

Product Guide



Allowing you the flexibility
to design a fire system that
best suits **your requirement.**

MORLEY  **IAS**
FIRE SYSTEMS
by Honeywell

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CONTROL PANELS

DXc Series

DX CONNEXION™



The Morley-IAS DX Connexion panel is ideally suited for use in the protection of small to medium sized systems. It is high performance, feature rich, economical fire alarm control panel designed to help both – the installer and the end user. The DX Connexion brings the traditional Morley-IAS qualities of reliability, flexibility, ease of installation, commissioning and maintenance, value with advanced features, intuitive functionality and a low cost of ownership. Retaining the inherited values of Morley-IAS, DX-Connexion brings additional features like large display with option of company logo, networking option, tactile and fast responsive key-pad, enhanced and robust power supply unit and industry leading aesthetics.

714-001-112

DXc1, Single-Loop Control Panel



Features

- 1 analogue loop.
- 6x40 characters, blue liquid crystal display with backlight illumination.
- Option to upload company logo.
- Configuration by Keypad and PC.
- 80 Fire Zones (Can be used with or without Zone LEDs)
- RS-485 port for repeater connection.
- 2 programmable output sounder circuits (monitored)
- Fire, Fault and Auxiliary relay (one each)
- Networking up to 16 loops
- Loop-Battery calculator for reliable system design
- 7 day timer
- Onboard diagnostic
- Meets requirements of EN54 part 2 and 4
- LPCB approved

DXc1 is a single-loop control panel. It can operate as stand-alone or networked system with other DXc series panels up to 16 loops. The system can be expanded up to 16 nos. of DXc1 or 8 nos. of DXc2 or 4 nos. of DXc4 or a mix & match of different variants up to 16 loop networked solution.

Technical Data

Operating Voltage	230V, 50-60Hz AC (+15%, -15% tolerance)
Max PSU Rating	2A / 24Vdc
Sounder Ckt Rating	1 A
Auxiliary Output	24Vdc / 250 mA
Loop Load	500 mA
Ambient Temperature	0°C to 40°C
Humidity	5% - 95% non condensing
Batteries	2x12V / 7AH
Dimension (H x W x D)	260 x 390 x 147 mm
Weight	4 Kg
Housing Material	Mild Steel (rear enclosure), ABS plastic front cover complying BS EN60950.
Color	RAL 9002 – Grey White
Ingress Protection	IP30
Cable Entry	25 x 20mm knock-outs at the top 2 x 20mm knock-outs at the bottom

Accessories

- **795-099** Network card
- **795-102** Optional 40 zone LED card kit
- **795-124** Optional 80 zone LED card kit
- **020-891** USB isolated upload/download lead

714-001-222

DXc2, Two-Loop Control Panel



Features

- 2 analogue loops.
- 6x40 characters, blue liquid crystal display with backlight illumination.
- Option to upload company logo.
- Configuration by Keypad and PC.
- 80 Fire Zones (Can be used with or without Zone LEDs)
- RS-485 port for repeater connection.
- 2 programmable output sounder circuits (monitored)
- Fire, Fault and Auxiliary relay (one each)
- Networking up to 16 loops
- Loop-Battery calculator for reliable system design
- 7 day timer
- Onboard diagnostic
- Meets requirements of EN54 part 2 and 4
- LPCB approved

DXc2 is a two-loop control panel. It can operate as stand-alone or networked system with other DXc series panels up to 16 loops. The system can be expanded up to 16 nos. of DXc1 or 8 nos. of DXc2 or 4 nos. of DXc4 or a mix & match of different variants up to 16 loop networked solution.

Technical Data

Operating Voltage	230V, 50-60Hz AC (+15%, -15% tolerance)
Max PSU Rating	4A / 24Vdc
Sounder Ckt Rating	1 A
Auxiliary Output	24Vdc / 250 mA
Loop Load	500 mA
Ambient Temperature	0°C to 40°C
Humidity	5% - 95% non condensing
Batteries	2x12V / 17AH
Dimension (H x W x D)	391.5 x 390 x 147 mm
Weight	4.5 Kg
Housing Material	Mild Steel (rear enclosure), ABS plastic front cover complying BS EN60950.
Color	RAL 9002 – Grey White
Ingress Protection	IP30
Cable Entry	25 x 20mm knock-outs at the top 4 x 20mm knock-outs at the bottom

Accessories

- **795-099** Network card
- **795-102** Optional 40 zone LED card kit
- **795-124** Optional 80 zone LED card kit
- **020-891** USB isolated upload/download lead

714-001-242

DXc4, Four-Loop Control Panel



Features

- 4 analogue loops.
- 6x40 characters, blue liquid crystal display with backlight illumination.
- Option to upload company logo.
- Configuration by Keypad and PC.
- 80 Fire Zones (Can be used with or without Zone LEDs)
- RS-485 port for repeater connection.
- 2 programmable output sounder circuits (monitored)
- Fire, Fault and Auxiliary relay (one each)
- Networking up to 16 loops
- Loop-Battery calculator for reliable system design
- 7 day timer
- Onboard diagnostic
- Meets requirements of EN54 part 2 and 4
- LPCB approved

DXc4 is a four-loop control panel. It can operate as stand-alone or networked system with other DXc series panels up to 16 loops. The system can be expanded up to 16 nos. of DXc1 or 8 nos. of DXc2 or 4 nos. of DXc4 or a mix & match of different variants up to 16 loop networked solution.

Technical Data

Operating Voltage	230V, 50-60Hz AC (+15%, -15% tolerance)
Max PSU Rating	4A / 24Vdc
Sounder Ckt Rating	24Vdc / 1 A
Auxiliary Output	24Vdc / 250 mA
Loop Load	500 mA
Ambient Temperature	0°C to 40°C
Humidity	5% - 95% non condensing
Batteries	2x12V / 17AH
Dimension (H x W x D)	391.5 x 390 x 147 mm
Weight	4.5 Kg
Housing Material	Mild Steel (rear enclosure), ABS plastic front cover complying BS EN60950.
Color	RAL 9002 – Grey White
Ingress Protection	IP30
Cable Entry	25 x 20mm knock-outs at the top 4 x 20mm knock-outs at the bottom

Accessories

- **795-099** Network card
- **795-102** Optional 40 zone LED card kit
- **795-124** Optional 80 zone LED card kit
- **020-891** USB isolated upload/download lead

CONTROL PANELS

ZXSe Series

ZXSe Series Control Panels



ZXSe range of analogue addressable fire alarm control panels have been designed and constructed around proven and reliable microprocessor technology. This simple approach has produced a modular, scalable fire alarm platform suitable for protecting all types of premises.

ZXSe series offers absolute flexibility in terms of system expansion, centralized monitoring and control or distributed monitoring and control. It uses various communication channels for networking such as Cu-cable, single-mode optic fiber, multi-mode optic fiber and TCP/IP. The capability of these panels to use different types of communication channels (new or existing infra-structure) makes them suitable for versatile application.

ZXSe series supports entire peripheral range of Morley-IAS like passive repeater, active repeater, mimic panels, multi-channel input/output modules, printer and Modbus interface. It facilitates seamless integration with 3rd part over Modbus. ZXSe also supports state-of-the-art GUI which facilitates efficient and effective centralized monitoring, control and maintenance of the system. These features along with the option of configuration via key-pad as well as PC make ZXSe user-friendly and ensure operational excellence at a very low cost of ownership.

722-001-301



ZX1Se - Analogue addressable fire alarm control panel

ZX1Se is a single-loop variant of ZXSe family which can operate as stand alone system or a networked system. The control panel supports entire range of peripheral devices in Morley-IAS range, networked solution, GUI and seamless integration with 3rd party system over Modbus.

Features

- 1 analogue loop.
- 4x40 characters display
- Configuration by Keypad and PC
- 20 Zone LED
- 2 serial ports
- 2 programmable output sounder circuits (monitored)
- Fire and Fault relay (one each)
- Networking up to 99 control panels
- Versatile networking (Cu-Cable, Optic Fiber, TCP/IP)
- VisualeyeZ GUI compatibility
- Loop-Battery calculator for reliable system design
- 7 day timer
- Onboard diagnostic
- Meets requirements of EN54 part 2 and 4
- LPCB approved

Technical Data

Operating Voltage	230V, 50Hz AC (+10%, -15% tolerance)
Max PSU Rating	4.2A total (2.5A for control panel and loop supply, 1.7A charger current)
Loop Load	460 mA
Ambient Temperature	0°C to 40°C
Humidity	85% non condensing
Batteries	Min capacity 2x12V / 7AH Max capacity 2x12V / 12AH (inside control panel) Max capacity 2x12V / 38AH (separate housing)
Dimension (H x W x D)	400 x 400 x 135 mm
Weight	10 Kg
Housing Material	Steel
Color	RAL 9002 – Grey White
Ingress Protection	Ip30
Cable Entry	14 x 20mm knock-outs at the top 2 x 20mm knock-outs at the bottom

Accessories

- RS-485 Module (795-004-001)
- RS-232 Module (795-005)
- Analogue loop cards (795-072-100)
- Active repeater (709-601-001)
- Passive repeater 709-701-001)
- Internal Printers (795-051-001)
- External Printers (795-060-002)
- Mimic Driver Module (795-065)
- Modbus Module (795-057)
- 4-way sounder module (795-015)
- 4-way relay module (795-014)
- 8-way input module (795-029)
- VisualeyeZ

720-001-301



Features

- 2 analogue loops.
- 4x40 characters display
- Configuration by Keypad and PC
- 20 Zone LED
- 2 serial ports
- 2 programmable output sounder circuits (monitored)
- Fire and Fault relay (one each)
- Networking up to 99 control panels
- Versatile networking (Cu-Cable, Optic Fiber, TCP/IP)
- VisualeyeZ GUI compatibility
- Loop-Battery calculator for reliable system design
- 7 day timer
- Onboard diagnostic
- Meets requirements of EN54 part 2 and 4
- LPCB approved

ZX2Se - Analogue addressable fire alarm control panel

ZX2Se is a two-loop variant of ZXSe family which can operate as stand alone system or a networked system. The control panel supports entire range of peripheral devices in Morley-IAS range, networked solution, GUI and seamless integration with 3rd party system over Modbus.

Technical Data

Operating Voltage	230V, 50Hz AC (+10%, -15% tolerance)
Max PSU Rating	4.2A total (2.5A for control panel and loop supply, 1.7A charger current)
Loop Load	460 mA
Ambient Temperature	0°C to 40°C
Humidity	85% non condensing
Batteries	Min capacity 2x12V / 7AH Max capacity 2x12V / 12AH (inside control panel) Max capacity 2x12V / 38AH (separate housing)
Dimension (H x W x D)	400 x 400 x 135 mm
Weight	10 Kg
Housing Material	Steel
Color	RAL 9002 – Grey White
Ingress Protection	Ip30
Cable Entry	14 x 20mm knock-outs at the top 2 x 20mm knock-outs at the bottom

Accessories

- RS-485 Module (795-004-001)
- RS-232 Module (795-005)
- Analogue loop cards (795-072-100)
- Active repeater (709-601-001)
- Passive repeater 709-701-001)
- Internal Printers (795-051-001)
- External Printers (795-060-002)
- Mimic Driver Module (795-065)
- Modbus Module (795-057)
- 4-way sounder module (795-015)
- 4-way relay module (795-014)
- 8-way input module (795-029)
- VisualeyeZ

721-001-301



Features

- 5 analogue loops.
- 4x40 characters display
- Configuration by Keypad and PC
- 20 Zone LED (Available up to 200 on special request)
- 3 serial ports
- 4 programmable output sounder circuits (monitored)
- Fire and Fault relay (one each)
- Networking up to 99 control panels
- Versatile networking (Cu-Cable, Optic Fiber, TCP/IP)
- VisualeyeZ GUI compatibility
- Loop-Battery calculator for reliable system design
- 7 day timer
- Onboard diagnostic
- Meets requirements of EN54 part 2 and 4
- LPCB approved

ZX5Se - Analogue addressable fire alarm control panel

ZX5Se is a five-loop variant of ZXSe family which can operate as stand alone system or a networked system. The control panel supports entire range of peripheral devices in Morley-IAS range, networked solution, GUI and seamless integration with 3rd party system over Modbus.

Technical Data

Operating Voltage	230V, 50Hz AC (+10%, -15% tolerance)
Max PSU Rating	4.2A total (2.5A for control panel and loop supply, 1.7A charger current)
Loop Load	460 mA
Ambient Temperature	0°C to 40°C
Humidity	85% non condensing
Batteries	Min capacity 2x12V / 7AH Max capacity 2x12V / 12AH (inside control panel) Max capacity 2x12V / 38AH (separate housing)
Dimension (H x W x D)	500 x 500 x 195 mm
Weight	20 Kg
Housing Material	Steel
Color	RAL 9002 – Grey White
Ingress Protection	IP30
Cable Entry	24 x 20mm knock-outs at the top 24 x 20mm knock-outs at the bottom

Accessories

- RS-485 Module (795-004-001)
- RS-232 Module (795-005)
- Analogue loop cards (795-072-100)
- Active repeater (709-601-001)
- Passive repeater 709-701-001)
- Internal Printers (795-051-001)
- External Printers (795-060-002)
- Mimic Driver Module (795-065)
- Modbus Module (795-057)
- 4-way sounder module (795-015)
- 4-way relay module (795-014)
- 8-way input module (795-029)
- VisualeyeZ

PERIPHERAL DEVICES

Repeaters and Interfaces

709-601-001

Active Repeater Panel



Features

- 2x40 characters, liquid crystal display with backlight illumination.
- Backlit adjustable alpha-numeric display.
- General Status LEDs.
- Control for System Reset, Accept, Mute, Silence and Self-Test
- Access enable key-switch.
- Compact metal housing.

The repeater provides an extension to the operation of the fire alarm control panel. There are two types available - passive with indications only and no controls, or active with both controls and indicators. Both display the operational state of the control panel using the 80 character LCD display and the 7 LED status indicators.

In addition to the general status indicators the Active repeater is fitted with key operated "Access Enable" switch for the control functions. Individual buttons are provided for System Reset, Mute, Accept, Sound Alarms, Silence/Re-sound Alarms and Self test. Thus enabling control functions to be duplicated in strategic locations around the installation.

Technical Data

Operating Voltage	18 – 32 Vdc
Rated Voltage	24Vdc
Quiescent Current	90mA
Alarm Current	120mA
Ambient Temperature	5°C to 45°C
Humidity	10% to 93% (Non condensing)
Dimension (H x W x D)	165 x 253.5 x 50mm
Weight	1.7 Kg

Accessories

- 795-004-001 RS-485 Communication Module

709-701-001

Passive Repeater Panel



Features

- 2x40 characters, liquid crystal display with backlight illumination.
- Backlit adjustable alpha-numeric display.
- General Status LEDs.
- Access enable key-switch.
- Compact metal housing.

Same as Active Repeater Panel (709-601-001) but no control option. Passive Repeater Panel facilitates only monitoring of events.

Technical Data

Operating Voltage	18 – 32 Vdc
Rated Voltage	24Vdc
Quiescent Current	90mA
Alarm Current	120mA
Ambient Temperature	5°C to 45°C
Humidity	10% to 93% (Non condensing)
Dimension (H x W x D)	165 x 253.5 x 50mm
Weight	1.7 Kg

Accessories

- 795-004-001 RS-485 Communication Module

795-014

4-Way Relay Module



Features

- Provides 4 individually-programmable relay outputs.
- RS-485 communication.
- Easy DIP switch addressing.
- Normal, Delayed and Double-Knock operation.
- LED status indication.

The 4-way relay card consists of 4 relay outputs built on a single printed circuit board. Each output relay provides single pole double throw (SPDT) switching action for other locally powered equipment. The form C relay contacts are designed to switch resistive loads of up to 1A/24V ac/dc.

Technical Data

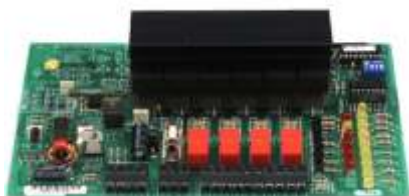
Operating Voltage	18 – 32 Vdc
Rated Voltage	24Vdc
Quiescent Current	80mA
Alarm Current	200mA
Relay Contact Rating	1A / 30 V
Ambient Temperature	0°C to 49°C
Humidity	10% to 93% (Non condensing)
Dimension (H x W x D)	130 x 180 x 35mm
Weight	200g

Accessories

- 795-004-001 RS-485 Communication Module

795-015

4-Way Sounder Module



Features

- Provides 4 individually-programmable monitored sounder outputs.
- RS-485 communication.
- Easy DIP switch addressing.
- Normal, Delayed and Double-Knock operation.
- LED status indication.

4-Way Sounder Module consists of 4 supervised sounder outputs built on a single printed circuit board. Each sounder output provides a monitored 24Vdc polarity reversal circuit. This output can be used to drive conventional bells, sounders, strobes etc. Each output circuit can provide up to 1A current with maximum of 3A spread over all four output terminals.

Technical Data

Operating Voltage	18 – 32 Vdc
Rated Voltage	24Vdc
Quiescent Current	120mA
Alarm Current	220mA + sounder load.
Relay Contact Rating	1A / 30 V
Ambient Temperature	0°C to 49°C
Humidity	10% to 93% (Non condensing)
Dimension (H x W x D)	125 x 190 x 50mm
Weight	230g

Accessories

- 795-004-001 RS-485 Communication Module

795-029

8-Way Input Module



Features

- Provides 8 individually-programmable inputs.
- RS-485 communication.
- Easy DIP switch addressing.
- Normal, Delayed and Double-Knock operation.
- Fire, Fault, Bomb-Alert, Class-Change and Security Event options
- LED status indication.

The 8-way input card consists of 8 non-supervised monitoring circuits built on a single printed circuit board. Each input is equipped with a pair of terminals to accept an input from an external NO clean contact suitable for low voltage / low current switching. Each input can be individually programmed to generate one of the five input events in the panel: Fire, fault, bomb-alert, class change or security.

Technical Data

Operating Voltage	18 – 32 Vdc
Rated Voltage	24Vdc
Quiescent Current	65mA
Alarm Current	97mA + sounder load.
Ambient Temperature	0°C to 49°C
Humidity	10% to 93% (Non condensing)
Dimension (H x W x D)	113 x 160 x 22mm
Weight	120g

Accessories

- 795-004-001 RS-485 Communication Module

795-065

40-Way Mimic Interface Module



Features

- Provides 40 programmable open-collector outputs.
- RS-485 communication.
- Easy DIP switch addressing.
- Zone or Event based operation.
- LED status indication.

40-Way Mimic Interface Module consists of 40 open collector outputs built on a single printed circuit board. The outputs can provide up to 15mA each to drive mimic LEDs (or other low-current external loads) and can be programmed to follow a zone or an event in the master panel.

The AUTO-LEARN facility in the ZX series control panels automatically determines the number of modules connected to the peripheral bus. Once the mimic driver cards are learnt, each of these cards can be programmed to follow a group of 40 zones or events on the system (e.g. zones 1-40, 41-80, etc., events 1-40, 41-80, 81-120, etc.).

Technical Data

Operating Voltage	18 – 32 Vdc
Rated Voltage	24Vdc
Quiescent Current	29mA @ 24V
Alarm Current (Full Load)	277mA @ 24V.
Ambient Temperature	0°C to 49°C
Humidity	10% to 93% (Non condensing)
Dimension (H x W x D)	113 x 160 x 29mm
Weight	226g

Accessories

- 795-004-001 RS-485 Communication Module

795-057

Modbus Interface Module



Features

- Modbus Protocol Supported.
- RS-485 communication.
- Easy DIP switch addressing.
- IP67 rated enclosure.
- Integrates seamlessly with ZX series control panels.
- Modbus output via RS-232 port.
- LED status indication.

The Modbus interface unit connects to the RS-485 peripheral bus of the ZX series fire alarm control panels and allows panel interrogation by a Modbus control system. Information on the states of panel outputs, peripherals, detectors and the general operating condition of the panel can be requested.

A DC supply in the range of 18-28 Vdc, typically 24 Vdc, rated at 150 mA, is required to power the interface.

An earth reference should be connected to the Modbus Interface Platforms Earth termination point from the supply earth (i.e. fire control panel entry gland). For a complete listing of the commands supported please refer to the installation guidelines and commissioning instructions.

Technical Data

Operating Voltage	18 – 32 Vdc
Rated Voltage	24Vdc
Quiescent Current	120mA @ 24V
Ambient Temperature	0°C to 49°C
Humidity	10% to 93% (Non condensing)
Dimension (H x W x D)	250 x 175 x 75mm
Weight	1.1Kg

Accessories

- 795-004-001 RS-485 Communication Module

DETECTORS

Smoke, Thermal and Multi-Criteria Detectors

S200A Series Detectors



The new series of Morley-IAS sensors (S200A series) incorporate major hardware and software technology driven developments. A completely new optical chamber design is proven in extensive testing to be more efficient, less liable to false alarm due to dust and insects and less susceptible to fault in high air velocities or back pressure. Extensive hydrodynamic modeling has confirmed the greater efficiency of the new chamber and housing shape combination. Large-scale integration of the all-new electronics, through the fully automated surface mount PCB assembly, coupled with in-line testing through the manufacturing process, laser PCB cutting along with a completely new compound of plastic offers improved quality and reliability.

All S200A detectors are environmentally friendly and meet the WEEE and RoHS legislative requirements which minimize the end of life disposal costs.

MI-PSE-S2-IV



Features

- New Optical chamber design to facilitate genuine and fast response
- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- Dual Integrated LED for 360° visibility
- Conforms to EN54-7
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

Optical Smoke Detector

MI-PSE-S2-IV photoelectric smoke detector comes with a completely new detection chamber design, the result of many years of research and development. This delivers improved responsiveness, reduced sensitivity changes caused by settling dust and reduced false alarms resulting from ingress of insect and other debris. The plug-in unit uses sophisticated processing circuitry that incorporates smoothing filters to help eliminate transient environmental noise conditions that can be the cause of unwanted alarms. The devices are managed by embedded software running complex algorithms that further improve resilience to false alarms and improve detection speed. The MI-PSE-S2 has two integral red LEDs that provide 360° local visual indication of the device status.

Technical Data

Operating Voltage	15 to 32 Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	52mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	97g
Maximum Wire Gauge	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

MI-PSE-S2I-IV



Features

- New Optical chamber design to facilitate genuine and fast response
- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- In-built isolator
- Dual Integrated LED for 360° visibility
- Conforms to EN54-7
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

Optical Smoke Detector with Isolator

Same as MI-PSE-S2-IV but with in-built isolator

Technical Data

Operating Voltage	15 to 32 Vdc
Isolator Operating Voltage	15 to 28.5Vdc
Isolation Current	15mA at 24Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	52mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	97g
Maximum Wire Gauge	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

MI-PTSE-S2-IV



Features

- New Optical chamber design to facilitate genuine and fast response
- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- Dual Integrated LED for 360° visibility
- Conforms to EN54-5 & EN54-7
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

Sensitivity settings

- Alarm Level 1 1%/ft smoke
- Alarm Level 2 2%/ft smoke
- Alarm Level 3 3%/ft smoke
- Alarm Level 4 3%/ft smoke
- Alarm Level 5 3%/ft smoke
- Alarm Level 6 ClassA1R

Photo-Thermal Multi-Criteria Detector

MI-PTSE-S2-IV Photo-Thermal Multi-Sensor uses thermal assistance to the core photoelectric smoke detector to give enhanced false alarm immunity and faster response to a wide range of incipient fires. The plug-in unit combines two separate sensing elements that are managed by embedded software to act as a single unit. The MI-PTSE-S2 conforms to EN54-7, a 58°C fixed temperature and rate of rise thermal assistance conforming to EN54-5. The thermal detection function combines thermistor technology with a software corrected linear temperature response. In areas where the normal daytime activities may potentially create unwanted alarms, the detector can be programmed to operate in a "heat only" mode, automatically reverting to full photo-thermal operation during unoccupied periods. The sensing elements of the MI-PTSE-S2 are panel controllable so the sensitivity thresholds of each element can be changed by the panel offering the ability to customise the device for the changing use of the area it is protecting. The detector has two integral red LEDs that provide 360° local visual indication of the device status.

Technical Data

Operating Voltage	15 to 32 Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	61mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	99g
Maximum Wire Gauge	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV..... Detector base

MI-PTSE-S2-IV



Features

- New Optical chamber design to facilitate genuine and fast response
- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- In-built isolator
- Dual Integrated LED for 360° visibility
- Conforms to EN54-5 & EN54-7
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

Sensitivity settings

- Alarm Level 1 1%/ft smoke
- Alarm Level 2 2%/ft smoke
- Alarm Level 3 3%/ft smoke
- Alarm Level 4 3%/ft smoke
- Alarm Level 5 3%/ft smoke
- Alarm Level 6 ClassA1R

Photo-Thermal Multi-Criteria Detector with Isolator

Same as MI-PTSE-S2-IV but with in-built isolator

Technical Data

Operating Voltage	15 to 32 Vdc
Isolator Operating Voltage	15 to 28.5Vdc
Isolation Current	15mA at 24Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	61mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	99g
Maximum Wire Gauge	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

MI-RHSE-S2-IV



Features

- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- Dual Integrated LED for 360° visibility
- Conforms to EN54-5
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

Rate of Rise Thermal Detector

The MI-RHSE-S2 uses the thermistor and microprocessor technology to provide an alarm when the rate of rise in temperature exceeds 10°C/minute (typical) or if the temperature exceeds a threshold of 58°C (Response Class A1R). The detectors have two integral red LEDs that provide 360° local visual indication of the device status.

Technical Data

Operating Voltage	15 to 32 Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	61mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	88g
Maximum Wire Gauge	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

MI-RHSE-S2-IV



Features

- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- Dual Integrated LED for 360° visibility
- In-built Isolator
- Conforms to EN54-5
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

Rate of Rise Thermal Detector with Isolator

Same as MI-RHSE-S2-IV but with in-built isolator

Technical Data

Operating Voltage	15 to 32 Vdc
Isolator Operating Voltage	15 to 28.5Vdc
Isolation Current	15mA at 24Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	61mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	88g
Maximum Wire Gauge	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

MI-FHSE-S2-IV



Features

- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- Dual Integrated LED for 360° visibility
- Conforms to EN54-5
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

58°C Thermal Detector

The MI-FHSE-S2 is fixed temperature analogue addressable sensors employing low mass thermistors and microprocessor technology for fast response and linear temperature sensing. Its linear response allows the sensor to be used to signal temperatures over 58°C (Class A1S).

Technical Data

Operating Voltage	15 to 32 Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	61mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	88g
Maximum Wire Gauge	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

MI-FHSE-S2-IV



Features

- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- In-built isolator
- Dual Integrated LED for 360° visibility
- Conforms to EN54-5
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

58°C Thermal Detector with Isolator

Same as MI-FHSE-S2-IV but with in-built isolator

Technical Data

Operating Voltage	15 to 32 Vdc
Isolator Operating Voltage	15 to 28.5Vdc
Isolation Current	15mA at 24Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	61mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	88g
Maximum Wire Guage	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

MI-HTSE-S2-IV



Features

- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- Dual Integrated LED for 360° visibility
- Conforms to EN54-5
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

78°C Thermal Detector

The MI-HTSE-S2 is fixed temperature analogue addressable sensors employing low mass thermistor and microprocessor technology for fast response and linear temperature sensing. Its linear response allows the sensor to be used to signal temperatures over 78°C (Class BS).

Technical Data

Operating Voltage	15 to 32 Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	61mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	88g
Maximum Wire Guage	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

MI-HTSE-S2I-IV



Features

- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- In-built isolator
- Dual Integrated LED for 360° visibility
- Conforms to EN54-5
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

78°C Thermal Detector with Isolator

Same as MI-HTSE-S2-IV but with in-built isolator

Technical Data

Operating Voltage	15 to 32 Vdc
Isolator Operating Voltage	15 to 28.5Vdc
Isolation Current	15mA at 24Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	61mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	88g
Maximum Wire Gauge	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

MI-PTIR-S2-IV



Features

- Versatile detection with Photo, Thermal and IR Sensors.
- New Optical chamber design to facilitate genuine and fast response
- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- Dual Integrated LED for 360° visibility
- Conforms to EN54-5, EN54-7, EN54-10
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

Photo-Thermal IR Multi-Criteria Detector

MI-PTIR-S2-IV Photo-Thermal IR Multi-Sensor is the environmentally friendly alternative to the ionisation detector, a technology that is now over sixty years old. The MI-PTIR-S2 offers comparable speed of response to the ionisation technology for a fast flaming fire and is less susceptible to false alarms. It can be deployed with confidence in locations where the main risk is from fast-developing flaming fires. MI-PTIR-S2 fights against false alarms by delivering enhanced false alarm immunity. The integration of continual monitoring for all three major elements of a fire enables the MI-PTIR-S2 to respond far more quickly to an actual fire and has the highest immunity to nuisances. Based upon the sensor signals, the program dynamically changes sensor thresholds, sensor gain, time delays, combination, sampling rates, averaging rates and, if any sensor fails, changing sensitivity of the remaining sensors as well as indicating a fault condition. The detector has two integral red LEDs that provide 360° local visual indication of the device status.

Technical Data

Operating Voltage	15 to 32 Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	63 mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	102g
Maximum Wire Gauge	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

MI-PTIR-S2I-IV

Photo-Thermal IR Multi-Criteria Detector with Isolator



Features

- Versatile detection with Photo, Thermal and IR Sensors.
- New Optical chamber design to facilitate genuine and fast response
- Advanced protocol and smoothing filter to suppress false alarm
- Rotary decade switches
- Analogue addressable communications
- In-built isolator
- Dual Integrated LED for 360° visibility
- Conforms to EN54-5, EN54-7, EN54-10
- LPCB Approved
- Environment friendly - meets WEEE & RoHS legislative requirements

Same as MI-PTIR-S2-IV but with in-built isolator

Technical Data

Operating Voltage	15 to 32 Vdc
Isolator Operating Voltage	15 to 28.5Vdc
Isolation Current	15mA at 24Vdc
Maximum Standby current	200uA @ 24Vdc (No LED blink) 300uA @ 24Vdc (LED blink enabled)
LED current	3.5mA @ 24Vdc
Remote output voltage	22.5Vdc @ 24Vdc input
Remote output current	10.8mA @ 24Vdc
Temperature Range	-30°C to +70°C
Humidity Range	10 to 93% (Non-Condensing)
Height	63 mm installed with B501AP base.
Diameter	102mm installed in B501AP base.
Weight	102g
Maximum Wire Gauge	2.5 sqmm
Material	PC / ABS
Color	Ivory

Accessories

- MI-B501AP-IV Detector base

Laser Detector

MI-LZR



Features

- Extremely high sensitivity 'laser' based smoke sensor
- Superior early warning performance
- Effective response to both fast flaming and slow smouldering fires
- Automatic drift compensation
- Three levels of fault warning for contamination
- Stable communication with high noise immunity
- Nine sensitivity levels (0.02 - 2%/ft)
- Twin LED indicators providing 360° visibility
- Rotary decade address switches
- Tamper resistant
- Built in test switch
- Conforms to EN54-7
- LPCB Approved

Alarm level

Alarm level 1	0.02%/ft. smoke
Alarm level 2	0.03%/ft. smoke
Alarm level 3	0.05%/ft. smoke
Alarm level 4	0.10%/ft. smoke
Alarm level 5	0.20%/ft. smoke
Alarm level 6	0.50%/ft. smoke
Alarm level 7	1.00%/ft. smoke
Alarm level 8	1.50%/ft. smoke
Alarm level 9	2.00%/ft. smoke

High Sensitivity smoke detector using LASER

MI-LZR high sensitivity 'laser' based intelligent smoke sensor is a unique offering from Morley-IAS that provides extremely high sensitivity to fire conditions, by detecting the earliest particles of combustion. This is achieved by combining a patented optical chamber with the latest in laser diode and precision optics technology, which enhances the sensitivity of the device. The chamber is also linked to sophisticated processing circuitry that incorporates smoothing filters to help eliminate transient environmental noise conditions, which can be the cause of unwanted alarms. The result is a very sensitive but stable sensor that can achieve sensitivities of 0.02 - 2%/ft per metre obscuration and provides up to 100 times more sensitivity than a standard photoelectric smoke sensor. With its quick response and pinpoint accuracy, this unique sensor is ideally suited to environmental applications where there is substantial cost for downtime or a significant investment in installed equipment has been made (e.g. Electronics Manufacturer Clean Rooms, Telecommunication Rooms, Computer Rooms etc). It provides good response to both types of fires – smouldering as well as fast-flaming – by improving its signal-to-noise ratio. The laser diode improves the sensor's signal and increases the ability to detect small particles (usually associated with fast flaming fires), which are not as easily detected by a standard photoelectric smoke sensor. Meanwhile, the sensor's smoothing and filtering algorithms reduce noise and the possibility of false alarms.

Technical Data

Operating Voltage	15 to 32 Vdc
Maximum Standby current	230uA @ 24Vdc (No communications) 330uA @ 24Vdc (with communication)
Alarm current	6.5mA @ 24Vdc
Temperature Range	-10°C to +55°C
Humidity Range	10 to 93% (Non-condensing)
Height	42 mm
Diameter	104mm installed in B501AP base.
Weight	120g
Maximum Wire Gauge	2.5 sqmm
Material	Bayblend FR110.
Color	Pantone Warm Grey 1C

Accessories

- MI-B501AP-IV Detector base

Beam Detector

MI-LPB2



Features

- Addressable loop powered beam detector.
- 10-100m range.
- 4 fixed sensitivity levels.
- 2 automatic variable sensitivity modes.
- Numerical indicators to aid beam alignment.
- Standby, Fault and Alarm LED indicator.
- Automatic Drift compensation.
- Complies to EN54-12
- LPCB Approved

Accessories

- BEAM-LRK Long Range reflector kit (70 – 100m range).
- BEAM-SMK Surface Mount accessory.
- BEAM-MMK Multi-mount accessory for ceiling or wall mounting with additional mounting adjustment. BEAMSMK also required.

Addressable Beam Detector

The MI-LPB2 is an addressable reflector-type linear optical beam smoke detector, designed to operate as a component of an intelligent fire alarm system. It operates primarily on the principle of light obscuration utilising an Infra-Red beam. Optical beam smoke detectors are particularly appropriate for protecting buildings with large open space such as warehouses, atriums etc.

The MI-LPB2 detector is a combined transmitter/receiver unit that can be directly connected to an analogue loop circuit. The Infra-Red transmitter generates a beam of light towards a high efficiency reflector. The reflector returns the beam to the receiver where an analysis of the received signal is made. The change in the strength of the received signal is used to determine the alarm condition.

Technical Data

Operating Voltage	15 to 32 Vdc
Rated Voltage	24Vdc
Typical Standby current	2mA @ 24Vdc
Max Alarm Current	8.5mA
Maximum Alignment Current	20mA
Temperature Range	-30°C to +55°C
Humidity Range	Up to 95% (Non-condensing)
Dimension (H x W x D)	254 x 190 x 84mm (Tx/Rx Unit) 230 x 200mm (single, 10-70m range)
Weight	1.77Kg
Maximum Wire Gauge	2.5 sqmm
Material	Bayblend FR110 (Trim), Lexan (Lens Cover) Noryl (Back-Box)
Color	White (Trim), Black (Back-Box)

Duct Detector

DNRE

Duct Detector Housing



Features

- Photoelectric, integrated low-flow technology
- Air velocity rating from 0.5m/s to 20m/sec
- Versatile mounting options: square or rectangular configuration
- Broad ranges for operating temperature 0°C to 70°C and humidity (0% to 95% non-condensing)
- Patented sampling tube installs from front or back of the detector with no tools required
- Cover tamper signal
- 20mm conduit knockout for easy wiring access
- Available space within housing to accommodate mounting of relay module
- Easily accessible code wheels on sensor head (sold separately)
- Clear cover for convenient visual inspection

The Morley-IAS Series duct smoke detectors sense smoke in the most challenging conditions, operating in air flow speeds of 0.5m/s to 20m/sec, temperatures of 0°C to 70°C, and a humidity range of 0 to 95 percent (non-condensing).

An improved cover design isolates the detector head from the low-flow feature for simple maintenance. The unit incorporates cover tamper feature to indicate a trouble signal for a removed or improperly installed sensor cover. The duct detector housing provides a 20mm conduit knockout and ample space to facilitate easy wiring and mounting of relay module. The duct smoke detector can be customised to meet local codes and specifications without additional wiring.

Technical Data

Power supply voltage	8.5-35 VDC
Input capacitance	0.1 µF max.
Reset voltage	2.5 VDC min
Sensitivity Test	See detector label
Peak standby current	120µA
Size	(Rectangular) 37 cm L; 12.7 cm W; 6.36 cm D (Square) 19.7 cm L; 22.9 cm W; 6.35 cm D
Weight	0.82 kg
Operating Temperature Range	0°C to 70°C
Storage Temperature Range	0° to 70°C
Operating Humidity Range	0% to 95% relative humidity non-condensing
Air Duct Velocity	0.5 to 20 m/sec

MANUAL CALL POINT

MI-MCP-FLEX



Features

- Unique plug and play installation concept
- Resettable, unbreakable flexible element option
- Analogue addressable communications
- Semi-flush and surface mount option
- Integrated LED
- Integral loop isolation
- Conforms to EN54-11
- LPCB Approved

Accessories

- **KG1X10** Pack of 10 nos. of EN54-11 Glasses
- **PS230** Pack of 10 resettable elements.
- **SR** Surface mounting box, red
- **SC071** Pack of 20 terminal blocks
- **SC070** Pack of 10 spare test keys

Manual Call point

MI-MCP Series Manual Call Points are designed to provide a manual alarm interface to Morley IAS's fire alarm control panel.

Installation efficiency, flexibility and compliance with the latest standards are at the heart of the call point range.

The unique 'plug n play' concept is designed specifically to reduce installation time by using a terminal block which can be wired during the initial installation cabling with a link (P102) to provide continuity for testing. During the commissioning phase, the links are removed and the terminal block is simply inserted into the connector at the back of the unit. No re-termination is required.

Technical Data

Operating Voltage	15 to 30 Vdc
Quiescent current	260uA @ 24Vdc (without isolator) 360uA @ 24Vdc (with isolator)
Alarm Current	6mA @ 24Vdc
Temperature Range	-30°C to +70°C
Relative Humidity	0 – 95% non-condensing
Dimensions (W x H x D)	89 x 93 x 27.5 mm (Semi-Flush) 89 x 93 x 59.5 mm (Surface Mounted)
Diameter	102mm installed in B501AP base.
Weight	110g (Semi-Flush) 160g (Surface Mount)
Ingress Protection	IP24D
Maximum Wire Guage	2.5 sqmm
Material	ABS plastic.
Color	Red

Modules

MI-DMMI



Features

- Single input.
- DIN rail mounting option.
- Rotary decade address switch
- Analogue addressable communications.
- Tri-color LED status.
- Plug-in connectors
- Built-in short circuit isolators
- Approval – LPCB, GEA GEI 1-082, CEA GEI 1-084.

Single Channel Input Module

MI-DMMI monitor module is used with the Morley-IAS intelligent fire alarm control panels to provide a single input circuit from external devices. Each input is continuously monitored for normal, open circuit and alarm conditions. Changes to the status of the input circuits are communicated to the panel where the appropriate actions may be undertaken.

MI-DMMI requires a single address of the ninety-nine possible module addresses available on a loop. It responds to regular polling from the control panel indicated by a pulsing LED every successful communication.

Technical Data

Operating Voltage	15 to 30 Vdc
Quiescent current	310uA @ 24Vdc (No communications) 510uA @ 24Vdc (LED blink enabled)
Temperature Range	-20°C to +60°C
Relative Humidity	Up to 95% (non-condensing)
Dimensions (W x H x D)	93 x 94 x 23 mm
Weight	100g
Ingress Protection	IP30 (IP50 in M200E-SMB)
Maximum Wire Guage	2.5 sqmm

Accessories

- **SMB500** Surface mounting box for single module.
- **M200E-SMB** Surface Mounting Box.
- **M200E-DIN** Surface mounting box for single module

MI-DMM2I

Dual Channel Input Module



Features

- Dual input.
- DIN rail mounting option.
- Rotary decade address switch
- Analogue addressable communications.
- Tri-color LED status.
- Plug-in connectors
- Built-in short circuit isolators
- Approval – LPCB, GEA GEI 1-082, CEA GEI 1-084.

MI-DMM2I monitor module is used with the Morley-IAS intelligent fire alarm control panels to provide dual input circuit from external devices. Each input is continuously monitored for normal, open circuit and alarm conditions. Changes to the status of the input circuits are communicated to the panel where the appropriate actions may be undertaken.

MI-DMM2I requires two addresses of the ninety-nine possible module addresses available on a loop. It responds to regular polling from the control panel indicated by a pulsing LED every successful communication.

Technical Data

Operating Voltage	15 to 30 Vdc
Quiescent current	340uA @ 24Vdc (No communications) 600uA @ 24Vdc (LED blink enabled)
Temperature Range	-20°C to +60°C
Relative Humidity	Up to 95% (non-condensing)
Dimensions (W x H x D)	93 x 94 x 23 mm
Weight	110g
Ingress Protection	IP30 (IP50 in M200E-SMB)
Maximum Wire Gauge	2.5 sqmm

Accessories

- SMB500 Surface mounting box for single module.
- M200E-SMB Surface Mounting Box.
- M200E-DIN Surface mounting box for single module

MI-D2ICMO

Dual Input Single Output Module



Features

- Dual input Single Output.
- DIN rail mounting option.
- Rotary decade address switch
- Analogue addressable communications.
- Tri-color LED status.
- Plug-in connectors
- Built-in short circuit isolators
- Approval – LPCB, GEA GEI 1-082, CEA GEI 1-084.

MI-D2ICMO optionally supervises the wiring to the load devices and, upon command from the control panel, switches an external power supply to operate these devices. It also has built-in short circuit isolation capability. In normal supervised mode, the device switches out the load supervision and switches in the external power supply through a double pole relay. The external power supply is monitored and raises an unlatched fault condition if the voltage falls below the fixed threshold. In the unsupervised mode, the device provides neither load nor power supply supervision and can be used to switch a single form C set of changeover contacts.

Technical Data

Operating Voltage	15 to 30 Vdc
Quiescent current	340uA @ 24Vdc (No communications) 660uA @ 24Vdc (LED blink enabled)
Relay Specifications	2A @ 30Vdc, Resistive Load.
Temperature Range	-20°C to +60°C
Relative Humidity	Up to 95% (non-condensing)
Dimensions (W x H x D)	93 x 94 x 23 mm
Weight	110g
Ingress Protection	IP30 (IP50 in M200E-SMB)
Maximum Wire Gauge	2.5 sqmm

Accessories

- SMB500 Surface mounting box for single module.
- M200E-SMB Surface Mounting Box.
- M200E-DIN Surface mounting box for single module

MI-DCMO

Single Channel Output Module



Features

- Single output – Relay or Sounder mode.
- DIN rail mounting option.
- Rotary decade address switch.
- Analogue addressable communications.
- Tri-color LED status.
- Plug-in connectors.
- Built-in short circuit isolators
- Approval – LPCB, GEA GEI 1-082, CEA GEI 1-084.

MI-DCMO optionally supervises the wiring to the load devices and, upon command from the control panel, switches an external power supply to operate these devices. It also has built-in short circuit isolation capability. In normal supervised mode, the device switches out the load supervision and switches in the external power supply through a double pole relay. The external power supply is monitored and raises an unlatched fault condition if the voltage falls below the fixed threshold. In the unsupervised mode, the device provides neither load nor power supply supervision and can be used to switch a single form C set of changeover contacts.

Technical Data

Operating Voltage	15 to 30 Vdc
Quiescent current	310uA @ 24Vdc (No communications) 510uA @ 24Vdc (LED blink enabled)
Relay Specifications	2A at 30Vdc, resistive load.
Temperature Range	-20°C to +60°C
Relative Humidity	Up to 95% (non-condensing)
Dimensions (W x H x D)	93 x 94 x 23 mm
Weight	62g
Ingress Protection	IP30 (IP50 in M200E-SMB)
Maximum Wire Gauge	2.5 sqmm

Accessories

- SMB500 Surface mounting box for single module.
- M200E-SMB Surface Mounting Box.
- M200E-DIN Surface mounting box for single module

MI-DISO

Short-Circuit Isolator Module



Features

- Short-Circuit Isolation.
- DIN rail mounting option.
- Rotary decade address switch.
- Analogue addressable communications.
- Tri-color LED status.
- Plug-in connectors.
- Approval – LPCB, GEA GEI 1-082, CEA GEI 1-084.

MI-DISO is intended to be spaced between groups of devices on a communication line to protect the line if a short circuit fault occurs. It automatically opens when the voltage in the communication line falls below a fixed threshold. If a short circuit fault occurs, the two isolators located around the device group where the fault occurred will sense the line voltage drop, open their switches and remove the devices from the rest of the line. When the line voltage rises above the fixed threshold, the isolator module will detect the removal of the fault condition and automatically restore power to the isolated group of devices.

Technical Data

Operating Voltage	15 to 30 Vdc
Quiescent current	200uA @ 24Vdc
Fault Detection delay	100 – 400ms
Temperature Range	-20°C to +60°C
Relative Humidity	Up to 95% (non-condensing)
Dimensions (W x H x D)	93 x 94 x 23 mm
Weight	62g
Ingress Protection	IP30 (IP50 in M200E-SMB)
Maximum Wire Gauge	2.5 sqmm

Accessories

- SMB500 Surface mounting box for single module.
- M200E-SMB Surface Mounting Box.
- M200E-DIN Surface mounting box for single module

MI-MM3E



Features

- Small size.
- No separate power requirement.
- Rotary decade address switch.
- Analogue addressable communications.
- High noise immunity.
- LPCB approved.

Micro-Monitor Module

MI-MM3E micro monitor module provides an interface between the normally-open contact alarm initiating devices. Though the module can be used to monitor an entire zone circuit, it is ideally suited for monitoring single devices. The module is small enough to fit inside a single-gang junction box behind the device being monitored. The small size and lightweight allow it to be installed without the need to be rigidly mounted. It is used to monitor a single device or a zone of 4-wire smoke detectors, manual call points or pull stations, waterflow devices or other normally open dry-contact devices. A 47K Ohm end-of-line resistor (provided) terminates the circuit. It responds to regular polls from the control panel and reports its type and the status (open/normal/ short) of its zone.

Technical Data

Operating Voltage	15 to 32 Vdc
Quiescent current	375uA @ 24Vdc
Alarm Current	5.1mA @ 24Vdc
Temperature Range	-10°C to +60°C
Relative Humidity	10% to 93% (non-condensing)
Dimensions (W x H x D)	48 x 40 x 13 mm
Weight	33g

MI-DCZRM



Features

- Connection of a zone of non-addressable detectors to an analogue addressable fire system
- Built in isolation allowing system installation in stages without loss of protection
- Monitors open circuit and short circuit faults
- TRI-Colour Status LED
- Zone powered from addressable loop wiring or external 24V PSU
- Remote reset of non-addressable zone
- Compatible with most non-addressable detectors, IS non-addressable detectors
- Monitoring of external power supply
- External fault input
- CPD approval to EN54-17 and EN54-18, LPCB
- DIN rail mountable, consistent with all other modules
- Support for an extended power supply range as low as 18Vdc 60mA with an External PSU

Conventional Zone Monitor Module

MI-DCZRM addressable zone monitor module allows a zone of non-addressable devices to communicate with Morley-IAS protocol analogue addressable system. As a result existing non-addressable zones can be integrated into a Morley-IAS protocol system. The module monitors a zone of two-wire non-addressable devices. A fault signal will be transmitted to the panel in case of an open circuit or short circuit on the non-addressable zone wiring or when the external fault input is pulled low (can be used for power supply monitoring). A flashing LED indicates that the module is in communication with the control panel. The LED latches steady on alarm (subject to current limitations).

Technical Data

Operating Voltage	18 to 28.5 Vdc
Max standby current	288uA (conventional zone connected to external supply)
Quiescent current	375uA @ 24Vdc
LED Current	2.2.uA @ 24Vdc (Red) 6.6uA @ 24Vdc (Green) 8.8uA @ 24Vdc (Yellow)
End Of Line Resistor	3.9K
Temperature Range	-20°C to +60°C
Relative Humidity	5% to 95% (non-condensing)
Dimensions (W x H x D)	93 x 83 x 23 mm
Weight	110g

Sounder Strobes

MI-WSD-R

Wall mounted sounder, Red



Features

- 32 built-in tones
- Lower power requirements
- Optional IP65 rating
- Optional built-in isolator
- Anti-Tamper feature
- CPD approved
- LPCB approved in accordance to EN54 part-3

Part Codes

- **MI-WSD-R** Intelligent Wall Mounted Sounder, Red
- **MI-WSD-W** Intelligent Wall Mounted Sounder, Bright White
- **MI-WSD-R-I** Intelligent Wall Mounted Sounder, Red with Isolation
- **MI-WSD-W-I** Intelligent Wall Mounted Sounder, Bright White with Isolation

Morley-IAS Wall Mount Sounder is installed in exactly the same manner as an intelligent fire detector. A separate, common installation base, which accepts any product within Morley-IAS Audible Visual product family, is installed at first fix. This common base is fitted with a shorting spring, enabling loop continuity to be maintained without having to install any Morley-IAS Audible Visual product. It also removes the need to separately test the wiring. As the Wall Mount Sounder itself does not have to be installed until final commissioning, there is no risk of damage during first fix.

By utilising the latest developments in piezoelectric transducer and high output LED array technology, the Wall Mount Sounder is highly efficient. Current consumption is minimised, enabling the maximum number of devices to be installed on a loop, without compromising on sound and light output levels.

Technical Data

Operating Voltage	15 to 32 Vdc (Without Isolator) 15 to 28 Vdc (With Isolator)
Quiescent current	120uA @24Vdc (Without Isolator) 220uA @24Vdc (With Isolator)
Alarm Current	6.8mA @ 24 Vdc
Max Sound O/P	100dB
Temperature Range	-25°C to +70°C
Relative Humidity	Up to 95% non-condensing
Dimensions	115mm (dia), 68mm (depth with low profile base, LPBW), 111mm (depth with surface mount deep base)
Weight	238g
Ingress Protection	IP24 (With LPBW) IP44 (With surface mount base) IP65 (With water-proof base)
Maximum Wire Gauge	2.5 sqmm
Color	Red & White.

Accessories

- LPBW Low Profile Base
- SDBR Surface Mount Deep Base (Red) with LPBW
- SDBW Surface Mount Deep Base (White) with LPBW
- WDBR Waterproof Deep Base (Red) with LPBW
- WDBW Waterproof Deep Base (White) with LPBW

MI-WSDB

Wall mounted sounder strobe



Features

- 32 built-in tones
- Lower power requirements
- Optional IP65 rating
- Optional built-in isolator
- Anti-Tamper feature
- CPD approved
- LPCB approved in accordance to EN54 part-3

Part Codes

- **MI-WSDB-R-**-**** Intelligent Wall Mounted Sounder Strobe, Red
- **MI-WSDB-R-RD** Intelligent Wall Mounted Sounder Strobe. Red body and lens colour. Requires LPBW, SDBD, SDBR or WDBR (Ip66) mounting plate.
- **MI-WSDB-W-**-**** Intelligent Wall Mounted Sounder Strobe, Bright White
- **MI-WSDB-R-**-I** Intelligent Wall Mounted Sounder Strobe, Red with Isolation
- **MI-WSDB-W-**-I** Intelligent Wall Mounted Sounder Strobe, Bright White with Isolation

The Wall Mount Sounder/Strobe is installed in exactly the same manner as an intelligent fire detector. A separate, common installation base (LPBW), which accepts any product within Morley-IAS audible-visual product family, is installed at first fix. This common base is fitted with a shorting spring, enabling loop continuity to be maintained without having to install any audible-visual product. It also removes the need to separately test the wiring. As the Wall Mount Strobe itself does not have to be installed until final commissioning, there is no risk of damage during first fix.

By utilising the latest developments in piezoelectric transducer and high output LED array technology, the Wall Mount Sounder/Strobe is highly efficient. Current consumption is minimised, enabling the maximum number of devices to be installed on a loop, without compromising on sound and light output levels.

Technical Data

Operating Voltage	15 to 32 Vdc (Without Isolator) 15 to 28 Vdc (With Isolator)
Quiescent current	120uA @24Vdc (Without Isolator) 220uA @24Vdc (With Isolator)
Alarm Current	9mA @ 24 Vdc
Max Sound O/P	100dB
Strobe Flash Rate	1Hz
Temperature Range	-25°C to +70°C
Relative Humidity	Up to 95% non-condensing
Dimensions	115mm (dia), 68mm (depth with low profile base, LPBW), 111mm (depth with surface mount deep base)
Weight	256g
Ingress Protection	IP24 (With LPBW) IP44 (With surface mount base) IP65 (With water-proof base)
Maximum Wire Gauge	2.5 sqmm
Color	Red & White
Lens Color	Red

Accessories

- LPBW Low Profile Base
- SDBR Surface Mount Deep Base (Red) with LPBW
- SDBW Surface Mount Deep Base (White) with LPBW
- WDBR Waterproof Deep Base (Red) with LPBW
- WDBW Waterproof Deep Base (White) with LPBW

MI-BEAC

Wall mounted Strobe



Features

- High output LED array technology
- Lower power requirements
- Optional IP65 rating
- Optional built-in isolator
- CPD approved
- LPCB approved in accordance to EN54 part-3

Part Codes

- **MI-BEAC-RD** Intelligent Wall Mounted Strobe with red lens. Requires LPBW, SDBD, SDBR or WDBR (IP66) mounting plate.
- **MI-BEAC-RD-I** Intelligent Wall Mounted Strobe with red lens and built in isolator. Requires LPBW, SDBD, SDBR, WDBR (IP66) mounting plate.

The Wall Mount Strobe is installed in exactly the same manner as an intelligent fire detector. A separate, common installation base (LPBW), which accepts any product within Morley-IAS audible-visual product family, is installed at first fix. This common base is fitted with a shorting spring, enabling loop continuity to be maintained without having to install any audible-visual product. It also removes the need to separately test the wiring. As the Wall Mount Strobe itself does not have to be installed until final commissioning, there is no risk of damage during first fix.

Technical Data

Operating Voltage	15 to 32 Vdc (Without Isolator) 15 to 28 Vdc (With Isolator)
Quiescent current	120uA @24Vdc (Without Isolator) 220uA @24Vdc (With Isolator)
Alarm Current	2.22mA @ 24 Vdc
Strobe Flash Rate	1Hz
Temperature Range	-25°C to +70°C
Relative Humidity	Up to 95% non-condensing
Dimensions	112mm (dia), 37mm (depth with low profile base, LPBW), 78mm (depth with surface mount deep base)
Weight	104g
Ingress Protection	IP24 (With LPBW) IP44 (With surface mount base) IP65 (With water-proof base)
Maximum Wire Gauge	2.5 sqmm
Lens Color	Red / Amber

Accessories

- LPBW Low Profile Base
- SDBR Surface Mount Deep Base (Red) with LPBW
- SDBW Surface Mount Deep Base (White) with LPBW
- WDBR Waterproof Deep Base (Red) with LPBW
- WDBW Waterproof Deep Base (White) with LPBW

MI-IBSDB

Integrated Detector Base Sounder Strobe



Features

- 32 built-in tones
- Low power requirements
- Optional IP65 rating
- Optional built-in isolator
- Anti-Tamper feature
- CPD approved
- LPCB approved in accordance to EN54 part-3

Part Codes

- **MI-IBSDB-W-**-I** Intelligent Integrated Detector Base Sounder Strobe- Detector White
- **MI-IBSDB-PW-**-I** Intelligent Integrated Detector Base Sounder Strobe - Bright White
- **MI-IBSDB-R-**-I** Intelligent Integrated Detector Base Sounder Strobe, Red with Isolation
- **MI-IBSDB-W-**-I** Intelligent Integrated Detector Base Sounder Strobe, Detector White with Isolation
- **MI-IBSDB-PW-**-I** Intelligent Integrated Detector Base Sounder Strobe, Bright White with Isolation

The Integrated Detector Base Sounder/Strobe is installed in exactly the same manner as an intelligent fire detector. A separate, common installation base, which accepts any product within the Morley-IAS Audible-Visual product family, is installed at first fix. This common base is fitted with a shorting spring, ensuring loop continuity even when no Morley-IAS Audible Visual product is installed on the analogue loop. It also removes the need to separately test the wiring. As the Integrated Detector Base Sounder/Strobe itself does not have to be installed until final commissioning, there is no risk of damage during first fix.

The common installation base is available in low profile or surface versions to enable the Integrated Detector Base Sounder/Strobe to be installed either flush or surface mounted.

By utilising the latest developments in piezoelectric transducer and high output LED array technology, the Integrated Detector Base Sounder/Strobe is highly efficient. Current consumption is minimised, enabling the maximum number of devices to be installed on a loop, without compromising on sound and light output levels. When installed with a Morley-IAS detector, the combined unit also provides multiple technologies at a single point of installation.

Technical Data

Operating Voltage	15 to 32 Vdc (Without Isolator) 15 to 28 Vdc (With Isolator)
Quiescent current	120uA @24Vdc (Without Isolator) 220uA @24Vdc (With Isolator)
Alarm Current	8.7mA @ 24 Vdc
Max Sound O/P	95dB
Strobe Flash Rate	1Hz
Temperature Range	-25°C to +70°C
Relative Humidity	Up to 95% non-condensing
Dimensions	112mm (dia), 69.2mm (depth with low profile base, LPBW and Sensor)
Weight	164g
Ingress Protection	IP24 (With LPBW) IP44 (With surface mount base)
Maximum Wire Gauge	2.5 sqmm
Color	White
Lens Color	Red

Accessories

- LPBW Low Profile Base
- SDBD Surface Mount Base (Detector White) with LPBW
- SDBP Surface Mount Base (Pure White) with LPBW

Product Selection guide

		Wall Sounder		Wall Sounder Beacon		Integrated Base Sounder	Integrated Base Sounder Beacon	Beacon
								
	Standard (IP21C)	LPBW + MI-WSD-R	LPBW + MI-WSD-W	LPBW + MI-WSD-B-R-RD	LPBW + MI-WSD-B-W-RD	LPBW + MI-IBSDB-W	LPBW + MI-IBSDB-W-CL	LPBW + MI-BEAC-RD
	Deep Back Box (IP33C)	SDBR + MI-WSD-R	SDBW + MI-WSD-W	SDBR + MI-WSD-B-R-RD	SDBW + MI-WSD-B-W-RD	SDBD + MI-IBSDB-W	SDBD + MI-IBSDB-W-CL	SDBR + MI-BEAC-RD
	Waterproof (IP65)	WDBR + MI-WSD-R	WDBR + SDBW + MI-WSD-W	WDBR + MI-WSD-B-R-RD	WDBR + SDBW + MI-WSD-B-W-RD			WDBR + MI-BEAC-RD
						Suitable for all sensors except Intrinsically Safe sensors.		

Horn Strobes

SYS/HS

Wall Mount Horn-Strobe



Features

- Three field selectable candela settings: 15, 75, and 115.
- Easy to use rotary dials for selection of candela and horn settings.
- Built in synchronization feature keeps strobes in sync.
- Strobes Listed to UL1638; Horns Listed to UL464.
- High and low volume setting.
- Continuous or temporal tone settings.
- Round trim ring available for ceiling mount applications.

Conventional range of Morley-IAS horn-strobes offer the most flexible and easy-to-use line of horns, strobes and horn-strobes in the industry. With red housing, universal fire symbol and a ceiling mount accessory available, these devices can meet virtually any application. They also mount to a wide variety of back box sizes to offer the most flexibility in installation. Settings for the strobe and horn are done using easy to set rotary switches on the back of the device. Synchronization is achieved without the use of additional modules when powered with a filtered DC source. The strobe portion is capable of self synchronization for 30 minutes as per NFPA72.

These horn-strobes work on 24 volts DC or full wave rectified power. Three candela-setting options are available for the strobe. High and low volume options for the horn are there with continuous tone or temporal tone.

Technical Data

Operating Voltage	16 – 33 Vdc
Rated Voltage	24Vdc
Operating Temperature	0 to 49°C
Relative Humidity	10% to 93% (Non-condensing)
Dimensions (HxWxD)	131x127x63mm
Max Sound output	104 dBA
Max current consumption	98mA

SYS/HS-C

Ceiling Mount Horn-Strobe



Features

- Three field selectable candela settings: 15, 75, and 115.
- Easy to use rotary dials for selection of candela and horn settings.
- Built in synchronization feature keeps strobes in sync.
- Strobes Listed to UL1638; Horns Listed to UL464.
- High and low volume setting.
- Continuous or temporal tone settings.
- Round trim ring available for ceiling mount applications.

Similar to SYS/HS but ceiling Mount. Dimensions given below.

Technical Data

Operating Voltage	16 – 33 Vdc
Rated Voltage	24Vdc
Operating Temperature	0 to 49°C
Relative Humidity	10% to 93% (Non-condensing)
Dimensions	173 mm (dia) 63mm (depth)
Max Sound output	104 dBA
Max current consumption	98mA

Part codes

- **SYS/HS** Horn + Strobe Wall Mount
- **SYS/ST** Strobe Wall Mount
- **SYS/HS-C** Horn + Strobe Ceiling Mount
- **SYS/ST-C** Strobe Ceiling Mount
- **MHR1** Mini Horn, Red

MHR1

Mini Horn



MHR1 with Trim Plate

Features

- 12 V and 24 V Operation.
- High and Low Volume Setting.
- Temporal and Non-Temporal Tones.
- UL Listed.

Part Codes

- **SYS/HS** Horn + Strobe Wall Mount
- **SYS/ST** Strobe Wall Mount
- **SYS/HS-C** Horn + Strobe Ceiling Mount
- **SYS/ST-C** Strobe Ceiling Mount
- **MHR1** Mini Horn, Red
- **SYS/MH-TP** Trim Plate for Mini Horn

MHR1 mini-horn sounders are designed to simplify installation to provide primary and secondary signaling for fire and security applications.

The MHR mini-horns operate at 12 and 24 volts and are ideal for hotel, motel or residential fire system applications, where a smaller notification device is desired. The mini-horns offer high and low volume settings, and temporal or non-temporal tones. The horns can be mounted to single gang back boxes for aesthetically sensitive applications. They are listed to Underwriter's Laboratories.

Technical Data

Operating Voltage	8 – 33 Vdc
Rated Voltage	12 Vdc & 24Vdc
Operating Temperature	0 to 49°C
Relative Humidity	10% to 93% (Non-condensing)
Dimensions (H x W x D)	117 x 74 x 37mm (Mini-Horn) 131 x 127 x 43mm (with trim-plate)
Output Sound Level (dBA)	66 to 80
Max current consumption	9mA to 29mA (Depends on tone setting. Refer data-sheet)

TCP/IP Interface

3616-0020

TCP/IP Interface Module



Features

- RS-232, RS-422, RS-485 serial protocols
- 10/100 Mbps Ethernet
- UDP, TCP client or server selectable
- Special software modes for advanced applications
- Total galvanic isolation & transient protection
- Configuration via web interface and DIP switches
- Comprehensive Diagnostics
- Virtual COM port emulation software supplied

3616-0020 is a serial to Ethernet converter allowing RS-232, RS-422 and RS-485 serial devices to communicate via TCP/IP Ethernet networks. The DIN rail mounted TCP/IP interface is designed for industry. It can be powered from two separate supplies and handle an operating voltage range of 10–60 VDC. It provides comprehensive diagnostic tools for fault finding. The unit offers 10 LED indicators as well as advanced protocol diagnostics through Telnet support.

It is also possible to remotely interrogate the unit and determine the DIP switch settings. Configuration is possible via web interface and by DIP switch. DIP switches allow the Ethernet connection to be fixed if auto-negotiation is not possible and also allows termination to be configured for RS-422/485 connections. The web interface which is password protected for security and allows all other settings to be configured remotely. It is also possible to connect and configure the IP address locally via the serial port.

Technical Data

Rated voltage	12 to 48 VDC
Operating voltage	10 to 60 VDC
Rated current	250mA @ 12 VDC 125mA @ 24 VDC 63 mA @ 48 VDC
Rated frequency	DC
Maximum inrush current @ 10 ms	0.3 A ² S @ 48 VDC
Polarity	Reverse polarity protected
Redundant power input	Yes
Isolation to Connection	All other 3 k Vrms Detachable screw terminal
Enclosure	UL 94, PC / ABS, Flammability class V-1
Dimension (W x H x D)	35 x 121 x 121 mm
Weight	0.2 kg
Degree of protection	IEC 529, Enclosure Ip21
Cooling	Convection
Mounting	On 35 mm DIN-rail

Accessories

- 795-004-001 RS-485 Communication Module

Optical Fiber Interface

3650-0201

RS-485/Optical Fiber Interface Module, 820nm wavelength



Features

- Suitable for harsh environments.
- Galvanic Isolation.
- Protects connected units from lightning and transients.
- DIN rail mounting option.
- Ideal for connecting equipments with different earth potential.
- Guarantees reliable long distance communication.
- Suitable for fibers with 820nm wavelength.

The RS485 fibre optic interface can be used for point to point communication between equipment provided with RS485 interfaces. Fibre optic cable is completely immune to external interference, which makes this unit ideal for harsh industrial environments. Another reason may be the need for a high level of security as fibre optic cable is very hard to tap. The fibre optic interface can handle data rates up to 1.5 Mbit/s. It is suitable with fibers with 820nm wavelength.

Technical Data

Operating Voltage	12 – 36 Vdc
Rated Voltage	24Vdc
Quiescent current	125 mA
Dimensions (W x H xD)	55 x 100 x 128 mm
Weight	300g

Accessories

- 795-004-001 RS-485 Communication Module

3650-0210

RS-485/Optical Fiber Interface Module, 1300nm wavelength



Features

- Suitable for harsh environments.
- Galvanic Isolation.
- Protects connected units from lightening and transients.
- DIN rail mounting option.
- Ideal for connecting equipments with different earth potential.
- Guarantees reliable long distance communication.
- Suitable for fibers with 1300nm wavelength.

Technical Data

Operating Voltage	12 – 36 Vdc
Rated Voltage	24Vdc
Quiescent current	125 mA
Dimensions (W x H xD)	55 x 100 x 128 mm
Weight	300g

Accessories

- 795-004-001 RS-485 Communication Module

Visualeyez

Part Code and Description given below



Features

- Secure System.
- Multiple Users.
- Multiple PC workstations.
- Image, Plan or Text displays.
- Simple Navigation and Control.
- Current event-list.
- In-depth history analysis.
- Report and history print.

Visualeyez is a pictorial and textual aid to help you manage an alarm activation within your work place. It can be programmed to suit any application including: Hospitals, Universities, Prisons, Hotels, Industrial and Commercial buildings. Visualeyez is designed to present the information in a simple, clear and user friendly way, allowing rapid comprehension of the situation.

In addition to the basic function of displaying alarms at a common location, the system also offers the ability to record and analyse both alarms and non-alarm events. This provides the building's engineers or management with the tools they need to analyse alarms, faults, review events, assess problems and plan their maintenance and false alarm prevention strategies.

Technical Data

Processor	Intel Pentium or Equivalent, 2GHz.
Memory	512Mb Minimum.
Disk Space	20Gb Minimum.
Graphics Card	1024 x 768 (XGA), 16 Million colours.
Monitor	XGA or higher, > 80Hz refresh rate.
Sound Card	Windows compatible.
Loudspeakers	Compatible with windows sound card
Pointing Device	2 button mouse.
Keyboard	Required.
Serial Ports	1-6 (configuration dependent).
Parallel Port	Required for Hardware key.
Printer	Windows compatible (Optional).
LAN Connection	10/100 Mps (required for Multiple Workstations).
CD ROM	Required for software installation, min 4x Read recommended.
BackUp Device	Recommended.
Operating System	Windows 2000 (SP4), XP Professional (SP2).

Part Codes

- **795-088-100** - Visualeyez Graphics Workstation - Basic Edition. PC based mimic panel. English Only.
- **795-088-200** - Visualeyez Graphics Workstation - Standard Edition. For connection to a single network with up to 9 control panels. English Only.
- **795-088-210** - Visualeyez Graphics Workstation - Standard Edition including TCP/IP Groups. For connection to a single network with up to 9 control panels. English Only.
- **795-088-220** - Visualeyez Graphics Workstation - Level 2 Standard Plus including TCP/IP Groups. For connection to a single network with up to 5 mimic licenses and up to 9 control panels. English Only.
- **795-088-230** - Visualeyez Graphics Workstation - Level 2 Standard Plus including TCP/IP Groups. For connection to a single network with up to 10 mimic licenses and up to 9 control panels. English Only.
- **795-088-240** - Visualeyez Graphics Workstation - Level 2 Standard Plus including TCP/IP Groups. For connection to a single network with up to 20 mimic licenses and up to 9 control panels. English Only
- **795-088-300** - Visualeyez Graphics Workstation - Premium Edition. For connection to a single network with up to 99 panels. English Only.
- **795-088-310** - Visualeyez Graphics Workstation - Premium Edition. For connection to a single network with up to 99 panels including TCP/IP Groups. English Only.
- **795-088-320** - Visualeyez Graphics Workstation - Level 3 Premium Plus including TCP/IP Groups. For connection to a single network with up to 5 mimic licenses and up to 99 control panels. English Only.
- **795-088-330** - Visualeyez Graphics Workstation - Level 3 Premium Plus including TCP/IP Groups. For connection to a single network with up to 10 mimic licenses and up to 99 control panels. English Only.
- **795-088-340** - Visualeyez Graphics Workstation - Level 3 Premium Plus including TCP/IP Groups. For connection to a single network with up to 20 mimic licenses and up to 99 control panels. English Only.

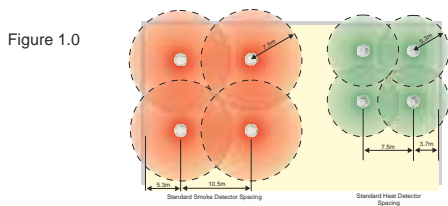
DESIGN GUIDE

Automatic Fire Detectors

The following information is intended only as a guide to the location and spacing of detectors. There is currently no European standard available. This guide is based on Bs5839 part 1, 2002.

Location and Spacing of Point Fire Detectors on Flat Ceilings

On a flat ceiling with no obstructions, the radius of protection of fire detectors is 7.5m for a smoke detector and 5.3m for a heat detector, and detectors should be mounted a minimum of 0.5m from a wall. Figure 1.0 gives a simple spacing plan based on these figures. In practice, the layout of the room must be considered to obtain the the most efficient detector layout.



Simple spacing plans for smoke and heat detectors

Ceiling Height

Smoke or heat detectors can only detect fires once a certain amount of smoke or heat has reached the sensor. As the height of a ceiling increases, the time taken for smoke or heat to reach a sensor will increase, and it will become diluted with clean, cool air. As a result, maximum ceiling heights are limited as indicated in table below.

Detector type	Maximum ceiling height
Point smoke detector conforming to EN54-7	10.5m
Heat detector conforming to EN54-5 Class A1 (threshold 58°C)	9m
High temperature heat detector conforming to EN54-5 Class B (threshold 78°C)	6m
Optical beam detectors	25m

Maximum ceiling height for different types of detector

Often, a boundary layer can form close to the ceiling, which is free of smoke and remains cool. To avoid this, and maximise the probability of detection, smoke detectors should normally be mounted with their smoke entry 25mm-600mm below the ceiling, and heat detectors should be mounted with their heat element 25mm-150mm below the ceiling.

Ceiling Obstructions

Ceiling obstructions such as beams greater than 10% of the ceiling height should be treated as a wall, and will thus divide a room. Detectors should not be mounted within 500mm of such an obstruction.

If the depth an obstruction such as a beam is less than 10% of the height of the ceiling, but greater than 250mm deep, then detectors should not be mounted any closer than 500mm to the obstruction.

Where an obstruction such as a beam or a light fitting is less than 250mm in depth, detectors should not be mounted any closer to the obstruction than twice its depth (see figure 1.1 below)

Where a ceiling comprises a series of small cells, for example a honeycomb ceiling, or a series of closely spaced beams, for example floor of ceiling joists, the recommended spacing and siting of detectors changes further, dependant on the ceiling height and the depth and spacing of the beams. Reference should be made to relevant standards for details (in the UK BS5839 Part 1: 2002, 22.3.k Tables 1 and 2).

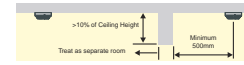
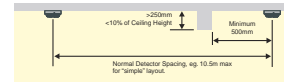


Figure 1.1



Detector Spacing around isolated ceiling obstructions

Partitions and Racking

Where the gap between the top of a partition or section of racking and the ceiling is greater than 300mm, it may be ignored. If the gap is less than 300mm it should be treated as a wall (Ref. Figure 1.2).

To maintain a free flow of smoke and heat to the detector, a clear space should be maintained for 500mm in all directions below the detector.

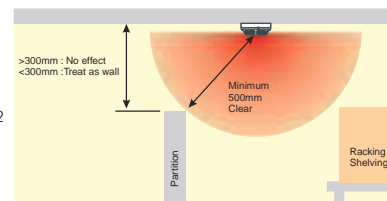


Figure 1.2

Partitions

Sloping Ceilings

Where the ceiling is pitched or sloping, the slope of the roof tends to speed the rise of smoke or heat to the apex, hence reducing the delay before the detectors are triggered. For sloped roofs with a pitch height greater than 600mm for smoke detectors, or 150mm for heat detectors, a row of detectors should be placed within a maximum vertical distance of 600mm or 150mm for smoke or heat detectors respectively from the roof apex. Sloped roofs rising less than 600mm for smoke detectors or 150mm for heat detectors may be treated as a flat ceiling.

Since the smoke or heat tends to rise faster up the slope, it is permissible to use a greater spacing for the row of detectors mounted in the apex of the roof (Ref. Figure 1.3). For each degree of slope of the roof, the spacing may be increased by 1% up to a maximum of 25%. Care must be taken when placing the next row that no gaps are left in detection coverage.

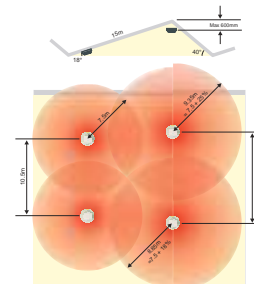


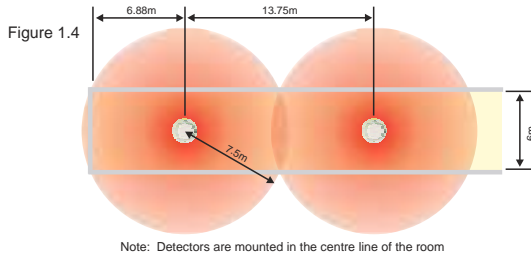
Figure 1.3

Spacing of Smoke Detectors under a Pitched Roof

Corridors

In corridors less than 2m wide, detectors should be spaced at a distance of 15m for smoke detectors and 10.6m for heat detectors, with the maximum dimension to a wall at the end of the corridor being 7.5m and 5.3m respectively.

In narrow rooms and corridors greater than 2m wide, due to the way that the coverage radii of detectors intersect with the walls of the corridor, the spacing between detectors will increase. Figure 1.4 shows how, for a room 6m wide, the spacing for smoke detectors can be increased from the standard 10.5m.

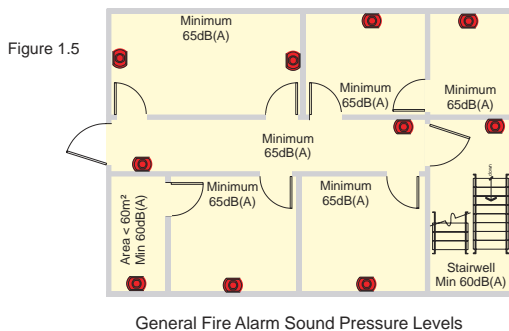


Alarm Signals

Audible Alarm Signals

Audible fire alarm signals must provide a clear warning of a fire to all those for whom the signal is intended.

The general requirement for the volume of audible alarm signals is that they should provide a Sound Pressure Level (SPL) of at least 65dB(A), but not more than 120dB(A) throughout all accessible areas of a building. See figure 1.5



Exceptions to this general rule are as follows:

- In stairways the SPL may be reduced to 60dB(A)
- Enclosures less than 60m² may be reduced to 60dB(A)
- There is no minimum for enclosed areas less than 1m²
- At specific points of limited extent the SPL may be reduced to 60dB(A)

Where a continuous background noise level greater than 60dB(A) is present the fire alarm signal should be 5dB above the ambient, but not greater than 120dB(A)

Where the alarm is intended to wake people, an SPL of 75dB(A) is required at the bed head. Generally this will require a sounder to be placed within the room.

Where it is not possible to place a sounder within a room, there will be a loss of approximately 20dB(A) through a standard door, and 30dB(A) through a fire door (Ref. Figure 1.6).

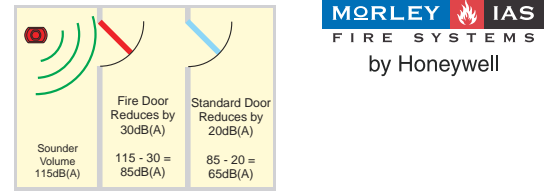


Figure 1.6

Warning: Volumes greater than 120dB(A) will cause damage to hearing.

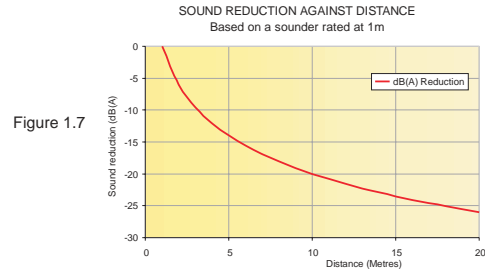


Figure 1.7

In open space, as the distance from a sounder doubles, the sound level will be reduced by 6dB(A), as shown in Figure 1.7.

Visual Alarm Signals

Visual alarms are normally used only as a supplement to audible alarms where they are likely to be ineffective, for example in areas of high background noise levels where hearing protection is likely to be worn. They can however be used alone where audible warnings are undesirable for example operating theatres and recording studios.

Visual alarms should be clearly distinguishable from other warning lights, preferably red and should flash at a rate of 30 to 130 flashes per minute. The recommended mounting height is above 2.1m, however they should not be mounted closer than 150mm from the ceiling. They should be positioned so that any alarm is clearly visible from all locations within the area protected.

Manual Call Points

People can often still detect a fire long before automatic fire detectors; hence manual call points are important components of fire detection systems in occupied buildings to ensure timely evacuation in the case of fire. All call points are approved to EN54-11, and should be of type A, that is once the frangible element is broken or displaced the alarm condition is automatic.

Manual call points should be mounted on all escape routes, and at all exit points from the floors of a building and to clear air.

In order to provide easy access, call points should be mounted between 1.2 and 1.6m from the floor, and should be clearly visible and identifiable. The maximum distance anyone should have to travel in order to activate a manual call point is 45m, (Ref. Figure 1.8) unless the building is occupied by people having limited mobility, or a rapid fire development is likely, in which case the maximum travel distance should be reduced to 20m. Call points should also be sited in close proximity to specific hazards, for example kitchens or paint spray booths.

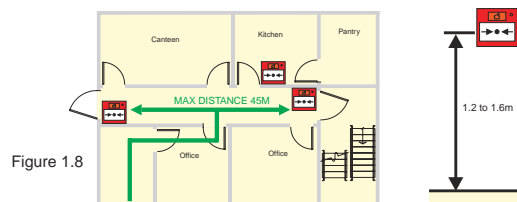


Figure 1.8

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