features

- Easy plug-in type connection
- RS232 and RS485 options
- Hi-485 High-integrity option for critical applications
- Compatible with ZXa and ZXe intelligent multi protocol fire alarm control panels
- Class-A or Class-B networking capability
- Peripheral bus for remote I/O devices (RS485)
- Leased line modem link (RS232)
- Third-party graphic front-end interfacing

The serial communication modules are plug-in expansion modules for use in the ZXa and ZXe intelligent multi-protocol fire alarm control panels. These optional modules add optically isolated communication ports to the ZXa/ZXe control panels to allow serial communications for networking and peripherals. Two types of serial communication protocols are available with the ZXa and ZXe control panels:-

- RS485 Communication protocol
- RS232 Communication protocol

The RS485 communication module supports two-wire RS485 multi-drop transmission between networked ZXa/ZXe control panels, between ZXa/ZXe control panels and repeaters or between ZXa/ZXe control panels and serial peripheral devices. Using a shielded twisted-pair cable with a cross sectional area of minimum 0.5 mm^2 (24 AWG), the RS485 module will support cable/bus lengths of 1,200 meters (3937 ft) per channel.

When used to drive a peripheral bus the RS485 module can support remote I/O devices such as:

- Active and passive repeaters
- External printers
- 4-way programmable relay and sounder cards
- 8-way input cards
- 40-way mimic driver cards
- Modbus and pager interface modules

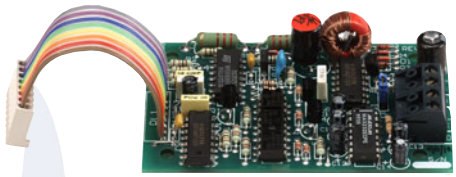
The RS485 communication module can also be used in conjunction with the Hi-485 conversion module for systems requiring a "High Integrity" loop for network communications. The Hi-485 nodes are able to detect and isolate transmission line faults such as short and open circuits on the network wiring.

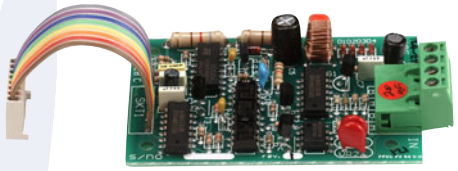
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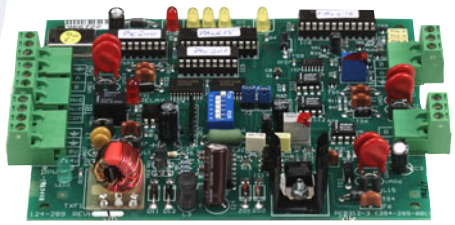
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Communication Modules

Data Sheet

157(0102)

We reserve the right to change or amend any design or specification in line with our policy of continuing development and improvement.

The Hi-485 modules also act as signal repeaters/boosters, which enable "High Integrity" loops of up to 12 km (39,370 ft) to be constructed.

The RS232 communication module supports a single point-to-point communication between ZXa/ZXe panels. The panels can also be installed remotely if a suitable modem and leased or private line are used. The RS232 module also supports a single point-to-point transmission between a ZXa/ZXe control panel and graphic front end.

When used in an ZXe control panel, the RS232 module can also be used as a communication interface to the pager interface. This option is not available with a ZXa panel.

The AUTO-LEARN facility provided in the ZXa and ZXe control panels saves considerable time and effort when installing new plug-in modules and peripheral devices or when changing system configuration. It allows the system to learn itself what modules and peripheral devices have been installed on the panel.

mechanical

Dimensions (HxWxD):

RS232 Module	90 x 54 x 25 mm
RS485 Module	90 x 54 x 25 mm
Hi-485 Conversion Module	112 x 145 x 22 m

Weight:

RS232 and RS485 Modules:	35 gr. (1 oz)
Hi-485 Conversion Module:	150 gr. (5 oz)

Operating temperature: 0°C to 49°C

Relative humidity: 10% to 93% non-condensing

electrical

Operating voltage: 18 to 28Vdc (derived from the panel)

Current consumption (typical at 24Vdc):

RS232 Module:	59 mA
RS485 Module:	25 mA
Hi-485 Module:	40 mA (typical)
	100 mA (in fault condition)

These current consumption figures must be added to the basic current consumption of the panel when calculating stand-by battery requirements.

Port terminals:

Removable terminal block with maximum cable cross sectional area of 2.5mm² (13 AWG).

Wiring:

RS485 Module:

Maximum network wiring length:	1,200m (3937 ft)
Maximum high integrity loop length:	12Km (39,370 ft)
Maximum peripheral bus length:	1,200m (3937 ft)

150 Ohm end-of-line resistors are required at both ends of the RS485 circuit.

Recommended cable:

Belden 8760 and 8719 or equivalent twisted shielded pair. For high integrity installations suitable twisted pair fire-resisting cables are: Calflam and FireTwist or equivalent.

RS232 Module:

Using a shielded twisted pair cable with a cross sectional area of 0.5mm² (24 AWG) the interface will support communications over distances of up to 15.2 meters (50 ft).

approvals

UL LISTED

part numbers

EN54

795-005	RS232 Communication Module
795-004	RS485 Communication Module
795-038-001	Hi-485 Conversion Module

UL listed

794-005	RS232 Communication Module
794-004	RS485 Communication Module