

SAFETY SPEED MONITORING INTERFACE

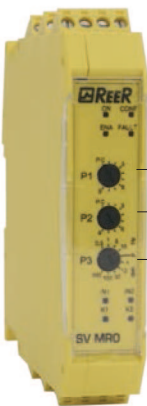


SV MRO

PL e - SIL 3 SAFETY SPEED MONITORING INTERFACE

GENERAL

Safety speed monitoring relay for Overspeed and Zero speed control. Safety level up to PL e - SIL 3. Manual or Automatic restart selectable. EDM feedback input for external contactors monitoring. Enable inputs used, for instance, when monitoring the same axis, in different working phases, with more SV MRO configured with different thresholds. Faults are signalled by LED "Fault" and a PNP system status output. PNP status output indicating overspeed thresholds crossing. 2 inputs for PNP proximities switches. 3 front panel selectors allow configuration of the speed threshold. When the measured speed raises over the threshold, the relays outputs open.



Speed threshold configuring selectors:

- P1 selector tenths
- P2 selector units
- P3 selector multiplier

Multipliers "Hz" from 0.5 to 990 Hz

- 1 - x 0.5
- 2 - x 1
- 3 - x 5
- 4 - x 10

P1 and P2 selectors allow to set numeric values from 01 to 99. P2 selector allows to set a multiplier to apply to the numeric value obtained with the first two. The multiplier can be set in "Hz" or in "rpm" (round per minute). Note: Only when the proximities switches sensor show a single pulse per turn, the value in "rpm" corresponds to the value in "ipm" (pulse per minute).

Multipliers "rpm" From 1 to 49,500 rpm

- 1 - x 1 Note: minimum possible value 10 rpm
- 2 - x 10
- 3 - x 50
- 4 - x 100
- 5 - x 500

TECHNICAL DATA

Model	SV MRO
Ordering Code	1100078
Safety level	up to PL e, Cat. 4 according to EN ISO 13849-1 SIL 3 - SILCL 3 according to IEC 61508 - IEC 62061
Safety relay outputs	2 NO - 6A 250 VAC
Overspeed status output	PNP - 100 mA 24 VDC
System status output	PNP - 100 mA 24 VDC
Power supply	24 VDC ± 20%
Electrical connections	Removable terminal blocks, screw contacts
Start/Restart	Automatic/Manual
Maximum input Frequency (Hz)	2000
Selectable Frequency Threshold (Hz)	0,5 ... 990
Selectable Frequency Threshold (rpm)	10 ... 49500 equivalent to 0,17 ... 825 Hz
Hysteresis	5%
External Device Monitoring	yes
Signalling	LED indicators for status and diagnostic
Protection rating	IP 20 for housing - IP 2X for terminal block
Operating temperature	-40 ... +55 °C
Fastening	DIN rail fastening according to EN 50022-35 standard
Dimensions h x w x d (mm)	99 x 22,5 x 114



Safety level:
SIL 3
SIL 3 – SILCL 3
PL e – Cat. 4

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- 2006/42/EC "Machinery Directive"
- 2004/108/EC " Electromagnetic Compatibility (EMC)"
- 2006/95/EC "Low Voltage Directive (LVD)"
- EN ISO 13849-1 "Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design"
- IEC/EN 62061 "Safety of machinery – Functional safety of safety-related electrical, electronic and programmable electronic control systems"
- IEC 61508 "Functional safety of electrical/electronic/programmable electronic safety-related systems"