

# SAFETY SPEED MONITORING INTERFACE

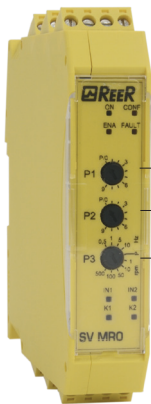


# SV MRO

## 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

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 "Hz" from 0.5 to 990 Hz**

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

**Multipliers "rpm" From 1 to 49,500 rpm**

- 1 - x 1
- 2 - x 10
- 3 - x 50
- 4 - x 100
- 5 - x 500

Note: minimum possible value 10 rpm

### TECHNICAL DATA

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



**-40 ... +55 °C**



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

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

- 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"