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Two hand safety Modules ND12D

CARLO GAVAZZI



- Safety Category 4, Performance Level e according to EN13849-1
- Safety Category III C according to EN 574
- Safety Category 4 according to EN 954-1
- 2 NO safety outputs
- 1 PNP auxiliary output
- 1 NC relay auxiliary output
- Dual channel input
- Max delay between input 500 ms
- Automatic RESET
- Self monitoring
- Failure diagnosis by LEDs
- Approvals: TÜV NORD, UL

Product Description

Two hand Safety module according to EN 60204-1, EN 292-1 /-2, EN 574 (safety category IIIC), EN 954-1 (safety category 4), EN 13849-1 (safety category 4, Performance Level e). These safety modules are suited to be used in applications at the highest risk level as presses and punches.

Ordering Key

ND12 D 230

Housing _____
 Application _____
 Controlled Devices _____
 Safety Outputs _____
 Safety Category _____
 Power Supply _____

Type Selection

| Power supply | References |
|--------------|------------|
| 24 VAC/VDC | ND12D |
| 110 VAC | ND12D110CG |
| 230 VAC | ND12D230CG |

Electrical Specifications

| | | | | | |
|--------------------------|-------------------|---|--------------------------------|------|--|
| Power supply | ND12D | 24 VAC -15/+10% 50-60 Hz 24 VDC -15/+10% | Auxiliary output | | |
| | ND12D110CG | 110 VAC -15/+10% 50-60 Hz | Resistive loads | AC1 | 5 A @ 230 VAC |
| | ND12D230CG | 230 VAC -15/+10% 50-60 Hz | Small inductive loads | AC15 | 1.5 A @ 230 VAC |
| Power consumption | | 4 VA /4 W | Contact fuse protection | | 6 A fast or 4 A delayed |
| Safety outputs | | 2 NO | Insulation voltage | | Pollution degree: 2 Overvoltage Cat.: 3/250 V |
| Auxiliary outputs | | 1 NC Relay 1 PNP | Supply to input | | none 4 kV 1.2/50µs |
| Contact ratings | | | Supply to output | | 4 kV 1.2/50µs 4 kV 1.2/50µs |
| Safety output | | | Input to output | | 4 kV 1.2/50µs 4 kV 1.2/50µs |
| Resistive loads | AC1 | 8 A @ 230 VAC | | | |
| Small inductive loads | AC15 | 3 A @ 230 VAC | | | |
| | DC13 | 4 A @ 24 VDC | | | |

Time Specifications

| | |
|--------------------------|----------|
| Delay on energisation | < 150 ms |
| Delay on de-energisation | < 30 ms |
| Recovery time | ≥ 30 ms |
| Channel simultaneity | < 500 ms |

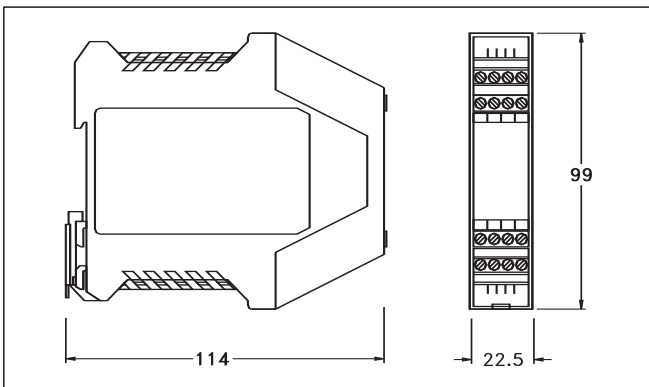
Environmental Specifications

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

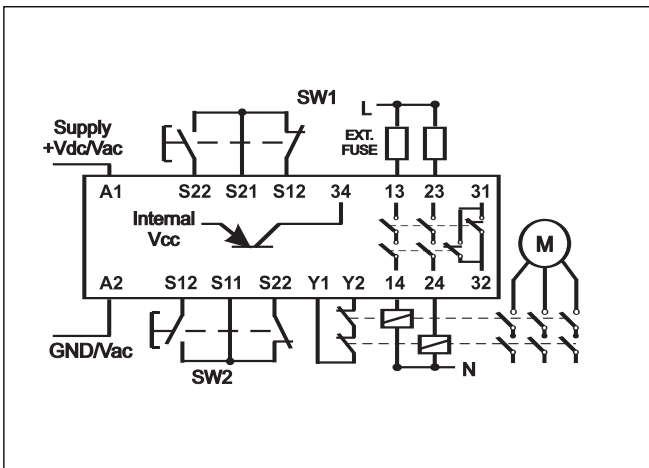
Mechanical Specifications

| | | | |
|-----------------------------|---------------------|--|---|
| Protection degree terminals | IP 20 | Max cross section of external conductors | 2.5 mm ² flexible wire 2.5 mm ² rigid wire |
| Protection degree housing | IP 40 | Dimensions | 22.5 x 99 x 114 mm |
| Housing material | Polyamid PA6.6 | Weight | ND12D 170 g ND12D110CG, ND12D230CG 240 g |
| Housing type | 22.5 housing models | | |
| Mounting | DIN rail | | |

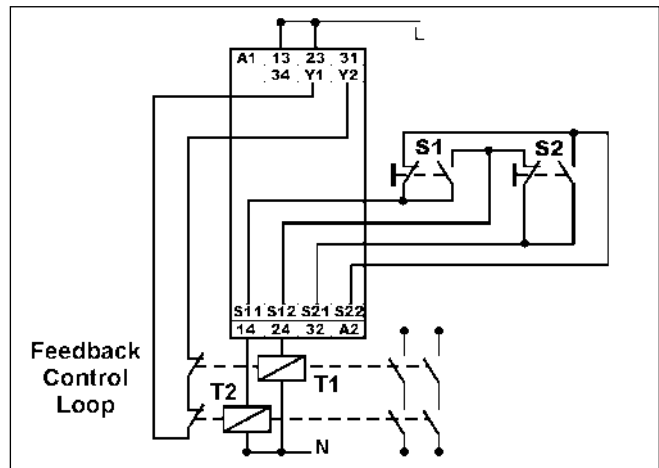
Dimensions



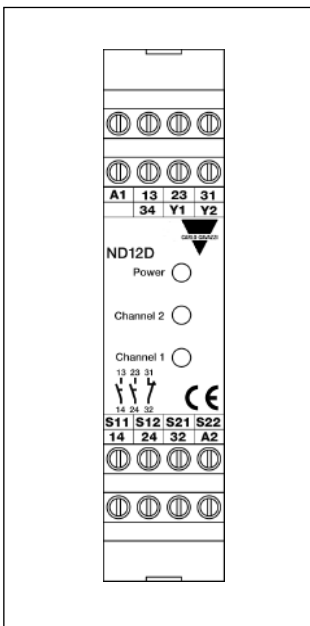
Wiring Diagrams



Application



Connection Sample



Connections

| Terminal Function | Connection |
|-------------------|---|
| A1 | +24 VDC or AC supply |
| A2 | GND or AC supply |
| S11-S12-S22 | First input button (S1) |
| S21-S12-S22 | Second input button (S2) |
| Y1-Y2 | Feedback control loop |
| 34 | PNP aux output (collector of a PNP transistor with emitter connected internally to Vcc) |
| 13-14 | First safety output (NO) |
| 23-24 | Second safety output (NO) |
| 31-32 | Relay auxiliary output (NC) |