POWERLOOP DRIVER BSD-340/1

AutroSafe Interactive Fire Detection System
Product datasheet

Specifications subject to change without notice.

Features

- Protocol converter between AUTROFIELDBUS and PowerLoop
- Reports analogue values and signals faults
- 19'' rack mounted
- Conforms to CE standards
- Approved by DNV

Application / Description

The *PowerLoop Driver BSD-340/1* functions as a protocol converter between AUTROFIELDBUS and PowerLoop.

It consists of a PowerLoop interface for power and communication, and an AUTROFIELDBUS interface towards an AUTROFIELDBUS Driver.

The PowerLoop is a two-wire bus capable of delivering 30VDC/100W connected in ring topology and is galvanic isolated from the rest of the system. The PowerLoop interfaces detectors and other loop units including a 4-20mA interface.

The BSD-340/1 provides a service port female DSub 9-pin, which is used for commissioning and maintenance.

The AUTROFIELDBUS address is set by switches. The AUTROFIELDBUS is normally category 5 copper cable.

Capacity / Limitations

- The maximum number of detectors on a PowerLoop needs to be calculated by means of the Power Loop Calculator (an integral part of the AutroSafe Configuration Tool). The result depends on cable lengths, cable types (resistance) and the type of detectors on the PowerLoop. Normally, 2,5mm2 cables are preferred.
- May require forced cooling, dissipates up to 30W when fully loaded
- No branches allowed on PowerLoop or AUTROFIELDBUS

Versions
BSD-340/1 Rack mounted version
BSD-340/2* Rail mounted version

* *(see separate datasheet)*

Faults signalled by the BSD-340/1

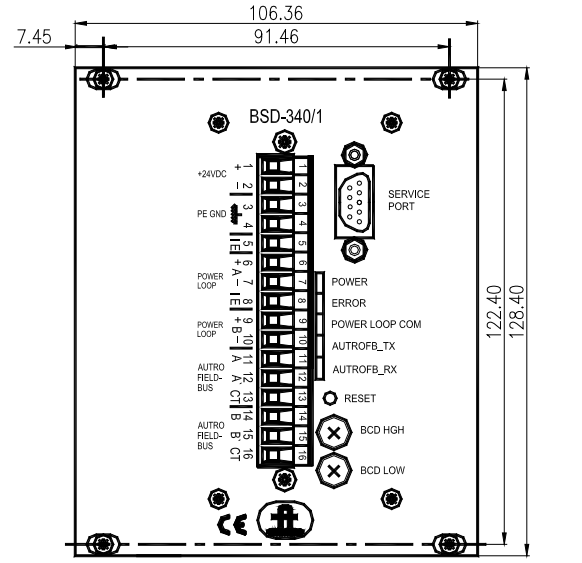
- Earth fault
- PowerLoop open loop, short-circuits, missing units
- Voltage fault on PowerLoop output
- Internal faults

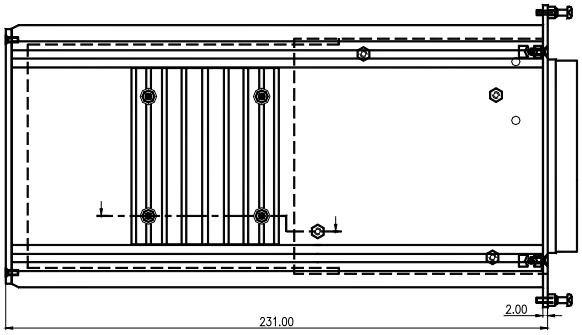
Technical Specifications

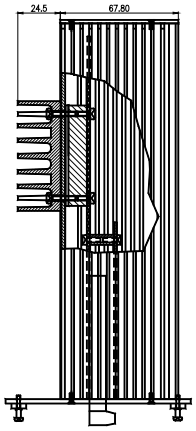
Weight	600g
Mounting	19'' rack, 3U Module x21 TE, 231 mm deep
Temperature	-20 to +70 °C
Relative humidity	10% to 95% RH non-condensing
Shock/vibration	DNV requirements for technical rooms anywhere onboard ships
Degree of protection	IP20
Maintenance	None
Detector loop	PowerLoop
Supply voltage	18-32VDC
Current consumption	Maximum 5.5A at 24VDC, Fuse 8A slow
Output	30VDC/100W
Maximum power consumption	125W
Approvals	EN54, DNV, CE
Housing material	Aluminium

Part Number	Description
BSD-340/1	PowerLoop Driver Rack Mounted

Connections / Dimensions / Mounting







Status LEDs

The BSD-340/1 Status LEDs visible from the front (same side as terminals):

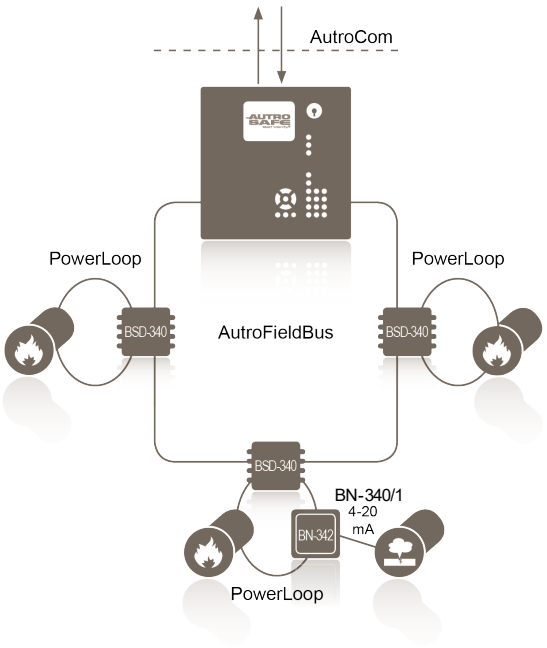
1. Green: Power indicator
2. Red: Error indicator
3. Yellow: PowerLoop traffic
4. Green: AUTROFIELDBUS TX
5. Red: AUTROFIELDBUS RX

Termination

The BSD-340/1 has a plug-in terminal block capable of 2.5mm² cables.

Screw Terminal no.	Signal
Power Supply	
1	+24V DC input
2	0V input
Earthing	
3	PE
4	PE
5	IE
PowerLoop Interface	
6	PowerLoop A out plus
7	PowerLoop A out minus
8	PowerLoop A shield (Internally connected to IE)
9	PowerLoop B in plus
10	PowerLoop B in minus
AUTROFIELDBUS	
11	AUTROFIELDBUS A
12	AUTROFIELDBUS A'
13	AUTROFIELDBUS A shield (Floating)
14	AUTROFIELDBUS B
15	AUTROFIELDBUS B'
16	AUTROFIELDBUS B shield (Floating)

Overview



Note: All PowerLoop cables must be shielded