



# FLM-420-O2 Output Interface Modules



- ▶ **Two semi-conductor outputs, can be switched independently of each other**
- ▶ **Outputs are electrically isolated from LSN loop and short-circuit proof**
- ▶ **Max. switchable current per output 700 mA**
- ▶ **Maintains LSN loop functions in the event of wire interruption or short-circuit thanks to two integrated isolators**

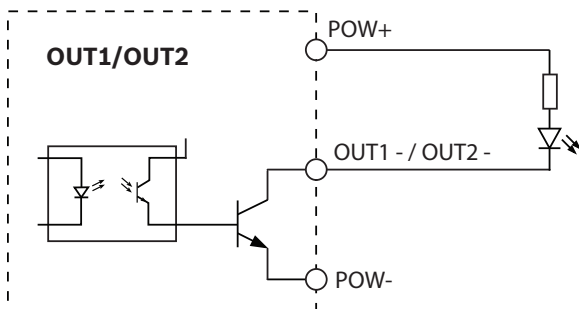
The FLM-420-O2 Output Interface Modules have two outputs to control external devices.

They are 2-wire LSN elements for connection to the Local SecurityNetwork LSN improved version with the enhanced functionality.

## Functions

### Semi-conductor outputs

The two semi-conductor outputs can be switched independently of each other. They are electrically isolated from the LSN loop and protected against short circuits.



Functionality of the semi-conductor outputs

### Power supply

The loads' power supply can be selected for each output:

- Power supply of the interface module
- External power supply.

### Address switches

The addresses of the interface modules are set using:

- DIP switches for FLM-420-O2-E and FLM-420-O2-W
- Rotary switches for FLM-420-O2-D.

In improved version LSN mode, the operator can select between automatic or manual addressing with or without auto-detection.

Address rotary switches	Address DIP switches	Operating mode
0 0 0	0	Loop/stub in improved version LSN mode with automatic addressing (T-taps not possible)
0 0 1 - 2 5 4	1 - 254	Loop/stub/T-taps in improved version LSN mode with manual addressing
CL 0 0	255	Loop/stub in LSN mode classic

### LSN features

Integrated isolators ensure that function is maintained in the event of a short circuit or line interruption in the LSN loop. A fault indication is sent to the fire panel.

### Features of LSN improved version

The interface modules in the 420 series offer all the features of improved LSN technology:

- Flexible network structures including T-tapping without additional elements
- Up to 254 LSN-improved elements per loop or stub line
- Unshielded cable can be used

**Interface module variants**

The Output Interface Modules are available in various designs:

- FLM-420-O2-E type in-built:
  - Can be built in to standard device boxes in accordance with EN 60670
  - For space-saving installation in devices
- FLM-420-O2-W type wall-mount (with cover):
  - Can be built in to standard device boxes in accordance with EN 60670
  - For surface mounting in conjunction with the FMX-IFB55-S interface box.
- FLM-420-O2-D type DIN rail:
  - For installation on a DIN rail in accordance with EN 60715 with included adapter
  - Can be built in to a FLM-IFB126-S surface-mounted housing.

**Certifications and Approvals**

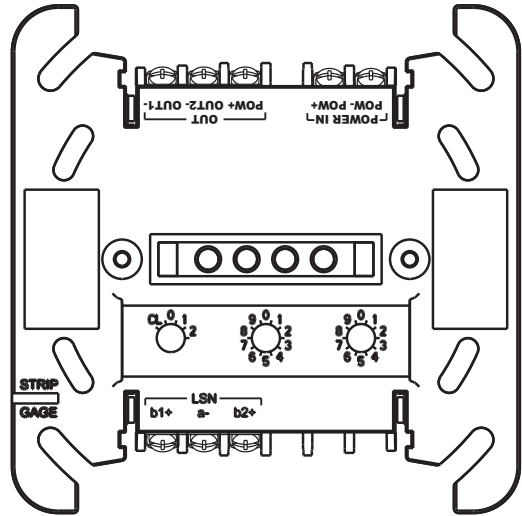
Complies with

- EN54-17:2005
- EN54-18:2005

Region	Certification	
Germany	VdS	G 207075 FLM-420-O2-D; FLM-420-O2-E; FLM-420-O2-W
Europe	CE	FLM-420-O2/-W/-E FLM-420-O2-D
	CPD	0786-CPD-20290 FLM-420-O2-D 0786-CPD-20289 FLM-420-O2-W, -E
	MOE	UA1.016-0070270-11 FLM-420-O2-W_FLM-420-O2-E_FLM-420-O2-D

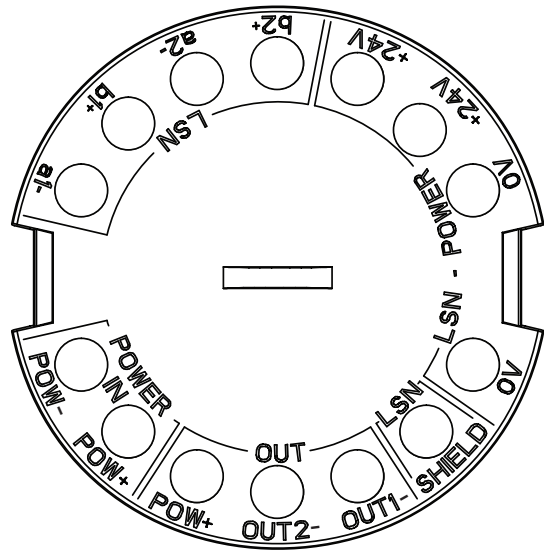
**Installation/Configuration Notes**

**FLM-420-O2-D**



Description	Connection
POWER IN: POW-   POW+	Power supply (LSN and outputs)
POW+	Reference potential (+)
OUT2-	Output 2 (switched negative potential)
OUT1-	Output 1 (switched negative potential)
LSN b1+   a-   b2+	LSN (in/out)

**FLM-420-O2-E / FLM-420-O2-W**



Description	Connection
POWER IN POW+   POW-	Power supply (LSN and outputs)
POW+	Reference potential (+)
OUT2-	Output 2 (switched negative potential)
OUT1-	Output 1 (switched negative potential)
LSN SHIELD	Shielding cable (if available)

Description	Connection
LSN POWER 0 V   0 V   +24 V   +24 V	LSN power supply (supports for looping through)
LSN a1-   b1+   a2-   b2+	LSN (in/out)

- Can be connected to the fire panels FPA-5000 and FPA-1200.
- Programming is done with the programming software of the fire panel.
- The LSN connection is established via the two wires on the LSN line.
- The power supply for the outputs can be provided by the power supply of the interface module or an external power supply. External power supply units must be free-of-ground.
- The loads are switched against the negative potential of the interface modules (OUT1- or OUT2-). The positive potential is provided by either the power supply of the interface module (POW+) or an external power supply unit.
- The maximum switchable voltage to the semi-conductor outputs is 30 V DC. The maximum switchable current is 700 mA per output.
- A maximum cable length of 3 m is permitted per output.
- The in-built (-E) and wall-mount (-W) versions are fitted with terminals to allow a second wire pair to be looped through to the LSN power supply of subsequent elements.
- For a fire system operation according to EN 54-2, the interface modules used for the activation of fire protection equipment and whose outputs are not monitored, must be installed directly next to or within the device which shall be activated.

### Parts Included

Type	Qty.	Component
FLM-420-O2-E	1	Output Interface Module, type in-built
FLM-420-O2-W	1	Output Interface Module, type wall-mount, with cover and accessories
FLM-420-O2-D	1	Output Interface Module, type DIN rail, with adapter and light pipe

### Technical Specifications

#### Electrical

LSN	
• LSN input voltage	15 V DC to 33 V DC
• Max. current consumption from LSN	4.9 mA
Outputs	2, independent of each other
• Max. switching voltage of semi-conductor outputs	30 V DC
• Max. switchable output current	700 mA per output
• Bounce period (when initializing the system)	< 2 ms
External power supply	5 to 30 V DC (min. to max.)

#### Mechanical

Connections	
• FLM-420-O2-E / -W	14 screw terminals
• FLM-420-O2-D	8 screw terminals
Permitted wire cross-section	
• FLM-420-O2-E / -W	0.6 to 2.0 mm <sup>2</sup>
• FLM-420-O2-D	0.6 to 3.3 mm <sup>2</sup>
Address setting	
• FLM-420-O2-E / -W	8 DIP switches
• FLM-420-O2-D	3 rotary switches
Housing material	
• FLM-420-O2-E / -W	ABS/PC blend
• FLM-420-O2-D with adapter	PPO (Noryl)
Color	
• FLM-420-O2-E / -W	Signal white, RAL 9003
• FLM-420-O2-D with adapter	Off-white, similar to RAL 9002
Dimensions	
• FLM-420-O2-E	Approx. 50 mm x 22 mm (Ø x H)
• FLM-420-O2-W	Approx. 76 mm x 30 mm (Ø x H)
• FLM-420-O2-D with adapter	Approx. 110 x 110 x 48 mm (W x H x D)
Weight	
• FLM-420-O2-E	Without / with packaging
• FLM-420-O2-W	Approx. 35 g / 130 g
• FLM-420-O2-D	Approx. 55 g / 155 g
• FLM-420-O2-D	Approx. 150 g / 235 g

### Environmental conditions

Permitted operating temperature	-20 °C to +65 °C
Permitted storage temperature	-25 °C to +80 °C
Permitted rel. humidity	< 96% (non-condensing)
Classes of equipment as per IEC 60950	Class III equipment
Protection class as per IEC 60529	IP 30

### System limits

Max. cable length per output	3 m
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### Ordering Information

<b>FLM-420-O2-E Output Interface Module</b> with 2 open collector outputs, type in-built	<b>FLM-420-O2-E</b>
<b>FLM-420-O2-W Output Interface Module</b> with 2 open collector outputs, type wall-mount, with cover	<b>FLM-420-O2-W</b>
<b>FLM-420-O2-D Output Interface Module</b> with 2 open collector outputs, DIN rail type	<b>FLM-420-O2-D</b>

### Accessories

<b>FLM-IFB126-S Surface-mounted Housing</b> as retainer for the interface modules series 420 type DIN rail (-D) or spare housing for type surface-mount (-S)	<b>FLM-IFB126-S</b>
<b>FMX-IFB55-S Interface Box Surface-mount</b> for interface modules of wall mount type in the 420 series, surface-mount	<b>FMX-IFB55-S</b>

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