

# DDM800

## Universal Fire & Gas Detector Module



### Features

- // Interface for two zones of conventional detectors
- // Differentiates between smoke/heat/CO detectors and MCP for fast alarms
- // Loop powered or external 24Vdc
- // Built-in loop short-circuit isolator
- // Wide range of detectors
- // Inputs can be 4-20mA Interface\*1

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\*1

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.

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\*1. The DDM800 has an insertion loss of 4V, providing compatibility with a wide range of sensors from a 24V supply.



### Specifications

<i>MX</i> 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.)
<i>Indoor Applications only</i>	
ActivFire Listing	afp-1446
FPANZ Listing	VF/666
<b>Part Numbers</b>	
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	<i>MX1</i> Loop/ <i>MX</i> Module Brkt
FP1062	<i>MX</i> Module Mounting 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 on-board 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. Alternatively it may be custom mounted on stand-offs.

\*1 4-20mA mode supported by MX4428 only. Refer to Panel Design manuals for details.

## WIRING

### DDM800 simplified wiring diagrams

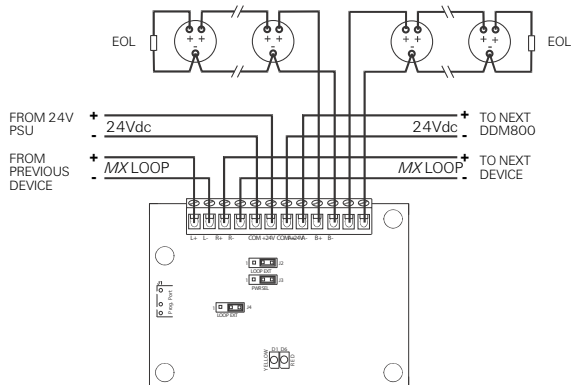


FIG 1. CONVENTIONAL DETECTORS - EXTERNAL 24V SUPPLY

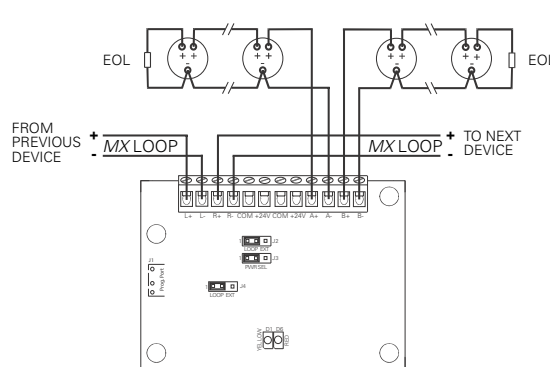


FIG 2. CONVENTIONAL DETECTORS - LOOP POWERED

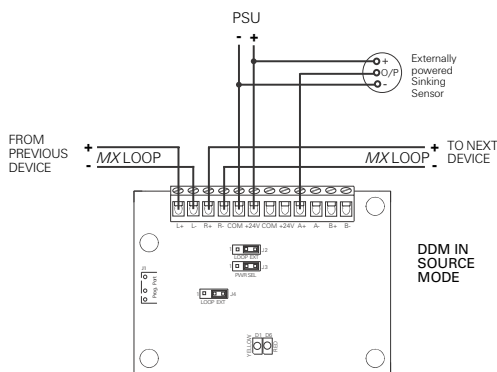


FIG 3. 4-20MA CURRENT SINKING SENSOR (MX4428 ONLY)

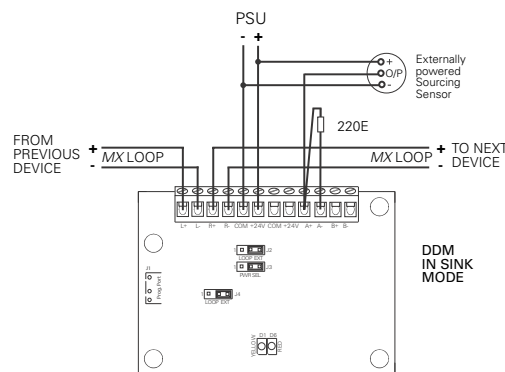


FIG 4. 4-20MA CURRENT SOURCING SENSOR (MX4428 ONLY)

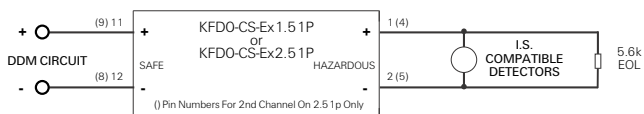


FIG 5. INTRINSICALLY SAFE DETECTORS WITH CURRENT REPEATER

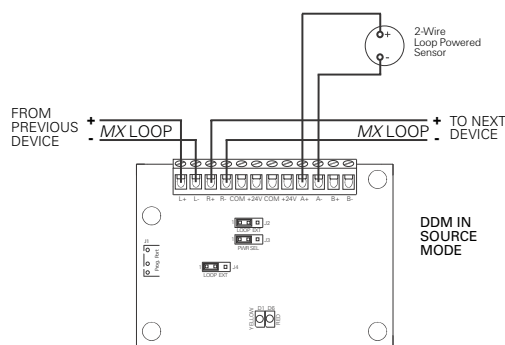


FIG 6. 2-WIRE LOOP POWERED 4-20MA SENSOR (MX4428 ONLY)

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