SHIELD®

TRUSTED WORLDWIDE

FIRE DETECTION SOLUTIONS
Touch Screen Technology

TRIDENT® SERIES

LPCB
LOSS PREVENTION CERTIFICATION BOARD
Certificate no. 360
(Ref redbooklive.com)

C E

7" Touchscreen Display

2-16 Loops

128 Nodes on Network

Multiple User Access

10,000 Events

Introduction

Competence and innovation driven by consistent market development and customer requirements have shaped the successful development of the SHIELD Brand. The extensive product range of the market leader in the field of fire detection technology contains single, individually integrable system performances. In this way, a customized overall fire protection concept can be planned and realized for every need with optimally synchronized products.

Performance is in international demand, SHIELD is among the highly accredited fire alarm companies that meet rigorous British and American standards for all projects from small conventional system to multi site networks. Certifications such as UL and FM approvals have earned SHIELD a world-renowned reputation with quality products and powerful solutions.

A strong brand is generally known to be a secure basis for close and lasting customer relationships. In accordance with this, SHIELD uses available potential in order to keep on growing in a dynamic competitive environment. And at the same time, SHIELD stands for innovative and high quality fire alarm and evacuation systems.

We invite you to explore and visit our new website www.shieldglobal.com. You can also send us your feedback and inquiry through our user-friendly online forms.

In line with SHIELD policy for continuous product development, SHIELD has the right to change specifications without prior notice.
Images shown in this catalogue are for illustrations purposes only.

Contents

LPCB C E

SHIELD®

ADDRESSABLE FIRE DETECTION SYSTEM

TRIDENT®

LPCB
LOSS PREVENTION CERTIFICATION BOARD
360b-(cl-4)

TRIDENT

2 - 16 Loops (Touch Control)

Cert/LPCB ref. 360b-(cl-4)

Product Overview

The Trident product range combines the latest hardware and software to produce a control and indication system, which is powerful and sophisticated, yet simple to use. The 7" full colour touch screen provides a clear, uncluttered and intuitive interface, to minimise end user training requirements.

Available in 4 or 8 slot variants, with each slot supporting a 2 loop detection card, the Trident fire control panel ranges from 2 to 16 loops and easily supports more than 2000 detection devices.

Trident can be configured to suit all types of system, from the most simple to very complex, utilising secure networking and powerful network-wide cause and effect capabilities.

A wide array of outputs are provided as standard within the Trident control panel, however these can be expanded by adding Trident I/O cards in free slots, including:

- 16 channel input/output card.
- 8 way conventional zone card.
- 4 way sounder card.
- 8 way relay card.

Standard Features

- EN54-2 / EN54-4 certified.
- 7" full colour resistive touch screen display Intuitive user interface.
- 2 to 16 detection loops.
- 4 slot or 8 slot versions, each slot supporting a 2-loop card.
- 500mA loop current.
- 0, 48, 96 or 144 zone indicators.
- Enable control keyswitch as standard.
- Front loading printer option (0 and 48 zone panels).
- Standard panel supports up to 26Ah batteries.
- 5.25A and 10.25A EN54-4 power supply options.
- Deep enclosure option for 45Ah batteries.
- Network up to 128 panels.
- 4 programmable sounder outputs.
- 5 programmable relays.
- 3 programmable inputs.
- 24 programmable soft "function keys".
- 10000 event log, with filtering.
- Spare slots may be used to add more inputs/outputs.
- Connectivity enabled using the Media Gateway.

Config. Features

- Comprehensive day/night mode facility.
- Configuration application downloaded from a user specific account.
- The user is kept up to date with any new features and functions.
- Powerful and versatile cause and effect capability.
- 80 character zone location message per zone.
- 80 character device location message.
- Up to 64 user login accounts supported on the Trident panel.

Ordering Information

Product Code	Description
TEN-95112	Trident, 2 Loop 10A PSU, 0Z, Enable k/switch
TEN-95122	Trident, 2 Loop 10A PSU, 48Z, Enable k/switch
TEN-95124	Trident, 2 Loop 10A PSU, 48Z, Enable k/switch, Printer
TEN-96112	Trident, 2 Loop SHIELD 10A PSU, 0Z, Enable k/switch in Deep Enclosure
TEN-96122	Trident, 2 Loop SHIELD 10A PSU, 48Z, Enable k/switch in Deep Enclosure
TEN-96124	Trident, 2 Loop SHIELD 10A PSU, 48Z, Enable k/switch, Printer in Deep Enclosure
TEN-9058	Trident, Dual loop Module
TEN-9023	Trident, Network Card
TEN-91000	Trident, Network Repeater – Surface Mount
TEN-91001	Trident, Network Repeater – Flush Mount

Note: Specifications are subject to change without notice.

Connectivity

The Media Gateway card plugs into one of the panel slots and provides connectivity to our servers using IP, GSM or Dial Up connectivity.

The Media Gateway card is also used to meet integration application requirements.

Trident Display

Trident utilises a full colour, 7" 800x480 touch screen graphical display to provide a clear, simple and intuitive user interface.

80 character zone location and 80 character device messages allow a clear, concise description of each detection device location to be configured.

Resistive touch screen technology permits control functions to be available, even when wearing protective gloves.

User Access

Access to the Trident menu and control functions is provided by a unique 6 digit pass code or by the optional enable control key switch.

Up to 64 individual login accounts can be configured, with different profiles and access permissions.

Powerful, Network wide Cause & Effects

Trident cause and effect capacity supports 5000 cause and effect entries, with up to 20000 inputs controlling 20000 outputs across the network.

The introduction of Groups in Trident allows rationalisation and simplification of the system configuration.

Support for up to 5000 groups and up to 50000 devices is provided.

Trident Display – Function Buttons

Up to 24 customer specific function buttons may be configured to provide control, disablement and engineering functions.

The functions buttons can be configured to be either available or hidden for each log in profile.

Zone Indicators

Up to 144 zone indicators or 48 zone indicators plus panel printer are available.

Trident supports up to 2000 detection zones and zone indicators.

Note: Specifications are subject to change without notice.

Power Supply Options

Trident is available with two power supply options, each available in 230V or 115V mains voltages.

• 5.25A (supports up to 26Ah batteries)

• 10.25A (supports up to 45Ah batteries)

Note: The 4 slot enclosure houses 18Ah batteries and the 8 slot enclosure houses 33Ah batteries.

Backlight Control

The built in light sensor allows the display backlight can be configured to follow the ambient light levels or automatically dim after a period of inactivity.

Event Log

A 9999 entry event log records all system activity to 1 second resolution. The log is held in secure memory and is retained when power is removed from Trident.

Powerful filtering allows the log to be sorted by event type, between dates, by zone, by panel and by address.

Using the configuration program, the event log can be downloaded and stored as a comma separated values (csv) format.

Printer Option

A 40 character front loading thermal printer prints all events as they occur.

The printer can also be used to print all/selected event log entries.

Expansion Options

Trident I/O cards can be fitted in spare slots within the panel.

The family includes

• 8 way conventional detection board
• 4 way sounder output board
• 8 way volt free relay contact board
• 16 channel programmable I/O board

Note: Specifications are subject to change without notice.

Addressable Fire Alarm Control Panel

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Technical Data

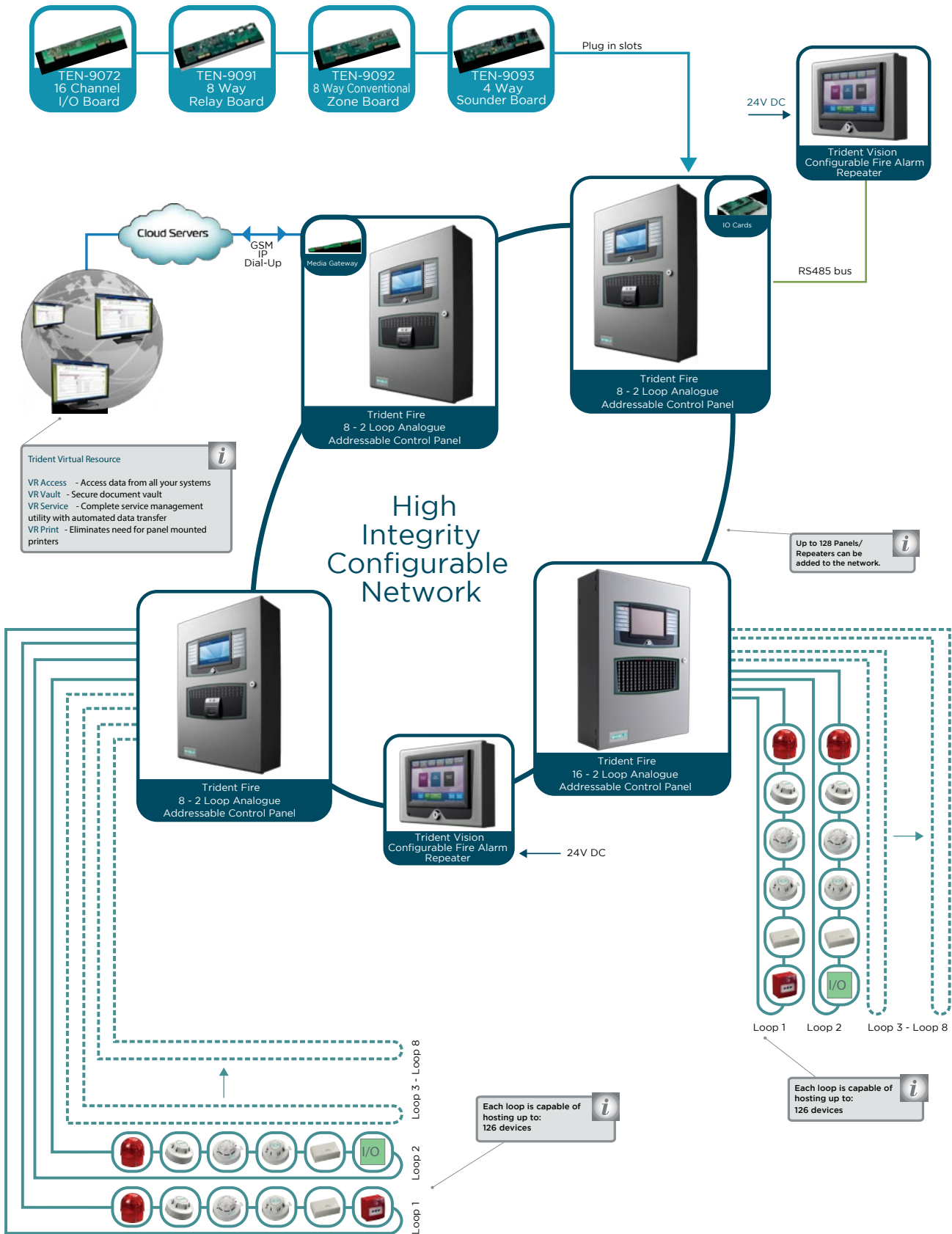|	2 - 8 loop Enclosure	2 - 16 loop Enclosure
Size	420mm (W) x 590mm (H) x 150mm (D) (Standard)	540mm (W) x 720mm (H) x 150mm (D) (Standard)
Construction	1.5mm mild sheet steel	
Cable Entry	28 knockouts top, 19 knockouts back, 1 knockout each side, 2 knockouts bottom (Standard)	38 knockouts top, 25 knockouts back, 2 knockouts each side, 2 knockouts bottom (Standard)
	38 knockouts top, 19 knockouts back, 1 knockout each side, 2 knockouts bottom (Deep)	50 knockouts top, 25 knockouts back, 2 knockouts each side, 2 knockouts bottom (Deep)
Battery Capacity	Up to 26Ah (Standard), Up to 45Ah (Deep)	

Specifications

Finish	Epoxy powder coated
Colour - Lid & Box	BS 00 A 05 fine texture
Power supply voltage	230V AC or 115V AC
Power supply rating at 24V DC	5.25A (charges up to 26Ah) or 10.25A (charges up to 45Ah)
Display	Full colour 800 x 480 LCD with resistive touch screen and automatic backlight dimming
Printer	40 column, front loading thermal (optional)
Zone LED indicators	Up to 3 banks of 48 (144) as standard
Software zones	2000
Software groups	5000
Event log	10,000 events, 1 second resolution. Filterable and printable Detection loops
Detection loops	2 to 16 added 2 at a time (TEN-9058 dual loop cards)
Detection loop current	500 mA each
Sounder circuits	4 each rated at 2.5A, 24V DC, programmable
Auxiliary 24V supply 1 & 2	24V DC fused at 500 mA
Default relays	Fault, Fire, Alarm, Programmable 1 and Programmable 2 (all re-programmable)
Programmable inputs	3, activated by volt free contacts
Auxiliary Serial port A	RS232 programmable
Auxiliary Serial port B	RS232 programmable
Ancillary I/O board serial port	RS485 programmable
Fire Routing (Ifam) serial port	RS485 programmable
USB host port	USB type A
USB device port	USB type B
Fire routing output	Monitored
Fire routing input	Monitored
Fault routing output	Monitored
Fault routing input	Monitored
Extinguisher output	Monitored
Extinguisher input	Monitored
Extinguisher fault input	Monitored

Current Ratings

Standby (mA)	Alarm (mA)
220 mA @ 115 VAC	234 mA @ 115 VAC
176 mA @ 230 VAC	181 mA @ 230 VAC
550 mA @ 24 VDC	620 mA @ 24 VDC

Note:

The data provided for standby and alarm current includes loads of the 2 loop FACP alone and excludes current loads from external devices or equipment.
Two loop operation represents the minimum board configuration of the FACP.

Note: Specifications are subject to change without notice.

TEN-9072
16 Channel
I/O Board

TEN-9091
8 Way
Relay Board

TEN-9092
8 Way Conventional
Zone Board

TEN-9093
4 Way
Sounder Board

Plug in slots

24V DC

Trident Vision
Configurable Fire Alarm
Repeater

Cloud Servers

GSM
IP
Dial-Up

Media Gateway

IO Cards

RS485 bus

Trident Fire
8 - 2 Loop Analogue
Addressable Control Panel

Trident Fire
8 - 2 Loop Analogue
Addressable Control Panel

Trident Virtual Resource ⓘ

VR Access   - Access data from all your systems
VR Vault   - Secure document vault
VR Service - Complete service management
utility with automated data transfer
VR Print   - Eliminates need for panel mounted
printers

High
Integrity
Configurable
Network

Up to 128 Panels/
Repeaters can be
added to the network. ⓘ

Trident Fire
8 - 2 Loop Analogue
Addressable Control Panel

Trident Vision
Configurable Fire Alarm
Repeater

24V DC

Trident Fire
16 - 2 Loop Analogue
Addressable Control Panel

Loop 1   Loop 2   Loop 3 - Loop 8

Loop 3 - Loop 8

Each loop is capable of
hosting up to:
126 devices ⓘ

Loop 2

Each loop is capable of
hosting up to:
126 devices ⓘ

Loop 1

Note: Specifications are subject to change without notice.

TRIDENT Vision

Compatible Equipment & Extras

Trident Network Card

Multi Purpose Flushing Collar

Overview

Trident Vision provides a means of allowing full display and optional control of the Trident Fire Alarm Control Panel from a small and unobtrusive local control station.

Based on an all new hardware and software platform, the large, full colour graphical display with touch screen functionality delivers information on the status of the fire alarm system to single or multiple locations.

Trident Vision repeaters can be configured to offer full display and control to replicate the functionality of the fire Control Panel or to operate as a simple, display only device for applications where access to control the fire alarm system would be inappropriate.

For other annunciation and control applications, Trident Vision can be configured to provide customisable switches and indications for a host of fire system ancillary functions.

Trident Vision may be connected to the fire Control Panels' fault tolerant, ancillary RS485 bus or to the fire alarm panel fault tolerant network using standard, fire rated cable offering flexibility in system wiring.

Available in several standard formats, Trident Vision can be mounted directly onto a wall, be recessed using our quick-fix adaptor frame or fully flush mounted. Special enclosure finishes and colours are also available to match existing decor.

Config. Features

- Robust, full colour, 7" 800 x 480 touch screen graphical display.
- Full indication of all information displayed at the fire Control Panel.
- Automatic display brightness adjustment.
- Silenceable internal sounder.
- Connections Via:
    - Control Panel RS485 bus
    - Option to connect to Control Panel network
- Low current, 24 Vdc powered.
- Slim compact construction.
- Configurable functionality.
- Configurable languages.
- Optional Enable key-switch.

Note: Specifications are subject to change without notice.

Graphic Software - Vega
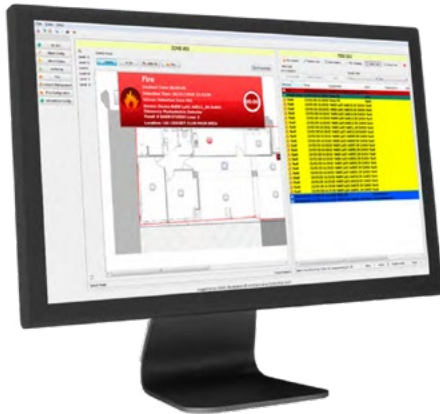
Overview

VEGA, a powerful and sophisticated software solution gives building managers complete monitoring and control over fire detection, providing a comprehensive fire risk and incident management system.

It can automatically switch to the area on the site map to where a fire device has been activated to quickly view an event and begin immediate investigation. In addition, It also provides a full capability to monitor a Fire Alarm System for faults and alarms and allows the operator to easily manage a fire incident.

With Vega, operators and users are alerted to an event as soon as it occurs and are directed to the location of the event. No situation requires a more urgent response than a fire event. On a large public site, especially during busy periods, public safety is paramount.

Where time is of the essence, site managers can respond quickly and efficiently to a fire event. Vega plays a crucial role in safeguarding people, vitally important information and property.

The Default Accounts are:

■ Operator – Ordinary users of the system.
■ Manager – Users who supervise the operators and as such have additional permissions and access. 2D GUI editing permitted.
■ Maintainer – Users who maintain the system. Allows analogue value polling, control of outputs, fire panel operations, fire zone testing and additional maintenance facilities.
■ Administrator – Users who are permitted to administer the system. Full system access permitted.

Features

■ Supports dual screens, allowing a dedicated screen for the 2D location images and a separate screen for listing active events and system management.
■ Fully configurable on site using administrator login.
■ Reports configuration mismatch errors – ensuring that the graphics system is properly maintained and updated whenever there are any panel configuration revisions.
■ Powerful event log filtering and reporting.
■ Manage the state of the fire system using a combination of graphical images and system controls.
■ Programmable macro buttons to perform panel control operations.
■ Full map navigation using configurable buttons or map areas.
■ Device analogue value reporting.
■ Perform device and zone disablements/enablements.

Note: Specifications are subject to change without notice.

SHIELD®

ADDRESSABLE DETECTORS & BASES

Shield is a range of high specification, analogue addressable fire detectors, Shield detectors offer reliable detection and false alarm management by a combination of EN54 approved operating modes and sophisticated algorithms. Shield has a distributed intelligence system where decisions are made in the detector head into the detector, allowing it to adapt to dirty or dusty environments which reduces false alarms.

The response charateristics have been carefully set so that the detectors comply with the requirements of the relevant part of EN54 in all response modes.

Designed for the use in medium to large applications with specific system requirements. Shield give you total reassurance in installations where adaptability or changing conditions and protection against unwanted alarms is paramount.

• Automatic drift compensation to ensure constant sensitivity
• Advanced features for audio visual devices
• Rejection of transient signals
• Four bytes of non-volatile memory for user data
• Alarm flag for fast alarm reporting
• Insect resistant

Cert/LPCB ref. 010q
010p
010m

CE declared under
the EMC Directive

TEN-A8011 — Photo-Electric Smoke Detector with Isolator

The Shield Photo-Electric Smoke Detector uses optical sensing technology, PureLight, to detect smoke particles entering the chamber. PureLight marks a new stage in the development of Shield optical technology and aims to reduce the possibility of false alarms whilst increasing the reliability of detection of a real fire.

- PureLight optical technology reduces false alarms and enhances smoke recognition.
- Drift compensation.
- Tri-coloured LED status indicator.

(LPCB)
Cert/LPCB ref. 010bc/01

Technical Data

Detector Type	Photo-electric
Working Voltage	17 - 35 V DC
Modulation Voltage	5 - 13 V (peak to peak)
Maximum Alarm Current LED on	3.5 mA
Surge Current	560 µA
Supervisory Current	350 µA
Test Method	FasTest for quicker testing of detectors
Humidity	0% to 95% RH
Operating Temperature Range	-40°C to +70°C
Dimensions (diameter x height)	100 mm x 48 mm (with base)
Weight	83 g

SEN-A4011 — Photo-Electric Smoke Detector without Isolator

SHIELD Optical Smoke Detector works on the light-scatter principle and is ideal for applications where slow-burning or smouldering fires are likely.

- Responds well to slow-burning, smouldering fires.
- Well suited for bedrooms and escape routes.
- Unaffected by atmospheric pressure.

(LPCB)
Cert/LPCB ref. 010q/18

Technical Data

Detector Type	Photo-electric
Working Voltage	17 - 28 V DC
Modulation Voltage	5 - 9 V (peak to peak)
Maximum Alarm Current LED on	4 mA
Surge Current	1 mA
Supervisory Current	340 µA
Test Method	Home safeguard, Gemini 501
Storage Temperature Range	-30°C to +80°C
Operating Temperature Range	-20°C to +60°C
Dimensions (diameter x height)	100 mm x 42 mm
Weight	105 g

Note: Specifications are subject to change without notice.

(LPCB) CE

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TEN-A8012

Heat Detector With Isolator

Shield Heat Detector is sleek and evolutionary, with a 360° LED indicator which illuminates red when in alarm, yellow to indicate a fault and green to indicate protocol activity.

■ Dual heat sensors.
■ FasTest for quicker testing of detectors.
■ Tri-coloured LED status indicator.

Technical Data

Detector Type	Heat
Working Voltage	17 - 35 V DC
Modulation Voltage	5 - 13 V (peak to peak)
Maximum Alarm Current LED on	3.5 mA
Surge Current	560 µA
Supervisory Current	350 µA
Test Method	FasTest for quicker testing of detectors
Humidity	0% to 95% RH
Operating Temperature Range	-40°C to +70°C
Dimensions (diameter x height)	100 mm x 50.5 mm (with base)
Weight	83 g

SEN-A4013 / SEN-A4014

Heat Detector Without Isolator

SHIELD Heat Detector is distinguishable by the low airflow resistant case and uses a single thermistor to sense the air temperature around the detector.

■ Ideal for environments that are dirty or smoky under normal conditions.
■ Well suited for warehouses, loading docks and parking garages.
■ Unaffected by wind or atmospheric pressure.
■ Remote test feature.

Technical Data

Detector Type	Heat
Working Voltage	17 - 28 V DC
Modulation Voltage	5 - 9 V (peak to peak)
Maximum Alarm Current LED on	4 mA
Surge Current	1 mA
Supervisory Current	360 µA
Heat Element Rating	55°C (SEN-A4013), 90°C (SEN-A4014)
Test Method	Hair dryer
Storage Temperature Range	-30°C to +80°C
Operating Temperature Range	-20°C to +60°C
Dimensions (diameter x height)	100 mm x 42 mm
Weight	105 g

Note: Specifications are subject to change without notice.

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TEN-A8013

LPCB
Cert/LPCB ref. 010bb/01

Multisensor Detector With Isolator

The Shield Multisensor Detector uses new optical sensing technology, PureLight, to detect smoke particles entering the chamber and is fitted with two thermistors for detecting heat. It can be switched to detect smoke, heat or a combination of both ofering greater flexibility.

- Drift compensation.
- FasTest for quicker testing of detectors
- Tri-coloured LED status indicator.

Technical Data

Detector Type	Photoelectric smoke sensor and Thermistor
Working Voltage	17 - 35 V DC
Modulation Voltage	5 - 13 V (peak to peak)
Maximum Alarm Current LED on	3.5 mA
Surge Current	560 µA
Supervisory Current	350 µA
Test Method	Home safeguard, Gemini 501
Humidity	0% to 95% RH
Operating Temperature Range	-40°C to +70°C
Dimensions (diameter x height)	100 mm x 50.5 mm (with base)
Weight	83 g

SEN-A4015

LPCB
Cert/LPCB ref. 010m/01

Multisensor Detector Without Isolator

SHIELD Multisensor contains a photo-electric smoke sensor and a thermistor (temperature sensor) whose outputs are combined to give the final analog value.

- Sensitive to a wide range of fires.
- Well suited for environments such as hotel bedrooms, warehouses & loading docks.
- Unaffected by wind or atmospheric pressure.

Technical Data

Detector Type	Photoelectric smoke sensor and Thermistor
Working Voltage	17 - 28 V DC
Modulation Voltage	5 - 9 V (peak to peak)
Maximum Alarm Current LED on	3.5 mA
Surge Current	1 mA
Supervisory Current	500 µA avg, 750 µA peak
Test Method	Home safeguard, Gemini 501
Storage Temperature Range	-30°C to +80°C
Operating Temperature Range	-20°C to +60°C
Dimensions (diameter x height)	100 mm x 50 mm
Weight	105 g

Note: Specifications are subject to change without notice.

LPCB CE

SEN-A4001 / TEN-A8030

Addressable Mounting Base

All detectors in the shield range fit the Intelligent Mounting Base. The Mounting Base is a low insertion force base with stainless steel contacts for the detector terminals.

- One way fit of detector.
- Locking feature to prevent unauthorized removal.

Technical Data

Operating Temperature Range	-20°C to +60°C
Material	Base: white flame retardant polycarbonate
	Terminal: nickel plated staniless steel
Dimensions (diameter x height)	100 mm x 20 mm
Weight	63 g

Cert/LPCB ref. 010q

SEN-A4003 / SEN-A4004

Short Circuit Isolator

The Isolator is placed at intervals on the loop and ensures that, in the case of a short circuit, only the section between the isolators will be affected. When the short-circuit is removed, the isolators automatically restore power and data to the isolated section.

- Detects wiring short-circuits.
- Minimizes disruption from short-circuits.
- Automatic de-isolation on the short-circuit removal.
- Upto 20 detectors or their equivalent load, may be installed between isolators.

Technical Data

Device Type	Isolator	
Style	Mounting Base and twist-in isolator module	
Working Voltage	17 - 28 V DC	
Operating Current	Modulation Voltage	5 - 9 V (peak to peak)
	Supervisory Current	35 µA
	Surge Current	0m A
	Maximum Current drawn	8.5 mA
	Maximum Line Impedance	50 Ω
Operating Temperature Range	-30°C to 80°C	
Dimensions (diameter x height)	100 mm x 35 mm	

Ordering Information

SEN-A4003	Short Circuit Isolator
SEN-A4004	Short Circuit Isolator Base

Cert/LPCB ref. 010aa/05

Note: Specifications are subject to change without notice.

Notes

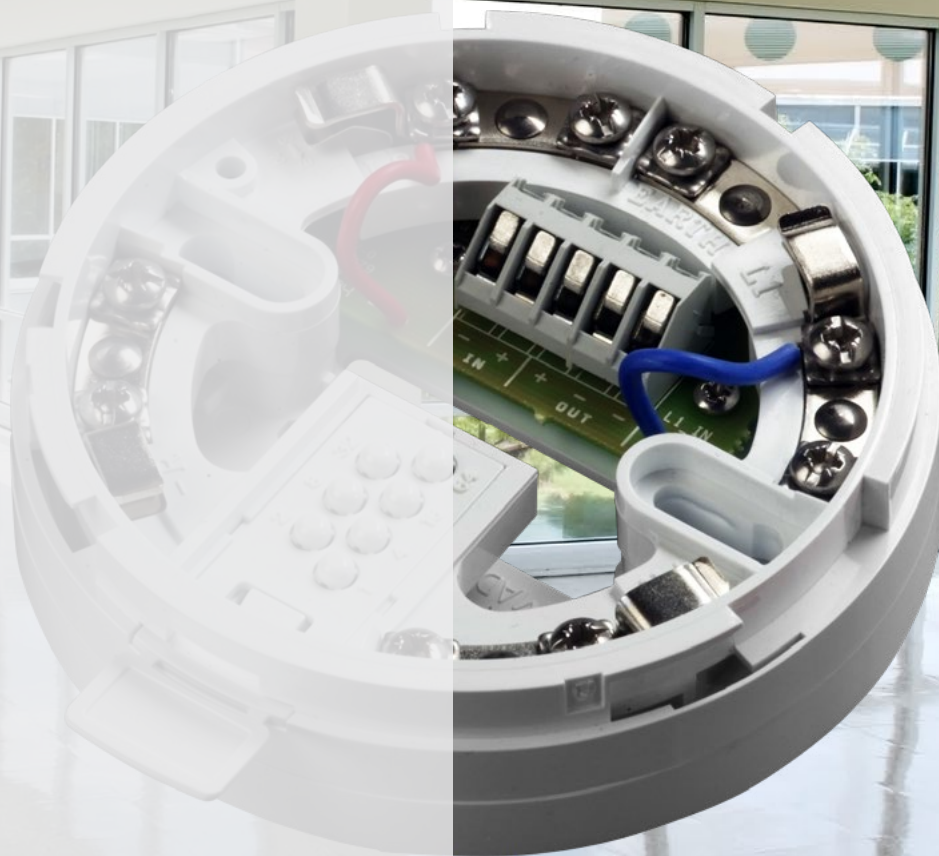# SHIELD®

ADDRESSABLE BASES

- Short Circuit Isolating Base
- Sounder Base
- Integrated Base Sounder
- Beacon Base

SEN-A4002

Short Circuit Isolating Base

Isolating Base senses and detects short circuit faults on loops and spurs. Upto 20 detectors or their equivalent load, may be installed between isolating bases. Detects wiring short-circuits. Minimizes disruption from short circuits.

LPCB
Cert/LPCB ref. 010aa/01

Technical Data

Detector Type	Photo-electric
Working Voltage	17 - 28 V DC
Modulation Voltage	5 - 13 V (peak to peak)
Maximum Alarm Current LED on	3.5 mA
Operating temperature	-20°C to 60°C
Storage temperature	-30°C to 80°C
Relative humidity	0 - 95 % RH
Design environment	Indoor use only
Dimensions (diameter x height)	100 mm x 31.25 mm

SEN-A4026

Sounder Base

The Shield Sounder Base (SEN-A4026) is a multifunctional device comprising a mounting base for Shield fire detectors, a sounder and a short-circuit isolator.

- 15 evacuation tones + 15 secondary or alert tones.
- 7 volume levels.
- Software-defined grouping addressing.
- Unique acoustic self test.
- Alarm switching by individual device, by group or of all devices on loop.
- Set-up and testing of devices at point of installation.
- Built in isolator with status information.

LPCB
Cert/LPCB ref. 010ax-(cl-1)

Technical Data

Operating voltage	17–28V DC (polarity sensitive)	
Protocol pulses	5–9V	
Current consumption at 24V	switch-on surge,	<1s 1.2mA
	quiescent	370 µA
	Device operated at maximum volume	5.5mA
Maximum sound output at 90°	90±3dB(A)	
Operating temperature	-20°C to 60°C	
Humidity (no condensation)	0 - 95 % RH	
IP rating	21C	
Dimensions (diameter x height)	115 mm x 38 mm	

Note: Specifications are subject to change without notice.

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SEN-A4005/SEN-A4006

Integrated Base Sounder

The Integrated Base Sounder comprises of a base sounder with integral mounting base and is for use with SHIELD ranges. It is designed for indoor use.

■ Two tones and two volume ranges 55-75dB(A) and 75-91dB(A).
■ Individual and group addressing
■ Unique acoustic self-test.
■ Built-in isolator (SEN-A4005).

CE
0832
15
(CPR-F1122/23)

Technical Data		
Operating voltage	17–28V DC (polarity sensitive)	
Protocol pulses	5–9V	
Current consumption at 24V	switch-on surge,	<1s1.2mA
	quiescent	<1.2mA
	sounder operated 55–75dB or 75–91dB	5mA
Maximum sound output at 90°	91db(A)	
Maximum sound output to EN54	83dB(A)	
Operating temperature	-20°C to 60°C	
Humidity (no condensation)	0 - 95 % RH	
IP rating (standard version)	21D	
Dimensions (diameter x height)	100 mm x 31.25 mm	

Note: Specifications are subject to change without notice.

SHIELD®
TRUSTED WORLDWIDE

SEN-A4010

CE declared under
the EMC Directive

Beacon Base

The Beacon Base is a loop-powered visual indicator combined with a standard Intelligent Mounting Base. It is used to signal a fire alarm in enclosed areas. The visual indicator base can be used with either a detector fitted or with a cap as a standalone alarm device.

- Visual indicator flash rate of once per second.
- Synchronization of visual indicator flash.
- Individual and group addressing.
- Unique visual indicator self-test.
- Loop-powered.
- Built-in Isolator (SEN-A4009).

Technical Data

Operating voltage	17–28V DC (polarity sensitive)	
Protocol pulses	5–9V	
Current consumption at 24V	switch-on surge,<s	1.2mA
	quiescent	300µA
	device operated	3.1mA
Operating temperature	-20°C to 60°C	
Humidity (no condensation)	0 - 95 % RH	
IP rating	21D	
Dimensions (diameter x height)	100 mm x 31.25 mm	

Ordering Information

SEN-A4005	Integrated Base Sounder with Isolator
SEN-A4006	Integrated Base Sounder
SEN-A4026	Sounder Base
SEN-A4010	Beacon Base

Note: Specifications are subject to change without notice.

SHIELD®

ADDRESSABLE SOUNDERS AND BEACONS

- Open Area Sounder
- Open Area Sounder Beacon

LPCB
Cert/LPCB ref. 010ak

CE
CE declared under
the EMC Directive

SEN-A4021

LPCB

Cert/LPCB ref. 010ak/01

Open Area Sounder

Open Area Sounder has been designed for use in open areas and can be connected to a SHIELD Trident system.

- Self-test fault monitoring.
- Two volume settings 92dB(A) and 100dB(A).
- Synchronization of tones.
- Individual and group addressing.
- Built-in isolator.
- Loop-powered.

Technical Data

Operating voltage	17–28V DC (polarity sensitive)	
Protocol pulses	5–9V	
Current consumption at 24V	switch-on surge,	1.2mA for <1 sec
	quiescent	333µA
	alarm, sounder 92/100dB(A)	5mA
Operating temperature	-10°C to 55°C	
Maximum sound output	100dB(A)	
IP rating	65	
Dimensions (diameter x height)	104 mm x 97.5 mm	

Ordering Information

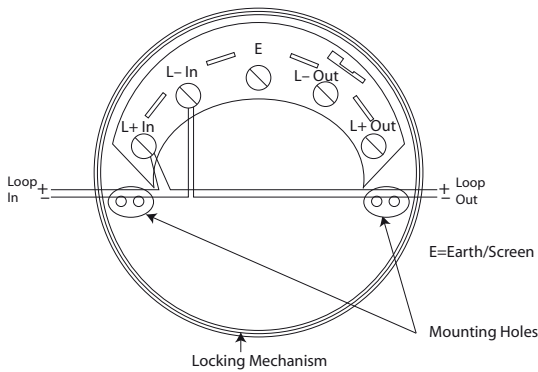|	
SEN-A4021	Open Area Sounder
SEN-A4025	Enhanced Deep Isolating Base

Fig 1. Base Diagram

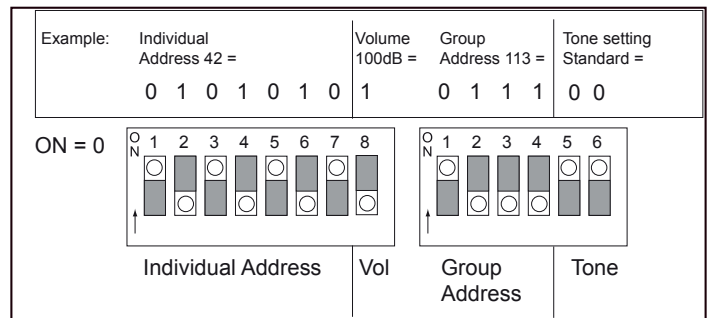**Fig 2. Address and Tone Setting**

Note: Specifications are subject to change without notice.

SEN-A4022

LPCB
Cert/LPCB ref. 010ak/03

Open Area Sounder Beacon

The Open Area Sounder Beacon Visual Indicator is designed for use in open areas and can be connected to SHIELD Trident system.

- Self-test monitoring.
- Two volume settings 92dB(A) and 100dB(A).
- Individual and group addressing.
- Synchronization of tones and flashes.
- Built-in isolator.
- Loop-powered.
- IP65 rated.

Technical Data

Operating voltage	17–28V DC (polarity sensitive)	
Current consumption at 24V	switch-on surge,	1.2mA for <1 sec
	quiescent	333µA
	alarm, sounder 92/100dB(A)	5mA
	alarm, sounder beacon	8mA
Operating temperature	-10°C to 55°C	
Maximum sound output	100dB(A)	
IP rating	65	
Dimensions (diameter x height)	104 mm x 97.5 mm	

Ordering Information

SEN-A4022	Open Area Sounder Beacon
SEN-A4025	Enhanced Deep Isolating Base

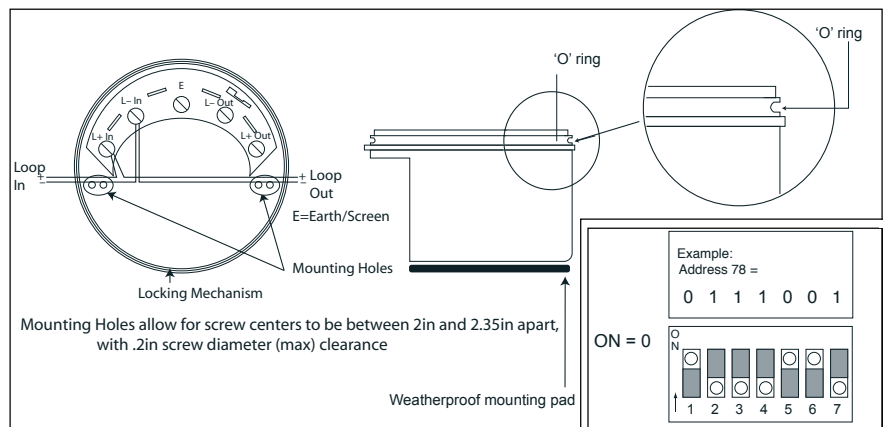
Fig 1. Wiring diagram

Fig 2. Example of Address

Note: Specifications are subject to change without notice.

Notes

SHIELD®

ADDRESSABLE INTERFACING MODULES

- Intelligent Switch Monitor
- Intelligent Input/Output Unit
- Intelligent Mains Switching Input/Output Unit
- Intelligent Twin Input/Output Unit
- Intelligent Din-Rail Switch Monitor
- Intelligent Din-Rail Input/Output Unit
- Intelligent Twin Switch Monitor
- Sounder Controller Unit

TEN-A6061

Intelligent Switch Monitor

The Intelligent Switch Monitor is designed to monitor the state of one or more single pole, volt-free contacts connected on a single pair of cables to report the status. It has a selectable status reporting delay making it suitable for monitoring flow switches.

- Contains controllable isolator
- Capable of switching up to 30V at 1A on each of the three outputs.
- Five pre-configured modes.
- Priority mode for fast response.
- Configurable input styles.
- Earth fault monitoring.

Cert/LPCB ref. 010ah-(cl-7)

Technical Data	
Supply voltage	17–35 V DC
Protocol	5–13 V peak to peak
Power-up surge current	900 µA
Max current LEDs On	2 mA
Max current LEDs disabled	500 µA
Operating temperature	– 40°C to + 70°C
Humidity	0 - 95 % RH (no condensation or icing)
Vibration, impact and shock	EN 54-17 & EN 54-18
Dimension (L x B x H)	150 mm x 90 mm x 60 mm
Weight	239 g

TEN-A6062

Intelligent Input/Output Unit

The Intelligent Input/Output Unit provides supervision of one or more normally open contacts connected to a single pair of cables and a set of changeover relay output contacts.

- Contains controllable isolator.
- Failsafe mode (meets BS 7273-4 requirements).
- Configurable input styles.
- Earth fault monitoring.

Cert/LPCB ref. 010ah-(cl-7)

Technical Data	
Supply voltage	17–35 V DC
Protocol	5–13 V peak to peak
Power-up surge current	900 µA
Quiescent current	500 µA
Max current LEDs On	3.5 mA
Max current LEDs disabled	500 µA
Relay output contact rating	1 A at 30 V DC or AC
Operating temperature	– 40°C to + 70°C
Humidity	0 - 95 % RH (no condensation or icing)
Vibration, impact and shock	EN 54-17 & EN 54-18
Dimension (L x B x H)	150 mm x 90 mm x 60 mm
Weight	244 g

Note: Specifications are subject to change without notice.

TEN-A6063

Intelligent Mains Switching Input/Output Unit

The Intelligent Mains Switching Input/Output Unit provides a single line tolerant circuit containing one or more normally open contacts connected to a single pair of cables. It also provides a voltage free change over relay output capable of switching mains.

■ Contains controllable isolator.
■ Two input channels.
■ Failsafe mode (meets BS 7273-4 requirements).
■ Earth fault monitoring.

Cert/LPCB ref. 010ah-(cl-7)

Technical Data

Supply voltage	17–35 V DC
Protocol	5–13 V peak to peak
Power-up surge current	1.1 mA
Quiescent current	700 µA
Max current LEDs On	5.2 mA
Max current LEDs disabled	700 µA
Relay output contact rating	5A at 30 V DC or 250 V AC
Operating temperature	– 40°C to + 70°C
Humidity	0 - 95 % RH (no condensation or icing)
Vibration, impact and shock	EN 54-17 & EN 54-18
Dimension (L x B x H)	150 mm x 90 mm x 60 mm
Weight	301 g

TEN-A6064

Intelligent Twin Input/Output Unit

The Intelligent Twin Input/Output Unit provides the function of two Input/Output Units within one enclosure. The two units are electrically independent of each other. There is a DIL switch on each unit to set the address. Both input/output units in the enclosure provide supervision of one or more normally open volt free contacts connected to a single pair of cables and a set of changeover relay output contacts.

■ Contains controllable isolator.
■ Configurable input styles.
■ Earth fault monitoring.

Cert/LPCB ref. 010ah-(cl-7)

Technical Data

Supply voltage	17–35 V DC
Protocol	5–13 V peak to peak
Power-up surge current	900 µA per Input/Output Unit
Quiescent current	500 µA per Input/Output Unit
Max current LEDs On	3.5 mA per Input/Output Unit
Max current LEDs disabled	500 µA per Input/Output Unit
Relay output contact rating	1 A at 30 V DC or AC
Operating temperature	– 40°C to + 70°C
Humidity	0 - 95 % RH (no condensation or icing)
Vibration, impact and shock	EN 54-17 & EN 54-18
Dimension (L x B x H)	150 mm x 90 mm x 60 mm
Weight	281 g

Note: Specifications are subject to change without notice.

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TEN-A6065

LPCB
Cert/LPCB ref. 010ah-(cl-7)

Intelligent Din-Rail Switch Monitor

The Intelligent DIN-Rail Switch Monitor is designed to monitor the state of one or more single pole, volt-free contacts connected on a single pair of cables and to report the status. It has a selectable status reporting delay making it suitable for monitoring flow switches.

■ Contains controllable isolator.
■ Priority mode for first response.
■ Configurable input styles.
■ Earth fault monitoring.

Technical Data	
Supply voltage	17–35 Vdc
Protocol	5–13 V peak to peak
Power-up surge current	900 µA
Quiescent current	500 µA
Max current LEDs On	2 mA
Max current LEDs disabled	500 µA
Operating temperature	– 40°C to + 70°C
Humidity	0 - 95 % RH (no condensation or icing)
Vibration, impact and shock	EN 54-17 & EN 54-18
Standards & approvals	EN 54-17, EN 54-18, CPR, LPCB, VdS and BOSEC
Dimension (L x B x H)	102 mm x 33 mm x 33 mm
Weight	46 g

TEN-A6066

LPCB
Cert/LPCB ref. 010ah-(cl-7)

Intelligent Din-Rail Input/Output Unit

The Intelligent DIN-Rail Input/Output Unit provides supervision of one or more normally open volt free contacts connected to a single pair of cables and a set of changeover relay output contacts.

■ Contains controllable isolator.
■ Failsafe Mode (meets BS 7273-4 requirements).
■ Configurable input styles.
■ Earth fault monitoring.

Technical Data	
Supply voltage	17–35 Vdc
Protocol	5–13 V peak to peak
Power-up surge current	900 µA
Quiescent current	500 µA
Max current LEDs On	2 mA
Max current LEDs disabled	500 µA
Operating temperature	– 40°C to + 70°C
Humidity	0 - 95 % RH (no condensation or icing)
Vibration, impact and shock	EN 54-17 & EN 54-18
Dimension (L x B x H)	102 mm x 33 mm x 33 mm
Weight	46 g

Note: Specifications are subject to change without notice.

LPCB CE

TEN-A6067

Intelligent Twin Switch Monitor

The Intelligent Twin Switch Monitor provides the function of two Switch Monitor units within one enclosure. The two units are electrically independent of each other. There is a DIL switch on each unit to set the address.

■ Contains controllable isolator.
■ Priority mode for first response.
■ Configurable input styles.
■ Earth fault monitoring.

Cert/LPCB ref. 010ah-(cl-7)

Technical Data

Supply voltage	17–35 Vdc
Protocol	5–13 V peak to peak
Power-up surge current	900 µA per Switch Monitor
Quiescent current	500 µA per Switch Monitor
Max current LEDs On	2 mA per Switch Monitor
Max current LEDs disabled	500 µA per Switch Monitor
Operating temperature	– 40°C to + 70°C
Humidity	0 - 95 % RH (no condensation or icing)
Vibration, impact and shock	EN 54-17 & EN 54-18
Standards & approvals	EN 54-17, EN 54-18, CPR, LPCB, VdS and BOSEC
Dimension (L x B x H)	150 mm x 90 mm x 60 mm
Weight	273 g

SEN-A4047

Sounder Controller Unit

The Sounder Control Unit is used to control the operation of a zone of conventional sounders and report their status to the control panel.

■ Allows sounders to be operated continously or be pulsed; 1 second on, 1 second off.
■ May be synchronized with loop sounders.

Cert/LPCB ref. 010ah/08

Technical Data

Operating voltage	17–28V DC	
Maximum current consumption at 24V	switch-on surge, max 100ms	2.6mA
	quiescent, 10kΩ EOL fitted	1.95mA
	sounders operated	1.7mA
	fault (yellow LED on)	3.6mA
	sounder line short circuit	2.8mA
Maximum continuous current	1A	
Maximum switching current	3A	
On resistance	0.2Ω	
Sounder output monitoring voltage (open-circuit condition)	9–11V DC	
Operating temperature	−20°C to +70°C	
Humidity	0 - 95 % RH	
IP rating	54	
Dimensions (L x B x H)	150 mm x 90 mm x 48 mm	

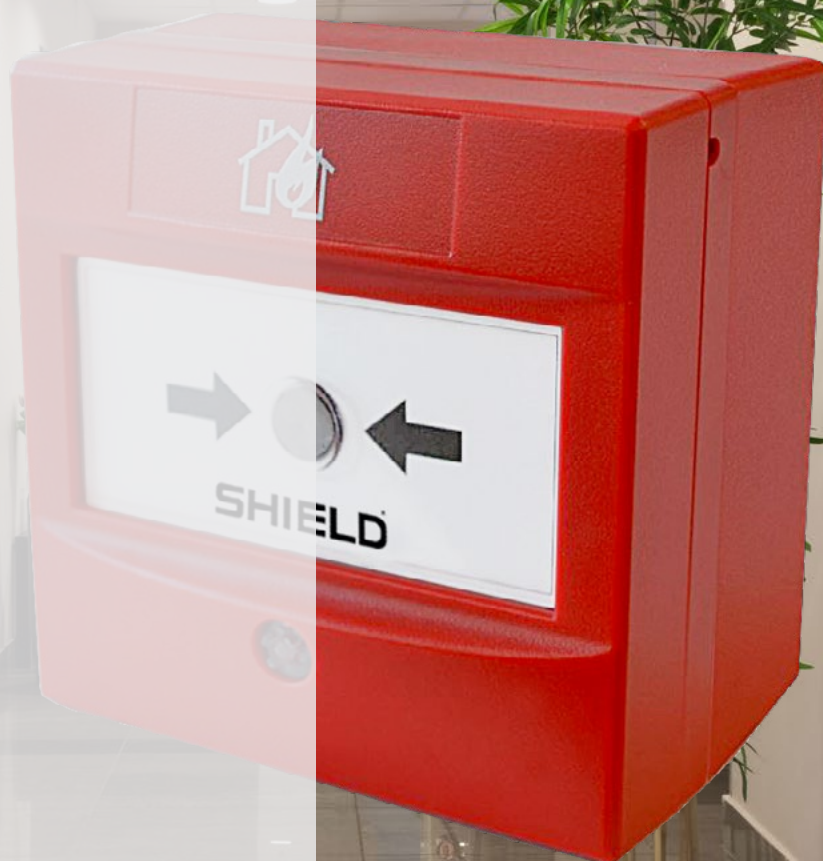Note: Specifications are subject to change without notice.

Notes

Note: Specifications are subject to change without notice.

SHIELD®

ADDRESSABLE MANUAL CALL POINT

- Intelligent Manual Call Point

LPCB
L OSS PREVENTION CERTIFICATION BOARD

010bh-(cl-2)

Addressable Manual Call Point

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SEN-A4061

LPCB
Cert/LPCB ref. 010bh/01

Intelligent Manual Call Point

The Intelligent Manual Call Point has been designed to operate one loop of intelligent fire detection devices. An alarm is initiated by pressing the resettable element. An alarm status is indicated through the rotation of the resettable element, displaying yellow and black indication bars and a solid red LED. The manual call point can be easily reset from the front using the supplied reset key.

- Resettable operating element.
- Easy access, front reset mechanism.
- E-Z fit connector system for installation.
- Ergonomic reset key.

Technical Data

Operating voltage	17 – 35 V DC
Operating temperature	-40°C to +70°C
Current Consumption at 24 V	100µA
Alarm Current at 24 V	4mA
IP rating	45
Dimensions (W x H x D)	90 mm x 90 mm x 63 mm
Weight	180 g

Note: Specifications are subject to change without notice.

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