

MONITORED OUTPUT UNIT, 7A RELAY - BN-221/02

AutoSafe interactive fire detection system
Product datasheet

Features

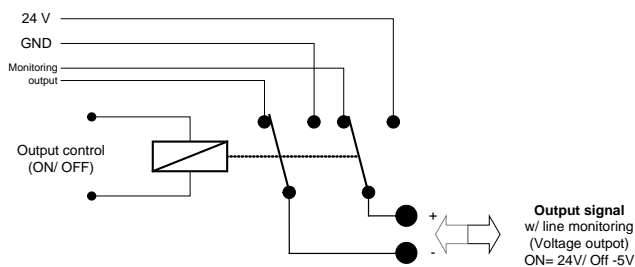
- Provides one monitored relay output
- Fully monitored for power failure or loss of power
- Screw terminals for easy connection of cables
- Directly connected to an AutoSafe (AI_Com) detection loop
- Requires separate 24 VDC supply for control electronics
- Relay contacts can be supplied from external source (no jumpers)
- Relay contacts rated for up to 7A
- Designed to meet EN 54 and conforms to CE standards

Description

The monitored output unit, 7A relay (BN-221/02) is connected directly to the detection loop in the AutoSafe interactive fire detection system. It controls and monitors external equipment. Typical applications are notification devices such as horns, strobe lights, indicating light etc. BN-221/02 monitors the presence of the 24V IN power supply. The unit will give a fault warning in case of power failure or loss of power. The unit has one monitored relay output.

Relay output

The BN-221/02 unit has one monitored output, which is controlled by a 2-pole relay with changeover contacts. In the non-activated position, the output is connected to the monitoring circuitry by means of the relay contacts.



When the output is OFF, the board monitors the line and detects short and open circuit. When it is ON, it connects 24 VDC to the line.

In activated position, the relay contacts will connect the supply voltage to the output circuit, and at the same time, disconnect the monitoring circuitry. The polarity may be changed by moving jumpers from A to B (see back page).



Connections and termination

The maximum cable dimension is 2,5mm².

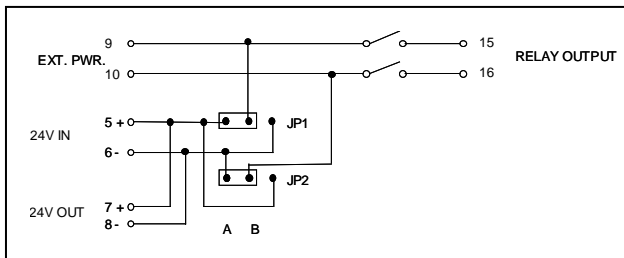
Screw terminal no.	Signal
1	Detection loop + IN (AI_Com)
2	Detection loop + OUT (AI_Com)
3	Detection loop - IN (AI_Com)
4	Detection loop - OUT (AI_Com)
5	+24 VDC power supply IN
6	0V IN
7	+24 VDC power supply OUT
8	0V OUT
9	External power
10	External power
11	Input A +
12	Input A -
13	Input B +
14	Input B -
15	Output +
16	Output -
17	+24V supply for output load
18	Collector output
19	Spare terminal (connected to 20)
20	Spare terminal (connected to 19)

If inductive load is used, a protection diode is required.

Technical specifications	
Weight	75 g
Material	Polycarbonate
Colour	Light grey
Mounting	Directly connected to a detection loop
Temperature	-20 ⁰ to +70 ⁰ C
AI_Com	< 0,3 mA
Supply voltage, 24V IN	20 - 28 VDC
External power	Maximum 48 VDC
Standby current	7mA
Operating current	25mA + load
Maximum load current	7A @ 24V
Max. capacitance on input	40 nF
Maximum cable length to output	100 m
Serial impedance ZC Max	250mΩ
Maintenance	None
Service	Replace if faulty
Degree of protection	IP66/IP67
Communication loop Protocol	Autronica loop communication protocol (AL_Com)
Approvals	See website

Part number	Description
116-BN-221/02	Monitored output unit (plastic box)

Schematics – BN-221/02



The relay output voltage comes from EXTERNAL POWER (JP1 / JP2 removed), or from 24 VDC IN (JP1 / JP2 set to A or B).

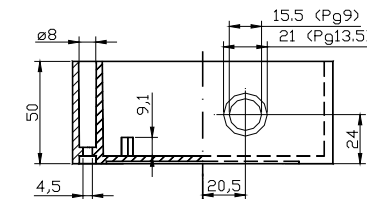
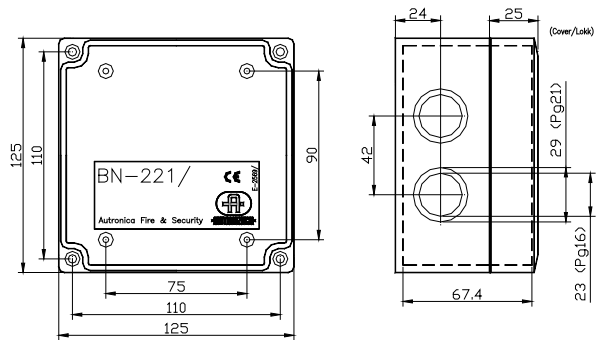
When JP1 / JP2 are set in position A, the positive voltage out is on connector 15.

When JP1 / JP2 are set in position B, the positive voltage out is on connector 16.

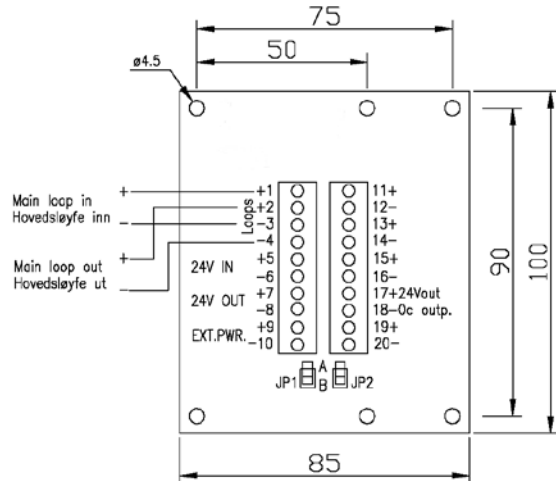
The supply voltage on 24V IN is always required.

Note that the 7A out load is only permitted if external power is fed to terminals 9 and 10. The jumpers JP1 and JP2 should then be removed. If fed from external 24V, through jumpers JP1 and JP2, the maximum current output is derated to 1A.

Dimensions – plastic box (mm)

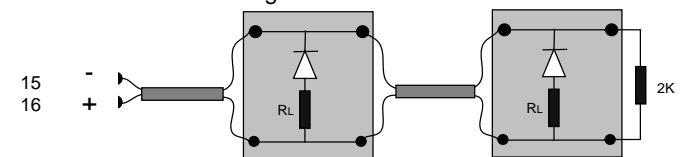


Screw terminals / circuit board dimensions (mm)



Connection to output port

A barrier diode and a 2K end resistor are used. Note that jumpers JP1 and JP2 must be set in position B (see illustration above), or in case of high current through external power connections, the positive voltage must be connected to 10 and negative to 9.



Monitored power is always led from terminal 15 (+) to 16 (-). This power is provided by the detection loop and as such it is isolated from the power supply.