

Light Curtain Safety Module NL1/3-D

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- Safety Category 4 according to EN 954-1
- 3 NO safety outputs, with force guided relay contacts
- 24 Vac / Vdc power supply
- dual channel input
- automatic or manual reset
- self monitoring
- Failure diagnosis by LEDs
- Approvals:



Product Description

Light curtain safety module according to EN 954-1, EN 292-1 and -2 and EN 60204-1. The NL1/3-D is a Safety Category 4 relay to be connected to the safety light curtain SB2 / SB4 series. The whole system can be used for risk category 2 or 4 applications,

depending on the safety light curtain version (SB2 or SB4). The module is provided with 3 NO safety outputs and can be operated in manual or automatic restart mode. It is placed in a 22.5 mm housing.

Ordering Key

NL1/3-D

Case _____
 Application _____
 Controlled Devices _____
 Safety Outputs _____
 Safety Category _____

Electrical Specifications

| | |
|-----------------------|--------------------------------------|
| Power supply | 24 Vac ± 10% 50-60Hz 24 Vdc ± 10% |
| Power consumption | 2.5 VA / 2.5 W |
| Input current/voltage | 70 mA @ 24 Vdc |
| Safety outputs | 3 NO |
| Auxiliary outputs | – |

| | |
|---|--|
| Switching voltage/ current /capability | 250VAC/24 Vdc/6A/1500VA |
| Contact fuse protection | 6 A fast or 4 A slow |
| Insulation voltage | Pollution degree: 2 Basis insulation: Overvoltage Category: 3 / 250 V Protective separation: Overvoltage Category: 2 |

Time Specifications

| | |
|--------------------------|----------|
| Delay on energisation | < 150 ms |
| Delay on de-energisation | < 30 ms |
| Channel simultaneity | ∞ |

Environmental Specifications

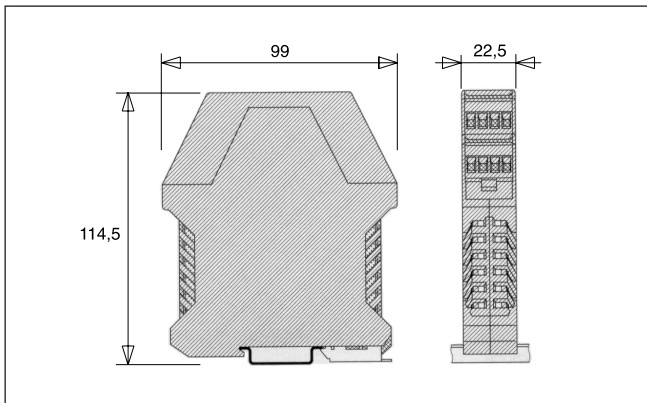
| | |
|-----------------------|-----------------|
| Operating temperature | -25°C to + 55°C |
| Storage temperature | -25°C to + 65°C |

Mechanical Specifications

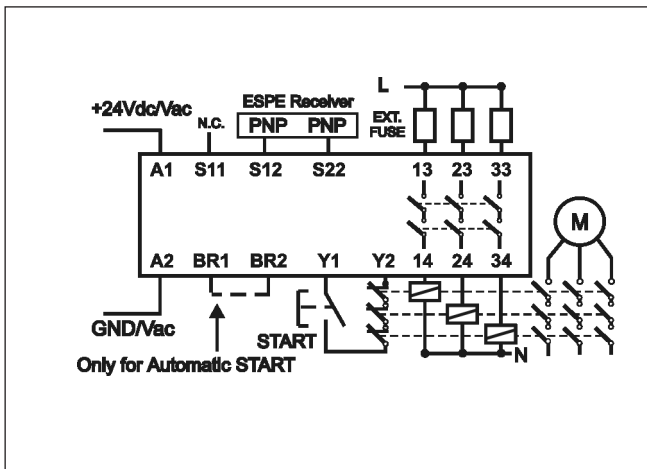
| | |
|-----------------------------|------------------------|
| Protection degree terminals | IP 20 |
| Protection degree housing | IP 40 |
| Housing material | Polyamid PA6.6 |
| Housing type | 22.5 mm housing models |
| Mounting | DIN rail |

| | |
|---|---|
| Max cross section of external conductors | 2.5 mm ² flexible wire 2.5 mm ² rigid wire |
| Dimensions (H x W x D) | 99x22.5x114.5 mm |
| Weight | 170 g |

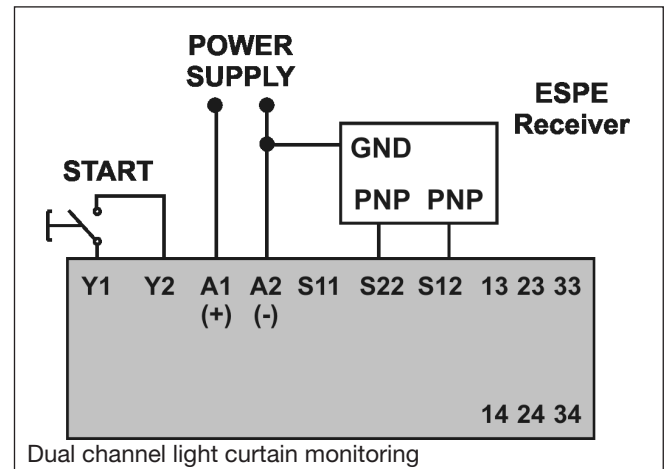
Dimensions



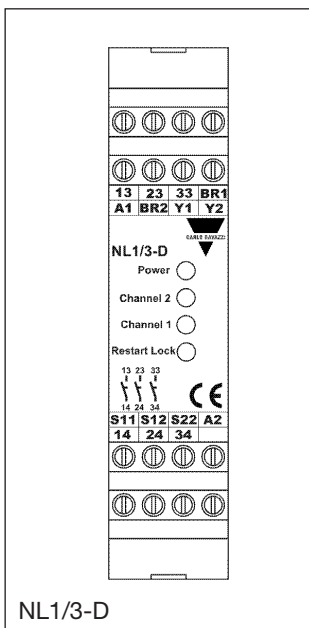
Wiring Diagrams



Application



Connection Sample



Connections

| Terminal Function | Connection |
|-------------------|--------------------------------------|
| A1 | +24 Vdc or AC supply |
| A2 | GND or AC supply |
| S12 | First input channel (PNP Channel 1) |
| S22 | Second input channel (PNP Channel 2) |
| Y1-Y2 | START (automatic or manual start) |
| BR1-BR2 | START (only for automatic start) |
| 13-14 | First safety output (N.O.) |
| 23-24 | Second safety output (N.O.) |
| 33-34 | Third safety output (N.O.) |