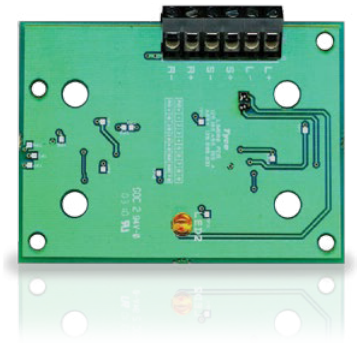
LIM800 Generation 6 MX Detection Range Line Isolator Module

Description

The LIM800 is an *MX* Addressable Loop Isolator Module that can be used to provide short circuit isolation between zones or portions of the *MX* addressable loop. LIM800s are installed at appropriate positions around the *MX* loop to monitor the loop voltage either side of the device. If the voltage drops to zero volts (e.g. due to a short), the two LIM800s either side of the short open their electronic switches and isolate the shorted section allowing the rest of the loop to be driven by the *MX* Control and Indicating Equipment (CIE). The LIM800 includes an additional spur output that can be wired to additional *MX* devices (usually all in one zone 3). If a short occurs on the spur, the two electronic switches in the LIM800 operate and disconnect the shorted spur from the loop. The LIM800 includes a yellow LED to indicate when one of its connections is shorted. The LIM800 supports up to 100 IB units of *MX* load on each connection, so additional LIM800s can be installed on long sections of cable to isolate each block of devices. Refer to the appropriate CIE manual for technical design specifications.

Figure 1: LIM800



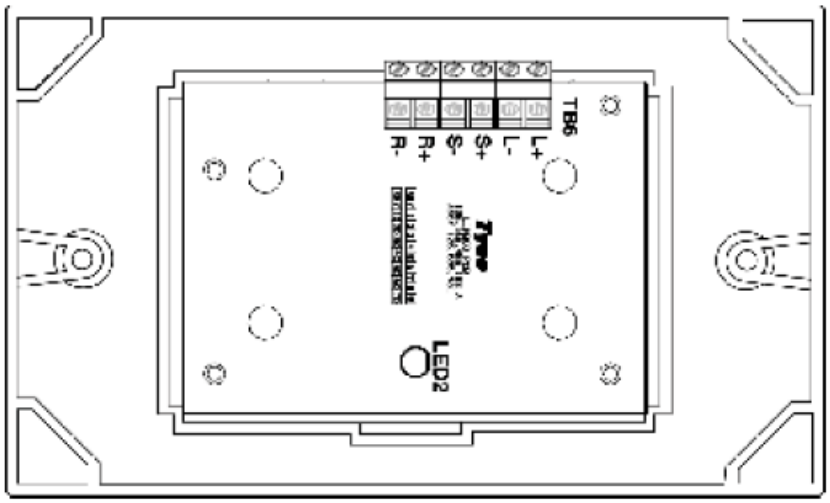
Features

- Compatible with *MX* Addressable Loop on SIMPLEX 4100ESi, VIGILANT *MX1* and VIGILANT MX4428 panels
- Automatic short circuit protection for the *MX* addressable loop
- LED indication of LIM800 operation
- Common *MX* module footprint
- AS ISO 7240.17 Listing Short Circuit MX Loop Isolator

Mounting

The LIM800 is supplied as an open circuit board (PCB) with mounting hardware and must be fitted into a suitable enclosure. It may be mounted on a gearplate using plastic standoffs, to an M520 Ancillary Cover and K2142 back box, or into a D800 Ancillary Housing. The K2142 mounting box provides a convenient surface mounting enclosure and the M520 cover is designed to accommodate the LIM800.

Figure 2: LIM800 fitted to the M520 cover



Specifications

Table 1: Specifications

Item	Description
Loop voltage [1]	20 V to 40 VDC
Input Current	
Normal	80 µA
Tripped (max.)	10 mA
Series Resistance (max.)	0.25 Ohm
Equivalent Capacitance	0.5 nF
IB Units between Isolator	100 (max.)
Max. LIM800 per Loop [2]	200/250
Ambient Temperature	–25°C to +70°C
Storage Temperature	–40°C to +80°C
Relative Humidity *Indoor Applications Only*	10% to 95% (non cond.)
Dimensions (HWD)	61 x 84 x 14 mm
Wire Size (maximum)	2.5sq. mm
ActivFire Listing	afp-3170
FPANZ Listing	VF/657
Standards	AS ISO 7240.17:2021

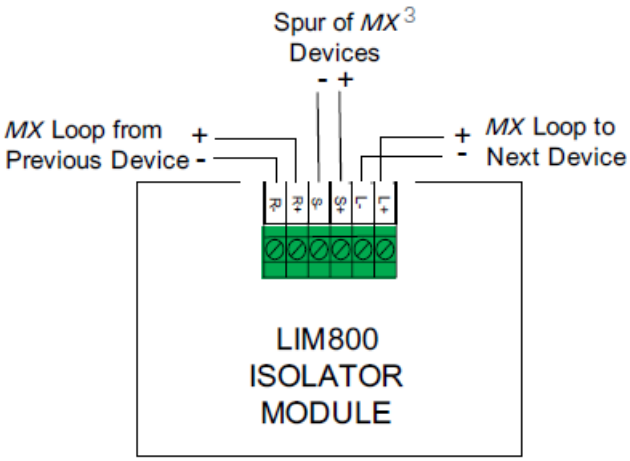
Table 2: Part numbers

Part number	Description
545.800.033	LIM800 Short Circuit Isolator Module
517.035.007	M520 Ancillary Cover
517.035.010	K2142 Back Box
547.004.002	DIN Rail Mounting Brkt
557.201.401	D800 Ancillary Housing

Item	Description
1	Addressable loop voltage provided by MX CIE
2	Maximum number of devices between isolators limited to 40 for AS 1670.1-2004 systems. Refer to LT0273 (MXP), LT0360 (MX1-NZ), LT0441 (MX1-Au) for design specifications
3	Not approved for external wiring on MX4428

Wiring

Figure 3: LIM800 wiring



Termination

L+ Line IN +ve

L– Line IN -ve

S+ Spur +ve

S– Spur -ve

R+ Line OUT +ve

R– Line OUT -ve

Contact information

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VIGILANT, a respected regional brand of Johnson Controls, is a technology leader in the Australian and New Zealand fire detection markets with AS and NZS product approvals. The VIGILANT product line includes a comprehensive range of MX TECHNOLOGY fire detection products and the market-leading QE20/QE90 voice evacuation systems. VIGILANT product is widely supported throughout Australia and New Zealand by a network of installation companies, service companies and distributors.