

Features

- General purpose PowerLoop 4-20 mA input unit for third party detectors.
- Analogue values supported.
- Faults, alarms and warnings supported.
- 19" rack mounted
- Short-circuit isolator on PowerLoop.
- Conforms to CE standards.
- Maritime / offshore environment type approval

Application / Description

The *PowerLoop 4-20mA Input Unit BN-342/1* is a general purpose PowerLoop interface designed for third party detectors connected to the AutroSafe Integrated Fire and Gas System.

The PowerLoop is a two-wire power and signalling bus connected in ring topology and is galvanically isolated from the rest of the system.

The unit communicates with AutroSafe using the PowerLoop protocol.

The unit has a 4-20mA input galvanically isolated from the PowerLoop.

Versions

- BN-342/EX*: EEx me version including 9,5W DC/DC for external detector power supply
- BN-342/1: 19" 3U rack version, bare PCB with 19" rack front panel, no DC output
- BN-342/2*: DIN rail version, bare PCB in a open DIN rail box, no DC output

* See separate data sheet

4-20 mA Interface

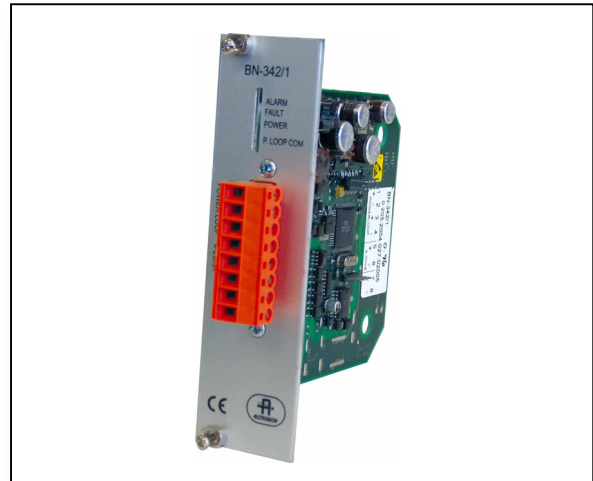
- Current level (mA) (0,9-25mA, 100µA steps)
- Analogue values supported

Options selected in AutroSafe Configuration Tool

- Simrad GD-10P Interface
- Sieger Excel OPGD*
- Sieger Excel Duct*
- Dräger XP Tox
- General purpose 4-20 mA unit (configured in AutroSafe Configuration Tool)

* Sensor-power must be supplied from an external source.

Specification subject to change without notice.



Faults signalled

- 4-20mA input below lower current limit
- 4-20mA input above upper current limit
- Configurable in 0,9 - 25 mA range using state windows and error types available in AutroSafe
- Internal error (faulty unit)
- Voltage fault.
- Temperature out of range

Alarms and Warnings signalled

Alarms and warnings levels on 4-20mA::

- configurable in 0.9 – 25 mA range
- Alarm Levels:
 - Early Warning
 - Prealarm (low alarm)
 - Alarm (high alarm)

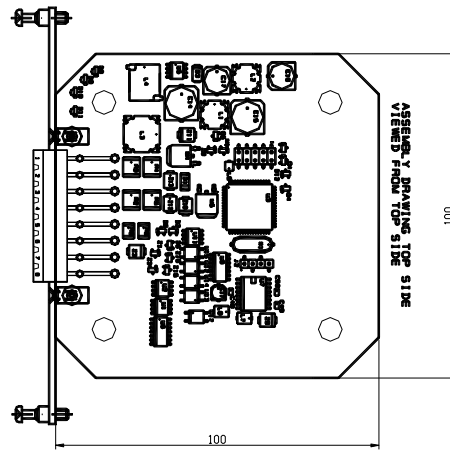
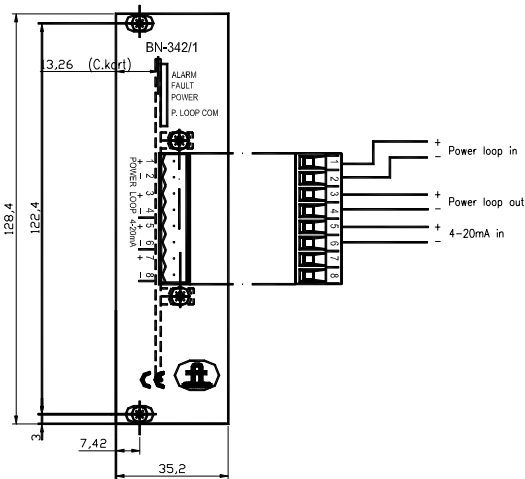
Technical Specifications

| | |
|---------------------------|--|
| Materials | FR4 and Aluminium front |
| Weight | 85g |
| Mounting | 19" 3U rack mounting x 7TE, 100mm deep |
| Temperature | -20 - +70 °C |
| Relative Humidity | 10-95 % non-condensing |
| Shock / Vibration | DNV Requirements for technical rooms anywhere onboard ships. |
| Degree of protection | IP20 |
| Maintenance | None |
| Power Consumption | Pmax < 2.5W (power consumption limit) |
| Standby Current | I _{max} < 100 mA |
| 4-20mA input circuit | 0,9-25mA |
| 4-20mA internal impedance | 190 Ohm |
| Approvals | DNV Maritime, CE |

Order Numbers

| Order number | Description |
|--------------|---------------------------------------|
| BN-342/1 | PowerLoop 4-20 mA Input, Rack Mounted |

Connections / Dimensions



Status LEDs

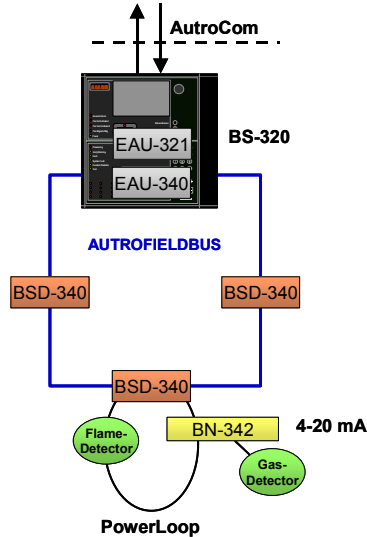
1. Red: Alarm.
2. Yellow: Fault.
3. Green: Operative
4. Red: Communication. On if transmission on PowerLoop is detected.

Termination

Terminal block capable of 2.5mm² cable.

| Screw Terminal no. | Signal |
|-------------------------|-----------------|
| PowerLoop | |
| 1 | PowerLoop + IN |
| 2 | PowerLoop – IN |
| 3 | PowerLoop + OUT |
| 4 | PowerLoop – OUT |
| Sensor Interface | |
| 5 | 4-20mA input + |
| 6 | 4-20mA input - |
| 7 | Do NOT connect. |
| 8 | Do NOT connect. |

Overview



Note: Shielded cables must be used in offshore and maritime installations.