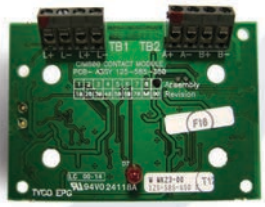
Addressable Loop Modules

Introduction FC410MIM

The FC410MIM Mini Input module is designed to monitor fire contacts, such as extinguishing system control, ventilation control, fire door control etc. The module provides one identifiable detection spur which is capable of monitoring multiple normally open contacts or a single normally closed contact.

The FC410MIM can be mounted in any electrical enclosure with sufficient depth to accommodate FC410MIM and the contacts monitored by the IN+ and IN- terminals, ie, no field wiring.The remote LED (if required, not supplied) must be located within the same electrical enclosure.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	EOL RESISTOR VALUE	MONITOR RESISTOR VALUE	NUMBER OF INPUTS	NUMBER OF OUTPUTS
555.800.701	410MIM	Mini Contact Module	PCB 48x57x13	22	- 25 - + 70 ºC	200 Ohms	100 Ohms	1(N/O or N/C)	1x LED

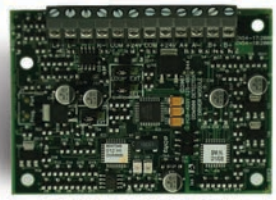


Introduction FC410CIM

The FC410CIM FC Addressable Contact Input Module is designed to monitor fire contacts such as extinguishing system control, ventilation control, fire door control etc. The FC410CIM can be configured as:
Two spur circuits monitoring multiple normally open contacts, with short circuit giving a fault output.
Two spur circuits monitoring single normally closed contacts, with short circuit giving a fault output.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	EOL RESISTOR VALUE	MONITOR RESISTOR VALUE	NUMBER OF INPUTS	NUMBER OF OUTPUTS
555.800.702	410CIM	Contact Module	PCB 48x57x13	100	- 25 - + 70 ºC	200 Ohms	100 Ohms	2 (N/O or N/C)	0

Description FC410DDM

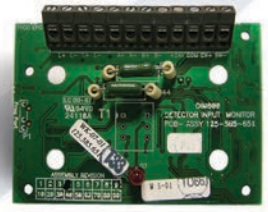


The FC410DDM provides the ability to connect and interface 2 conventional zones, to the FireClass fire alarm controller.

The FC410DDM monitors the status of the detectors and the wiring to the detectors and signals detector and wiring status back to the controller. The conventional detector circuits can be configured as one Class A circuit (loop) or two Class B spur circuits. The FC410DDM can be either loop powered or driven from a local 24Vdc supply. Supports Detector Removal using diode bases.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	EOL RESISTOR VALUE	MONITOR RESISTOR VALUE	NUMBER OF INPUTS
577.800.706	410DDM	Universal Detection Module	PCB: 84x60x25 mm (includes LED on rear)	100	- 25 - + 70 ºC	Conventional Circuit: 4.7 kohm, 1% standard. Detector Removal: 18 V, 2% Zener Diode	100 Ohms	One Class A or two Class B

Introduction FC410DIM



The Addressable FC410DIM provides the ability to connect and Interface one zone of conventional detectors (non-addressable) to the Fire Alarm Controller.

The FC410DIM monitors the status of detectors and wiring to detectors and signals detector and wiring status back to the Controller.
The FC410DIM requires a 24Vdc power supply.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	EOL RESISTOR VALUE	NUMBER OF OUTPUTS
555.800.712	410DIM	Conventional Zone Monitor	PCB 48x57x13	100	- 25 - + 70 ºC	4.7k Ohms	1

Introduction FC410BDM

The FC410BDM Beam Detector Interface Module is designed to power and interface one FIRERAY 50/100/2000/5000 Beam Detector to the FireClass Digital Addressable Loop.

The FC410BDM monitors the Fire and Fault contacts and also monitors for open and short circuits on the connections between the interface and the beam detector. For remote siting of the FIRERAY detector an optional BTM800 Terminal Module can be used.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	TYPICAL STANDBY mA	TYPICAL ALARM mA	OVERLOAD mA
555.800.766	410BDM	Beam Detector	PCB 48x57x13	100	- 10 - + 55 ºC	14	21	35

Introduction BTM800

In many cases it will be necessary to site the FC410BDM Beam Detector Module some distance from the beam detector itself. To minimise and simplify wiring in such cases an optional unit, the BTM800 beam termination module is available. The BTM800 is also housed in a standard double gang ancillary cover and has all the connections and components required to minimise installation time.

Features

- Simplifies the wiring between Beam detector and FC410BDM
- Allows FC410BDM to be sited up to 40m from the beam detector

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE
555.800.067	BTM800	Beam Termination Module	60x84x14 PCB	130	- 20 - + 70 ºC

Introduction FC410RIM

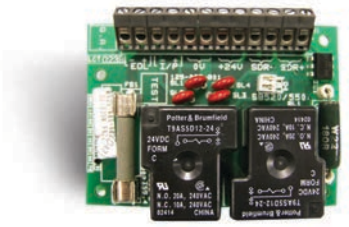
The FC410RIM Relay Interface Module provides one volt-free relay changeover contact on a latching relay. The relay is controlled by a command sent from the FireClass fire controller via the addressable loop. The relay state (activated, deactivated or stuck) is returned to the controller as confirmation.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	QUIESCENT CURRENT mA	RELAY CONTACTS	ALARM CURRENT mA	NUMBER OF OUTPUTS
555.800.702	410RIM	Relay Interface Module	PCB 48x57x13	100	- 25 - + 70 ºC	0.46	100 Ohms	4.6	1 Volt Free Change Over

Introduction FC410SNM

The FC410SNM Sounder Notification Module is designed to provide an output, in response to a command signalled from a controller, to activate a number of polarised and suppressed sounders. The sounders are powered from an independent power supply and the module is capable of passing up to a maximum of 2A (eg, 24V dc 50mA company sounders or a mixture of different current rated sounders not exceeding a maximum current of 2A).

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	EOL RESISTOR VALUE	RELAY CONTACTS	POWER REQUIREMENT	NUMBER OF OUTPUTS
577.800.705	410SNM	Sounder Circuit Controller	PCB 48x57x13	100	- 25 - + 70 ºC	27k Ohms ½ Watt	2A @ 24Vdc	24Vdc	1 Monitored Sounder Circuit

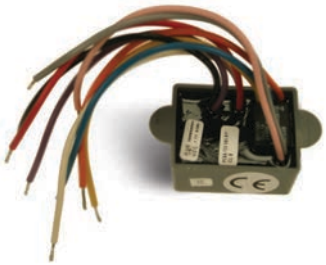


Introduction SB520

The SB520 sounder booster module enables the FC410SNM to drive circuits with higher currents whilst maintaining the reverse polarity integrity line monitoring. It is non-addressable and requires a local 24 V DC supply to drive a single circuit of polarised and suppressed sounders.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	OUTPUT RATING	EOL RESISTOR VALUE	NUMBER OF OUTPUTS
577.001.023	SB520	Sounder Booster Module	PCB 48x57x13	100	- 20 - + 70 ºC	15A @ 24Vdc	270 Ohms 6 Watt	1 Monitored Sounder Circuit

Introduction HVR800



The HVR800 High Voltage Relay Interface is a non-addressable multi-voltage relay module (operating from 24V dc, 24V ac, 120V ac and 240V ac). The encapsulated HVR800 provides a 10 amp volt-free contact that can be used to extend the contact ratings of FC410RIM Addressable Relay Module applications.

A maximum of four HVR800s can be individually driven and controlled by an FC410MIO Small Addressable Multi-Input/Output module if all HVR800s are powered by 120V ac or 240V ac.

For ac operation, no external dc power supply unit is required to operate the relay.

When used to switch 24V dc, the HVR800 must be provided with an external 24V dc supply which should be switched through the clean relay contacts of an FC410MIO or FC410RIM.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	RELAY CONTACTS 28Vdc	RELAY CONTACT 240VAC
568.800.004	HVR800	High Voltage Relay	Module 26.5 x 73.6 x 41.5	172	- 20 - + 70 ºC	8A	10A

Introduction FC410SIO

The FC410SIO Single Input/Output Module is designed to provide a monitored open collector input and a volt free relay changeover output. FC410SIO can switch up to 2 A @ 24 Vdc.

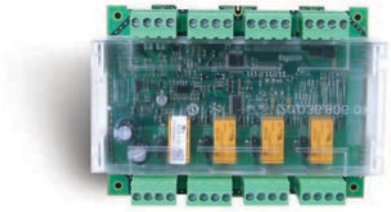
PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	RELAY CONTACT	EOL RESISTOR VALUE	NUMBER OF INPUTS	NUMBER OF OUTPUTS
555.800.763	410SIO	Single Input/ Ouput Unit	PCB 60x84x14	105	- 20 - + 70 ºC	2A @ 24Vdc	3.3k Ohm	1	1

Introduction FC410MIO

The FC410MIO Multi I/O Module has three inputs and two outputs from latching relays. The inputs can monitor fire contacts such as extinguishing system control, ventilation control, fire door control etc. The two relays outputs provide volt-free relay changeover contacts.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	RELAY CONTACTS	EOL RESISTOR VALUE	NUMBER OF INPUTS	NUMBER OF OUTPUTS
555.800.765	410MIO	Multi Input/ Ouput Unit	PCB 72x110x18	70	- 20 - + 70 ºC	27k Ohms ½	330 Ohm	3	4

Output 1 and 2 HVR Driver and Relay / Output 3 and 4 HVR Driver only

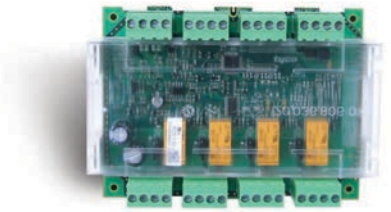


Introduction FC410QMO

The FC410QMO comprises of four monitored relay outputs that are suitable for 24Vdc sounders. The outputs are monitored for short and open circuit faults.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	RELAY CONTACTS	EOL RESISTOR VALUE	NUMBER OF INPUTS	NUMBER OF OUTPUTS
555.800.770	410QMO	Quad Output Unit	Module 133x96x40	105	- 20 - + 70 ºC	2A @ 30Vdc	27k Ohm	0	4

Introduction FC410QIO

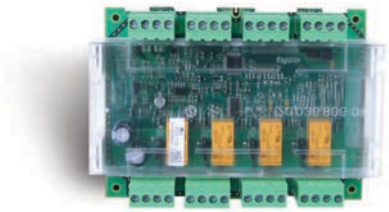


The FC410QIO Quad Input/Output Module is designed to provide four monitored digital inputs and four potential free relay changeover outputs.
The outputs can be connected to an Auxiliary Voltage source and its voltage can be monitored.

The FC410QIO has an integral FireClass loop isolator.
When a section of the loop adjacent is shorted, the isolator trips, isolating the shorted section, then the yellow LED illuminates. This status remains until the short is removed. The FC410QIO must be fitted in a control enclosure or any distributor enclosure. The FC410QIO will be preferably mounted via a DIN rail. Alternatively, it can be directly fixed on the rear side of the enclosure.

The digital input monitoring and isolator functions are both configurable. Furthermore, all outputs can be connected to the HVR800 which allows switching to high power galvanic isolated loads.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	RELAY CONTACTS	EOL RESISTOR VALUE	NUMBER OF INPUTS	NUMBER OF OUTPUTS
555.800.771	410QIO	Quad Input/ Output Unit	133x96x40 module	150	- 20 - + 70 ºC	2A @ 30Vdc	3.3k Ohm	4	4



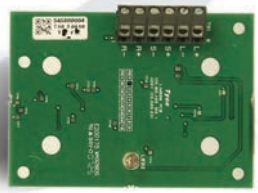
Introduction FC410QRM

The FC410QRM Quad Relay Module is designed to provide four potential free relay changeover outputs. The outputs are monitored with parallel contacts of the relays. The outputs can be connected to an Auxiliary Voltage source and its voltage can be monitored.

The FC410QRM has an integral FireClass loop isolator.
When a section of the loop adjacent is shorted, the isolator trips, isolating the shorted section, and illuminating a yellow LED.
This status remains until the short is removed.

The FC410QRM must be fitted in a control enclosure or any distributor enclosure. The FC410QRM will preferably be mounted via a DIN rail. Alternatively, it can be directly fixed on the rear side of the enclosure. Furthermore, all outputs are configurable to the HVR - mode (High Voltage Relay), which allows to connect up to four HVR800 modules for switching e.g. 240V loads galvanic isolated.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	RELAY CONTACTS	NUMBER OF OUTPUTS
555.800.773	410QRM	Quad Relay Module	133x96x40 module	150	- 20 - + 70 ºC	2A @ 30Vdc	4



Introduction FC410LI

The FC410LI Line Isolator Module is designed to be used on the FireClass addressable controller loop. It monitors the line condition and when detecting a short circuit will isolate the affected section whilst allowing the rest of the loop to function normally. The purpose of the FC410LI Line Isolator Module is to ensure that, on a looped addressable system, no short circuit fault can disable more detection devices than would be lost on a conventional non-addressable fire circuit.

PRODUCT CODE	TYPE	DESCRIPTION	DIMENSIONS (mm)	WEIGHT (g)	OPERATING TEMPERATURE	TYPICAL NUMBER OF DEVICES BETWEEN ISOLATORS
545.800.704	410LI	Line Isolation Module	60x84x14 PCB	100	- 20 - + 70 ºC	20