056-2 or IEC 62485-2 and made of material with flammability rating V-1 or better.

MODULES

HOP-433-100   Dual Loop Module OPAL   (1 supplied and optional for extension)
HOP-402-100   Charger Module   (1 supplied)
HOP-431-100   CPU Module *Notifier*   (1 supplied)
HOP-631-100   Network Module ID²Net   (optional)
HOP-608-200   Net Converter Fibre Multi Mode   (optional for ID²NET module)
HOP-405-100   Serial Communication Interface Module   (optional)
HOP-404-100   4 x I/O configurable Auxiliary 24V Module   (optional)
HOP-406-100   Fire / Fault Routing Module   (optional)
HOP-407-200   FBF / FAT Communication Module   (optional)

OPTIONAL KITS

HOP-238-110   Semi flush mounting kit for E10 panel   (optional)
HOP-238-115   Semi flush mounting kit for E15 panel   (optional)

| HOP-208-111 | Rack mounting Kit for E10 and E15 panels (2 kits are required for E15 panel) | (optional) |

SPARE PSU

| HOP-501-240 | PSU 240 W | (spare part) |
| HOP-501-480 | PSU 480 W | (spare part) |

2-SLOT MODULE CARRIER AND LINK MODULE

HOP-202-102	2-slots Module Carrier supplied with a Link Module	(option for extension)
HOP-202-200	Link Module	(spare part)
HOP-202-210	2nd Row Modules Cable kit	(spare part)

Parts of Notifier INSPIRE Panels

The Notifier INSPIRE E10/E15 range of Control panels are modular design to make installation easier. Each panel is supplied in the following parts: a back box enclosure, standard modules and a door assembly, plus spare parts and the batteries are optional extra not supplied with the panel.

Back box assembly

◻ 6-slots Module carrier(s) supplied fitted inside each back box as standard. A module carrier accommodates removable terminal blocks for field wiring. It also has a termination module with cables to connect to the PSU and for connecting to a required battery option. Additionally, the E15 panel has a Row Link module with cables that links 2nd × 6-way module carriers.

◻ Modules are fitted to the module carrier during commissioning and power up stage. There are optional modules available they include:
Dual Loop OPAL Module, FAT / FBF Module, FARE / FRE Module, Serial RS232 / RS485 Module, I/O Module and ID²NET Module.

The Integral Power Supply Unit (PSU) is rated:
240W for a Notifier INSPIRE E10 Control panel range
480W for a Notifier INSPIRE E15 Control panel range
The PSU provides the power requirements of the panel and external system. All power is normally derived from an external AC mains power source. When the mains power supply is not available, the standby batteries automatically supply the power requirements for a limited period, this period being determined by the requirements of the local fire standards.

Door assembly

◻ The Door has a touch-screen display, push button controls and LED indicators, to provide system status indication and messages with system control being accessible via Access level PIN codes.

UNPACKING A NOTIFIER INSPIRE E10 PANEL

Label

① ② ③

④ x 2   ⑤ x 2   ⑥ x 2

⑦ x 2   ⑧

⊡⊙⊙ x 2

Item	Description
①	Door assembly
②	Backbox assembly
③	Side Covers
④	Charger Module
⑤	Dual Loop
⑥	CPU Module
⑦	**NOT SUPPLIED Typical option** 12 V 24 Ah Battery X 2 (each battery comes with 2 Bolts and Washers)
⑧	Transit foam
See heading "Spare parts supplied with the panel", on page 30.	

UNPACKING A NOTIFIER INSPIRE E15 PANEL

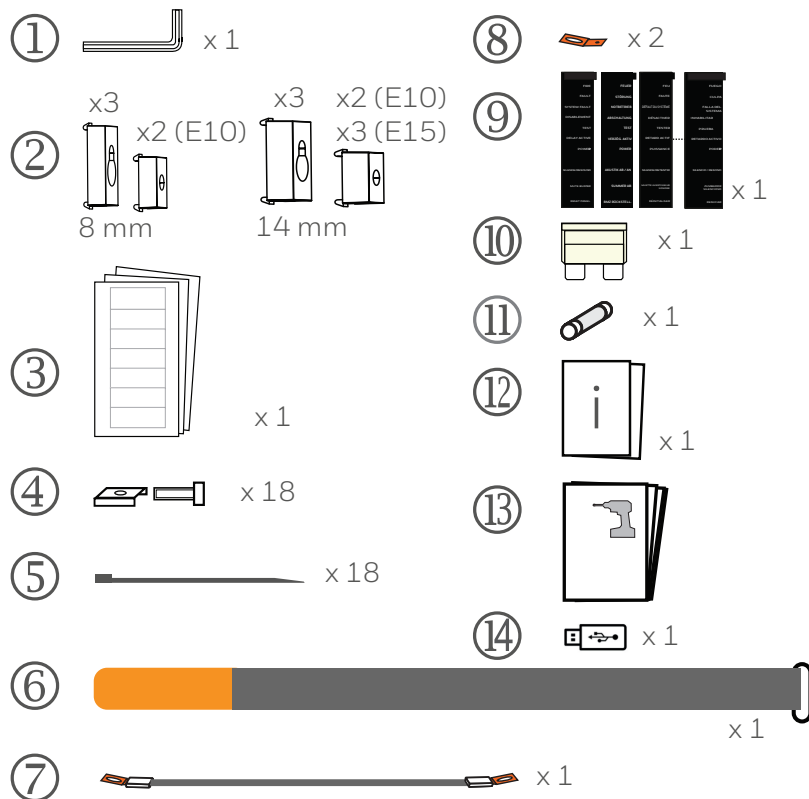| Item	Description
①	Door assembly
②	Backbox assembly
③	Charger Module
④	Dual Loop Module
⑤	CPU Module
⑥	**NOT SUPPLIED** Typical option 12 V 24 Ah Battery X 2 (each battery comes with 2 Bolts and Washers)
⑦	Transit foam
See heading "Spare parts supplied with the panel", on page 30.	

Spare parts supplied with the panel

① ⌐ x 1

② x3 x2 (E10) x3 x2 (E10) x3 (E15)
8 mm 14 mm

③ x 1

④ ⊏⊐ x 18

⑤ ――― x 18

⑥ ▬▬▬▬▬▬

⑦ ⊏――⊐ x 1

⑧ x 2

⑨ x 1

⑩ x 1

⑪ x 1

⑫ i x 1

⑬ x 1

⑭ x 1

x 1

Item	Description
①	Door key
②	Spacers
③	Tags and labels
④	Bracket and screw – Earth bar
⑤	Cable tie
⑥	Battery strap (supplied fitted)
⑦	Battery link cable
⑧	Spare spade connectors for 24Ah & 38 Ah batteries
⑨	Backlit film – languages
⑩	25 A Battery fuse
⑪	3.15 A Mains fuse
⑫	Instructions
⑬	Drill template
⑭	Memory stick with manuals

EXTENSION AND OPTIONS

A standard E10/E15 Notifier Inspire panel can be extended to provide additional functionality and for this there are spare slots available in the module carrier to accommodate optional modules. The module carrier can also be extended by 2-slots using an optional 2-slot module carrier supplied with a link module. Panel has other battery options available to carter for system standby power requirements.
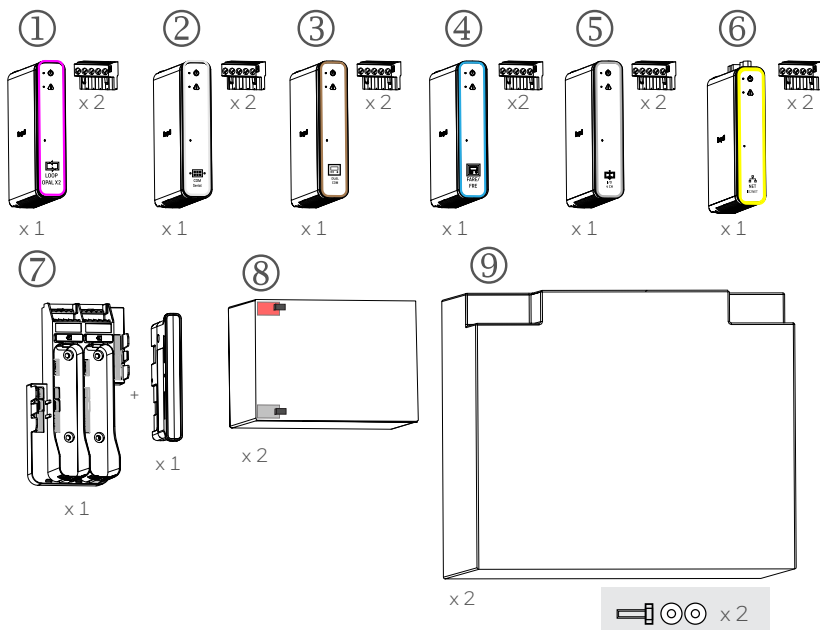
Item	Description
Optional modules	
①	Dual Loop Module (Purple)
②	Serial Comm Module (White)
③	FBF/FAT Module (Dark Blue) DE
④	FARE/FRE Module (Light Blue) DE
⑤	I/O 4-CH Module (Grey)
⑥	ID2Net Module (Yellow)
Optional module extension	
⑦	2-Module Carrier supplied with a Link Module
More optional batteries, see page 18	
⑧	12 V 12Ah Battery 2 required for E10 enclosure only
⑨	12 V 38 Ah Battery 2 required for E15 enclosure only (each battery comes with 2 Bolts and Washers)

Panel Installation
MOUNTING HEIGHT

The panel ① must be mounted on a wall ② at a height of 1.7m above floor level ③, such that the display is just above normal eye level. Ensure there is adequate space to allow for opening the panel door to the right.
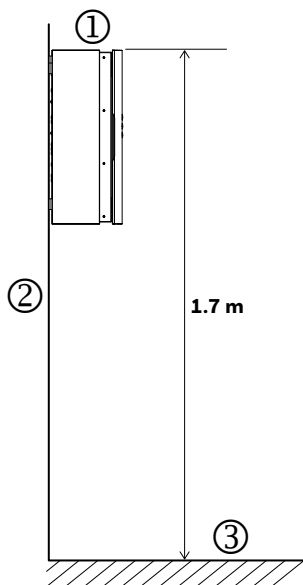
BACKBOX SPACERS

Ensure either the 8 mm (for E10) or 14 mm (for E10 and E15) keyhole spacers ① and round hole spacers ② supplied are fitted to the backbox ③, to offset it from the wall. To permit cables to run behind the backbox the 14mm spacers must be used. Fit the 3 keyhole spacers at the top and 2/3 round hole spacers at the bottom (3rd middle for E15) fixing points on the back of the backbox.
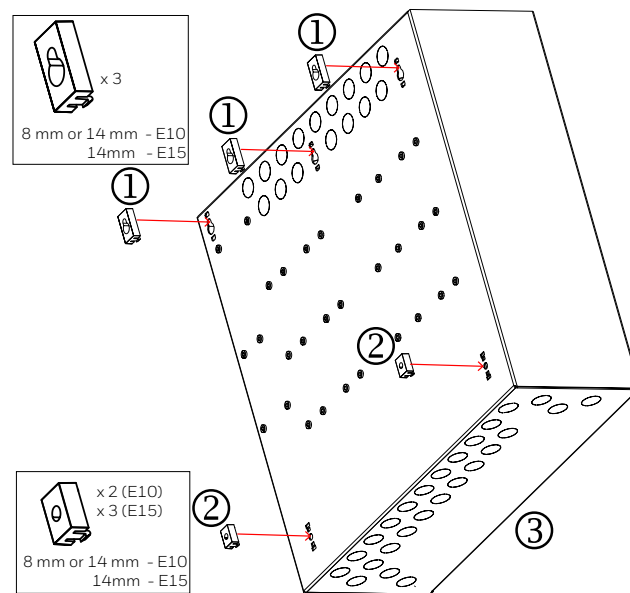
SURFACE MOUNT

A Notifier INSPIRE E10/E15 panel can be surface mounted onto a flat wall using suitable fixtures and fittings, whilst considering the weight of a fully assembled panel with batteries, see Technical Data for weight information. As a general recommendation for types of wall surfaces ensure assessments are made and suitable fixtures and fittings are used to hold the panel assembly. The mounting of panel backbox shown below is to a concrete block wall

Using the drill template supplied ① mark the required holes **a** onto the wall surface depending on enclosure type. All fixing points must be used. Drill ② and dowel/Rawlplug (UK) ③ the fixing holes. Fit the required spacers ④ to the back of the E10 or E15 backbox. Use 50 mm long x 5 mm diameter screws ⑤ to secure the backbox to wall.
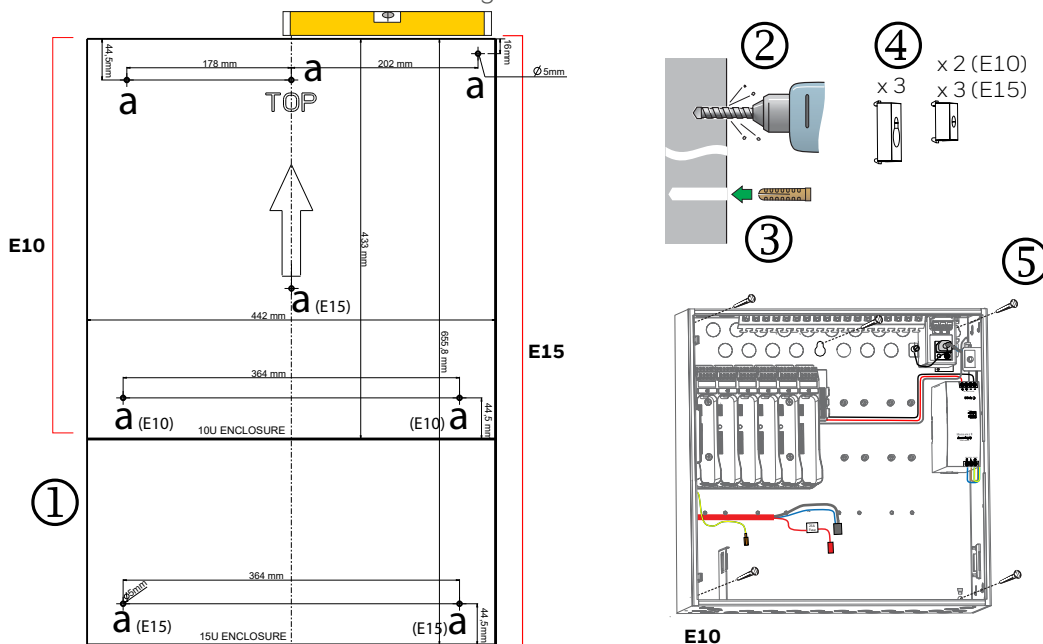
SIDE COVERS

A surface mounted Notifier INSPIRE E10 panel requires Right ② and Left ⑥ Side Covers to be fitted to the panel backbox. Knock out the 8 keyholes ① from both sides of the backbox. Ensure the Right Side Cover ② is in the correct orientation with marked arrow pointing upwards ③. Align the screws ④ on the Cover with the keyholes on the backbox and hook the cover onto the backbox ⑤. Fit the Left side Cover ⑥ in a similar manner.
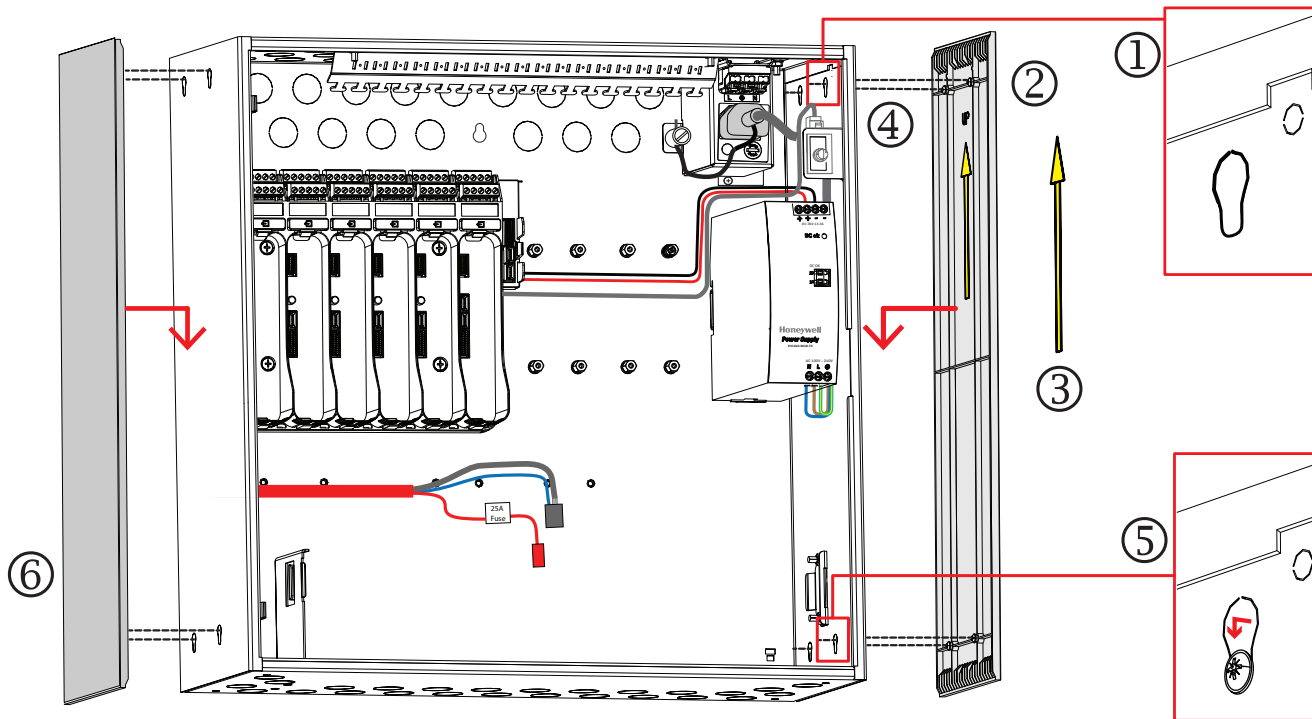
WALL RECESS FOR SEMI FLUSH FIXING A PANEL

A Notifier INSPIRE E10/E15 panel can be semi flush mounted into a wall recess using a Semi Flush Surround mounting kit (HOP-238-110) for an E10 enclosure and kit (HOP-238-115) for an E15 enclosure.

Panel	Dimension in mm (Height x Width x Depth)	Colour
E10	505 x 515 x 50	GREY RAL7022
E15	730 x 515 x 50	GREY RAL7022

First determine the Semi Flush Surround ① fixing points to use, either 'D' or 'C' on the Back box ②.
Then determine which size ③ 'A' and 'B' Spacers, that is 8 mm or 14 mm, to use and fit the required ones to the backbox . Use the table below ④ to determine the wall recess dimensions required for either an E10 or E15 enclosure. Create a recess ⑤ into a wall for mounting the panel back box and the Semi Flush Surround.

E10 ⟶	'X'	'Y'	'Z'
E10 + ('A'+'B') 8 mm + 'C'	157 mm	437 mm	462 mm
E10 + ('A'+'B') 14 mm + 'C'	163 mm	437 mm	462 mm
E10 + ('A'+'B') 8 mm + 'D'	122 mm	437 mm	462 mm
E10 + ('A'+'B') 14 mm + 'D'	128 mm	437 mm	462 mm

E15 ⟶	'X'	'Y'	'Z'
E15 + ('A'+'B') 14 mm + 'C'	232 mm	660 mm	462 mm
E15 + ('A'+'B') 14 mm + 'D'	197 mm	660 mm	462 mm

③ 'A' x 3   'B' x 2 (E10) x 3 (E15)   8 mm - E10   14 mm - E10 / E15
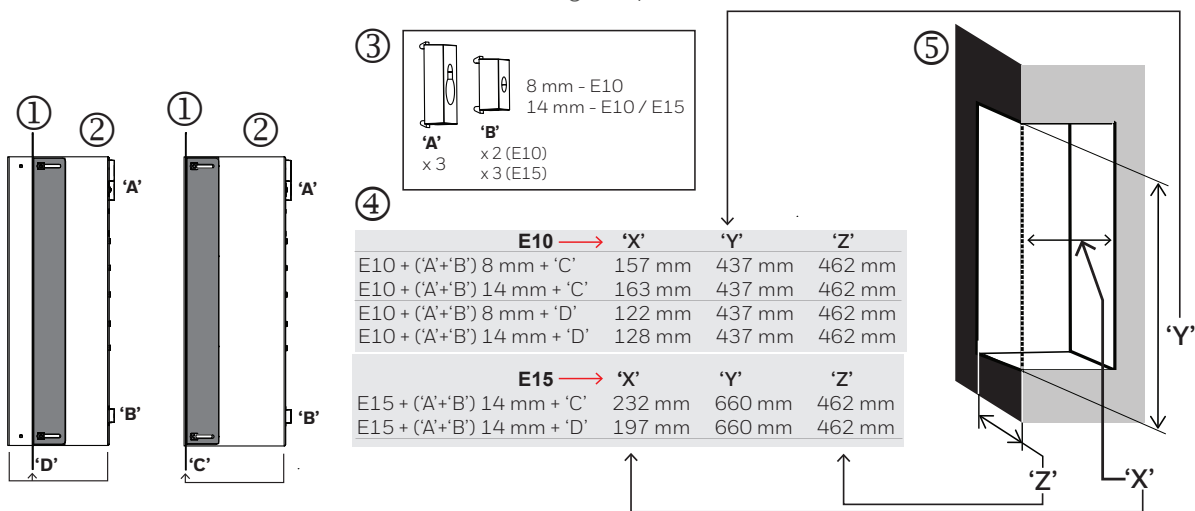
SEMI FLUSH FIXING AN E10/E15 PANEL

These procedures semi flush mounting an E10/E15 panel into a wall.

01 Check the wall recess ① is of the correct size, see previous page for information on recess.

02 Ensure the required spacers ② are fitted to the backbox.

03 Fix the backbox ③ into the recess of the wall using suitable fixings, while ensuring there is equal gap between the backbox and recess for the Semi Flush Surround ④ fixing.

04 Adjust and secure the Semi flush Surround at either points 'C' or 'D' using screws supplied while making sure the flange of the surround is flush against the wall.

05 Fit the door ⑤ to the backbox ③ and ensure the door can be easily opened, closed and locked.
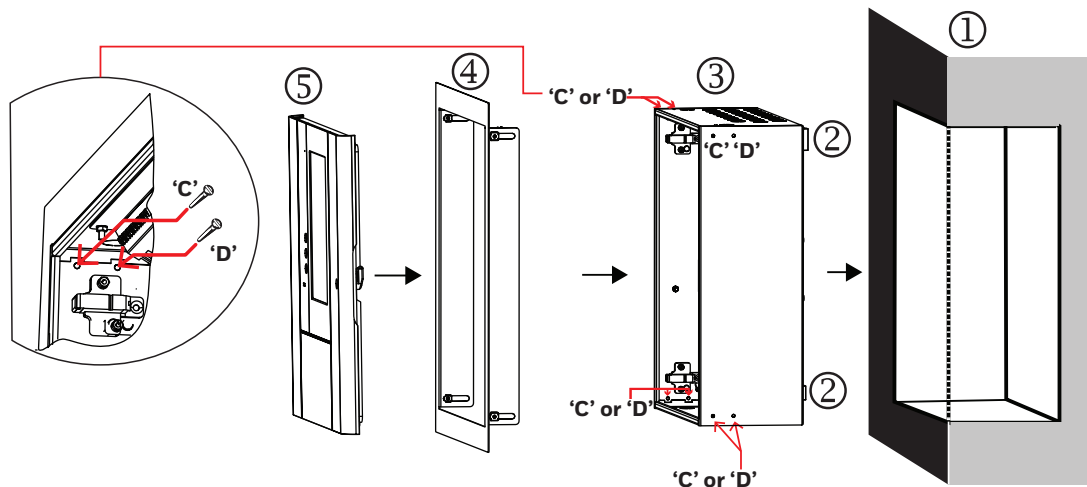
RACK MOUNTING E10 AND E15 PANELS

The Rack mount kit (HOP-208-111). One kit is required for rack mounting E10 panel and two kits for mounting an E15 panel. Fit the kit to a panel, follow steps ①, ② and ③
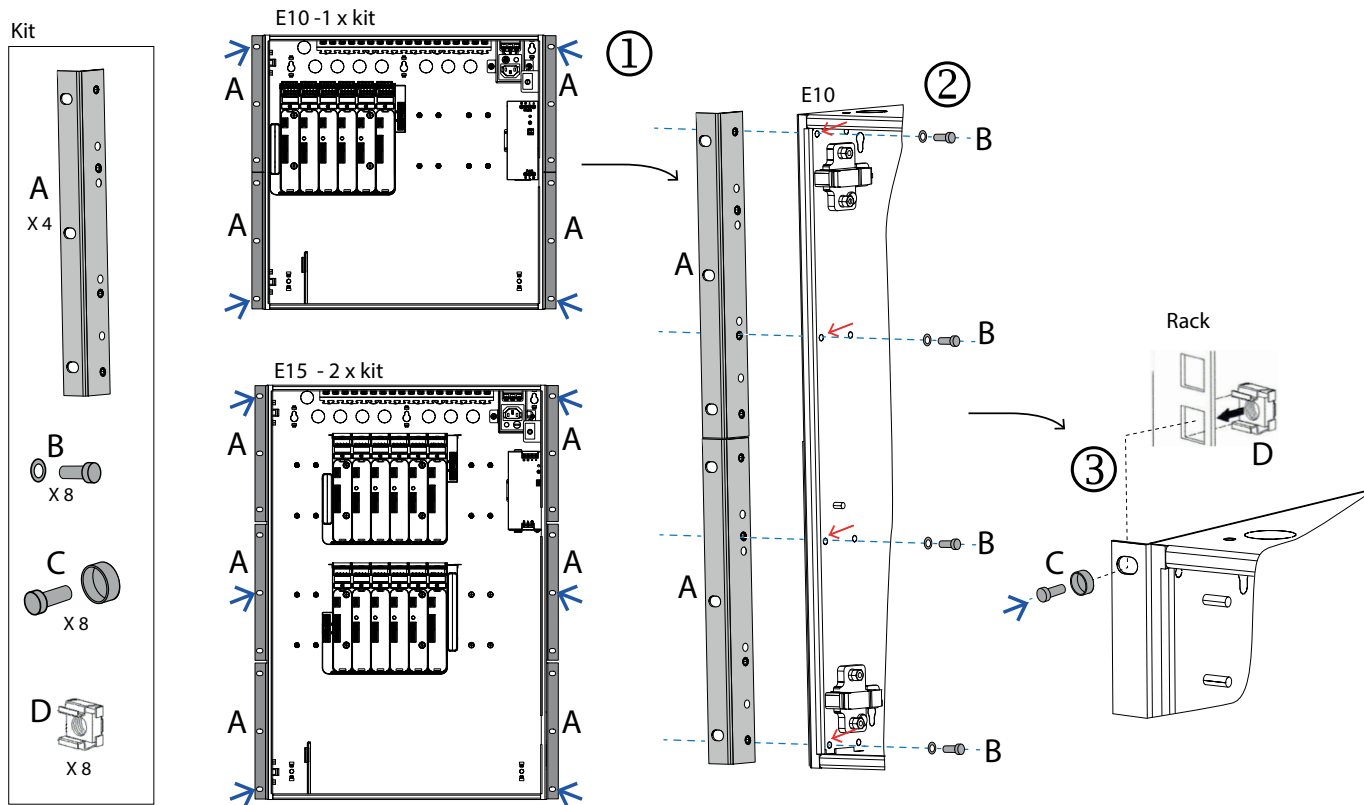
FRONT DOOR

Once the backbox of a Notifier INSPIRE E10 / E15 panel is secured to a wall surface or semi flush mounted to a wall, the Front Door can be attached to the backbox using two quick-release-type hinges.

FITTING THE FRONT DOOR

To fit the front door, carefully line up the two hinges with the enclosure-mounted hinge plates and proceed as follows:

01 Locate the pillar (A) and spring-loaded catch plate (B) with the front ① and rear ② rebates on the hinge plate.
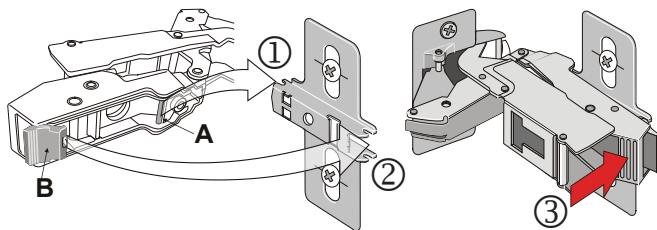
02 With each hinge positioned as described, push the back part of the hinge assembly firmly towards the enclosure side wall until each spring-loaded catch engages the rear rebate slot ③ (this is confirmed with a sudden 'snapping' action).

03 Connect the cable to CPU module and secure the Earth wire from the backbox to the front door spade.

REMOVING THE FRONT DOOR

01 Ensure Mains and Battery supplies are powered down.

02 First, disconnect the cable from the CPU Module and disconnect the Earth wire from the Front door.

03 To release the door hinges, locate the spring-loaded tab at the far end of the hinge assembly (for clarity, the illustrations show the hinge as it would appear looking from the inside of the backbox).

04 While supporting the door, carefully pull the tab ④ outwards, i.e. away from the enclosure wall until the hinge disengages the rear rebate slot of the enclosure-mounted hinge plate.

05 Repeat this procedure for the second hinge and release the door.

06 Store the door safely until required for refitting.
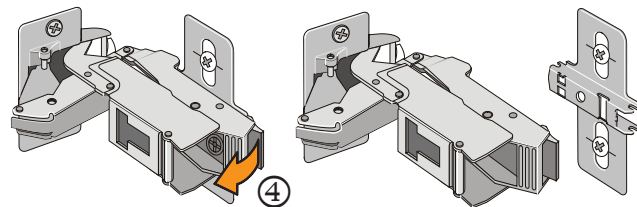
MODULE CARRIERS AND SLOTS

As standard the E10 / E15 panel enclosures have either a 6 slots / 2 x 6 slots module carriers respectively as standard. The Termination module (A) has cable connections for power and battery. The Row link modules (B) connects first row to a second row of the module carriers.

Use a Link bridge module (C) to connect a new Module carrier (D) to a previously fitted module carrier in a row.
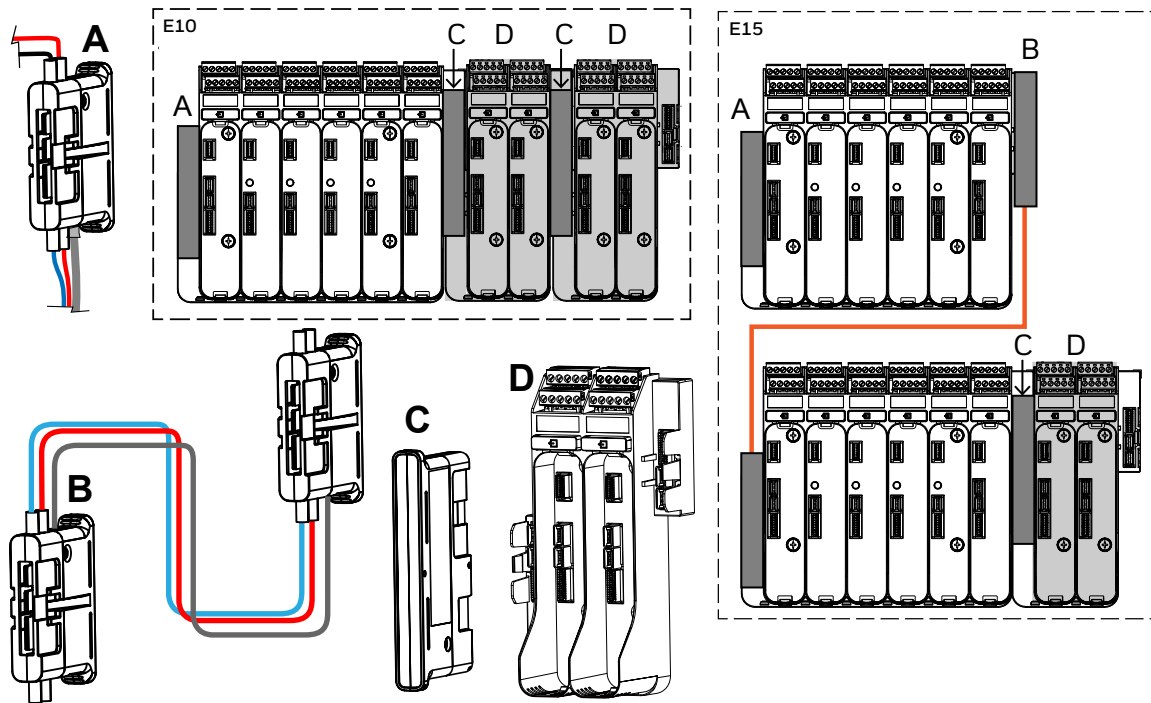
LOCATION OF MODULES IN CARRIER SLOTS

> **!** It is required that the **Charger module** is always fitted in **Slot 1** of the module carrier and **CPU Module** fitted in **Slot 2** of Module Carrier.

IMPORTANT

	Module: Charger	Module: CPU	Modules: - Loop Opal 2X - COM Dual (FAT/FBF) - FIRE/FAULT routing - COM Serial (RS232/RS485) - I/O 4-CH - NET ID2NET	6/2-slots Module Carriers	Link module for Module carriers expansion	Termination Module for Battery & PSU cables	2-Rows Link Modules with power and Ethernet patch cables
Slot 1	✓ E10 / E15	X	X	E10 E15	-	✓ E10 / E15	-
Slot 2	X	✓ E10 / E15	X		-	-	-
Slot 3	X	X	✓		-	-	-
Slot 4	X	X	✓		-	-	-
Slot 5	X	X	✓		-	-	-
Slot 6	X	X	✓		✓ E10	-	✓ E15
Slot 7	X	X	✓		✓ E10	-	✓ E15
Slot 8	X	X	✓		✓ E10	-	-
Slot 9	X	X	✓		✓ E10	-	-
Slot 10	X	X	✓		-	-	-
Slot 11	X	X	✓		-	-	-
Slot 12	X	X	✓		✓ E15	-	-
Slot 13	X	X	✓		✓ E15	-	-
Slot 14	X	X	✓		-	-	-

E10 Panel range
E15 Panel range

ROW 1 — 6
ROW 1 — 6
ROW 2 — 6

Legend:

E10 / E15 - panel range.

X - Not allowed in these slots of Module Carriers

✓ Allowed to be fitted in these slots of Module carriers.

- Not applicable

Module carriers

6 - 6-slots, supplied fitted

2 - 2-slots Extension optional

E10 Module carriers

Slot No. ->1 2 3 4 5 6   7 8   9 10

E15 Module carriers

ROW 1
Slot No.:->1 2 3 4 5 6

ROW 2
Slot No.:->7 8 9 10 11 12   13 14
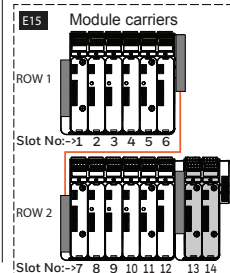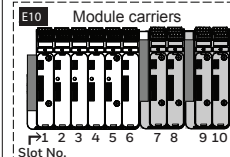
TO FIT TERMINAL BLOCKS

There are two 5-way terminal blocks supplied with each module.

Align and push fit a 5-way terminal block ② into the LOWER connector ③ of the Module carrier ①. Then align and push fit the other 5-way terminal block ④ into UPPER connector ⑤ of the Module carrier ①.

Repeat this process when fitting terminals blocks associated with other module slots.
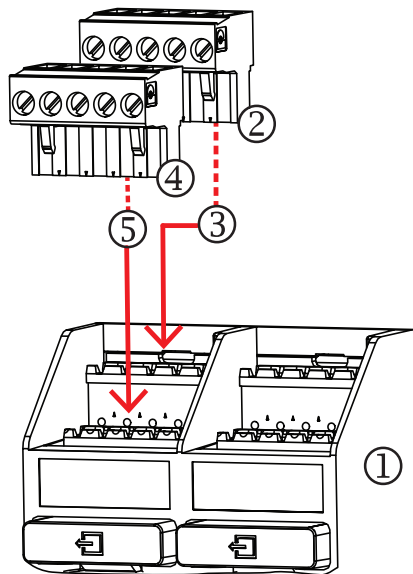
TO REMOVE TERMINAL BLOCKS

The UPPER and LOWER 5-way terminal blocks can be prised out and removed from the Module Carrier ⑦ by using a wide blade screwdriver. The UPPER terminal block ① should be prised out at two points ② and ③ and then similarly the LOWER terminal block ④ is prised out at two points ⑤ and ⑥.
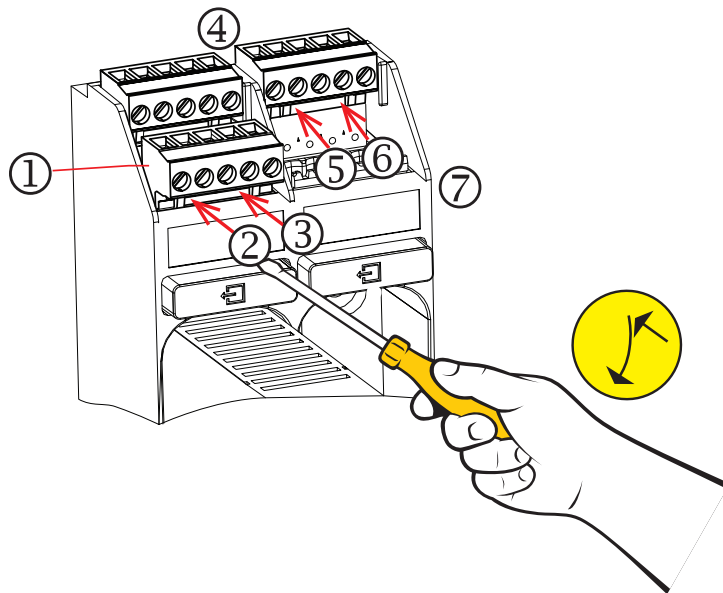
TO FIT PROTECTION COVER OVER BACKBOX

> ⚠️ Dust generated from building work processes may enter parts inside a backbox mounted on a wall. To prevent dust getting into the backbox, use the cardboards in panel packaging to make a dust cover for the backbox.

Find the flat cardboard sheet ⑤ from the package and fold the 2-tabs ④ by 90º as illustrated by the arrows. Slide the folded tabs into the slots ② on the Sleeve ③. Align and fit the Cover-Sleeve assembly over the backbox ①.
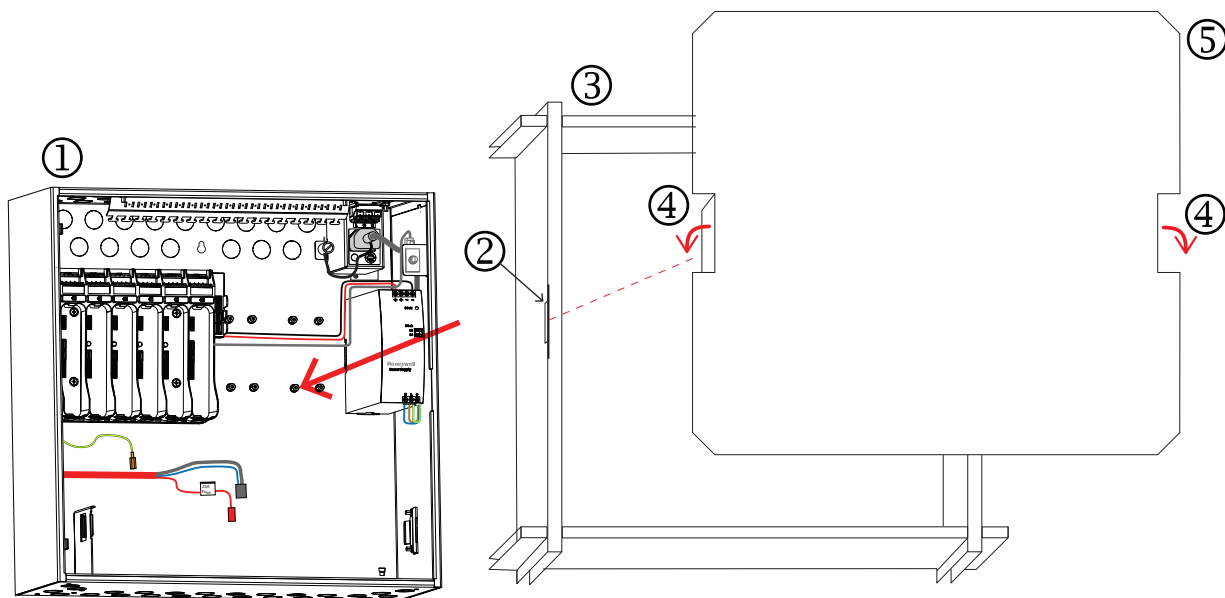
TO FIT A MODULE

⚠ NEVER fit or remove any module on a live panel, as this will damage the electronics.

Here is how to fit a Module ② into a slot of a Module carrier slot ①. Hold the module upright with its correctors aligned to the connectors on the Module carrier slot ③. Slide the Module straight into the slot until a click sound is heard and the module is firmly seated into the slot.
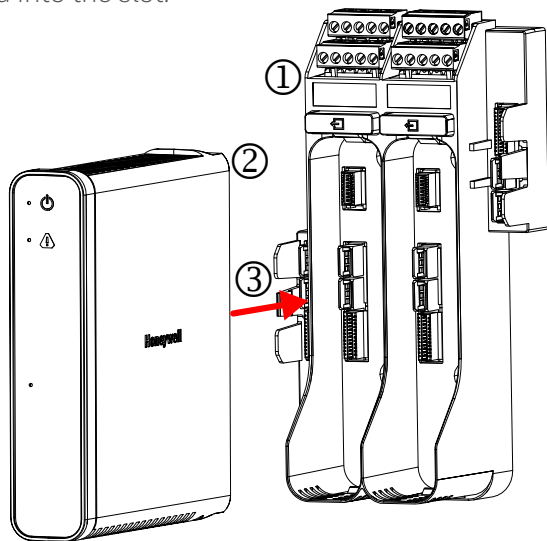
TO REMOVE A MODULE

Here is how to remove a Module ② from a slot in the Module carrier ③. Hold the module by the top side 'a' and bottom side 'b', press the disengage button ① and then pull the module straight out from the slot ④. Release the disengage button.

⚠ Do not lever out a module from its slot, as this action may damage connectors.
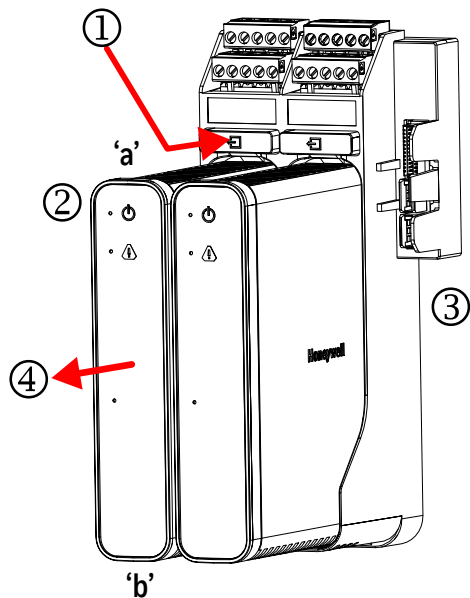
CABLE SCREEN TO EARTH

Here is how to connect the screen of an external cable coming into the panel enclosure.

Position the exposed end of the screen wire ④ for clamping to a point on the Earth bar ①. Fit the clamp bracket ② and secure it to the connection point using screw ③. Ensure the screen wire is securely clamped and then secure the screen wire with a cable tie ⑤ to the adjacent tag on the earth bar.
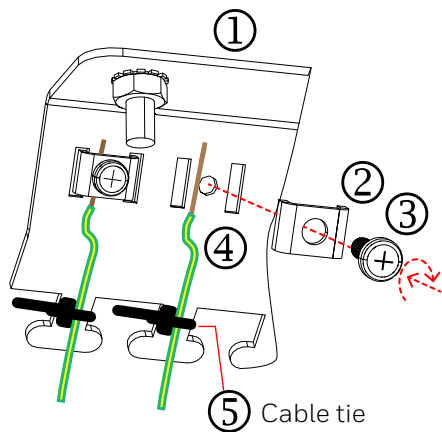
CABLE ROUTING

Illustrated below is a cut out side view of an E15 panel enclosure ① showing how cables are routed to the terminal blocks on the first ② and second ③ row of the Module carriers. Note the cables for the second row of Module carrier must run under the first row.
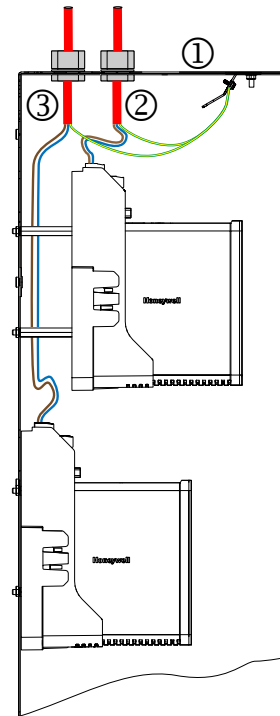
CABLE LENGTH AND LABEL

Each incoming wire ② must be fitted with a Label tag ① (not supplied). The Label tag must be sticky on one side and must be marked with terminal markings and applied to each wire ③. The marking will assist the engineer when making the connection to respective terminal block on the module carrier.

Where cables are not required to be connected to terminal block until later, then leave 500mm tail wire length for E15 panel and 300mm tail wire length for E10 panel.
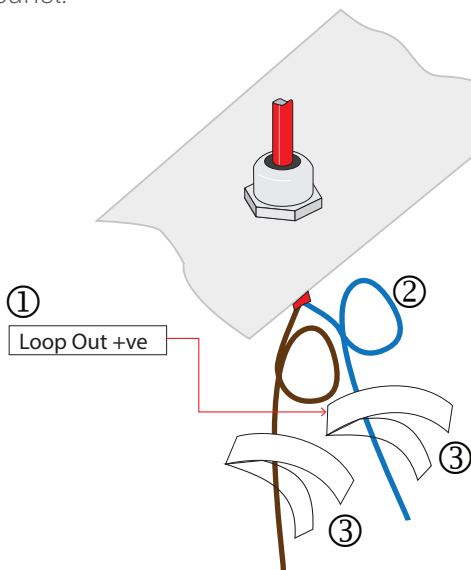
TERMINAL NUMBER LABEL

Take one strip of label ①. Cut the label in half to separate (1-5) and (6-10) ②. Stick the two strips of labels as illustrated ③ and ④. Repeat for all other Module terminal blocks.
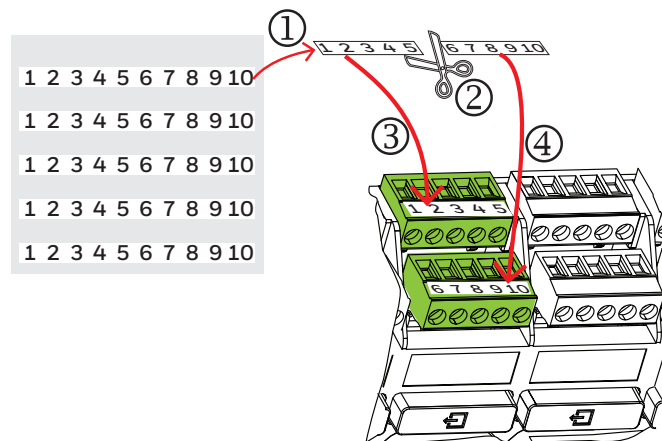
MODULE AND TERMINAL BLOCKS IDENTIFICATION

To ease wiring of external cables to respective terminal blocks you will need to decide in which slots of module carriers ① each module ③ is to be located.

Each module is colour coded and the respective colour coded label from the label set must be fitted to the module carrier, as illustrated.

Identify the required colour coded label ② from the label set and fit it to the module carrier ① in the location shown as illustrated.

RESET HOLE

Each module has a Reset hole ④ for engineering use.

During commissioning it may be necessary to reset a Module by inserting a non conductive pin through the hole ④ to operate a micro switch to reset the module.

1 Loop 1 OUT +VE
2 Loop 1 OUT –VE
3 ⏚
4 Loop 1 IN +VE
5 Loop 1 IN –VE

1 2 3 4 5

6 7 8 9 10

6 Loop 2 OUT +VE
7 Loop 2 OUT –VE
8 ⏚
9 Loop 2 IN +VE
10 Loop 2 IN –VE

LOOP OPAL X2

LOOP (OPAL X 2) MODULE

1 Loop 1 OUT +VE
2 Loop 1 OUT –VE
3 ⏚
4 Loop 1 IN +VE
5 Loop 1 IN –VE

1 2 3 4 5

6 7 8 9 10

6 Loop 2 OUT +VE
7 Loop 2 OUT –VE
8 ⏚
9 Loop 2 IN +VE
10 Loop 2 IN –VE

Do not use 3 ⏚ & 8 ⏚ .
Loop cable screen must
be connected to the Earth Bar.
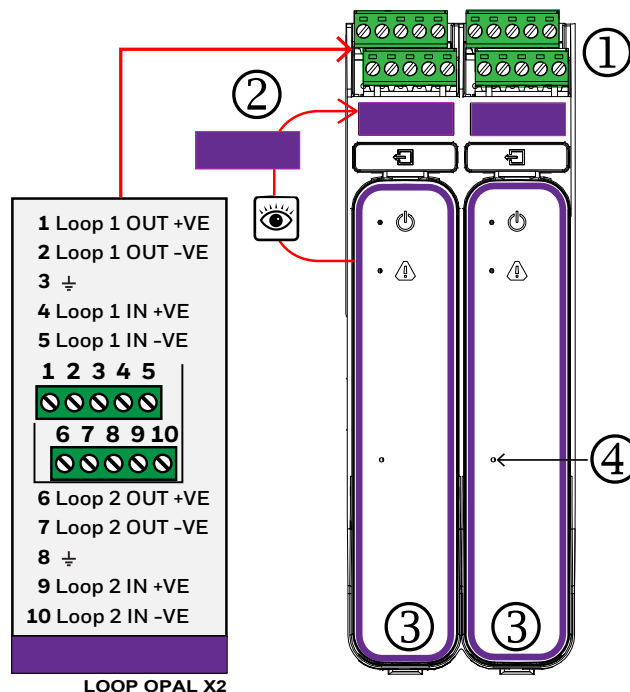
LOOP OPAL X2   **Purple**
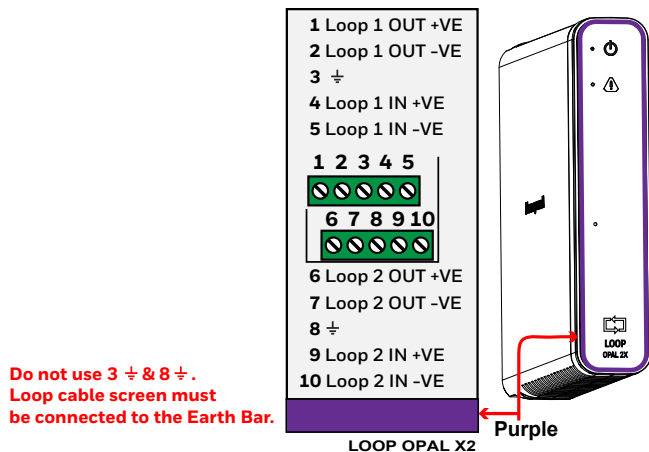
The Dual Loop Module (HOP-433-100) provides connection to two loop circuits of OPAL or CLIP devices.

> ⚠ The mixing of OPAL and CLIP devices on the same loop is not allowed.
> Use the Loop and Battery Calculator in the CLSS Configuration Tool to make sure the chosen system setup and configuration will work in accordance with the Standards.

Note the loop cable length is precisely calculated using the Battery Calculator in the CLSS Configuration Tool and the length can be up to 3.5 km depending on loading and cable type.

- ◻ Loop Module is colour coded Purple
- ◻ Can be given an identification Label
- ◻ Dimensions H-130 mm x W-28 mm x D-117 mm
- ◻ Dual Loop module has the capability of 2 loop circuits that can accept OPAL/CLIP device
- ◻ Ability to measure loop series and parallel resistances.
- ◻ Detects loop open circuit fault
- ◻ Detects Earth fault

LOOP CIRCUIT

Each loop circuit can have either OPAL or CLIP devices
- ◻ If only OPAL devices are used then there can be:
  up to 159 intelligent OPAL detectors and
  up to 159 OPAL modules per loop
  (i.e. AV, MCP, Input/output interface modules)
- ◻ If legacy CLIP devices are used then there can be:
  up to 99 legacy CLIP detectors and
  up to 99 legacy CLIP modules per loop
- ◻ Loop Driver delivers 750mA maximum per loop

INDICATORS

- ◻ Green LED
  Lit - Power On, Unlit - Power Off
  Blinking - when registration, Initialisation or upgrade process is active.
- ◻ Yellow LED
  Lit - Common fault at module, Unlit - No fault

⚠ EN54 ✓   In accordance with EN54-2 Clause 13.7 there is restriction of 512 detectors and/or MCPs applicable to the each Loop Module, which consists of 2 Loop circuits.

HOW LOOP CIRCUITS GET NUMBERED

The loop circuits are interpreted sequentially from left to right of module carrier. So the first loop module fitted to the left slot of the module carrier has Loop circuit 1 with other loops to the right sequentially numbered. The E15 panel has two rows of module carriers, here the second row of loop numbers continue from the first row.

Example 1
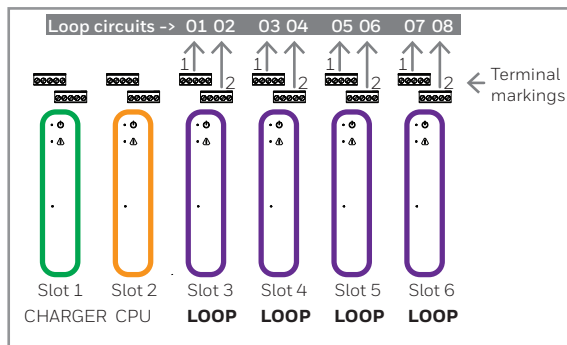
Example 3
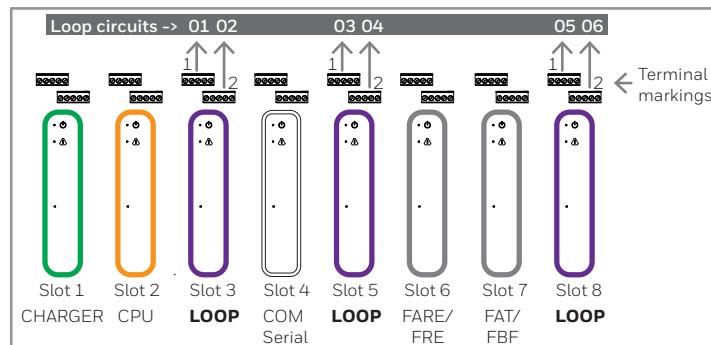
Example 2
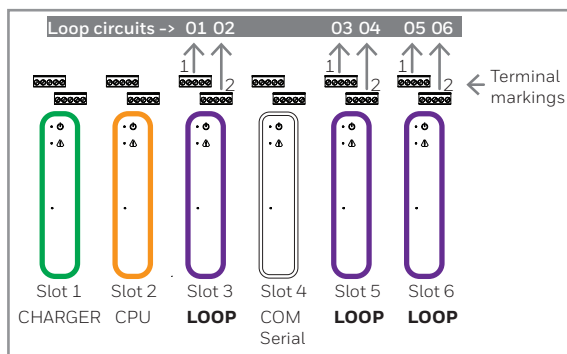
CALCULATION

The following values can be determined with the integrated calculation program:
- Loop length
- Load factor of the loop
- Required battery capacities

These values are required for the correct function of the Notifier INSPIRE panel.

'SENSOR DEVICES' ON A LOOP

A Sensor device such as a Smoke or Heat detector:

◘ is given a unique 'Address'.
◘ can be given a location label of up to 32 characters (Label texts on ID3K are limited to 32 characters)
◘ associated with a 'Detection Zone'
◘ has a working LED indicator on each device,
◘ a Remote LED option
◘ operating at particular Sensor sensitivity profiles.

'MODULE DEVICES' ON A LOOP

A Module device such as a Input/Output Interface, Sounder-Strobe, Mains switching module, FAAST LT Interface, and MCP etc on a loop:

◘ is given a unique 'Address'
◘ can be given a location label of up to 32 characters (Label texts on ID3K are limited to 32 characters)
◘ with a working LED indicator
◘ an I/O channel can each be given a label.

◘ IO Module:
  • Output channel can be set to 'Control Output channel' or 'Fire Alarm Output channel'
  • Input channel can be set to 'Control Input channel', 'Fire Detection Input channel', 'Technical Alarm Input channel', or 'Fault input channel', 'Fire Protection Installation(FPO)' or Confirmation Input (SST)
  • Module's Input or Output 'channel' can be associated with 'Detection Zone', 'Alarm Zone' or 'Control Zone'.
  • Zone Monitor can be set to 'Detector', 'MCP', 'Sprinkler', 'Mixed' or 'Other Type'
  • a FAAST LT has channel(s) that monitor the status of loop ASD sensor(s)
  • Where required, the channel 'Function type' can be set to 'Control', 'Sounder', 'Strobe', 'Fire Protection' or 'Fire Routing'
  • 'Monitoring Type' can be an End-of-Line from a range, with or without a delayed operation and can be set as a latching input
    - Output can be relay contacts set to either Normally Open or Normally Closed
    - Fire Protection Output 'Application Type' can be set to 'Unspecified' (default option), 'Door Release', 'Smoke Control', 'Extinguishing System'

> **CLIP DEVICES:** Notifier recommends CLIP devices are upgraded to Opal devices. The Notifier INSPIRE panel supports CLIP protocol, however it is the responsibility of the Supplier to ensure every CLIP device on a loop has undergone full functional tests and operates correctly.

OPAL DEVICES

> ❗ The OPAL devices listed below are those that are commercially available. Check to ensure respective device is available for selection in the CLSS Configuration Tool and for subsequent use with the 'Battery Calculator' to ensure their correct operation with the Notifier INSPIRE system.

Detectors

NFXI-OPT	OPAL Optical smoke detector, built-in isolator (White)
NFXI-OPT-BK	OPAL Optical smoke detector, built-in isolator (Black)
NFXI-SMT2	OPAL Optical smoke & heat detector, built-in isolator (White)
NFXI-SMT2-BK	OPAL Optical smoke & heat detector, built-in isolator (Black)
NFXI-SMT3	OPAL Optical smoke & heat detector with Infra-Red flame sensing, built-in isolator (White)
NFXI-TDIFF	OPAL Heat detector (A1R), rate of rise + fixed 58°C, built-in isolator (White)
NFXI-TDIFF-BK	OPAL Heat detector (A1R), rate of rise + fixed 58°C, built-in isolator (Black)
NFXI-TFIX58	OPAL Heat detector, fixed 58°C, built-in isolator (White)
NFXI-TFIX78	OPAL Heat detector, fixed 78°C, built-in isolator (White)
OSID-R	Reflective Imaging Beam Somke Detctor
NFXI-VIEW	VIEW™ high sensitivity analogue addressable IR smoke detector, built-in isolator
IRX-751CTEM-IV	SMART4 Infrared, Carbon Monoxide, Optical, Thermal Multi sensor (Ivory)
IRX-751CTEM-W	SMART4 Infrared, Carbon Monoxide, Optical, Thermal Multi sensor (Pure White)
NFX-OPT-IV	OPAL Optical smoke detector, no isolator (Ivory)
NFX-SMT2-IV	OPAL Optical smoke & heat detector, no isolator (Ivory)
NFX-SMT3-IV	OPAL Optical smoke & heat detector with infra-red flame sensing, no isolator (Ivory)
NFX-TDIFF-IV	OPAL Heat detector (A1R), rate of rise + fixed 58°C, no isolator (Ivory)
NFX-TFIX58-IV	OPAL Heat detector, fixed 58°C, no isolator (Ivory)
NFX-TFIX78-IV	OPAL Heat detector, fixed 78°C, no isolator (Ivory)

Self Test detectors

NFSTI-OPT	Photoelectric Self Test Smoke Sensor
NFSTI-SMT2	Photoelectric & Thermal Self Test Smoke Sensor
NFSTI-THE	Programmable Self Test Heat Sensor using the CLSS Tool

Manual Call Points

M700KACI-FF	Addressable Call Point (Red), Flexible element, built–in isolator
	Requires SR1T for surface mounting, terminal tray ETT-P and single gang back box for semi flush mounting.
M700KACI-FG	Addressable Call Point (Red) Glass, with built–in isolator
	Requires SR1T for surface mounting, terminal tray ETT-P and single gang back box for semi flush mounting.
NFXI-DKMB	Manual Call Point, DIN Class B, with built–in isolator (DE) (Blue)
NFXI-DKMG	Manual Call Point, DIN Class B, with built–in isolator (DE) (Yellow)
NFXI-DKMR	Manual Call Point, DIN Class B, with built–in isolator (DE) (Red)
NFXI-DKMW	Call Point (DE) (White)
M700WCP-R/I/SG	Addressable waterproof call point, IP 67, with built–in isolator.

Audio Visual (AV) Devices

NFXI-BSF-WCS	Standard Performance Detector Base Sounder Strobe, Red flash, Clear lens, with build–in isolator, EN54-23 VAD, (Pure White)
NFXI-BSF-WCH	High Performance Detector Base Sounder Strobe, Red flash, Clear lens, with build–in isolator, EN54-23 VAD, (Pure White)
NFXI-BF-WCS	Detector Base Strobe, Red flash, Clear lens, with build–in isolator, EN54-23 VAD (Pure White)
NFXI-BF-WC	Base VID - addressable, loop powered, Visual Indicating Device (VID), Red flash, Clear lens, with built–in isolator, (Pure White)
NFXI-BS-BK	Base Sounder - addressable, EN54-3 approved, with build–in isolator, (Black)
NFXI-BS-IV	Base Sounder - addressable, EN54-3 approved, with build–in isolator, (Ivory)
NFXI-BS-W	Base Sounder - addressable, EN54-3 approved, with build–in isolator, (White)
NFXI-DSF-WC	Base Sounder VAD - addressable, EN54-3 approved, EN54-23 O Class compliant Red flash, Clear lens, with build–in isolator, (White)
NFXI-WCF-WC	Wall / Ceiling VAD - addressable, EN54-23 W-2.4- 2.7 and C-3-5.1 / C-6-5.1 /C-9-5.1 class approved strobe, Clear lens, White flash, with built–in isolator, (White)
NFXI-WF-WC	Wall VAD - addressable, EN54-23 O class compliant (W-1.68-1.68), Red Flash, Clear lens, with built–in isolator, (White)
NFXI-WSF-RR	Wall Sounder VID - addressable, EN54-3 approved, Red lens, with build–in isolator, (White)
NFXI-WSF-WC	Wall Sounder VAD - addressable, EN54-3 approved, EN54-23 O class compliant

W-1.9-1.9) Clear lens, Red flash, with built-in isolator.

NFXI-WS-R	Wall Sounder - addressable EN54-3 approved, with built-in isolator, (Red)
NFXI-WS-W	Wall Sounder - addressable EN54-3 approved, with built-in isolator, (White)
WxA-yC-I02	High Power Wall Mount Sounder Strobe EN54-3, EN54-23 W-Category (x: W or R), (y: P or R).
WxL-yC-I02	High Power Wall Mount Strobe EN54-23 W-Category (x= W or R), (y= P or R).

Input Output Modules

M700X	Loop Isolator Module, plug-in screw connections
M701 / M701E	Single Output Module - addressable, direct decade address entry, with built-in isolator
M701-240	Single 240 V AC / 5 A Output Module - addressable, direct decade address entry, surface mount box, tri-colour LED's, with built-in isolator
M701-240-DIN	Single 240 V AC / 5 A (DIN Rail Mount) Output Module - addressable, direct decade address entry, tri-colour LED's, with built-in isolator
M710 / M710E	Single Input Module - addressable, direct decade address entry, with end-of-line resistor, plug-in screw connections, tri-colour LED's, with built-in isolator
M710-CZR	Conventional Zone Monitor Module - non-addressable, direct decade address entry, with end-of-line resistors, plug-in screw connections, tri-colour LED's, with built-in isolator
M701E-HC	Single Output Module, high current mode, complies with partial S/C
M710E-CZ	Conventional Zone Monitor Module with Active EOL
M720 / M720E	Dual Input Module - addressable, direct decade address entry, with end-of-line resistors, plug-in screw connections, tri-colour LED's, with built-in isolator
M721 / M721E	Dual Input and Single Output Module - addressable, direct decade address entry, with end-of-line resistors, plug-in screw connections, tri-colour LED's, with built-in isolator
M721-SST	Dual Input & Single Output Interface Module (SST Module)
CMA11	Single Input and Single Output Module
CMA22	Dual Input and Dual Output Module
NFX-MM1M	Mini Input Module (European) with 1 monitored input circuit - addressable, direct decade address entry, without isolator
NFXI-MM10	Ten-way Input Module - addressable, with rotary address switch and plug-in terminal blocks, requires 002-439 for mounting. with built-in isolator

NFXI-RM6	Six-way Relay Output Module, Complete with rotary address switch, plug-in terminal blocks. Requires 002-439 for mounting, with built-in isolator
NFXI-ASD11-HS	FAAST LT Single Channel NF Loop 90m
	Single channel loop connected FAAST LT aspirating unit fitted with 1 HSS detector and base. Also includes built in filters, Requires 24V power supply.
NFXI-ASD11-HS-EB	FAAST LT200 1 ch Notifier loop c/w EB
	Single channel loop connected FAAST LT aspirating unit fitted with 1 HSS detector and base. Also includes built in filters. Requires 24V power supply. Part number F-LT-EB (Earth bar) included.
NFXI-ASD12-HS	FAAST LT Double Knock Notifier Loop
	Single channel loop connected FAAST LT aspirating unit fitted with 2 HSS detectors and bases. Also includes built in filters. Requires 24V power supply.
NFXI-ASD12-HS-EB	FAAST LT200 double knock Notifier c/w EB
	Single channel loop connected FAAST LT aspirating unit fitted with 2 HSS detectors and bases. Also includes built in filters. Requires 24V power supply. Part number F-LT-EB (Earth bar) included.
NFXI-ASD22-HS	FAAST LT Dual Channel NF 90m
	Two channel loop connected FAAST LT aspirating unit fitted with 2 HSS detectors and bases. Also includes built in filters. Requires 24V power supply.
NFXI-ASD22-HS-EB	FAAST LT200 2 ch Notifier Loop c/w EB
	Two channel loop connected FAAST LT aspirating unit fitted with 2 HSS detectors and bases. Also includes built in filters. Requires 24V power supply. Part number F-LT-EB (Earth bar) included.
F-SEN-NFX	Notifier HS200 VIEW Sensor - Replacement HSS Sensor for NFXI-ASDxx-HS(-EB)
NFXI-BEAM-E	Notifier BEAM Detector ANL-AP
	Loop powered reflective IR beam, complete with reflector for up to 70 m. Use 6500LRK for 70 m to 100 m.
NFXI-BEAM-40E	Notifier Beam Detector ANL-AP - 40 m
NFXI-BEAM-TE	Notifier Beam Detector ANL-AP
	Loop powered reflective IR beam with servo test feature, complete with reflector for up to 70 m. Use 6500LRK for 70 m to 100 m.

Agile Wireless devices

NRX-TFIX58	Agile Wireless Heat Detector 58°C Fixed
NRX-TDIFF	Agile Wireless Heat Detector Rate of Rise
NRX-OPT	Agile Wireless Optical Smoke Detector

NRX-SMT3	Agile Wireless SMART3™ Multi Criteria Detector
NRX-DKM	Agile Wireless Call Point
NRX-WCP	Agile Wireless Call Point Waterproof
NRX-M711	Agile Wireless Single Input Single Output Module
NRX-WS	Agile Wireless Wall Sounder
NRX-WSF	Agile Wireless Wall Sounder Strobe
NRX-GATE	Agile Wireless Gateway
NRX-REP	Agile Wireless Repeater

FIRE PROTECTION EQUIPMENT (FPE)

An M721-SST Interface is used to connect to Fire Protection Equipment.

CPU MODULE NOTIFIER

1 –
2 –
3 Relay Fire NC
4 Relay Fire C
5 Relay Fire NO

1 2 3 4 5

6 7 8 9 10

6 RS485 A
7 RS485 B
8 Relay Fault NO
9 Relay Fault C
10 Relay Fault NC

6 RS485 A and
7 RS485 B are
for future use

1 & **2** Do not use

CPU NOTIFIER   **Orange**
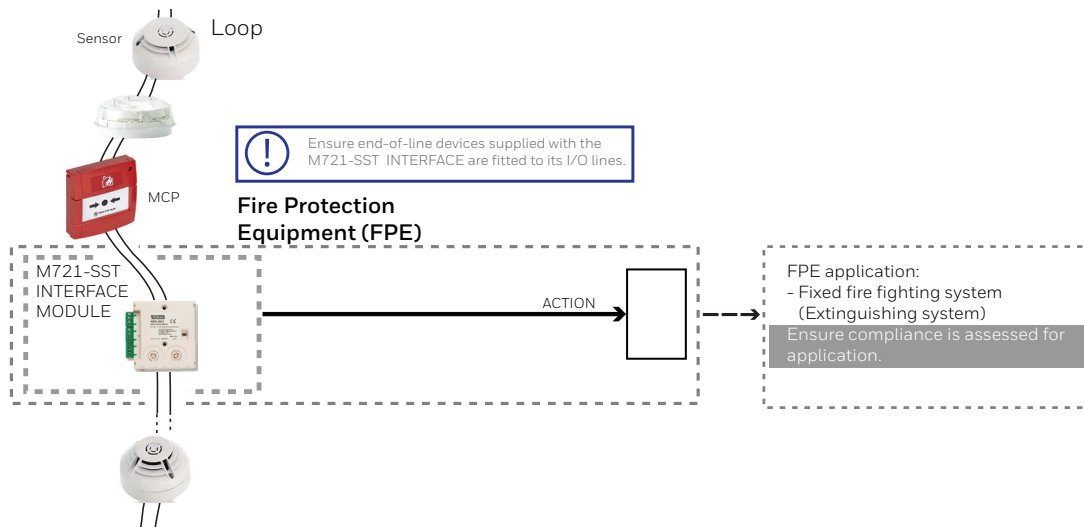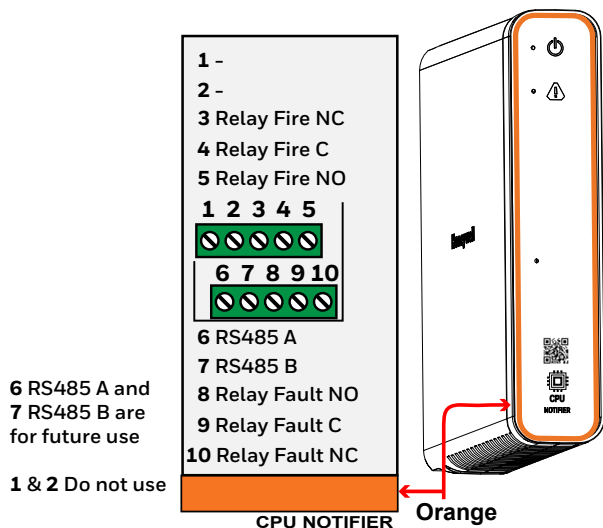
The CPU Module Notifier (HOP-431-100) is at the heart of the control panel that processes the system data and actions the system alarms and outputs. It has associated Fire event and Fault event voltage free change over contacts that can be used to control external equipment to initiate fire-fighting and maintenance actions.

! In VdS installations it is forbidden to use un-monitored relay contacts for fire alarm signal transmission purposes. A specific module is provided for this purpose.

There is a 36 V DC supply at 1 and 2, is not shown. Wiring to the changeover contacts from the external equipment is made using a recommended fire cable.

⚠ **It is required that the CPU Module is fitted in Slot 2 of the module carrier.**

- CPU Module is colour coded Orange
- Dimensions H-130 mm x W-28 mm x D-117 mm
- USB Interface (for USB firmware update)
- RJ45 (for Configuration tool)
- HMI connector to link to panel main display
- 36 V DC is for product development use only, this voltage will drop down to battery voltage on mains failure.
- Fire and Fault relays, change over contacts rated 1 A at 30 V DC resistive load

INDICATORS
- Green LED
  Lit - Power On, Unlit - Power Off
  Blinking - when registration, Initialisation or upgrade process is active.
- Yellow LED
  Lit - Common fault at module, Unlit - No fault

WIRING

① Relay contacts used to control external equipment in the event of a Fire condition.

② Relay contacts used to control external equipment in the event of a Fault condition.

③ Do not use.

④ RS485 A and RS485 are NOT FOR USE.

⑤ Fault relay contacts are shown with:
   - No power to the Panel or
   - Panel with power but has a Fault condition.

CHARGER MODULE

1 –
2 –
3 –
4 –
5 –

1 2 3 4 5

6 7 8 9 10

6 –
7 –
8 –
9 Temp. Sensor GND
10 Temp. Sensor Signal

CHARGER   **Green**
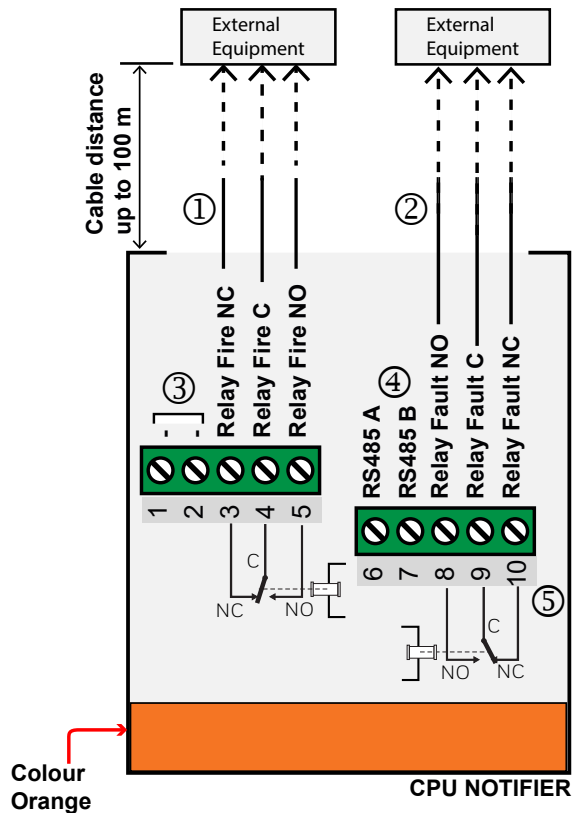
The Charger Module (HOP-402-100) provides functionality of a PSE to meet EN54-4 and to intelligently charge batteries of various sizes. It routes the battery power to the panel in the event of mains failure The module monitors temperature inside the panel housing with provision for external temperature sensing for future use.

⚠ **It is required for the Charger module to be ONLY fitted in Slot 1 of the module carrier.**

- ◻ Charger module is colour coded Green
- ◻ Dimensions H-130 mm x W-28 mm x D-117 mm
- ◻ Charge and discharge current monitoring
- ◻ Under Voltage Lockout that switches the battery supply off to prevent system going into undefined state
- ◻ Over Voltage Lockout that switches the battery supply off to prevent batteries overcharging
- ◻ Charges standard range of sealed lead acid batteries: 12 V – 12 Ah, 12 V – 24 Ah and 12 V – 38 Ah
- ◻ Battery condition monitored via load test
- ◻ Battery wiring fault monitored
- ◻ Intelligent battery charging, by local monitoring of battery temperature and connecting cable open/ short circuit fault
- ◻ Module can be given a label for display on panel HMI

INDICATORS

- ◻ Green LED
  Lit – Power On, Unlit – Power Off
  Blinking – when registration, Initialisation or upgrade process is active.
- ◻ Yellow LED
  Lit – Common fault at module, Unlit – No fault

ID²NET NETWORK MODULE

ID2NET NETWORK **Yellow**
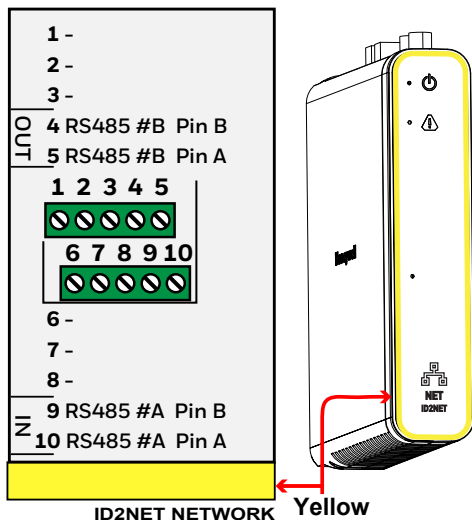
The ID²Net Network Module (HOP-631-100) provides the isolated RS485 ports for a copper network of Notifier INSPIRE panels. The module has provision for conversion to Optical Fibre using plug-in adaptors. Any combination of RS485 and Optical Fibre is possible.

- ID²NET Network module is colour coded Yellow
- Dimensions H-130 mm x W-28 mm x D-117 mm
- Copper connection to terminal blocks
- Two isolated RS-485 ports are available as standard
- Optional plug-in adapters to convert to Optical Fibre
- Any combination of RS-485 / Optical Fibre allowed
- Module can be given a 40 character software label for display on panel HMI

COPPER NETWORK CABLE

See approved lists of cables used for the wiring of ID2NET Copper Network loop.

MULTI MODE FIBRE NETWORK CABLE

See approved list of fibre cable used for the wiring of ID2NET Fibre Network loop.
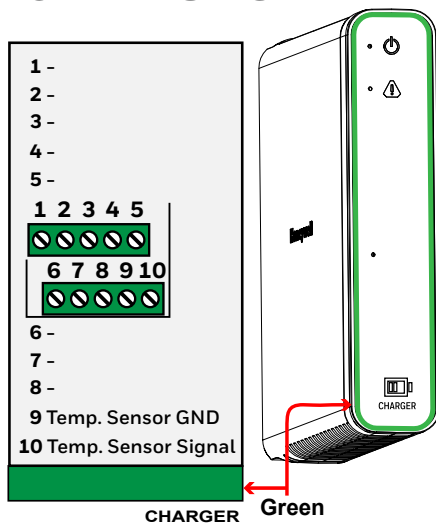
INDICATORS

- Green LED
  Lit - Power On, Unlit - Power Off
  Blinking - when registration, Initialisation or upgrade process is active.
- Yellow LED
  Lit - Common fault at module, Unlit - No fault

HOW TO ADD MULTI MODE FIBRE TO AN ID2NET MODULE

The Net Converter Fibre Multi Mode (HOP-608-200) consist of two identical PCB assemblies that must be fitted inside an ID2NET module to permit Fibre ST connections. To fit the PCBs inside an ID2NET follow steps ① to ③.
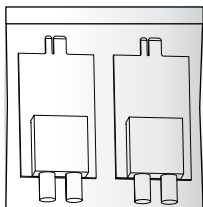
Take anti-static precautions when handling the module.

Keep Fibre Optic connector clean and dust free, only remove dust cap when making a connection.

ID2NET NETWORK COPPER AND MULTIMODE FIBRE WIRING

1. Find a suitable location on the back of the enclosure to fit the Ferrite clamp ⑤.
2. Secure the clamp to the enclosure using the double sided sticky pad ⑥.
3. Close the clamp cover.

1.2Km or more #
copper cable distance

2Km Multimode
fibre cable

ID2NET Module

Notifier INSPIRE Panel

ID2NET Module

Notifier INSPIRE Panel

ID2NET Module

Notifier INSPIRE Panel

length dependent on type of cable used, see section 'Network cables for ID"NET'

SERIAL COMMUNICATION INTERFACE MODULE

1	Aux. DC OUT +24 V
2	Aux. DC OUT GND
3	CH1 ISO GND
4	CH1 RS485 B
5	CH1 RS485 A

1 2 3 4 5

6 7 8 9 10

6	CH2 RS232 CTS
7	CH2 RS232 RTS
8	CH2 ISO GND
9	CH2 RX/B
10	CH2 TX/A

COM SERIAL

COMM Serial **White**

The Serial Communication Interface Module (HOP-405-100) provides an RS485 port and a configurable RS232 / RS485 port, with an auxiliary 24V DC supply. The module runs proprietary serial protocol 'Notifier TPP' for communication with external equipment, like CLSS Gateway, Notifier repeat / mimic panel.

Use only a recommended cable for wiring external circuits to the RS232/485 ports, making sure the cable length of 15 m/1.2 km respectively is not exceeded.

◻ Serial Communication Module is colour coded White
◻ Dimensions H-130 mm x W-28 mm x D-117 mm
◻ Monitors communication faults
◻ Module can be given a software label for identification to display on panel HMI
◻ Line 1 (CH1) has interface type RS485
  ● this line can be given a software label
  ● Protocol can be set, ie to TPP or Repeat or Repeater –new
  ● Protocol version 0013 / 0011A
  ● TPP mode type full of half duplex
◻ Line 2 (CH2) has interface type RS485 or RS232
  ● this line can be given a software label
  ● Protocol can be set, ie to TPP or Repeat or Repeater –new
  ● Protocol version 0013 / 0011A
  ● TPP mode type full of half duplex
◻ An Output gives 24 V DC ± 5% maximum. Current configurable to 0.5A, 1A, 1.5A and 2A
◻ State of Auxiliary Output On / Off

INDICATORS

◻ Green LED
  Lit - Power On, Unlit - Power Off
  Blinking - when registration, Initialisation or upgrade process is active.
◻ Yellow LED
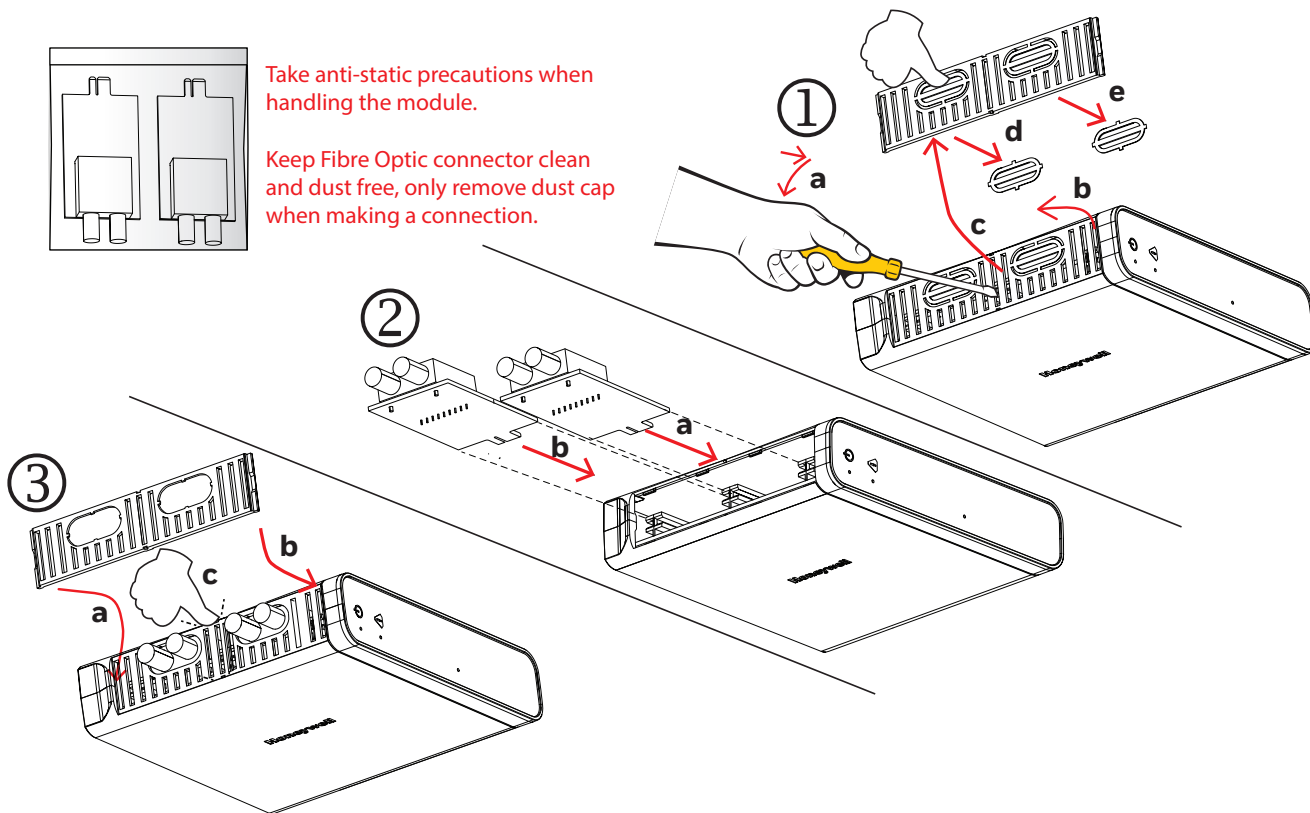 Lit - Common fault at module, Unlit - No fault

WIRING TO ABT4000 REPEATER USING SERIAL COMMUNICATION

ABT4000 Repeater

A
B
GND
IN

9 GND
8 TxD+
7 TxD-
6
5
4 RxD+
3 RxD-
2
1
S

-UB1
+UB1

Cable distance
up to 800m, Type
J-Y (St) Y n x 2 x ⌀ 0,8 mm

RxD-
RxD+
B2 A2

TxD-
TxD+
B1 A1

GND
RxD-
TxD+

+ UB
10-30V

ADP-NB-422

Aux. DC OUT +24V
Aux. DC OUT GND
CH1 ISO GND
CH1 RS485 B
CH1 RS485 A
CH2 RS232 CTS
CH2 RS232 RTS
CH2 ISO GND
CH2 RX/B
CH2 TX/A

1 2 3 4 5
6 7 8 9 10

COMM Serial   Notifier INSPIRE Panel
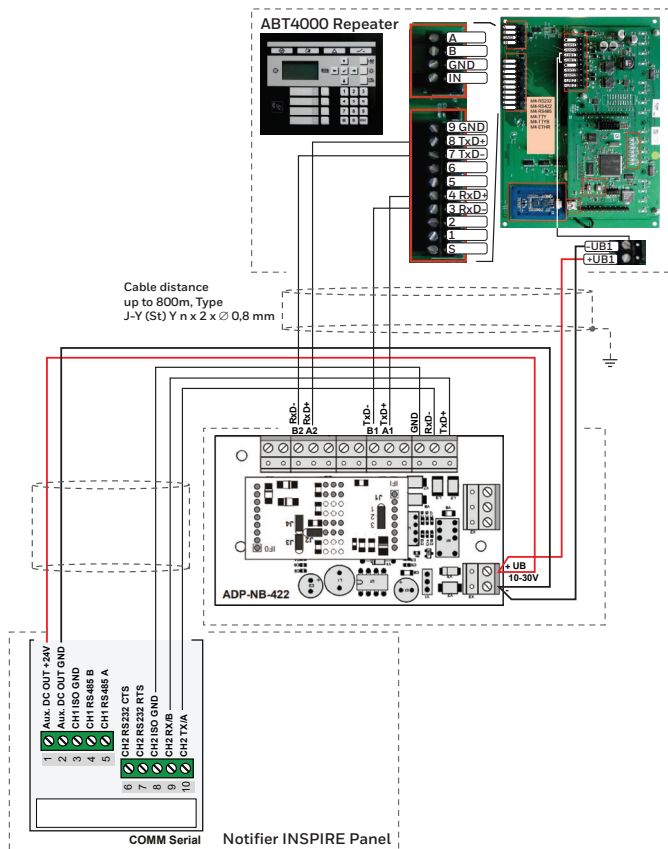
WIRING TO AN IDR6A REPEATER PANEL

A maximum of three IDRA Repeater panels can be connected to Serial Communication Module.

Cable distance of up to 1.2Km maximum

IDR6A Repeater panel (002-452)

0V
28V
0V
28V
0V
28V

A
B
A
B

Aux. DC OUT +24V
Aux. DC OUT GND
CH1 ISO GND
CH1 RS485 B
CH1 RS485 A

1
2
3
4
5

CH2 RS232 CTS
CH2 RS232 RTS
CH2 ISO GND
CH2 RX/B
CH2 TX/A

6
7
8
9
10

COMM Serial

WIRING TO A CLSS GATEWAY

CLSS Gateway

P2 P7 P4 P1 P5 J3 J4

Not used

RJ45

CPU

Notifier Inspire Panel

Serial Comm or
can be an IO

Aux. DC OUT +24V
Aux. DC OUT GND
CH1 ISO GND
CH1 RS485 B
CH1 RS485 A

1 2 3 4 5

CH2 RS232 CTS
CH2 RS232 RTS
CH2 ISO GND
CH2 RX/B
CH2 TX/A

6 7 8 9 10

COMM Serial

4 CHANNEL I/O MODULE

1 Aux. DC Out 24 V
2 Aux. DC Out GND
3 Channel 4 IN/OUT 2
4 Channel 4 IN/OUT 1
5 Channel 3 IN/OUT 2

1 2 3 4 5

6 7 8 9 10

6 Channel 3 IN/OUT 1
7 Channel 2 IN/OUT 2
8 Channel 2 IN/OUT 1
9 Channel 1 IN/OUT 2
10 Channel 1 IN/OUT 1

I/O 4-CH   Grey

The 4 Channel Input/Output (I/O) Module (HOP-404-100) provides flexible interfacing capability. Each I/O channel can be individually configured to provide an interface to external equipment. The Auxiliary DC supply is available for use to power the associated equipment on I/O circuits. The wiring to the respective terminals is made using an approved fire cable, with a maximum cable length of up to 100 m for each circuit.

> ⚠ The cable length of an Output circuit is precisely calculated using the Battery Standby Calculator feature in the 'CLSS Configuration Tool'.
> When using EOL-O on an Output line use a custom tool to determine line loading and cable length.
> The cable length is dependant on the loading of devices connected to each Output circuit of I/O Module.

- ◘ 4 channel - I/O Module is colour coded Grey
- ◘ Dimensions H-130 mm x W-28 mm x D-117 mm
- ◘ 4 - configurable Input or Output channels for fire, fault, control and alarm applications with monitoring
- ◘ A channel can be switch and set to in use or not in use
- ◘ A maximum of 3 A across all I/O channels of the Module plus Auxiliary power is allowed
- ◘ Auxiliary power 24 V DC ± 5 % at 500 mA, 1000 mA, 1500 mA and 2000 mA
- ◘ the Module can be given an identification label

INDICATORS
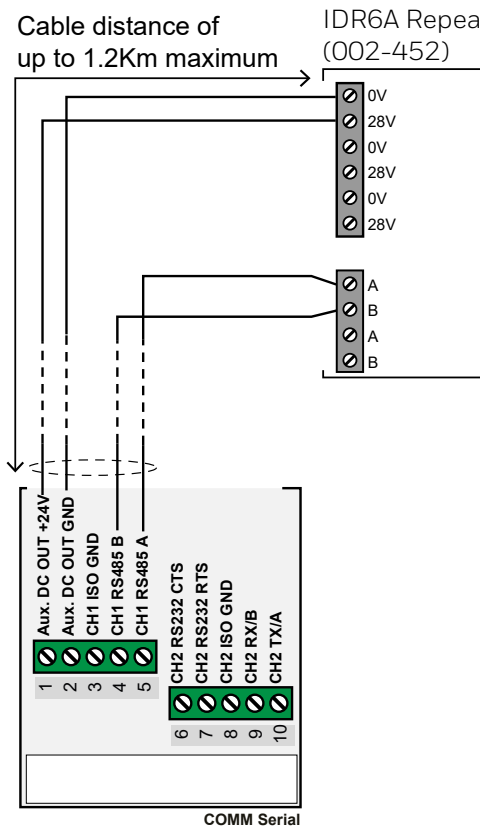- ◘ Green LED
  Lit - Power On, Unlit - Power Off
  Blinking - when registration, Initialisation or upgrade process is active.
- ◘ Yellow LED
  Lit - Common fault at module, Unlit - No fault

WIRING TO INPUT AND OUTPUT CIRCUITS

cable length 100m recommended maximum

24V dc

CH 4
CH 3
CH 2
CH 1

-

+

black

Alarm Output
EOL - O
(Part number 808624)

-

+

red

EOL - O

Earth bar

-

+

Fault Input
Fire Input
Control input
Technical Alarm

10 KΩ   1 KΩ

Switch

Aux. DC Out 24V
Aux. DC Out GND
Channel 4 IN/OUT 2
Channel 4 IN/OUT 1
Channel 3 IN/OUT 2

1 2 3 4 5

Channel 3 IN/OUT 1
Channel 2 IN/OUT 2
Channel 2 IN/OUT 1
Channel 1 IN/OUT 2
Channel 1 IN/OUT 1

6 7 8 9 10

I/O 4-CH   Colour Grey

Notifier INSPIRE Panel

FARE / FRE MODULE ⒹⒺ

1 Aux. DC OUT +24 V
2 Aux. DC OUT GND
3 FARE – Activation OUT
4 FARE – Ground OUT
5 FARE – Acknowledge IN

1 2 3 4 5

6 7 8 9 10

6 FRE – NC (energized open)
7 FRE – C
8 FRE – Fault IN
9 Key Safe – Activation OUT
10 Key Safe – Ground OUT

3 x 10KΩ
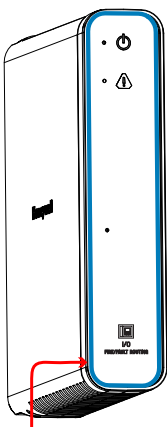
FARE / FRE   **Dark Blue**

The FARE / FRE Module (HOP-406-100) is an input/output module used to connect to Fire Alarm Routing Equipment (FARE), Fault Routing Equipment (FRE) and Key Safe Adapter. The module provides a 24 V DC Auxiliary output to power the connected equipment. The module route Fire and Fault signals to the external equipment. One FARE module is allowed per panel. FARE / FRE Module is colour coded Dark Blue

◻ Dimensions H-130 mm x W-28 mm x D-117 mm
◻ Auxiliary power 24 V DC ± 5 % at 1 A maximum
◻ Interface to FARE equipment (DIN14675)
◻ FARE Output is monitored for short and open circuit
◻ Interface to FRE equipment (e.g. Dialler)
◻ FRE input is supervised for open and short circuit
◻ Interface to Key Safe Adapter for Key Safe (VdS2105)
◻ the Module can be given an identification label

FARE CONFIGURATION

Where the module is used for FARE application you can give it a label, set it with 'Confirmation Input Required', with Output settings to include 'Reference Measurement (ohms)' and option to 'Remain in Service'.

FRE CONFIGURATION

Where the module is used for FRE application you can give it a label, set it with 'Confirmation Input', 'Fault Input' or 'No Input'.

KEY SAFE CONFIGURATION

Where the module is used for Key Safe application, then you can give it a Key Safe label and option to select 'Key Safe required'.

INDICATORS

◻ Green LED
Lit – Power On, Unlit – Power Off
Blinking – when registration, Initialisation or upgrade process is active.
◻ Yellow LED
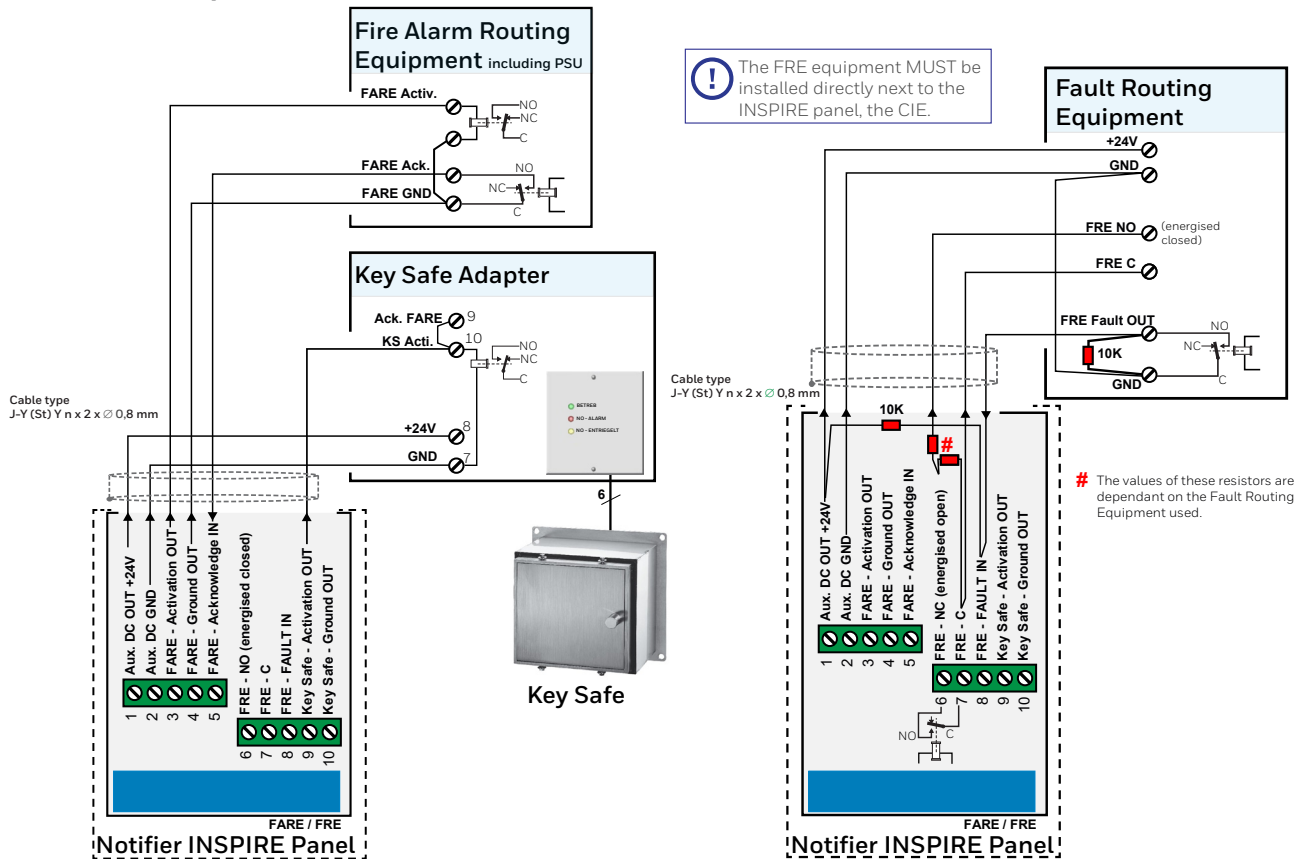Lit – Common fault at module, Unlit – No fault

TECHNICAL DATA

24V Aux. Output	Voltage and Current	24 V ± 5%, max. 1 A
FARE Interface	Voltage and Current	24 V ± 5%, max. 0.17 A
	Acknowledge Input	Min. Input high level voltage : ≥ 2.0 V Max. Input low level voltage : ≤ 0.8 V
	Monitoring	FARE Relay constant current for monitoring : 4 mA (FARE Relay must not be activated at 4 mA) Min detectable FARE Relay resistance : ≥ 120 Ω Max detectable FARE Relay resistance : ≤ 1850 Ω (Detailed Values for monitoring are software defined)
FRE Interface	FRE Relay:	Max. CLOSED contact resistance : ≤ 100 mΩ Min. OPEN insulation resistance : ≥ 1000 MΩ Nominal switching capacity : 2 A / 60 V DC, 0.3 A / 42 V AC Max. switching power : 60 W (DC), 37.5 VA (AC) Max. switching voltage: 60 V DC, 42 V AC Max. switching current: 2 A
	FRE RETURN Input	Max. Input voltage (FAIL) : 24 V Nominal voltage (NORMAL) : ≥ 10.8 V and ≤ 13.2 V FAIL Input voltage : ≤ 10.8 V or ≥ 13.2 V Min. Input voltage (FAIL) : 0 V
Key Safe Interface	Drive output:	24 V ± 5%, 0.17A

WIRING TO EQUIPMENT

Fire Alarm Routing Equipment *including PSU*

FARE Activ. — NO / NC / C

FARE Ack. — NO / NC / C

FARE GND

The FRE equipment MUST be installed directly next to the INSPIRE panel, the CIE.

Fault Routing Equipment

+24V
GND
FRE NO (energised closed)
FRE C
FRE Fault OUT — NO / NC / C
10K
GND

Key Safe Adapter

Ack. FARE — 9
KS Acti. — 10 — NO / NC / C
+24V — 8
GND — 7

BETRIEB
NO - ALARM
NO - ENTRIEGELT

Cable type
J-Y (St) Y n x 2 x ⌀ 0,8 mm

Cable type
J-Y (St) Y n x 2 x ⌀ 0,8 mm

6

Key Safe

10K

#

The values of these resistors are dependant on the Fault Routing Equipment used.

Notifier INSPIRE Panel

1 Aux. DC OUT +24V
2 Aux. DC GND
3 FARE - Activation OUT
4 FARE - Ground OUT
5 FARE - Acknowledge IN
6 FRE - NO (energised closed)
7 FRE - C
8 FRE - FAULT IN
9 Key Safe - Activation OUT
10 Key Safe - Ground OUT

FARE / FRE

Notifier INSPIRE Panel

1 Aux. DC OUT +24V
2 Aux. DC GND
3 FARE - Activation OUT
4 FARE - Ground OUT
5 FARE - Acknowledge IN
6 FRE - NC (energised open)
7 FRE - C
8 FRE - FAULT IN
9 Key Safe - Activation OUT
10 Key Safe - Ground OUT

NO / C

FARE / FRE

COMMUNICATION DUAL (FAT/FBF) MODULE DE

1 UB1+
2 UB1–
3 SIO1+
4 SIO1–
5 –

1 2 3 4 5

6 7 8 9 10

6 UB2+
7 UB2–
8 SIO2+
9 SIO2–
10 –

FAT/FBF (Comm Dual)

Light Blue

Service
Reset

COM
DUAL

The CIE Notifier INSPIRE panel provides a standardized interface according to EN 54-2, which can be realized by using a combination of network, FBF and FAT.
The Communication Dual (FBF/FAT) Module (HOP-407-200) is a dual communication module for FAT/FBF applications. It provides alarm transmission functionality to meet local requirements.

◻ FAT/FBF Module is colour coded Light Blue
◻ Dimensions H-130 mm x W-28 mm x D-117 mm
◻ Configurable via 3rd party software for FAT/FBF applications
◻ the Module can be given an identification label
◻ configurable for FAT/FBF application

INDICATORS
◻ Green LED
  Lit – Power On, Unlit – Power Off
  Blinking – when registration, Initialisation or upgrade process is active.
◻ Yellow LED
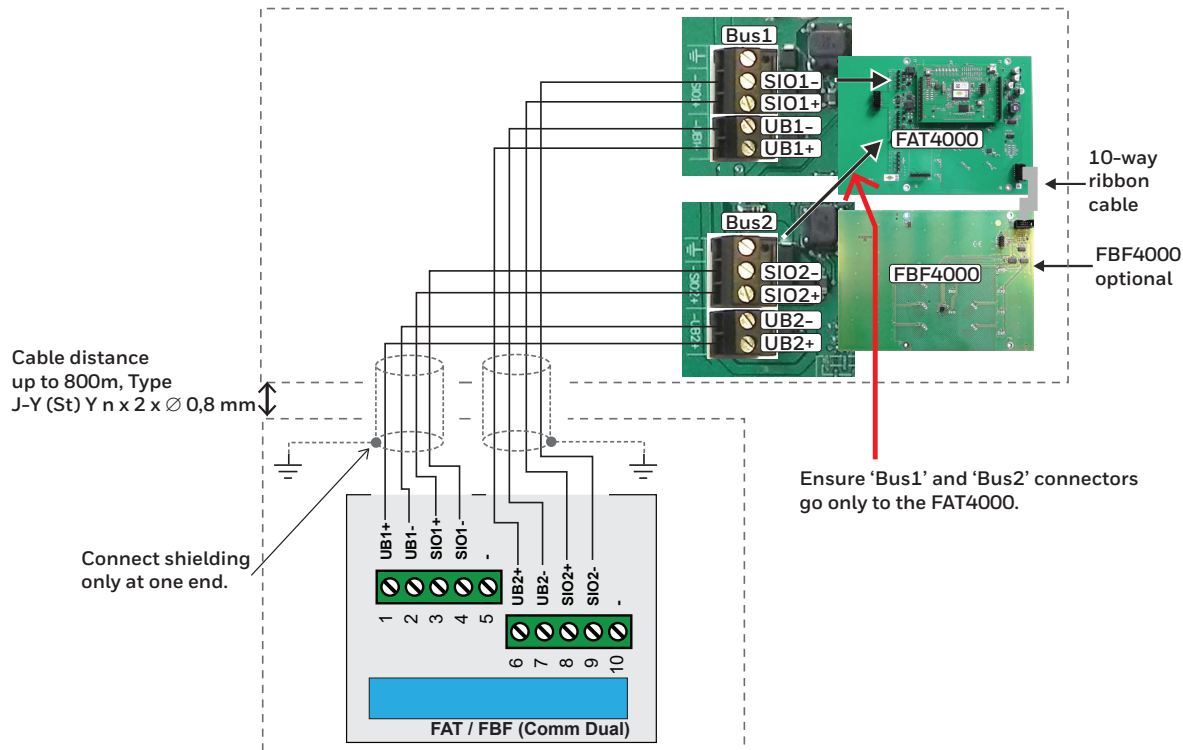 Lit – Common fault at module, Unlit – No fault

CONNECTION
◻ use two cable J-Y (St) Y 2 x 2 x ∅ 0,8 mm or comparable with shielded twisted pair cables
◻ cable screen must be connected to earth at one end for EMI protection of the cable.
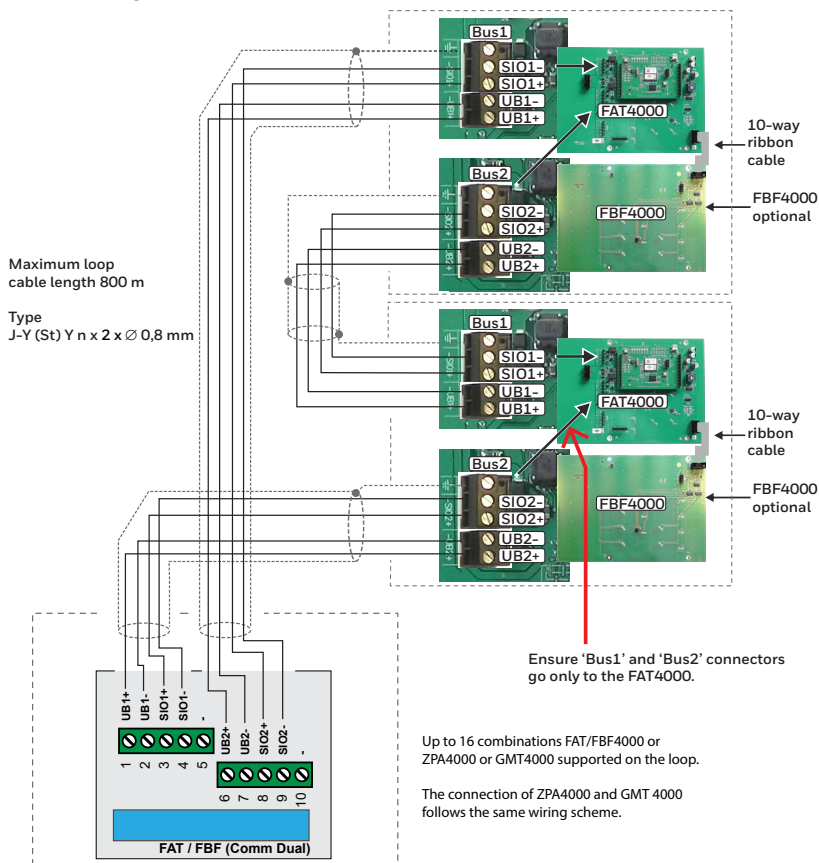
WIRING TO 'DE' EQUIPMENT – FAT/FBF

Bus1

SIO1–
SIO1+
UB1–
UB1+

FAT4000

10–way
ribbon
cable

FBF4000
optional

Bus2

SIO2–
SIO2+
UB2–
UB2+

FBF4000

Ensure 'Bus1' and 'Bus2' connectors
go only to the FAT4000.

Cable distance
up to 800m, Type
J–Y (St) Y n x 2 x ⌀ 0,8 mm

Connect shielding
only at one end.

UB1+
UB1–
SIO1+
SIO1–
-

1 2 3 4 5

UB2+
UB2–
SIO2+
SIO2–
-

6 7 8 9 10

FAT / FBF (Comm Dual)

WIRING TO 'DE' EQUIPMENT - 2 FAT

Bus1

SIO1-
SIO1+
UB1-
UB1+

FAT4000

10-way ribbon cable

FBF4000

FBF4000 optional

Bus2

SIO2-
SIO2+
UB2-
UB2+

Maximum loop cable length 800 m

Type J-Y (St) Y n x 2 x ⌀ 0,8 mm

Bus1

SIO1-
SIO1+
UB1-
UB1+

FAT4000

10-way ribbon cable

Bus2

SIO2-
SIO2+
UB2-
UB2+

FBF4000

FBF4000 optional

Ensure 'Bus1' and 'Bus2' connectors go only to the FAT4000.

UB1+
UB1-
SIO1+
SIO1-
-

1 2 3 4 5

UB2+
UB2-
SIO2+
SIO2-
-

6 7 8 9 10

FAT / FBF (Comm Dual)

Up to 16 combinations FAT/FBF4000 or ZPA4000 or GMT4000 supported on the loop.

The connection of ZPA4000 and GMT 4000 follows the same wiring scheme.

WIRING TO ABT4000 REPEATER USING FAT/FBF

ABT4000 Repeater

SIO1-
SIO1-
UB1-
UB1-
SIO2-
SIO2-
UB2-
UB2-

M4-RS232
M4-RS422
M4-RS485
M4-TTY
M4-TTYB
M4-ETHR

**Cable distance
up to 800m, Type
J-Y (St) Y n x 2 x ⌀ 0,8 mm**

Bus1
SIO1-
SIO1-
UB1-
UB1+

FAT4000

**10-way
ribbon
cable**

Bus2
SIO2-
SIO2-
UB2-
UB2+

FBF4000
optional

FBF4000

Ensure 'Bus1' and 'Bus2' connectors
go only to the FAT4000.

**Connect shielding
only at one end.**

UB1+
UB1-
SIO1+
SIO1-
-
UB2+
UB2-
SIO2+
SIO2-
-

1 2 3 4 5   6 7 8 9 10

**Notifier INSPIRE
Panel**

FAT / FBF (Comm Dual)

Mains Supply

> ⚠️ It is important to open and lock out the main circuit breaker before connecting any mains supply wiring.

The cable used for the primary mains supply must conform with the electrical wiring specifications of the country and local requirements.

A Notifier INSPIRE E10/E15 Control panel requires a mains AC supply cable from a Fused Spur unit ① enter into the panel enclosure, using an adjacent cable entry at point ②. The Fused Spur isolator cover must be marked:
FIRE ALARM – DO NOT SWITCH OFF

Use the quick connect Mains Termination Block unit ⑤ located at the top-right of the front face of the backbox. The Mains Termination Block unit has an IEC socket to allow the connection of an IEC connector cable pre-wired to the panel's PSU, it also houses a mains fuse T3.15AH250V Ceramic ④.

Route the mains supply cable ③ into the panel enclosure towards the mains terminal block, ensure the wires are kept short. Press the spring tab ⑦ and insert a wire into a required terminal hole ⑥ and then release tab, ensure wire is securely fitted. Connect the Neutral (blue) wire to termination point 'N', connect the Live (brown) wire to termination point marked 'L'. Connect the Protective Earth 'PE' wire to termination point marked with an Earth symbol. Ensure mains cable gland used provides IP30 protection.
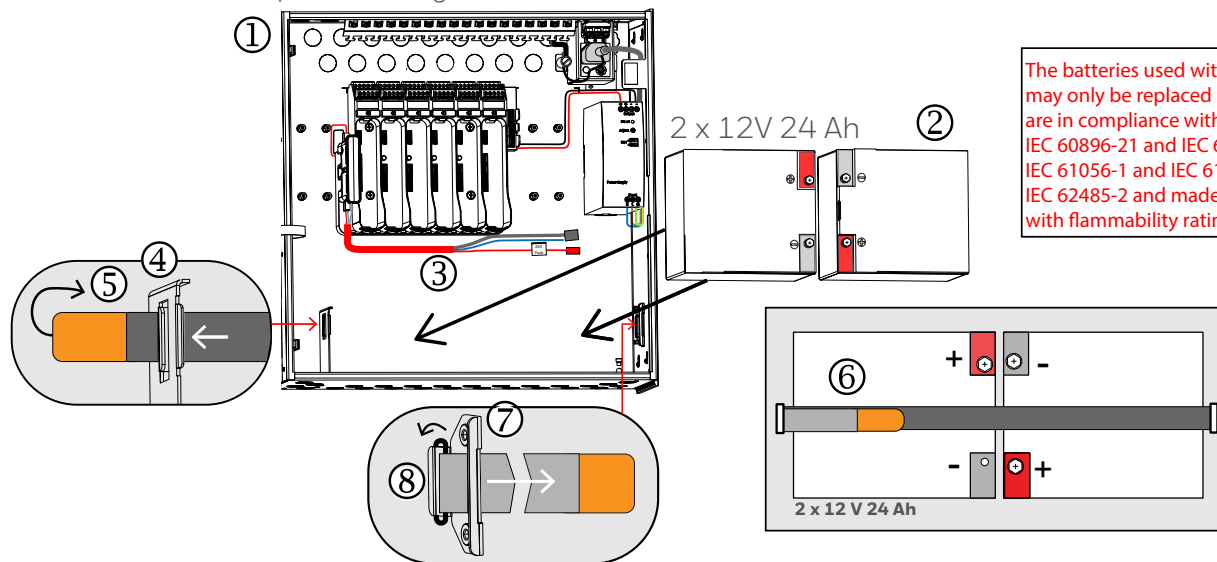Recommended cable ⑧ cross sectional area ≥ 4 mm^2.

> ⚠️ DO NOT connect power until the panel is ready to perform commissioning tests.
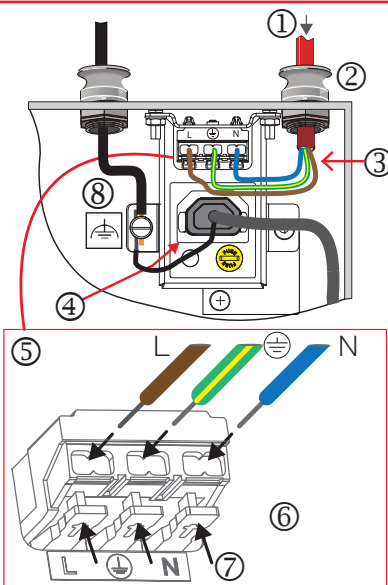
Battery installation

The YUASA 12V NP series batteries Flame Retardant are recommended for Notifier INSPIRE E10 and E15 panel range. The E10 panel enclosure can accommodate 12Ah and 24Ah batteries, while the E15 panel enclosure can additionally accommodate 38 Ah batteries. Note the 12 Ah battery have faston tabs for terminals for battery cable connection. Insert the Battery strap ⑦ in through a slot on the right bracket with the 'Velcro' side facing inside the backbox① and place the plastic ring over the hook ⑧. Move the battery leads ③ away and take the two batteries ② in the orientation shown and place them inside the backbox, ensure they are seated far back into the enclosure. Route the battery strap over the batteries with 'Velcro' side outwards and insert it through the slot in the left bracket ④ and pull the orange tab over the batteries and secure it to the velcro ⑥.

2 x 12V 24 Ah

The batteries used within this product may only be replaced by batteries that are in compliance with IEC 60896-11, IEC 60896-21 and IEC 60896-22, IEC 61056-1 and IEC 61056-2 or IEC 62485-2 and made of material with flammability rating V-1 or better.

2 x 12 V 24 Ah

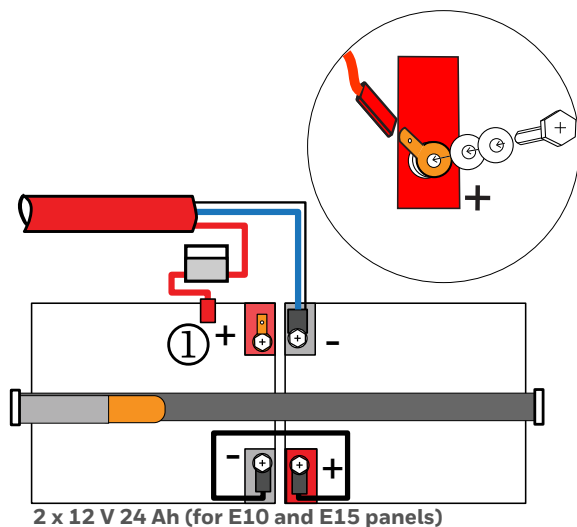## How to connect the 12V 24 Ah batteries

> ❗ The battery manufacturer's recommendations on battery handling, storage, maintenance charging, operation and disposal must be taken into consideration.

Secure the battery and link leads to the battery terminals with the bolt, washers, spade connector supplied.

> ⚠️ Make the final connections ① to the battery during commissioning power-up.

.

2 x 12 V 24 Ah (for E10 and E15 panels)

How to connect 12V 12 Ah and 12V 38 Ah batteries

> **!** The battery manufacturer's recommendations on battery handling, storage, maintenance charging, operation and disposal must be taken into consideration.

Secure the battery and link leads to the battery terminals with the bolt, washers, spade connector supplied.

> **⚠** Make the final connections ① to the batteries during commissioning power-up.

2 X 12 V 38 Ah (for E15 panel only)

2 X 12 V 12 Ah (for E10 panel only)
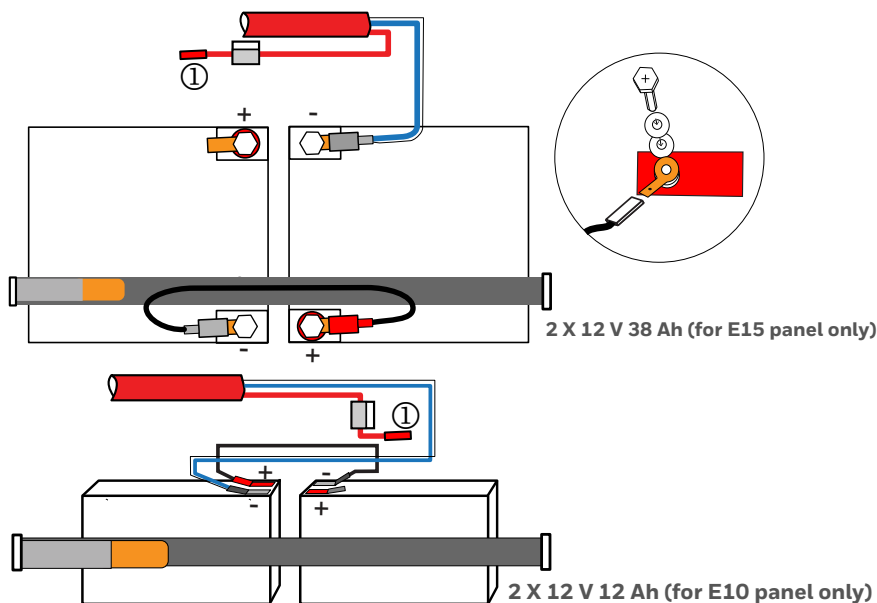
Fitting a language film insert

Find the language film set supplied with the panel. Select the required language film, which is dependant on the country and region. The text on the film is made visible to the user when the corresponding event LED or button LED on the panel fascia is lit.

①->②->③->④->⑤->⑥
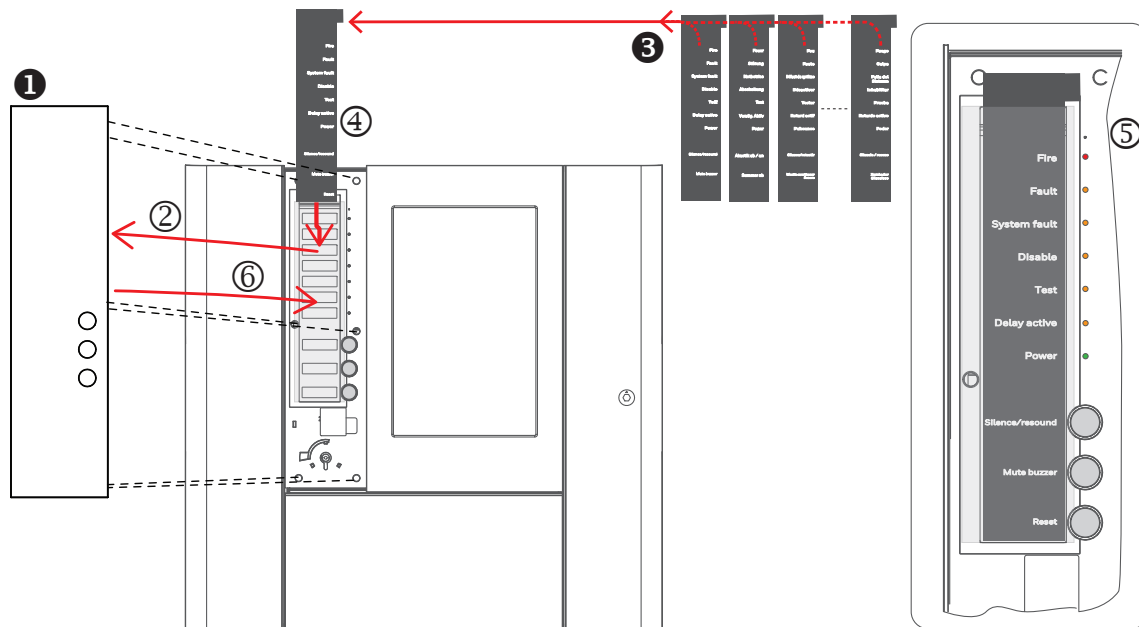
Fitting the HMI cable

Locate the HMI cable (which is also referred to as OCulink cable) ②, which is taped to the inside of the panel door ①. Route the HMI cable from the door into the backbox. Press the button ④ **'a'** on the HMI cable connector and insert it ④ **'b'** into the CPU socket ③. The HMI cable connector can only be fitted into the CPU socket in the profiled orientation. You will hear a click sound when the connector is securely engaged.

> ⚠️ Damage will occur if the HMI cable is removed incorrectly and also it must not be fitted or removed under tension. When removing the HMI cable press the button on the connector to unlatch it while it is being removed from the CPU socket.
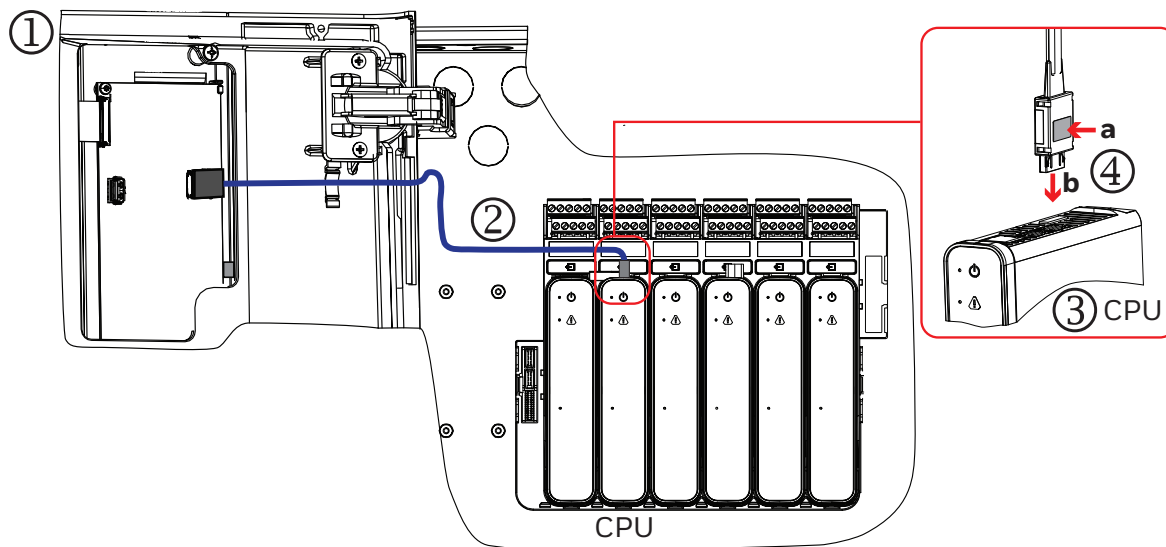
Commissioning

The commissioning process require each Notifier INSPIRE E10/E15 Control panel based system to be powered up to an operational state ready for configuration. Power up from the mains before connecting the batteries, refer to the *Commissioning instructions (HOP-138-8EN)* for details on first time commissioning.

Configuration and System Test

The CLSS Configuration Tool must be used to configure the Notifier INSPIRE system to site specific requirements and to national and local regulations, see *CLSS Configuration Tool user guide (4188-1124-EN)*.

Once an Notifier INSPIRE system is fully configured using the CLSS Configuration Tool, the tool must be connected to an Notifier INSPIRE panel and systems configurations synchronised. Each Notifier INSPIRE system must be tested to ensure that it meets site requirements as per project specification.

Standards

> ⚠ (!) The CIE must not be used to actuate the mechanisms that unlock, release or open doors in the event of fire.

Regulation (EC) No 1907/2006
◘ According to Article 33 of REACH Regulation be informed that this product contain components with Lead (CAS Number: 7439-92-1) above the threshold level of 0.1% by weight

EN54-2: Clause 13.7 requirements

EN54 ✓ The Notifier INSPIRE E10/E15 Control panel is designed with fall back fire line so that in the event of a processor failing and in the event of a fire detection, the General Fire LED and panel buzzer are activated and if the FARE/FRE module is fitted then the Fire Routing output will be activated. Therefore the restriction of 512 detectors and/or MCPs apply to each panel.

◘ Devices with internal isolators (when used with the B501 AP detector base): Ensure loops comply with the requirements of EN54-2.

EN54-2: Clause 12.5.2 requirements
Most OPAL loop devices have internal, FET-type isolators. With OPAL compatible sensor bases the isolator is connected across terminals +2 and +4 on the positive leg.

◘ To comply with the clause requirements, isolators must be fitted between a *maximum of 32 loop devices. For* Notifier INSPIRE E10/E15 Control panel based system:
 - Devices without internal isolators (this covers legacy CLIP protocol devices and some OPAL devices – see device data sheet): DO NOT place more than 20 CLIP devices between isolators.

Approvals

Specifications : EN 54-2 : 1997 / A1 : 2006
VdS approval :   G 221062

Option with requirements EN54-2

CONTROLS

Delays to outputs	CLAUSES
Outputs C[2], E[2] and G[1]	7.11.1
Provision to switch on and switch off the delayed operation of outputs [3]	7.11.2
Dependencies on more than one alarm signal	
Type A dependency	7.12.1
Type B dependency [2] - Confirmation alarm signal from the same fire detector - Confirmation alarm signal from another fire detector in the same zone - Confirmation alarm signal from another fire detector in a different zone	7.12.2
Type C dependency[1]	7.12.3
Disablement of addressable points	9.5
Test condition	10

INPUTS/OUTPUTS

Output to fire alarm devices	7.8

Control of fire alarm routing equipment	
Output to fire alarm routing equipment	7.9.1
Alarm confirmation input from fire alarm routing equipment	7.9.2
Outputs to fire protection equipment	
Output type A	7.10.1
Output type B	7.10.2
Output type C	7.10.3
Fault monitoring of fire protection equipment	7.10.4
Output to fault warning routing equipment	8.9

DISPLAYS

Alarm counter	7.13
Fault signals from points	8.3

Note [1]: For VdS Installations not permitted.

Note [2]: For VdS installations not permitted in combination with a manual call point.

Note [3]: For VdS installations the maximum delay time for FARE (Output E) is 3 minutes.
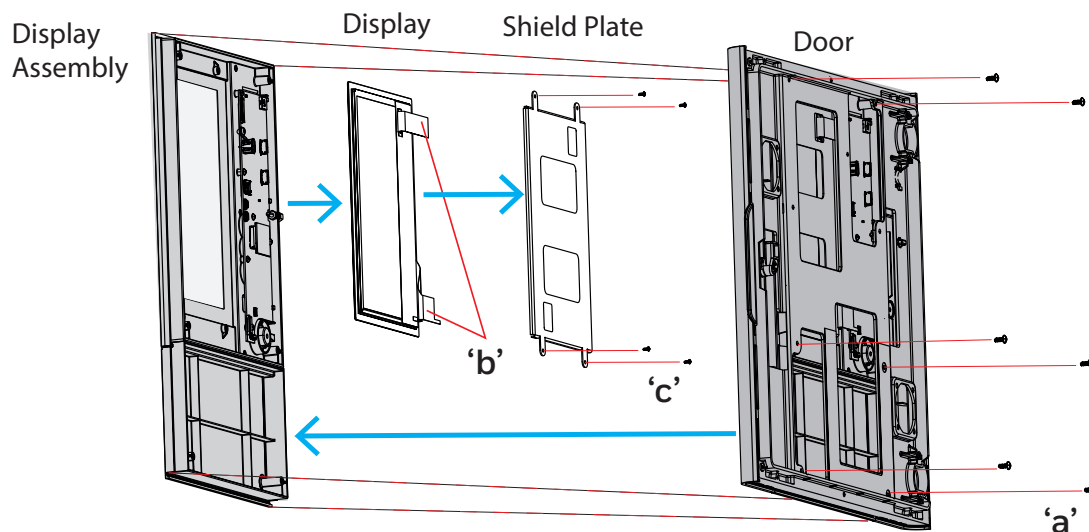
Appendix A
ECODESIGN REQUIREMENTS FOR ELECTRONIC DISPLAYS

Open the panel door using the key. Follow the steps below to dismantle the assembly to gain access to the Display for removal or maintenance.

1. Remove the 6 – Display Assembly fixing screws 'a'.
2. Remove Display Assembly from the Door.
3. Disconnect display cables 'b'.
4. Remove the 4 – Shield Plate fixing screws 'c'.
5. Remove the Shield Plate.
6. Remove the Display.

Appendix B
DOOR RELEASE CONTROL SYSTEM

The NEN 2535 is a standard that is applicable to autonomous fire detection systems in buildings which are not integrated with other systems.

The purpose of Independent Door Management System (IDMS) installations is to provide a reliable control signal to the relevant fire protection system, without triggering an alarm signal and/or forwarding it to the fire-fighting organization, such as the fire brigade.

Door management by IDMS

An IDMS require:
- Alarm from Building – a maximum output to Activate IDMS
- Alarm from IDMS – a maximum signal to a Notifier INSPIRE system to activate the relevant Operational Logic.
- IDMS Fault – Controlled Closure of Door. A maximum signal received by Notifier INSPIRE system of IDMS fault status.
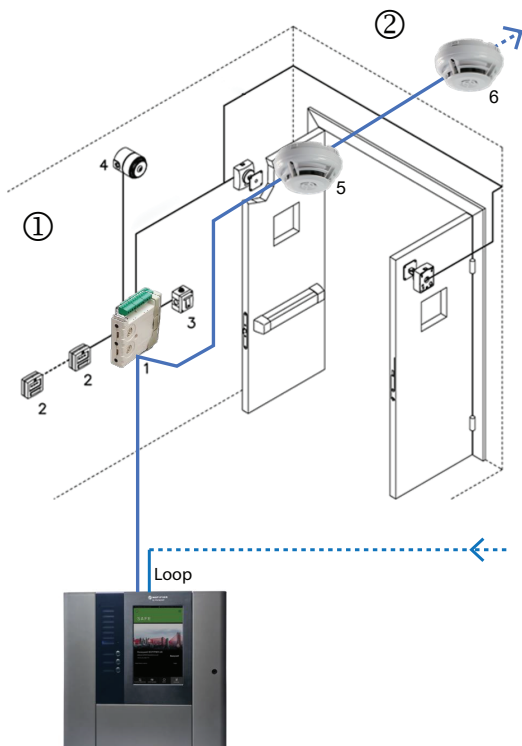
1. FACP 1Zone
2. MCP Alarm
3. MCP Reset
4. Siren
5. Detector

Input:
- Alarm
- Fault
- Disablement

Loop
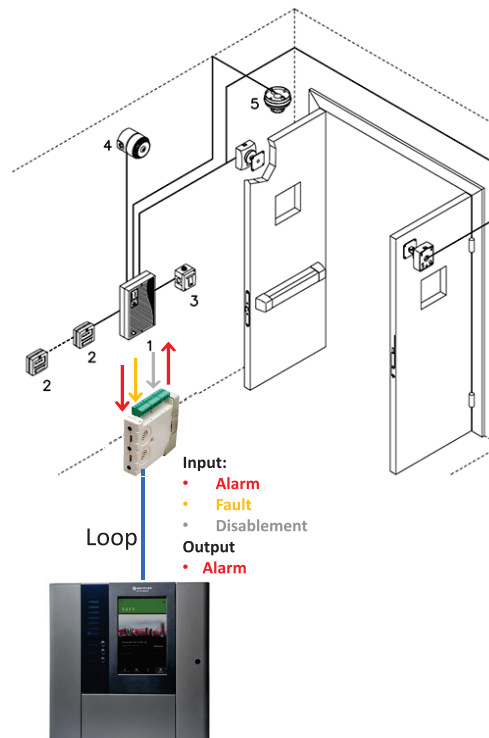
Output
- Alarm

Door managed by Notifier INSPIRE

Inspire require:
◻ Alarm from Sensor - Output to Close door
◻ Fault from Sensor - Output to Close door
◻ Sensor Disabled - Output to Close door

1. Module
2. MCP Alarm
3. MCP Reset
4. Siren

Example corridor configuration considerations:
◻ In order to prevent smoke movement between different areas, compartmenting ① and ② is necessary.
◻ Sensors on each side of the Fire door can be configured to control an output Module **1**
◻ In case of an Alarm, Fault or Disablement from a single sensor, the door holder must release the doors.
◻ The sensors near the door are responsible for controlling the Fire door and are part of the entire installation.
◻ An individual sensor must generate its own individual Alarm, Fault, Disable trigger
◻ A configurable timer must activate the control Module **1** every 24 hour to prevent permanent magnetisation of the door holders.

Activate Module **1** to control the door holders on:
◻ Sensor 5 in Alarm or
◻ Sensor 6 in Alarm or
◻ Sensor 5 in Fault or
◻ Sensor 6 in Fault or
◻ Sensor 5 in Disabled or
◻ Sensor 6 in Disabled or
◻ Once every 24 hour

UK CA

0832

Novar GmbH
Forumstrasse 30, 41468 Neuss, Germany
UK contact Novar Systems Ltd, Building 5, Carlton Park,
King Edward Avenue, Leicester LE19 0AL, UK
Manufactured by HLS Romania, Salcamilor 2 305500 Lugoj

23

DoP	Product No.
001-UKCA CPR-2022	HOP-131-206
001-UKCA CPR-2022	HOP-134-412

BS EN54-2, BS EN54-4

HOP-131-206	(BS EN54-2 & 4)
HOP-134-412	(BS EN54-2 & 4)

Intended for use in fire detection and fire alarm systems
in and around buildings

**Refer to 001-UKCA CPR-2022 for level or class of performance
declared, for details see website www.notifierfiresystems.co.uk**

CE

0786

Novar GmbH
a Honeywell Company
Forumstrasse 30, 41468 Neuss, Germany

21

DoP	Product No.
001-CPR-2021	HOP-131-206
001-CPR-2021	HOP-134-412

EN54-2, EN54-4

HOP-131-206	(EN54-2 & 4)
HOP-134-412	(EN54-2 & 4)

Intended for use in fire detection and fire alarm systems
in and around buildings

**Refer to 001-CPR-2021 for level or class of performance
declared, for details see website www.notifierfiresystems.co.uk**

WEEE Directive:
At the end of their useful life, the packaging, product
and batteries should be disposed of via a suitable
recycling centre.
Do not dispose of with your normal household waste.
Do not burn.

At the end of their useful life, the packaging,
product and batteries should be disposed of
via a suitable recycling centre and in
accordance with national or local legislation.

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