

МА

Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231	Казань (843)206-01-48	Новокузнецк (3843)20-46-81	Смоленск (4812)29-41-54
Архангельск (8182)63-90-72	Калининград (4012)72-03-81	Новосибирск (383)227-86-73	Сочи (862)225-72-31
Астрахань (8512)99-46-04	Калуга (4842)92-23-67	Омск (3812)21-46-40	Ставрополь (8652)20-65-13
Барнаул (3852)73-04-60	Кемерово (3842)65-04-62	Орел (4862)44-53-42	Сургут (3462)77-98-35
Белгород (4722)40-23-64	Киров (8332)68-02-04	Оренбург (3532)37-68-04	Тверь (4822)63-31-35
Брянск (4832)59-03-52	Краснодар (861)203-40-90	Пенза (8412)22-31-16	Томск (3822)98-41-53
Владивосток (423)249-28-31	Красноярск (391)204-63-61	Пермь (342)205-81-47	Тула (4872)74-02-29
Волгоград (844)278-03-48	Курск (4712)77-13-04	Ростов-на-Дону (863)308-18-15	Тюмень (3452)66-21-18
Вологда (8172)26-41-59	Липецк (4742)52-20-81	Рязань (4912)46-61-64	Ульяновск (8422)24-23-59
Воронеж (473)204-51-73	Магнитогорск (3519)55-03-13	Самара (846)206-03-16	Уфа (347)229-48-12
Екатеринбург (343)384-55-89	Москва (495)268-04-70	Санкт-Петербург (812)309-46-40	Хабаровск (4212)92-98-04
Иваново (4932)77-34-06	Мурманск (8152)59-64-93	Саратов (845)249-38-78	Челябинск (351)202-03-61
Ижевск (3412)26-03-58	Набережные Челны (8552)20-53-41	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
Иркутск (395)279-98-46	Нижний Новгород (831)429-08-12	Симферополь (3652)67-13-56	Ярославль (4852)69-52-93
Россия (495)268-04-70	Киргизия (996)312-96-26-47	Казахстан (7172)727-132	

Emergency Stop and Safety Gate Modules MA1B

CARLO GAVAZZI



- Safety Category 2 according to EN 954-1
- Category 0 Emergency Stop
- 2 NO safety outputs
- 1 NO optocoupled NPN auxiliary outputs
- 24 VCA / VCC power supply
- Self monitoring
- Automatic or manual reset
- Failure diagnosis by LEDs
- Single channel input
- 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.

Possibility to connect mechanical switches or SMS-03 magnetic switches for safety gate monitoring applications.

Ordering Key

MA1 B

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	< 5 VA / 5 W	Safety output contact fuse protection	6 A fast or 4 A delayed
Input current/voltage	50 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 55V 50mA		

Time Specifications

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

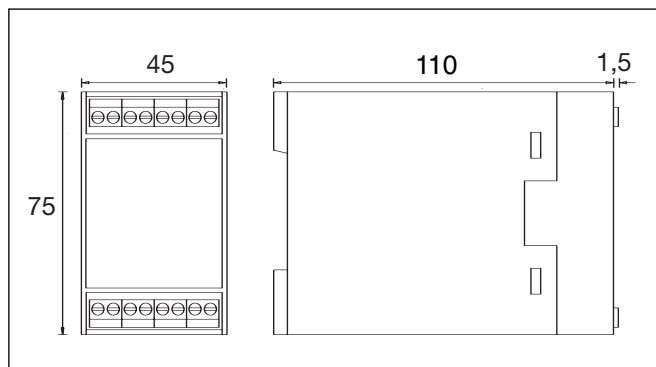
Environmental Specifications

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

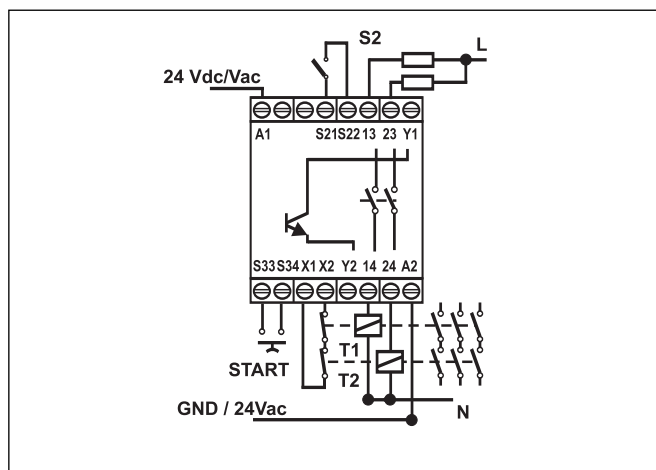
Mechanical Specifications

Protection degree terminals	IP 20	Max cross section of external conductors	4 mm ² rigid wire 2.5 mm ² flexible wire
Protection degree housing	IP 30	Dimensions	45 x 75 x 110 mm
Housing material	ABS	Weight	200 g
Housing type	45 mm housing models		
Mounting	DIN rail		

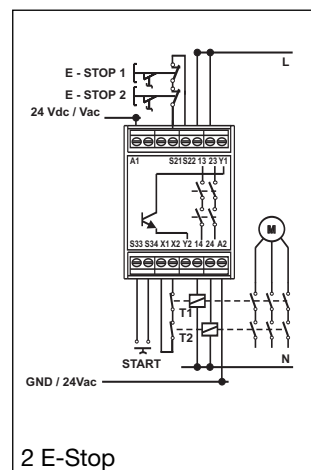
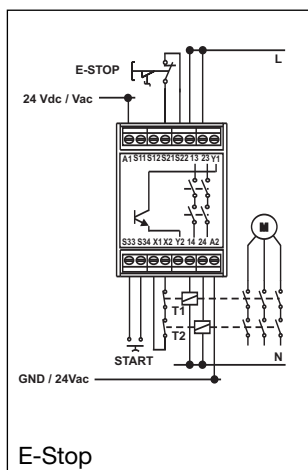
Dimensions



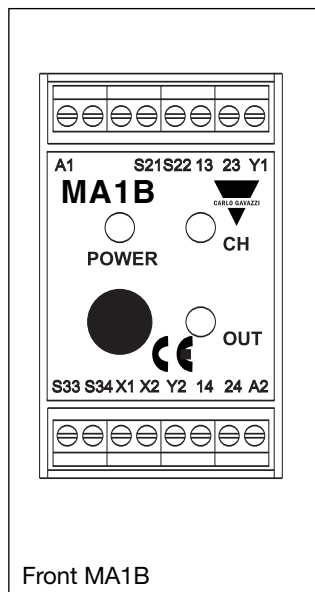
Wiring Diagrams



Application



Connection Sample

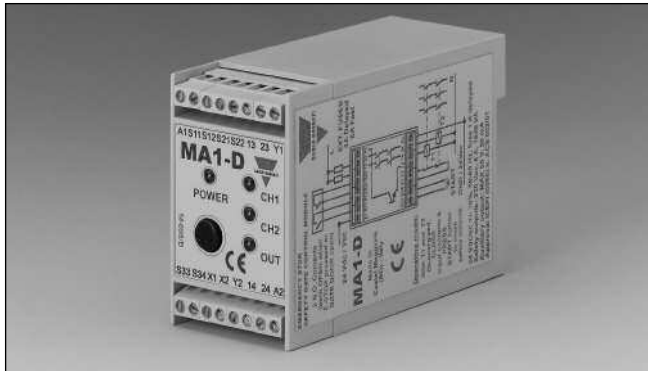


Connections

Terminal Function	Connection
A1	+24 VDC or AC supply
A2	GND or AC supply
S11-S12	Input channel (NO) (E-STOP or Safety Switch Channel)
X1-X2	Feedback input for external contactors monitoring
S33-S34	START (automatic or manual)
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)

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

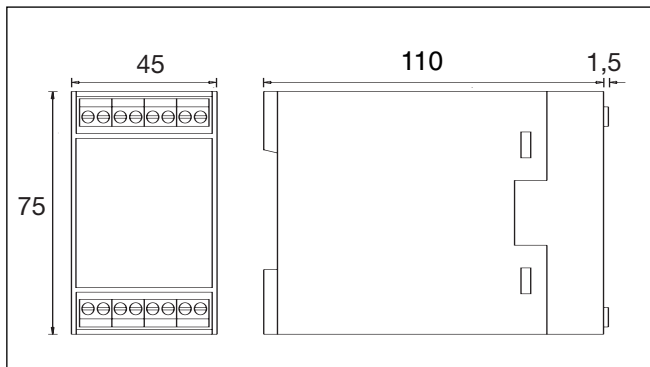
Environmental Specifications

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

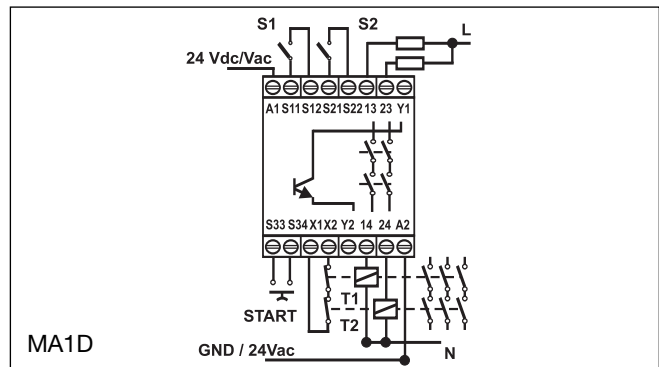
Mechanical Specifications

Protection degree terminals	IP 20	Max cross section of external conductors	2.5 mm ² rigid wire 4 mm ² 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		

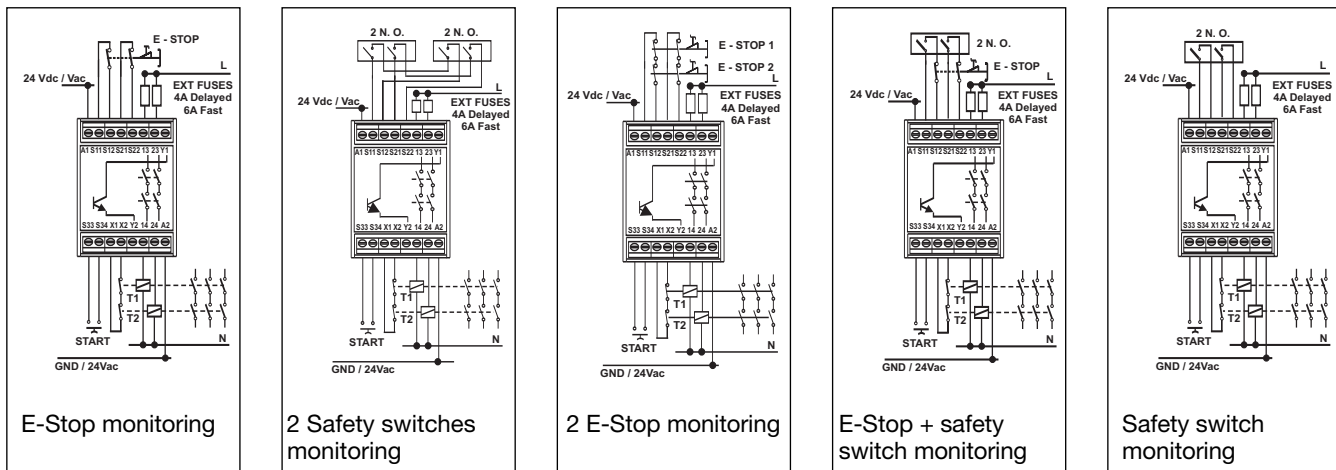
Dimensions



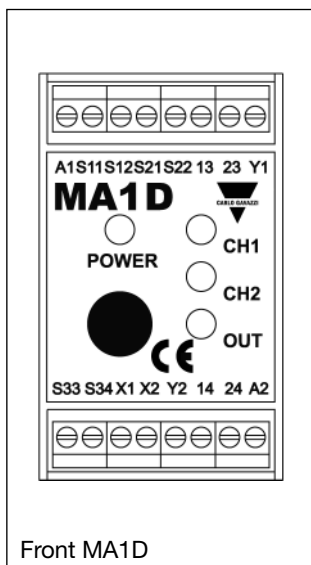
Wiring Diagrams



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)

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