

Features

- Protocol converter between AUTROFIELD BUS 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 AUTROFIELD BUS and PowerLoop.

It consists of a PowerLoop interface for power and communication, and an AUTROFIELD BUS interface towards an AUTROFIELD BUS Driver (EAU-340).

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

Capacity / Limitations

- Maximum 15 detectors can be connected to each PowerLoop. The number of units is limited due to the total power consumption to PowerLoop units, detectors and cable loss, which must be verified by the PowerLoop Calculator (part of the AutoSafe Configuration Tool).
- May require forced cooling, dissipates up to 30W when fully loaded
- No branches allowed on PowerLoop or AUTROFIELD BUS

Versions

BSD-340/1 Rack mounted version

BSD-340/2* Rail mounted version

* (see separate datasheet)

Specifications subject to change without notice.



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

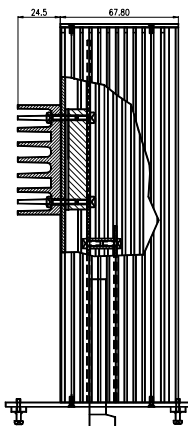
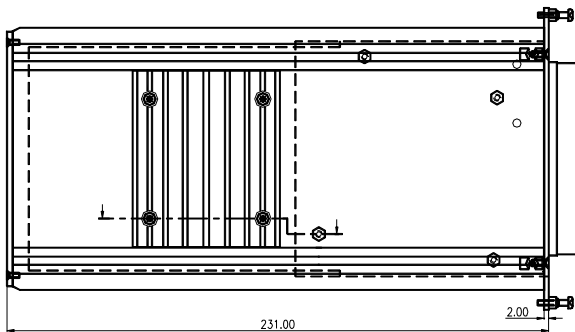
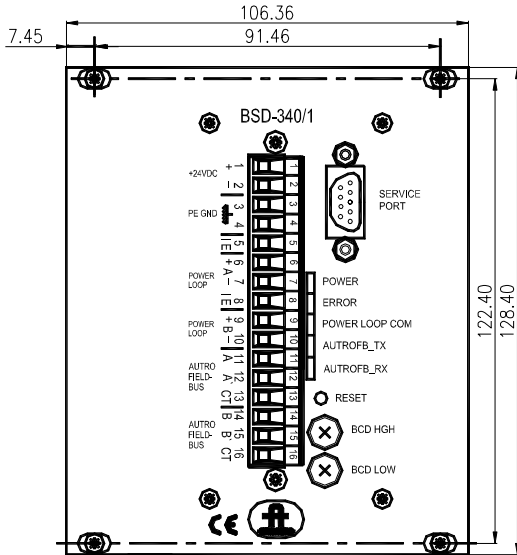
Weight	600g
Mounting	19" rack, 3U Module x21 TE, 231 mm deep
Temperature	-20 to +70 °C
Relative humidity	10% to 95% RH non-condensing
Shock/vibration	DNV requirements for technical rooms anywhere onboard ships
Degree of protection	IP20
Maintenance	None
Detector loop	PowerLoop
Supply voltage	18-32VDC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



Order Numbers

Order 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):

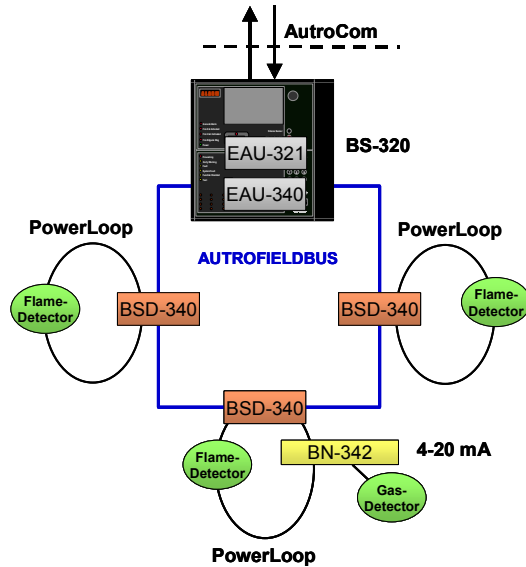
1. Green: Power indicator
2. Red: Error indicator
3. Yellow: PowerLoop traffic
4. Green: AUTROFIELDDBUS TX
5. Red: AUTROFIELDDBUS RX

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
AUTROFIELDDBUS	
11	AUTROFIELDDBUS A
12	AUTROFIELDDBUS A'
13	AUTROFIELDDBUS A shield (Floating)
14	AUTROFIELDDBUS B
15	AUTROFIELDDBUS B'
16	AUTROFIELDDBUS B shield (Floating)

Overview



Note: All cables must be shielded in offshore and maritime applications.

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