

Safety modules

Standstill monitor

Type MF1C

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
- Feedback circuit for external contactors monitoring
- Approvals: TÜV, cULUS LISTED

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

Housing _____
 Application _____
 Controlled devices _____
 Safety category _____

Electrical Specifications

| | |
|--|-------------------------------------|
| Power supply | 24 VAC ± 15% 50-60Hz / 24 VDC ± 15% |
| Power consumption | 5 VA / 5 W |
| Input current/voltage | 170 mA @ 24 VDC |
| 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

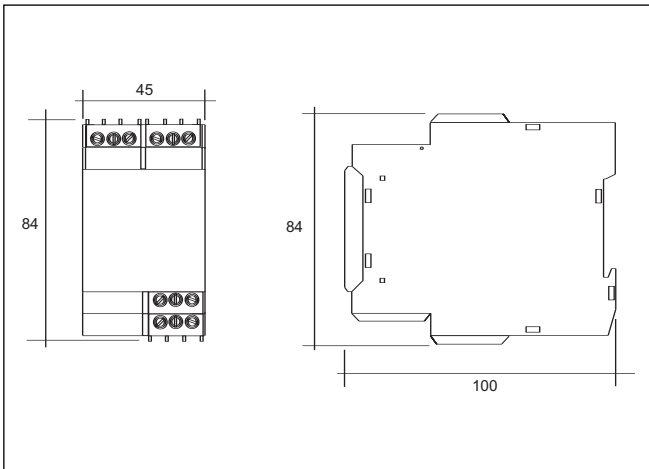
| | |
|-----------------------|------------------|
| Operating temperature | -25°C ... + 55°C |
| Storage temperature | -25°C ... + 65°C |

Mechanical Specifications

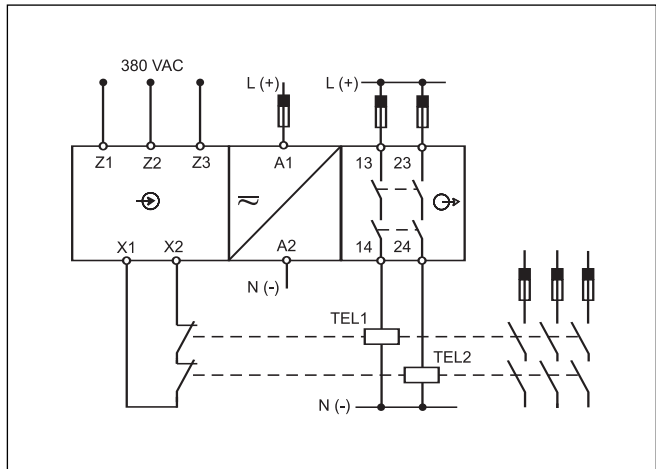
| | |
|-----------------------------|----------------------|
| Protection degree terminals | IP 20 |
| Protection degree housing | IP 40 |
| Housing material | ABS |
| Housing type | 45 mm housing models |
| Mounting | DIN rail |

| | |
|--|---|
| Max cross section of external conductors | 2.5 mm ² flexible wire 4 mm ² rigid wire |
| Dimensions | 45 x 84 x 100 mm |
| Weight | 260 g |

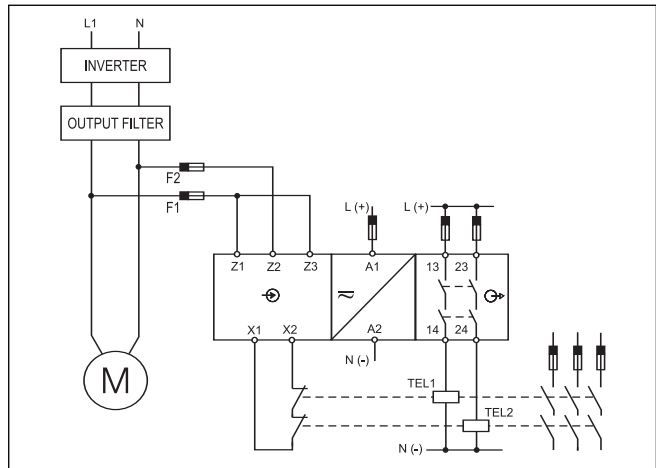
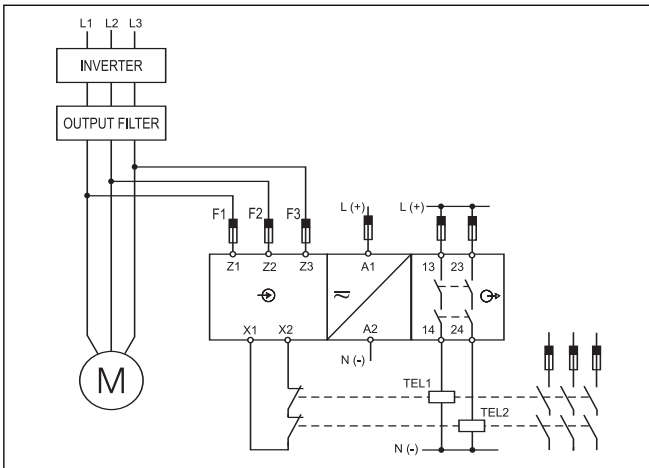
Dimensions



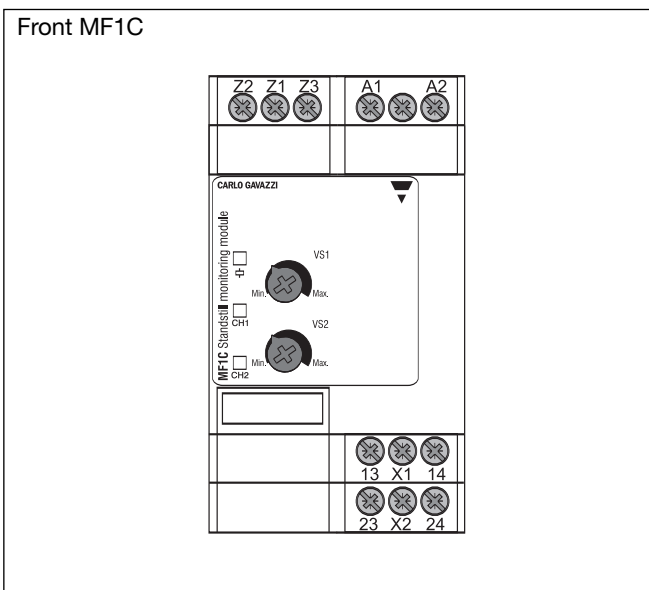
Wiring Diagrams



Application



Connection Sample



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 |