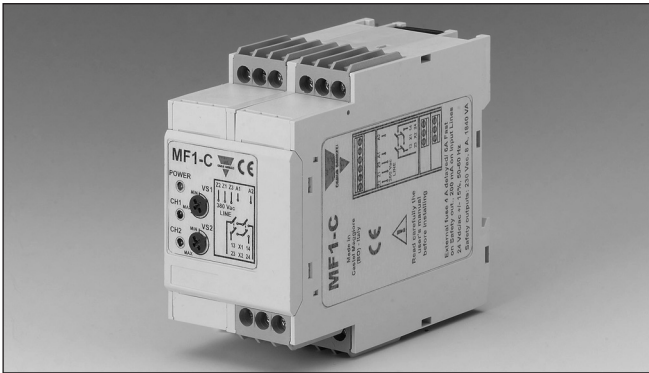


# Standstill Monitor Safety Module MF1-C

CARLO GAVAZZI



- Safety Category 3 according to EN 954-1
- Redundant circuit
- Monophase or three phase line input
- Cable break detection
- Suitable for engines powered by inverters
- Response value adjustable for each channel separately
- Channel status control LEDs
- Possibility to add and / or amplify safety contact outputs
- Single fault tolerance
- feedback circuit for external contactors monitoring

## Product Description

Standstill monitor safety module in conformity with EN 954-1, EN 60904-1, EN 292-1, /-2 and EN 418. The module, safety category 3, has been designed for those applications in which the rotational speed of mechanical parts can be dangerous to the correct carrying out of particular operations, like spindle-tool automatic change.

## Ordering Key

**MF1-C**

Case \_\_\_\_\_  
 Application \_\_\_\_\_  
 Controlled Devices \_\_\_\_\_  
 Safety Category \_\_\_\_\_

## Electrical Specifications

Power supply	24 Vac $\pm$ 15% 50-60Hz / 24 Vdc $\pm$ 15%
Power consumption	5 VA / 5 W
Input current/voltage	170 mA @ 24 Vdc, without load, internal relays energized
Safety outputs	2 NO
Auxiliary outputs	-
Safety output switching voltage /current /capability	230Vac/8A/1840VA

Safety output contact fuse protection	6 A fast or 4 A delayed
Insulation voltage	2.5 KV for signal parts; 4.0 KV for safety output parts; Pollution degree 2 Overvoltage category III
Response value (Vs)	200 - 1000 mVpp
Response isteresis	2 Vs
Max input voltage	500 Vrms
Max input signal frequency	1.5 KHz

## Time Specifications

Delay on energisation	< 500 ms (depending on the application)
Delay on de-energisation	(depending on the application)
Channel simultaneity	200 ms

## Environmental Specifications

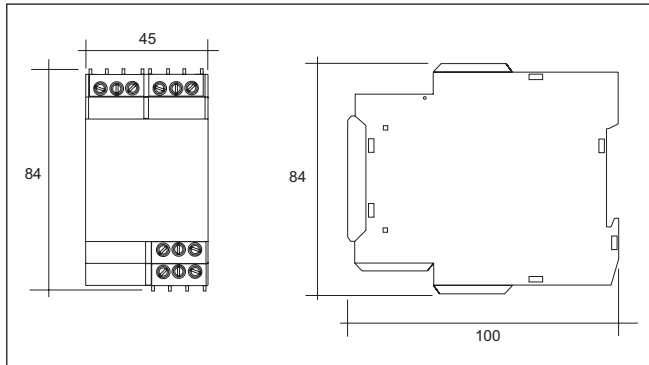
Operating temperature	-25°C to + 55°C
Storage temperature	-25°C to + 65°C

## Mechanical Specifications

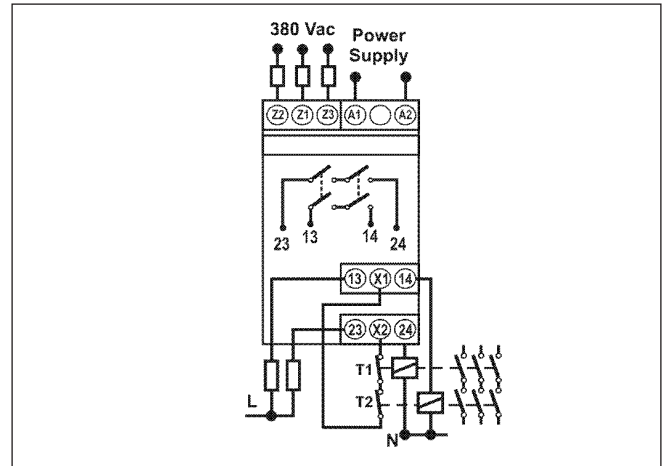
Protection degree terminals	IP 20
Protection degree housing	IP 40
Housing material	ABS
Housing type	45 mm housing models
Mounting	DIN rail

Max cross section of external conductors	2.5 mm <sup>2</sup> flexible wire 4 mm <sup>2</sup> rigid wire
Dimensions (H x W x D)	84x45x100 mm
Weight	260 g

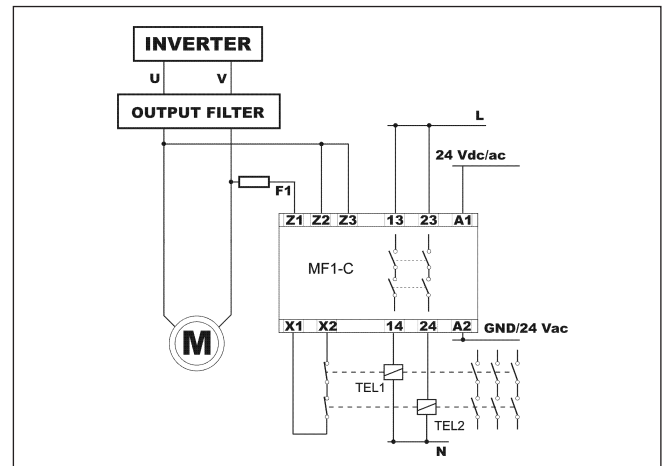
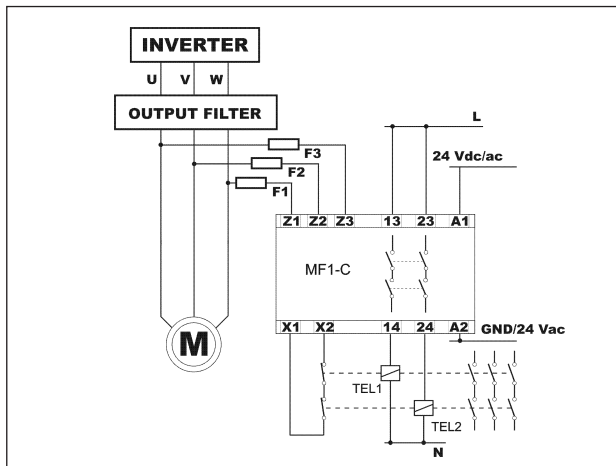
### Dimensions



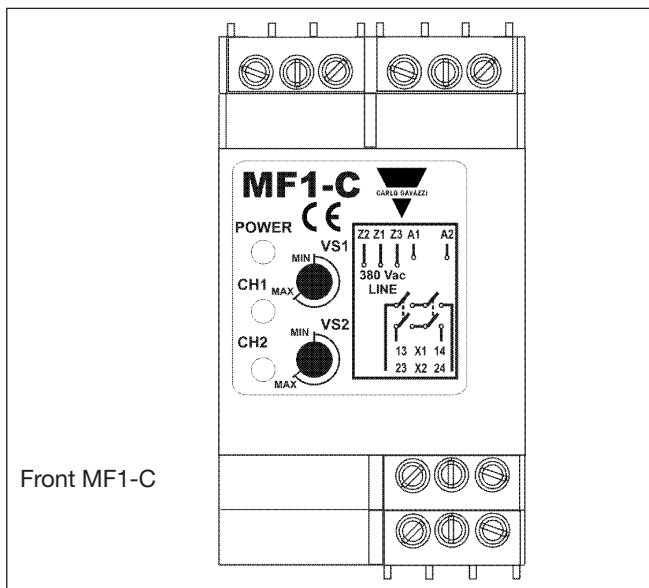
### Wiring Diagrams



### Application



### Connection Sample



Front MF1-C

### Connections

Terminal	Function/Connection
A1	+24 Vdc or AC supply
A2	GND or AC supply
Z1, Z2, Z3	Mono / three phase input terminals
X1-X2	Feedback input for external contactors monitoring
13-14	First safety output
23-24	Second safety output