

LOOP DRIVER MODULE - BSD-310/BSD-311

AutoSafe interactive fire detection systems
Product Datasheet

Features

- Each loop driver module allows connection of 127 loop units
- Monitoring function for break or short circuiting on the detection loop
- Easily plugged onto each other or onto other I/O modules on a standard mounting rail
- Automatic addressing
- Designed to meet EN 54 requirements and conforms to CE standards

Description / Application

The loop driver module functions as a modem for data exchange between the control system and the detection loop. The loop driver module is easily plugged onto a mounting rail inside a fire alarm control panel/controller.

1 detection loop for connection of 127 loop units can be connected to each loop driver module. A loop unit is defined either as a point (i.e. a detector or a manual call point), I/O unit or an electronic sounder.

In addition to its main function, the module provides two important monitoring and security features. The loop resistance on the detection loop is continuously monitored to register a possible break or short circuit on the detection loop.

The module will automatically detect its own address, no dipswitch or jumper settings are required.

Versions

The loop driver module normally comes in two versions, BSD-310 and BSD-311. The BSD-311 is a high power version (refer to technical specifications).

Optionally there is a BSD-310/N version for use when there are zone 2 detectors of type Ex ic on the loop. This is for type /N detectors only. See separate datasheet.



Capacity / Limitations

There can be a maximum of 12 Loop driver modules in each fire alarm control panel or controller.

The maximum number of detectors and manual call points that can be connected to these 12 modules are 512 (refer to EN 54).

Prepared for mounting in a cabinet suiting the application.

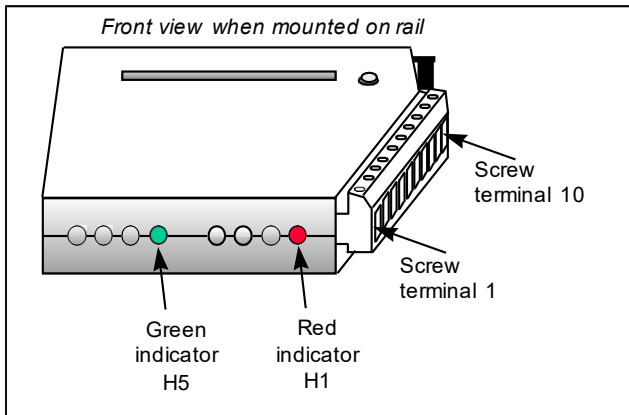
AutoGuard Compatibility

AutoGuard is compatible with BSD-310 and BSD-311 firmware revision 7 or newer.

Product Name	Part number	Description
BSD-310	116-BSD-310	Loop driver module
BSD-311	116-BSD-311	Loop driver module H.P.

Technical specifications	
Dimensions (mm)	95 x 89 x 32
Weight (g)	81
Materials	Plastic Printed circuit board and connector
Mounting	Onto a standard mounting rail inside the Fire detection control panel or Controller
Temperature Operating: Storage:	-20 to +70 °C -40 to +85 °C
Relative humidity	10-95% non-condensing
Electrical connection	Internal system: plug in connection Detection loop: screw terminals (maximum cable dimension 2,5mm ²)
Loop output voltage	24 VDC
Maximum current output to loop (24VREG)	100 mA (BSD-310) 200 mA (BSD-311)
Internal current consumption	24VREG, idle: 10 mA 24VREG, 12,5% communication capacity: 26 mA
Output resistance (Ohm) measuring accuracy on the loop	+/- 3 Ohm
Loop resistance measuring range	0-250 Ohm
Maximum capacitance on loop cable	BSD-310 and BSD-311: 500 nF
Maximum resistance on the total cable length (+ and - conductors)	BSD-310: 50 Ohm (each wire maximum 25 Ohm) BDS-311: 20 Ohm (each wire maximum 10 Ohm)

Indicators/connectors

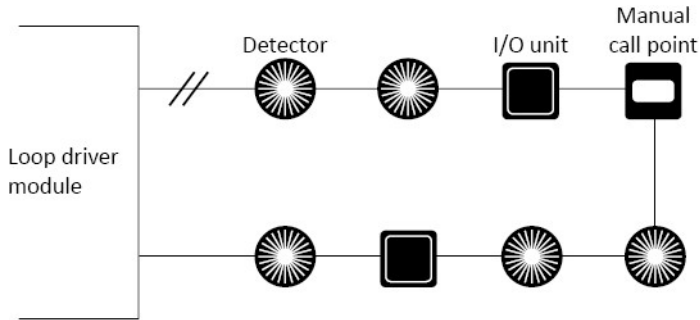


- Green indicator, H5. Communication indicator that gives a pulsing green light during traffic.
- Red indicator, H1. Fail_Safe indicator that gives a steady red light if a communication failure occurs, i.e. the system does not respond to an alarm.

The module has the following connections:

Screw terminal no.	Signal
1	OUT+ (+24 V)
2	OUT- OV
3	Shield
4	IN +
5	IN -
6	Shield
7	NA
8	NA
9	Chassis
10	Chassis

Block diagram



Schematics - Detection loop

