

# Conventional Loop Interface BNB-330A

Interactive fire detection systems  
Product datasheet

## Features

- Local-powered (requires external 24V power supply)
- Short and open circuit detection on conventional detection loop
- Ground fault detection on conventional detection loop via fire panel ground fault detection
- Up to 32 detectors/manual call points on one conventional detection loop
- Interfaces conventional detectors and manual call points from Autronica and other leading manufacturers., refer to voltage vs. current chart
- Uses active EOL unit
- Addressable loop technology
- Automatic addressing
- Proven technology
- TS35 DIN rail mounted
- Indicators for Power, Alarm and Fault on the conventional detection loop
- Galvanic isolation between power supply and detector interface
- Monitored power input. Fault signaled if <18V for 24 VDC
- Monitored power input. Fault signaled if <12V for 15 VDC
- Backbone bus distributing external 24V bus via DIN rail to up to 20 units, reducing installation time

## Application / Description

The Conventional Loop Interface BNB-330A is a 2 wire interface unit for interfacing conventional detectors and manual call points onto Autronica's interactive fire detection systems. BNB-330A replaces BNB-330 and may be used on all the same systems.

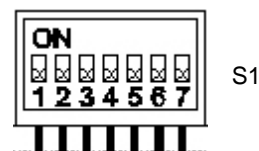
The BNB-330A has slightly different mechanical measurements than the BNB-330 and will not fit directly into the BN-330 enclosure. A special DIN rail (US-852/1) and brackets (US-852/2) must be used for fitting of the BNB-330A in this enclosure. (See arrangement drawing on page 4).

Note! The maximum numbers of BNB-330A in the BN-330 enclosure is 2 units. Part numbers for larger enclosure is show in table 4.



## Switch Settings

DIP switches (S1) are available to set up the unit into different modes of operation.



Note that the switches must be set before the AL\_Com detection loop is powered up.

Switch	Position	Function
S1.3	ON	24V conventional branch output
S1.3	OFF	15V conventional branch output

Table 1

All other dipswitches default off.

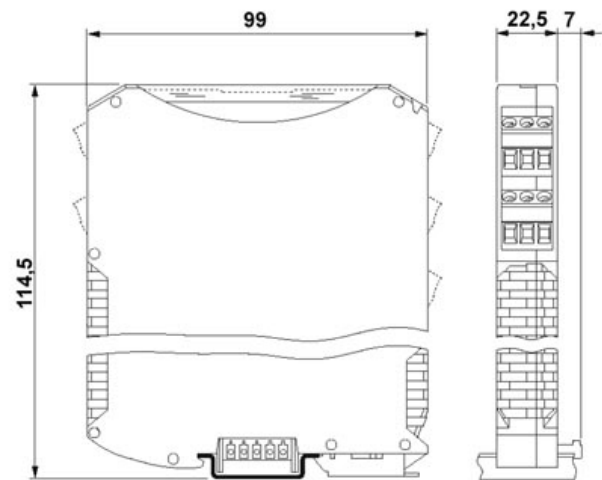
Technical Specifications	
Dimensions (mm)	22,5 x 114,5 x 99 mm
Weight (g)	192
Housing material	Polyamide 6.6.
Mounting	DIN rail mount
Power supply	Connects to AL_Com detector loop only
Galvanic isolation	50 VDC to supply voltage
Current consumption from AL_Com	345 $\mu$ A
External power supply	20 – 30 V
Current consumption from external power supply	Current consumption depends on the loop units that are used. Maximum: 60mA
Idle current conventional detection loop	Maximum 10 mA
Alarm current conventional detection loop	Minimum 20 mA
Short-circuit current conventional detection loop	> 37 mA @ 15 V > 43 mA @ 24 V
Operating temperature range	-25 to +70 °C
Storage temperature range	-40 to +85 °C
Humidity	10 % - 95 % RH (non-condensing)
Communication loop	Autronica Loop Communication protocol (AL_Com)
Cable terminals	Max 2.5 mm <sup>2</sup> single core wires
Cable requirements AL_Com	Refer to specification for the specific Autronica interactive fire detection system
Cable requirements conventional loop	Maximum resistance 30 $\Omega$ Non-shielded or shielded.
Alarm output rating	0,6 A 60 V
Alarm output type	MOSFET
IP grade	IEE 529 / IP20
Bottom connector – maximum current	$I_{max} = 8$ A

**Parts for adaption to BN-330 housing**

Part number	Description
116-US-852/1	DIN rail
116-US-852/2	Fixing Brackets

Table 2  
See page 4 for details.

**Layout / Dimensions**



Part number	Description
116-BNB-330A	Conventional Loop Interface, EOL included
116-BNY-330	EOL unit (Spare)

Table 3

**Large enclosure for field mounting**

Part number	Description
116-6882-031.0008	Enclosure with DIN rail
116-6571-011.1920	Gland
116-6531-006.1920	Backnut for gland

Table 4

**Connectors**

Terminal	Function
1	Alarm Out1
2	Alarm Out2
3	N.A.
4	N.A.
5	Conv +
6	Conv -
7	N.A.
8	N.A.
9	Loop+
10	Loop In-
11	Loop+
12	Loop Out -
13	24V
14	0v
15	N.A.
16	N.A.

Table 5

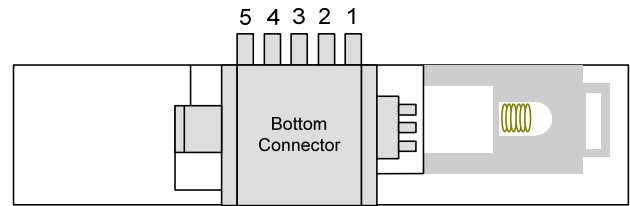
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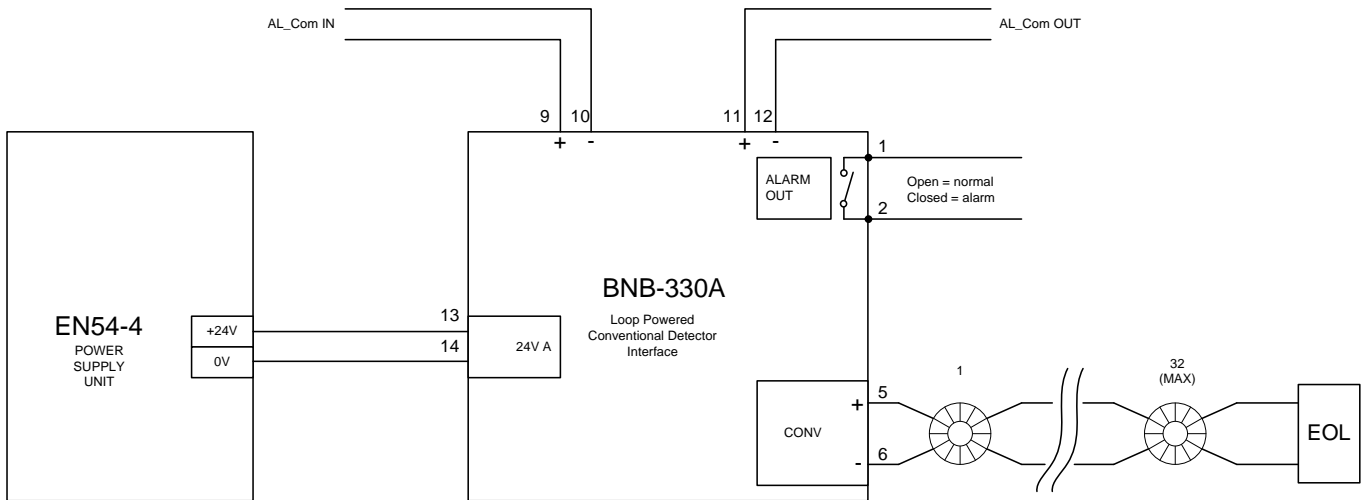
**Bottom Connectors**

Terminal	Function
1	24V
2	0V
3	N.A.
4	N.A.
5	Chassis ground

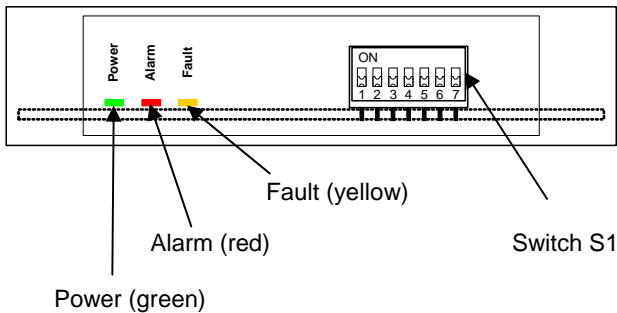
Table 4



**Overview – Typical Installation**



**Description – Indicators and Switch S1**



Indicator	Colour	Behaviour
Power	Green	Steady ON when unit is powered
Alarm	Red	Steady ON indicates that the unit is in Alarm Condition
Fault	Yellow	Steady ON indicates open circuit, low voltage or short-circuit

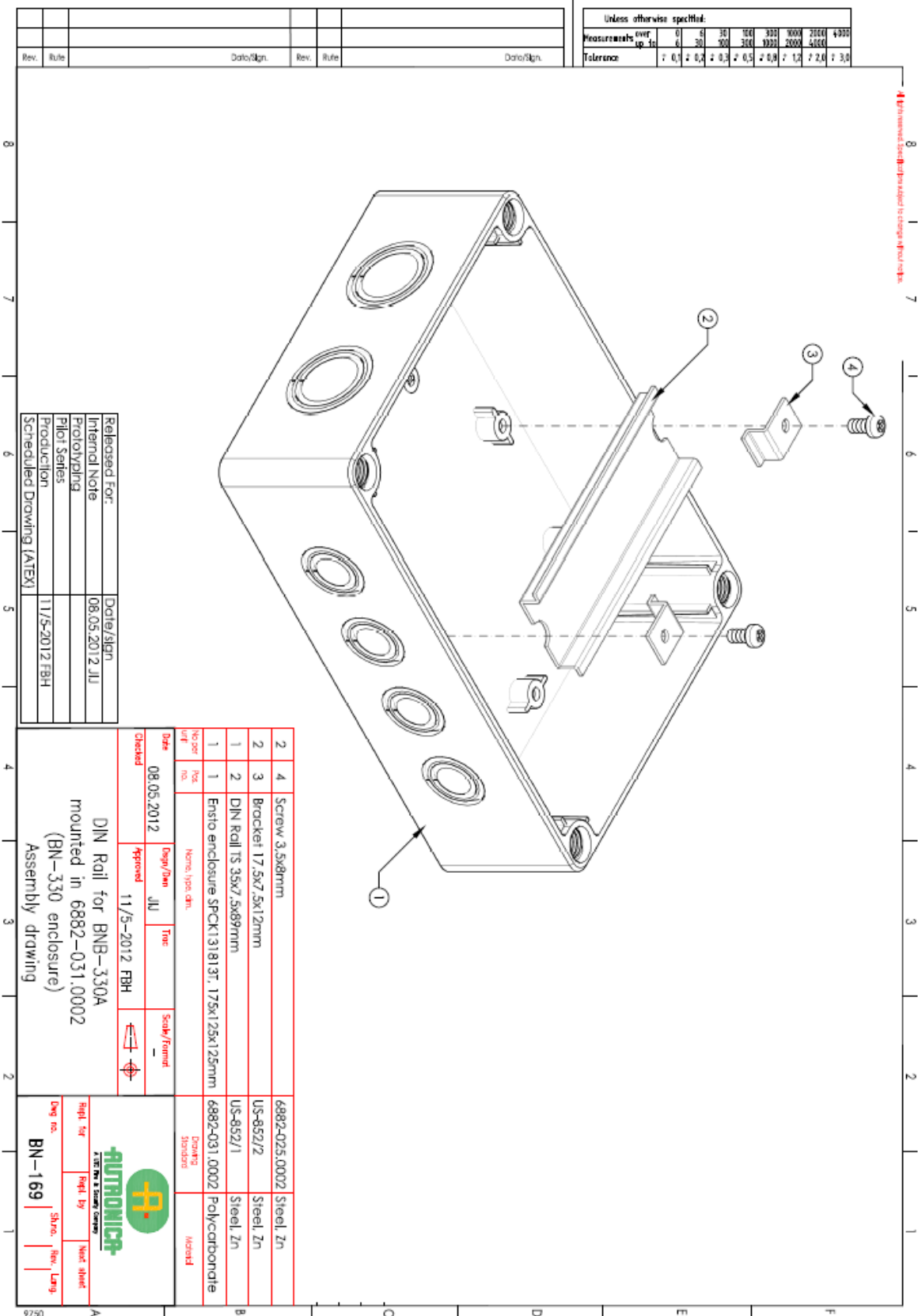
Table 5

**Note:**  
 PCB mounted LEDs are powered by an external 24 V power supply. If 24 VDC input is missing no LEDs will be lit.

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