

Switching Units

ESR-1/-3

- Safety Category 1, 3, according to CEN
- Bircher M3 Housing
- 11-pin Plug
- Large Selection

Switching Units ESR

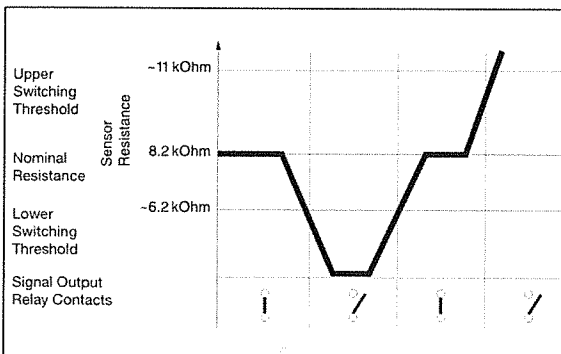
Connected Sensors are monitored for changes in the continuously flowing no-load current. In the non-activated condition both relays are energised.

When one or more Sensors are activated

- the total resistance sinks towards zero ohm
- if the value falls below the defined threshold (6 kOhm)
- the relays are de-energised
- the **yellow** LED illuminates

When a Error occurs in the Sensor circuit

- the total resistance rises towards infinity
- if the value rises above the defined threshold (12 kOhm)
- the relays are de-energised
- the **red** LED illuminates



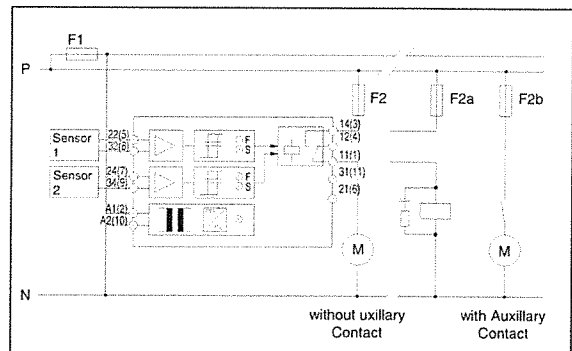
Connection

- The maximum length of the Sensor with cable must not exceed 25 metres
- Maximum surface area 5 m²
- Multiple Sensors are to be connected in series
- The total resistance must not exceed 8.2 kOhm

Type ESR-1

ESR-11

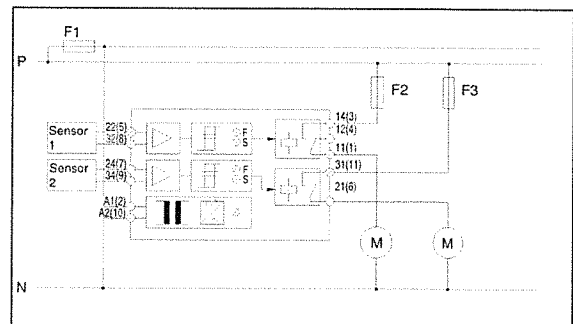
- Safety Category 1
- Two channel design
- Simple signal evaluation
- Recognition of Sensor Errors



ESR-12

In addition to ESR-11

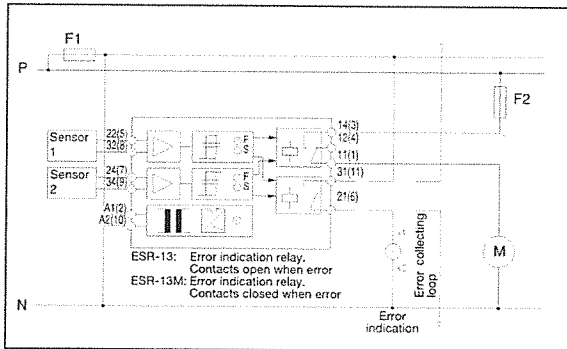
- Simple signal evaluation per output



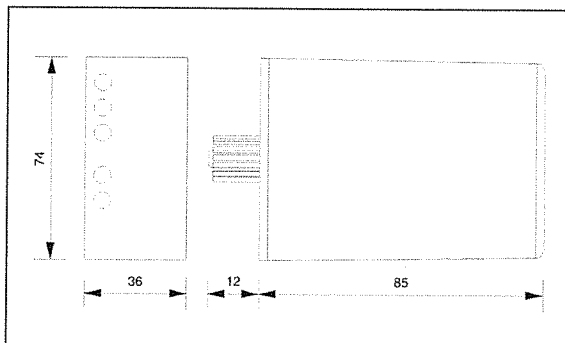
ESR-13

In addition to ESR-11

- Error indication connection



Dimension Sheet



Technical data ESR-1

Housing	Type M3, Material Red Noryl
Isolation Class	IP 30 (IEC 529)
Weight	max. 250 gramm (depending on type)
Power Supply	DC voltages are battery power only
- Type ESR-1. -24VADC	24-36 VAC/24-48VDC ($\pm 20\%$)
- Type ESR-1. -115VAC	($+10\%/-20\%$) with isolating transformer
- Type ESR-1. -230VAC	($+10\%/-20\%$) with isolating transformer
Frequency Range	50/60 Hz (45–66 Hz)
Power consumption	max. 3 VA
Duty Cycle	100% ED
Signal Output Relay/ Error Indication Relay	
- Switching Capacity	250 VAC/5 A (ohm)
- Contact Material	Hard silver
- Operating Life	Mechanical 200 million switchings Electrical 80 000 switchings at 250 VAC/5 A
- Fuse Protection	5 A slow
Indicators	LED 5 mm
- Operation	Green
- Function	Yellow
- Error	Red
Reaction Time	< 70 ms
Temperature Range	
- Operation	-20°C to +50°C
- Storage	-20°C to +80°C
Humidity	max. 80% relative