

# OUTPUT MODULE, MONITORED - BSB-310A

## AutoSafe Interactive Fire Detection System Product Datasheet

### Features

- Provides four output circuits monitored for break and short-circuiting
- Easily plugged onto each other or onto other I/O modules on a standard mounting rail
- Automatic addressing of the I/O module
- Designed to meet EN 54 requirements, and conforms to CE standards
- Galvanically isolated power to activated outputs

### Description / Application

The output module BSB-310A provides four monitored output circuits for alarm sounders, Fire Alarm Routing Equipment (FARE), Fault Warning Routing Equipment (FWRE), Fire Protection Equipment (FPE) and other output functions.

The module is easily plugged onto a mounting rail inside the Fire Alarm Control Panel or the Controller.

Each alarm output has programmable signal patterns. The standard frequency is 0,5 Hz.

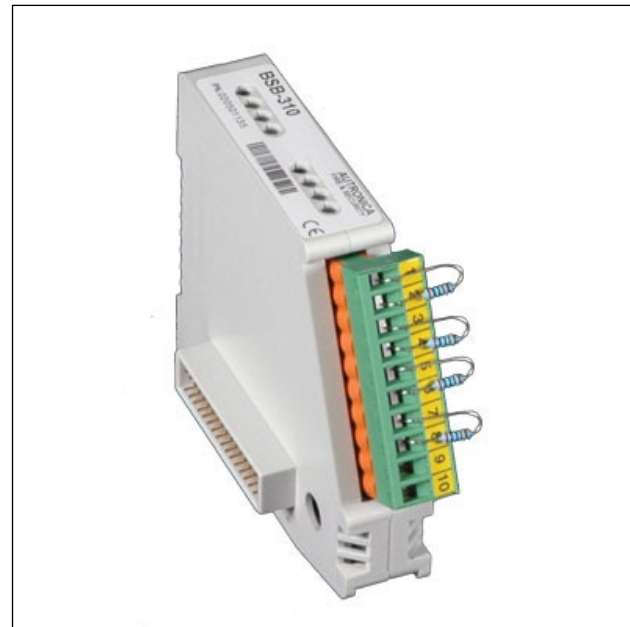
Each output is fused with a 1A self-resetting fuse.

External 24V DC power must be supplied to screw terminal 9 and 10 for each module.

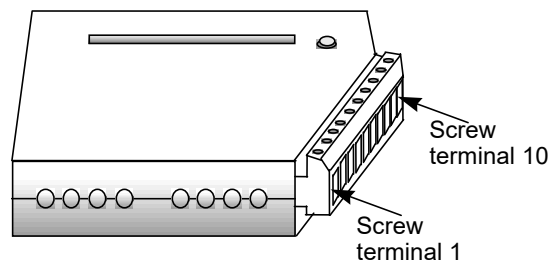
The internal power and the external power supply are galvanically isolated. An activated relay output draws current from the external 24V.

If BSB-310A is used as a spare part to replace an existing BSB-310 module, 24 VDC power must be supplied from the BSS-310 module.

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



Front view when mounted on rail



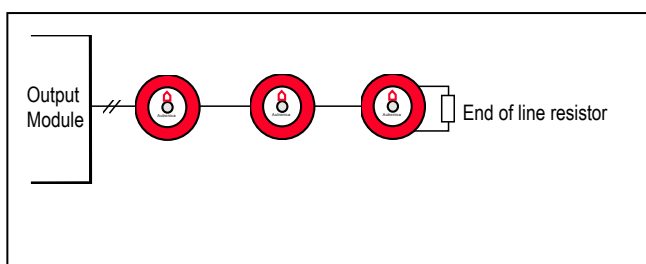
| Screw terminal no. | Signal             |
|--------------------|--------------------|
| 1                  | Output AK1- 0V     |
| 2                  | Output AK1+ (+24V) |
| 3                  | Output AK2- 0V     |
| 4                  | Output AK2+ (+24V) |
| 5                  | Output AK3- 0V     |
| 6                  | Output AK3+ (+24V) |
| 7                  | Output AK4- 0V     |
| 8                  | Output AK4+ (+24V) |
| 9                  | External 24V       |
| 10                 | External 0V        |

The output AK4 is configurable to be used as a monitored Fault Warning Routing Equipment (FWRE) output (an output which routes a fault warning signal to a fault warning signal receiving station).

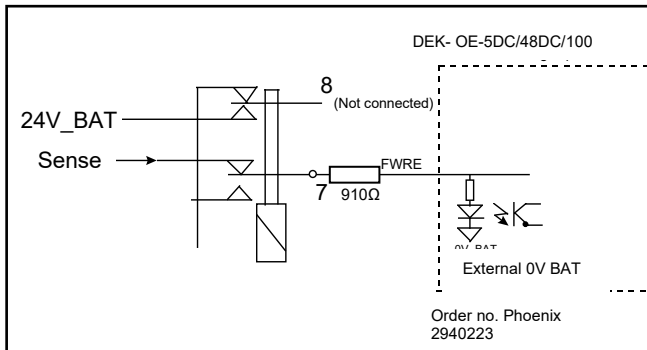
| Product Name | Part number  | Description              |
|--------------|--------------|--------------------------|
| BSB-310A     | 116-BSB-310A | Output module, monitored |

| Technical specifications               |                                                                                                                                                                                                                                          |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions (mm)                        | 95x89x32                                                                                                                                                                                                                                 |
| Weight (g)                             | 95,5                                                                                                                                                                                                                                     |
| Materials                              | Plastic encapsulation and PCB                                                                                                                                                                                                            |
| Operating temperature                  | -25°C to +70°C                                                                                                                                                                                                                           |
| Storage temperature                    | -40°C to +85°C                                                                                                                                                                                                                           |
| Humidity                               | Up to 95% non-condensing                                                                                                                                                                                                                 |
| Electrical connection                  | Internal system: plug in connection<br>Outputs: pluggable (maximum cable dimension 2,5mm <sup>2</sup> )                                                                                                                                  |
| Mounting                               | Onto a standard 35mm TS mounting rail                                                                                                                                                                                                    |
| Control outputs: four pieces monitored | Voltage: 24 VDC<br>Maximum load:<br>1A each output<br>3A total<br><br>Derated load:<br>Temperature range 40°C to 50°C: 0,8A per output<br>Temperature > 50°C:<br>0,6A per output<br><br>Maximum length of cable connected to output: 50m |
| Maximum inrush current                 | 3 A                                                                                                                                                                                                                                      |
| External power                         | 18 to 32 VDC                                                                                                                                                                                                                             |
| End of line resistor                   | 2000 Ohm                                                                                                                                                                                                                                 |
| Internal current consumption           | 24VREG, 15mA                                                                                                                                                                                                                             |
| Output monitoring – short-circuit      | < 200 Ohm                                                                                                                                                                                                                                |
| Output monitoring – normal             | 1000 - 2500 Ohm                                                                                                                                                                                                                          |
| Output monitoring – break              | > 3000 Ohm                                                                                                                                                                                                                               |
| Galvanic isolation strength            | 50V                                                                                                                                                                                                                                      |
| Dimensions (mm)                        | 95x89x32                                                                                                                                                                                                                                 |

## Installation overview

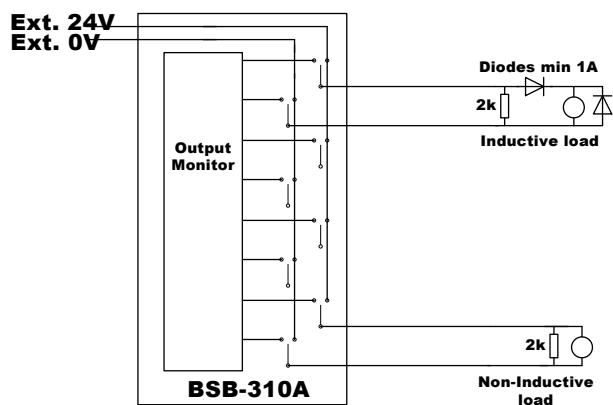


## Schematics - Fault Warning Routing Equipment (FWRE) output, output 4 only



### NOTE

**FWRE:** If external power is used, connect the external and internal 0V wires together.



### NOTE

**At inductive load, a protection diode shall be used.**

The 24V supply to the relays is monitored. If power is missing, the fault message "Open circuit" will be indicated for all the BSB-310 outputs on the panel display.