DESCRIPTION
The DIM800 Detector Input Module interfaces two collective detector circuits onto the MX addressable loop. Each circuit can support 3mA of detector current and requires a 4k7 Ohm EOL (End Of Line) resistor. The DIM800 requires a suitably rated external 24V supply to power the detector circuits. A switched 24V output is provided to power detectors that have separate power supply terminals. The two circuits are mapped to the same addressable point; either circuit in alarm will put the point into alarm. Unused circuits must be terminated with an EOL.

INSTALLATION
The DIM800 is supplied as an open PCB with mounting hardware and EOL resistor and must be fitted in a suitable enclosure. It may be mounted on a gear plate using plastic standoffs, or to an M520 Ancillary Cover and K2142 back box. The K2142 mounting box provides a convenient surface mounting enclosure and the M520 Cover is designed to accommodate the DIM800. Note that the external supply voltage rating is critical for compatibility with some detectors. This supply may be common to a number of DIM800s but do not connect the circuit wiring to any other circuit or non-isolated equipment.

OPERATION
The LED will operate when an alarm is detected on any circuit and can be programmed to blink when the DIM800 is polled by the CIE. Alarm Verification (AVF) can be programmed at the CIE to assist in reducing false alarms. The switched 24V output is turned off when the DIM800 is reset by the CIE, including a 5 second reset during AVF confirmation. The external supply is supervised by the DIM800 and a fault is generated if the voltage falls below the minimum operating voltage.

ADDRESS SETTING
The DIM800 has a default invalid address of 255 and must be set to the correct loop address using the 801AP MX Service Tool.

SPECIFICATIONS
Mechanical
PCB Dimensions:
  - Height: 61mm
  - Width: 84mm
  - Depth: 25mm
Wire Size (maximum): 2.5mm²
Part Number: DIM800

Electrical
Loop Voltage¹: 20V to 40VDC
Quiescent Current: 100µA
Alarm Current: 170µA
Detector Circuit
  - Detector Load (maximum per input): 3mA
  - Detector EOL: 4k7 Ohm
  - Switched 24VDC: Output (max): 300mA
    Output drop: 1.5V@300mA
External Supply²: 18-28.7VDC
Current per Circuit: 7.5mA
Alarm Current: 30 to 50mA
Max. DIM800 per loop³: 200

Environmental
Indoor Applications only
Operating Temperature: -25°C to +70°C
Storage Temperature: -40°C to +80°C
Relative Humidity (max. non-cond.): 95%

¹ Addressable loop voltage provided by Tyco MX4428
² Refer to table on page 2 for specific detectors
³ Refer to Technical Manual LT0273(MXP), LT0313 (4100MXP), LT0360(MX1) for design limits.
### Loop Circuit (4 wire)

#### Beam Detector Interface

- **L+**
- **L-**
- **A+**
- **B+**
- **A-**
- **B-**
- **487 EOL**

Unused inputs (A or B) must be terminated with 487 EOL.

#### Conventional Detector Interface

- **EXT PSU**
- **(+24V)**
- **COM**
- **SW+**
- **SW-**

Unused inputs (A or B) must be terminated with 487 EOL.

### DIM800 Detector Compatibility

<table>
<thead>
<tr>
<th>Series</th>
<th>Detector Type</th>
<th>Qty</th>
<th>External Supply Voltage</th>
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<td>MD614 Heat</td>
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<td>MR614 Photoelectric</td>
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<td>4098-9618EA, 9619EA, 9621EA Heat</td>
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<td>R24B Flame</td>
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<td>Hard Contact Devices</td>
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**M520 Ancillary Cover**

**DIM800 PCB**

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