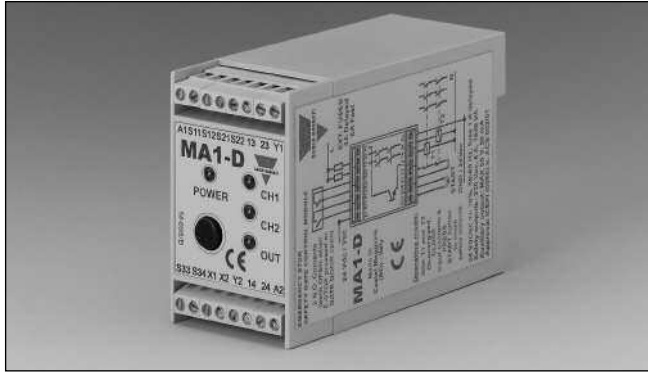


# Emergency Stop and Safety Gate Modules MA1D

CARLO GAVAZZI



- Safety Category 4 according to EN 954-1
- Category 0 Emergency Stop
- Redundant circuit
- 2 NO safety outputs
- 1 NO optocoupled auxiliary NPN output
- Self monitoring
- 24 VAC / VDC power supply
- Dual channel inputs
- Failure diagnosis by LEDs
- Feedback circuit for external contactors monitoring

## Product Description

Emergency Stop and Safety Gate modules according to EN 60204-1, EN 292-1/-2, EN 418, EN 1088 and EN 954-1. This models is characterized by dual channel input and 2 NO safety output contacts with force guided relay outputs.

## Ordering Key

**MA1 D**

Housing \_\_\_\_\_  
 Application \_\_\_\_\_  
 Controlled Devices \_\_\_\_\_  
 Safety Category \_\_\_\_\_

## Electrical Specifications

Power supply	24 VAC $\pm$ 10% 50-60Hz / 24 VDC $\pm$ 10%	Safety output switching voltage /current /capability	230VAC/8A/1840VA
Power consumption	< 7 VA / 7 W	Safety output contact fuse protection	6 A fast or 4 A delayed
Input current/voltage	100 mA @ 24 VDC	Insulation voltage	2.5 KV for signal parts; 4.0 KV for safety output parts; Pollution degree 2 Overvoltage category III
Safety outputs	2 NO		
Auxiliary outputs	1 optocoupled NPN NO 55V 50mA		

## Time Specifications

Delay on energisation	$\leq$ 150 ms
Delay on de-energisation	$\leq$ 25 ms
Recovery time	$\geq$ 25 ms
Channel simultaneity	$\leq$ 200 ms

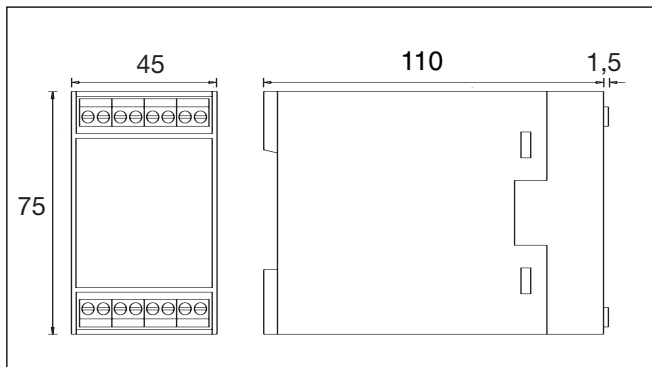
## Environmental Specifications

Operating temperature	0°C ... + 55°C
Storage temperature	-25°C ... + 55°C

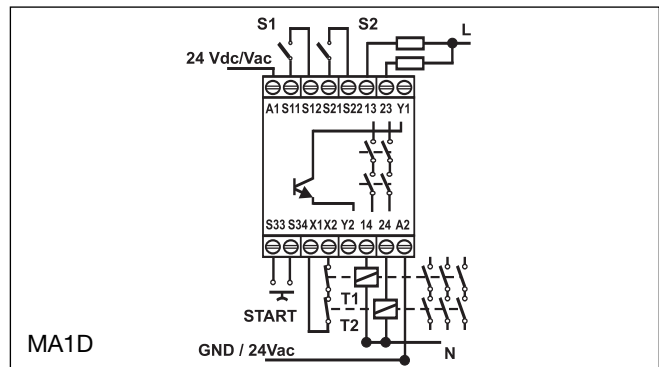
## Mechanical Specifications

Protection degree terminals	IP 20	Max cross section of external conductors	2.5 mm <sup>2</sup> rigid wire 4 mm <sup>2</sup> flexible wire
Protection degree housing	IP 30	Dimensions	45 x 75 x 110 mm
Housing material	ABS	Weight	240 g
Housing type	45 mm housing models		
Mounting	DIN rail		

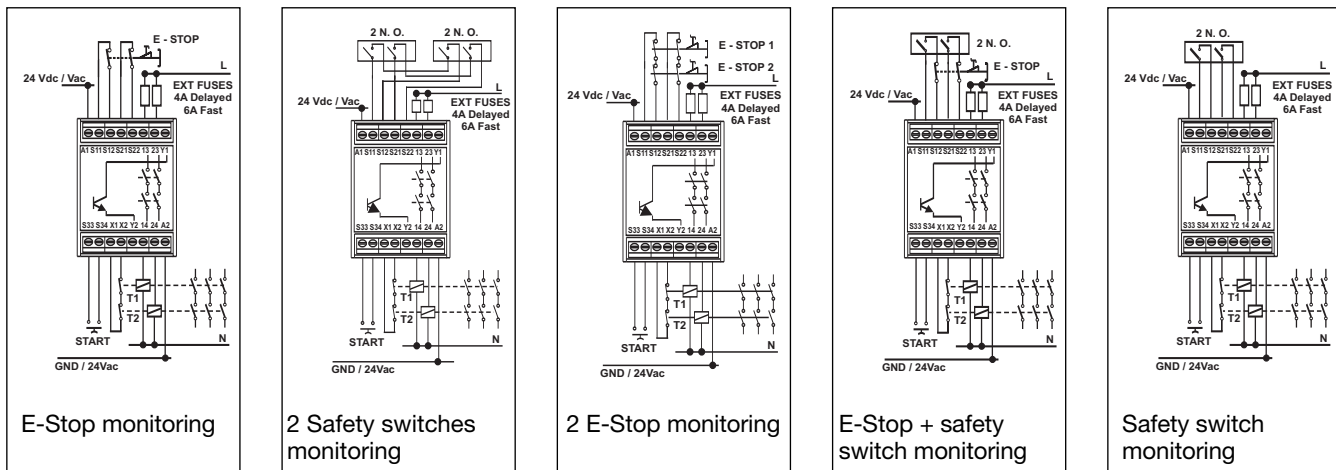
## Dimensions



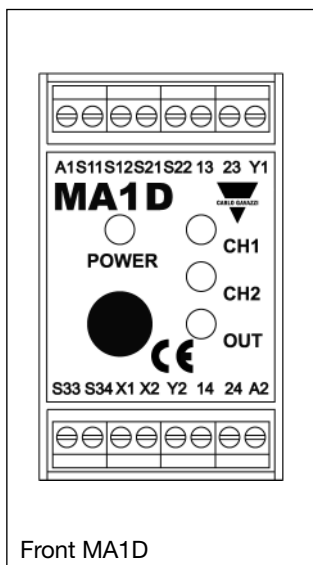
## Wiring Diagrams



## Application



## Connection Example



## Connections

Terminal Function	Connection
A1	+24 VDC or AC supply
A2	GND or AC supply
S11-S12	First input channel (NO) (E-STOP or Safety Switch Channel 1)
S21-S22	Second input channel (NO) (E-STOP or Safety Switch Channel 2)
S33-S34	START (automatic or manual)
X1-X2	Feedback input for external contactors monitoring
13-14	First safety output (NO)
23-24	Second safety output (NO)
Y1	Collector of NPN Auxiliary output (NO)
Y2	Emitter of NPN Auxiliary output (NO)