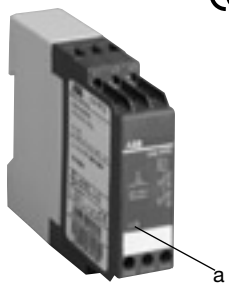
Phase Sequence Monitors
CM-PFS
DPDT Relay Output



a R: yellow LED - relay status

- Monitoring of three-phase supply voltage for phase sequence
- Fast response time
- Universal voltage range 3 x 200…500 V 50/60 Hz
- DPDT contacts
- LED for status indication

Approvals: c UL us LISTED

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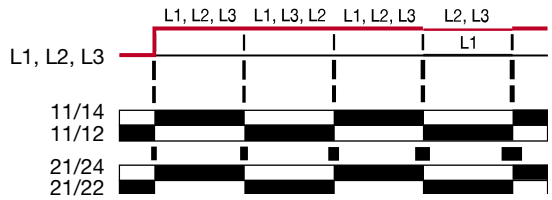
Description

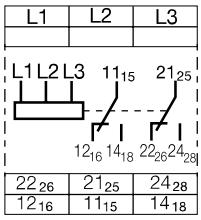
The CM-PFS phase sequence monitor is used to monitor three-phase supply voltages for incorrect phase sequence. The output relay energizes and the yellow LED turns on if all phases are present in the correct phase sequence (clockwise rotating field).

The relay de-energizes and the yellow LED turns off if incorrect phase sequence or loss of one phase is detected. If used with motors which continue running on only two phases, the CM-PFS detects phase loss if the regenerated voltage is less than 60% of the nominal voltage. For applications where a regenerated voltage greater than 60% is expected, we recommend using our phase unbalance monitors.

Function



Connection



L1-L2-L3 Measuring circuit 3 x 200…500 V AC 50/60 Hz

11_{15}-12_{16}/14_{18}, 21_{25}-22_{26}/24_{28} Output contact

NOTE

If several CM-PFS units are placed side by side and the supply voltage is higher than 415 V, spacing of at least 10 mm has to be maintained between the individual units.

Accessories

Panel Mounting Adapter
22.5 mm
P/N: 1SVR 430 029 R 0100

Transparent Cover
22.5 mm
P/N:
1SVR 430 005 R 0100

Marker Insert
P/N:
1SVR 366 017 R 0100

See accessory pages for specifications.

Ordering Table

Supply voltage = measuring voltage	Part Number
3 x 200…500 V AC 50/60 Hz	**1SVR 430 824 R 9300**

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Phase Sequence Monitors
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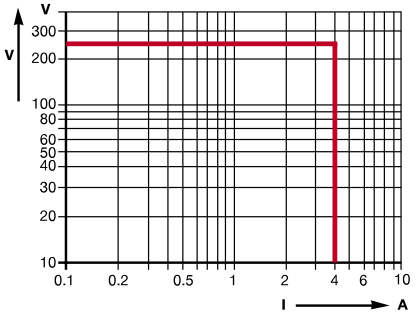
Technical Data

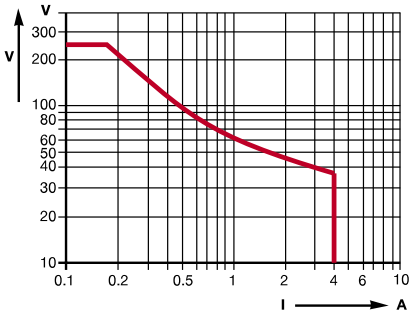
Input		
Supply voltage - power consumption	L1, L2, L3	200...500 V AC - 15 VA
Tolerance of supply voltage		-15 % ... +10 %
Supply voltage frequency		50...60 Hz
Measuring Circuit		
Monitoring voltage Vnom.	L1, L2, L3	200...500 V AC
Frequency		50...60 Hz
Response time		500 ms
Display of Operating Status		
Output relay energized		LED, yellow
Output	11-12/14, 21-22/24	Relay, 2 SPDT contacts
Rated voltage	VDE 0110, IEC 947-1	250 V
Rated switching voltage max.		250 V AC
Rated switching current	AC 12 (resistive)	4 A (at 230 V)
	AC 15 (inductive)	3 A (at 230 V)
	DC 12 (resistive)	4 A (at 24 V)
	DC 13 (inductive)	2 A (at 24 V)
Maximum mechanical life		30 x 10^6 operations
Maximum electrical life (acc. to AC 12 / 230 V / 4 A)		1 x 10^5 operations
Short-circuit proof, max. fuse rating		10 A / fast acting
General Data		
Rated impulse withstand voltage Vimp		4 kV
Operating temperature		-20°C ... +60°C
Storage temperature		-40°C ... +85°C
Mounting to DIN rail (EN 50022)		Snap-on mounting/Screw mounting using an adapter
Cable size stranded with wire end ferrule		2 x 14 AWG (2 x 2.5 mm²)
Weight		Approx. 0.33 lb (150 g)

Load Limit Curves

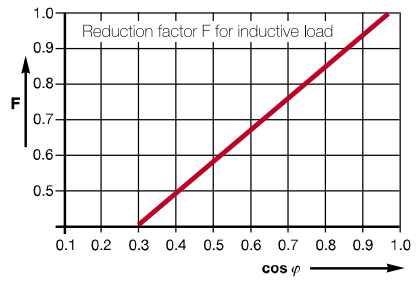
AC Load (Resistive)



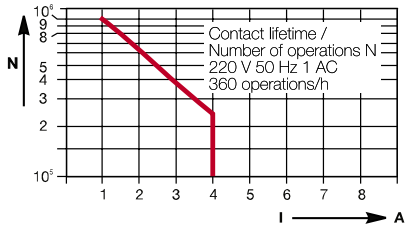
DC Load (Resistive)



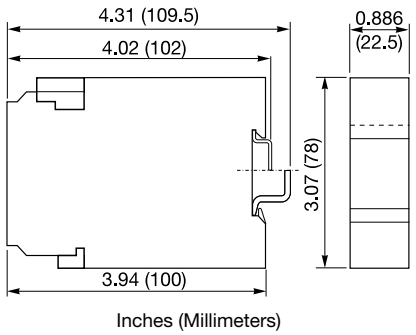
Reduction Factor for Inductive AC Load



Contact Lifetime



Mechanical View



Inches (Millimeters)

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