FLM-420-NAC Signaling Device Interface Modules

www.boschsecurity.com

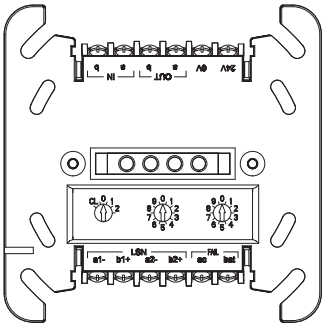
BOSCH
Invented for life

- Rotary switches for automatic or manual address setting
- Control of signaling device line by pole reversal
- Synchronized activation of all signaling devices connected to a LSN module via FLM-420-NAC Signaling Device Interface Module
- Ten different output signals via LSN selectable
- Maintains LSN loop functions in the event of wire interruption or short-circuit thanks to two integrated isolators

FLM-420-NAC Signaling Device Interface Modules make it possible to monitor and activate a group of signaling devices (NAC = Notification Appliance Circuit) in the Local SecurityNetwork LSN.
Each interface module offers one monitored primary line. This means one signaling device line can be connected to LSN fire panels.
The following can be connected:

- Sounders
- Strobes
- Horns.

System overview



Description	Connector
b IN / a IN	NAC zone input
b OUT / a OUT	NAC zone output
0 V / 24 V	Ext. power supply
a1- / b1+	LSN in
a2- / b2+	LSN out

FAIL ac	Trouble ext. voltage
FAIL bat	Trouble ext. battery

Functions

Interface module variants

Two different versions of the interface module are available:

- FLM-420-NAC-S for surface-mounting with housing
- FLM-420-NAC-D for installation on a DIN rail with adapter.

Functions

The functions of the signaling device interface module are:

1. Activation of signaling devices in the event of an alarm
2. Monitoring the signaling device line
3. Monitoring the ext. power supply
4. Status display via LEDs

When activated signaling devices connected to FLM-420-NAC zones are synchronized through the LSN module they are connected to.

The control of the signaling device line is performed through polarity reversal.

The status of the NAC zone is shown by a red and a green LED.

Rotary switches

The rotary switch integrated in the interface module can be used to select between automatic or manual addressing with or without auto detection.

The following settings are possible:

0 0 0	Loop/stub in LSN mode improved version with automatic addressing (T-tap system not possible)
0 0 1 - 254	Loop/stub/T-tap system in LSN mode improved version with manual addressing
CL 0 0	Loop/stub in classic LSN mode

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
- Downwards compatible with existing LSN systems and control panels.

Certifications and approvals

Complies with

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

Region	Regulatory compliance/quality marks	
Germany	VdS	G 207052 FLM-420-NAC-S; FLM-420-NAC-D
Europe	CE	FLM-420-NAC/-S/-D
	CPD	0786-CPD-20375 FLM-420-NAC
Hungary	TMT	TMT-24/2006-2011 FLM-420-NAC, FLM-I 420-S
Ukraine	MOE	UA1.016.0070266-11 FLM-420-NAC-S_FLM-420-NAC-D

Installation/configuration notes

- Can be connected to the fire panels FPA-5000 and FPA-1200 and the classic LSN fire panels BZ 500 LSN, UEZ 2000 LSN and UGM 2020.
- National standards and guidelines must be taken into account during the planning stage.
- An external power supply is required for the FLM-420-NAC interface module.
- The surface-mounted housing has two cable ducts on opposite sides:
  - 2 x 2 pre-punched cable ducts for diameter up to 21 mm/to 34 mm (for conduits)
  - 2 x 4 rubber bushes for inserting cables with diameters of up to 8 mm.
- In addition, there are cable ducts on the base of the surface-mounted housing:
  - 1 x pre-punched cable duct for diameter up to 21 mm (for conduits)
  - 2 x 4 rubber bushes for inserting cables with diameters of up to 8 mm.
- For operating the fire alarm system according to EN 54-13 the signaling device line must be designed in loop topology.

Parts included

Type	Qty.	Components
FLM-420-NAC-S	1	Signaling Device Interface Module with surface-mounted housing
FLM-420-NAC-D	1	Signaling Device Interface Module for installation on a DIN rail with adapter
	1	3.9 kOhm resistor

Technical specifications

Electrical

Input voltage	15 V DC to 33 V DC
Max. current consumption	
• from LSN	6,06 mA (normal operation and alarm)
• from external power supply	Normal operation: 15 mA Alarm: 50 mA + output current
External power supply	20,4 V DC to 29 V DC

Max. output current	3 A (during an alarm, from ext. power supply)
EOL resistance	3.9 kΩ

Mechanics

Display elements	
• Red LED	Alarm
• Green LED	Normal operation
LSN/Address setting	3 rotary switches for
	• Mode LSN "classic" or LSN improved version
	• Automatic or manual addressing
Connections	12 threaded clamps
Max. wire diameter for terminals	3.3 mm^2 (12 AWG)
Housing material	
• Interface module	PPO (Noryl)
• Surface-mount housing	ABS/PC-Blend
Housing color	
• Interface module	Off-white, similar to RAL 9002
• Surface-mount housing	Signal white, RAL 9003
Dimensions	
• FLM-420-NAC-S	Approx. 126 x 126 x 71 mm (4.96 x 4.96 x 2.8 in.)
• FLM-420-NAC-D (with DIN rail adapter)	Approx. 110 x 110 x 48 mm (4.33 x 4.33 x 1.89 in.)
Weight	
FLM-420-NAC-S	Approx. 390 g (13.8 ounces)
FLM-420-NAC-D (with DIN rail adapter)	Approx. 150 g (5.3 ounces)

System limits

Number of zones per signaling device interface module	1

Further characteristics

Output signals	Steady BS 5839 March Time March Time 120 California Coded Synchronization protocol (Wheelock, Gentex)

Environmental conditions

Permitted operating temperature	-20 °C to 50 °C (-4 °F to 122 °F)
Permitted storage temperature	-25 °C to 80 °C (-13 °F to 176 °F)
Permitted relative humidity	< 96%
Classes of equipment as per IEC 60950	Class III equipment
Protection class as per IEC 60529	
• FLM-420-NAC-S	IP 54
• FLM-420-NAC-D	IP 30

Ordering information

FLM-420-NAC-S Interface module, notific. app., surface
with 1 supervised output line for conventional signaling devices, with surface-mounted housing
Order number **FLM-420-NAC-S**

FLM-420-NAC-D Interface module, notific. app., rail
with 1 supervised output line for conventional signaling devices, for installation on a DIN rail with adapter
Order number **FLM-420-NAC-D**

Represented by:

Europe, Middle East, Africa:
Bosch Security Systems B.V.
P.O. Box 80002
5600 JB Eindhoven, The Netherlands
Phone: + 31 40 2577 284
emea.securitysystems@bosch.com
emea.boschsecurity.com

Germany:
Bosch Sicherheitssysteme GmbH
Robert-Bosch-Ring 5
85630 Grasbrunn
Germany
www.boschsecurity.com

North America:
Bosch Security Systems, LLC
130 Perinton Parkway
Fairport, New York, 14450, USA
Phone: +1 800 289 0096
Fax: +1 585 223 9180
onlinehelp@us.bosch.com
www.boschsecurity.us

Asia-Pacific:
Robert Bosch (SEA) Pte Ltd, Security Systems
11 Bishan Street 21
Singapore 573943
Phone: +65 6571 2808
Fax: +65 6571 2699
apr.securitysystems@bosch.com
www.boschsecurity.asia

1294666635 | en, V15, 10. Sep 2020