

Two hand safety Modules ND12D

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- 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 and EN 954-1, safety category IIC according to EN 574.

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

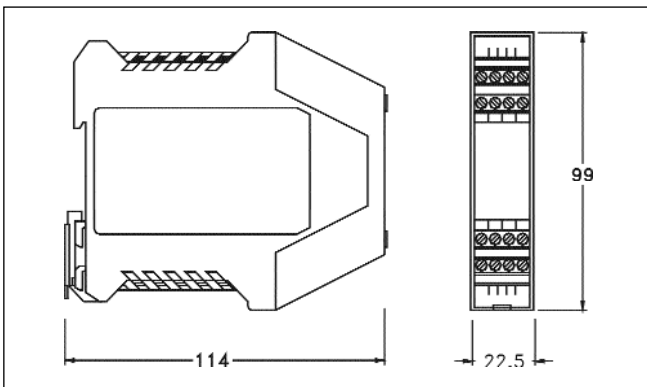
Environmental Specifications

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

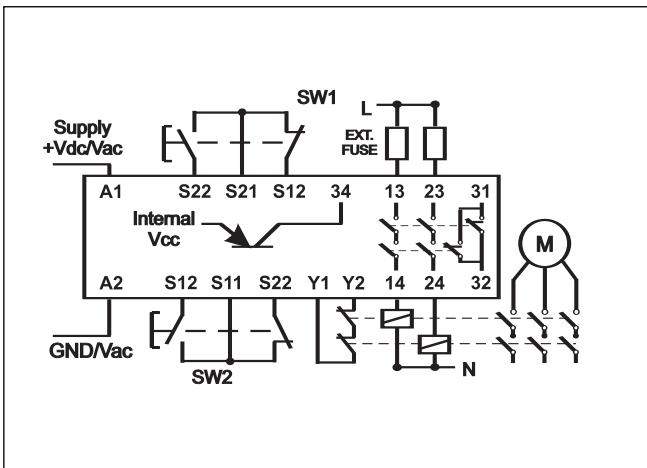
Mechanical Specifications

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		
Housing material	Polyamid PA6.6	Dimensions	22.5 x 99 x 114 mm
Housing type	22.5 housing models		
Mounting	DIN rail	Weight	ND12D 170 g ND12D110CG, ND12D230CG 240 g

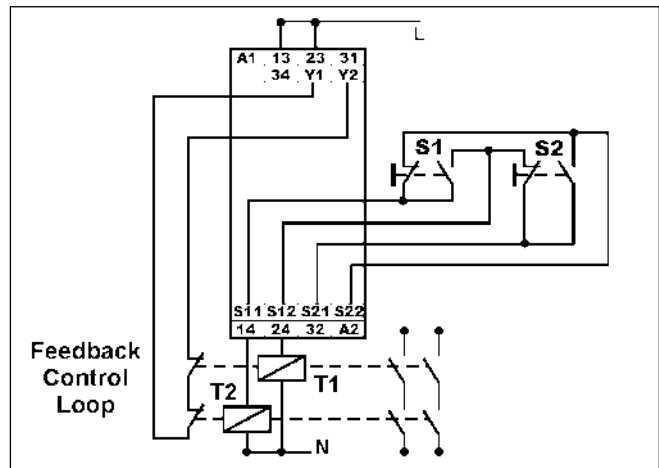
Dimensions



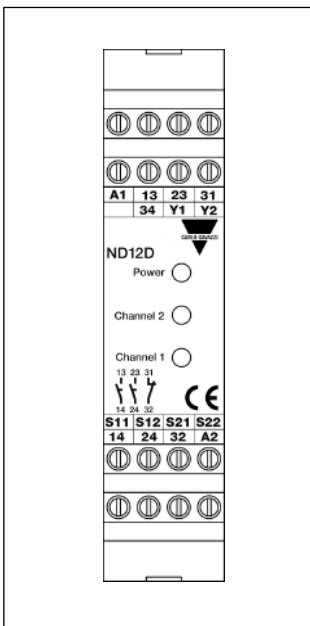
Wiring Diagrams



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)