DDM800

Generation 6 *MX* Universal Fire & Gas Detector Module

Features

- Compatible with *MX* Addressable Loop on SIMPLEX 4100ESi, VIGILANT *MX1* and VIGILANT MX4428 fire panels

- Interface for two zones of conventional detectors

- Programmable inputs as smoke/heat/CO detectors and MCP for fast alarms*[1]

- Loop powered or external 24Vdc

- Built-in loop short-circuit isolator

- Wide range of compatible detectors

The DDM800 – Universal Fire & Gas Detector Module is an *MX* addressable module designed to monitor and signal alarms from:
- One or two conventional 2-wire detector circuits, or
- One or two 4-20 mA sensors (MX4428)*[2]

The DDM800 module may be used to connect two circuits of conventional 20V detectors and interface them with an *MX* addressable fire alarm system.

These circuits are compatible with a wide range of detectors, and include support for fast alarms on 15V/Indicating Manual Call Points (MCP), Intrinsically Safe isolators and detectors, and AVF on smoke detectors*[1].

The DDM800 can be *MX* Loop-powered or use an external 24Vdc power supply. When loop-powered a special low voltage mode can be used with the Tyco 614 series detectors for operation over the full voltage range of the *MX* Loop.

Using an external 24V supply allows a wide range of detectors to be connected, and for the detector circuits to be electrically isolated from the *MX* Loop.

In 4-20mA mode the DDM800 can support a single 4-20mA source (e.g., gas sensor, flame sensor) on each circuit, operating in either current sink or current source mode*[2]. The DDM800 has an insertion loss of 4V, providing compatibility with a wide range of sensors from a 24V supply.

Specifications

MX Loop Voltage

Standard Loop pwr.	28 – 40Vdc
LV mode & Ext. pwr.	20 – 40Vdc
Detector Circuit	22V±1V
Max.Cct. Resistance	34 Ohm(NZ), 50 Ohm(Au)

Detector Quiescent Current (max. per input)

I.S.mode	1.0mA
LV mode	1.5mA
other modes	2.5mA

External Power Supply

Voltage	21.9 – 29V
Quiescent Current	10mA + Detector Load
Alarm/Short Current	52mA
Dimensions (HWD)	61 x 84 x 25 mm
Weight	100g
Ambient Temperature	−25°C to +70°C
Storage Temperature	−40°C to +80°C
Relative Humidity	10% to 95% (non cond.)

Indoor Applications only

ActivFire Listing	afp-3173
FPANZ Listing	VF/666

Compatible Panels	4100ESi	*MX1*	MX4428
4-20mA	–	–	Y
AVF	–	Y	Y
I.S. Detection	–	Y	Y
15V MCP/Fast Alarm	–	Y	Y
Low-Voltage	Y	Y	Y

Part Numbers

577.800.006	DDM800 Module
517.035.007	M520 Ancillary Cover
517.035.010	K2142 Back Box
547.004.002	DIN Rail Mntg Brkt
557.201.401	D800 Ancillary Housing
FP1027	*MX1* Loop/*MX* Module Brkt
FP1062	*MX* Module x4 Mountg Brkt
FP1063	4x DDM800 Mntd on FP1062

The DDM800 has an integral *MX* loop short-circuit isolator. When a section of the *MX* loop adjacent to the DDM800 is shorted, the isolator trips, isolating the shorted section and illuminating the yellow LED.

The DDM800 may be fitted to the M520 cover and K2142 back box, D800 Ancillary housing, or DIN rail bracket, or for *MX1*; 2 modules can be fitted to FP1027 or 4 fitted to FP1062.

A pre-wired bracket with 4x DDM800 fitted and wired for *MX1* is available as FP1063. Alternatively the DDM800 may be custom mounted on stand-offs.

*1 Available options depend on panel type used. Refer specific panel manuals.
*2 4-20mA mode supported by MX4428 only. Refer to Panel Design manuals for details.

Wiring

DDM800 simplified wiring diagrams.
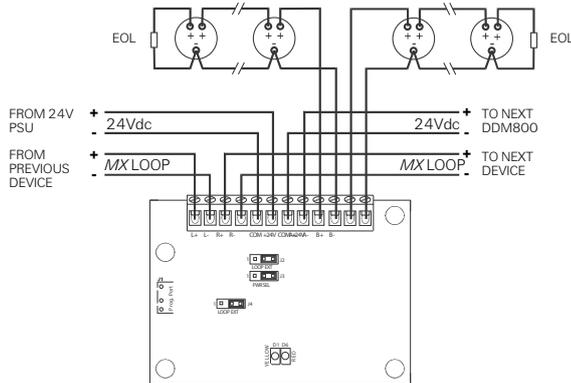
FIG 1. CONVENTIONAL DETECTORS - EXTERNAL 24V SUPPLY
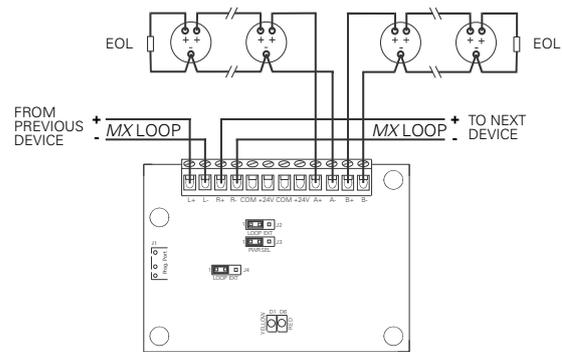
FIG 2. CONVENTIONAL DETECTORS - LOOP POWERED
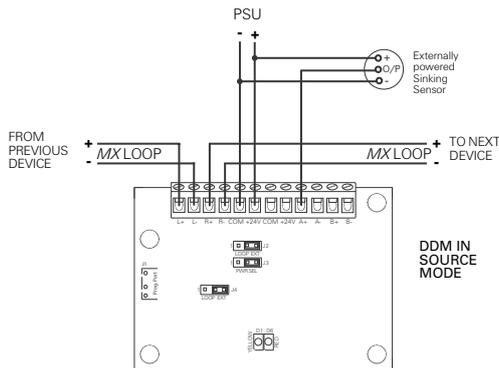
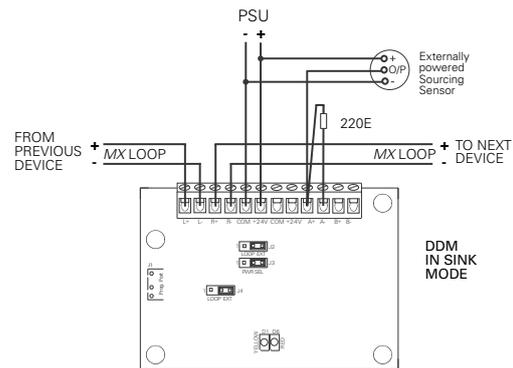FIG 3. 4-20MA CURRENT SINKING SENSOR (MX4428 ONLY)
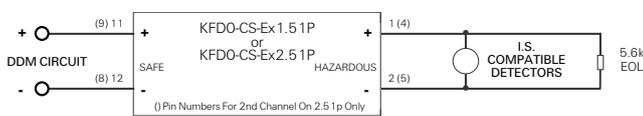
FIG 4. 4-20MA CURRENT SOURCING SENSOR (MX4428 ONLY)

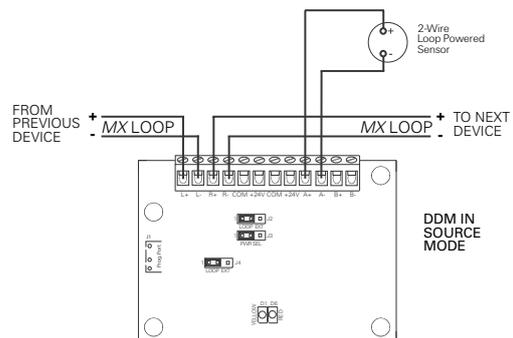FIG 5. INTRINSICALLY SAFE DETECTORS WITH CURRENT REPEATER

FIG 6. 2-WIRE LOOP POWERED 4-20MA SENSOR (MX4428 ONLY)

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