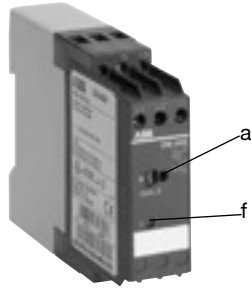


Phase Unbalance, Phase Loss Monitors CM-ASS SPDT Relay Output



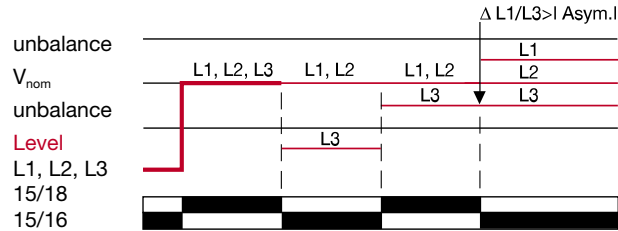
- a Unbalance threshold
f R: yellow LED - relay status
- Phase loss, unbalanced voltage, phase reversal monitoring
 - Fixed trip delay of 0.5 s
 - Adjustable unbalance: 5...15%
 - 2 supply and measuring voltage ranges of 220...240 and 380...415 V AC
 - 1 SPDT contact
 - LED for status indication

Description

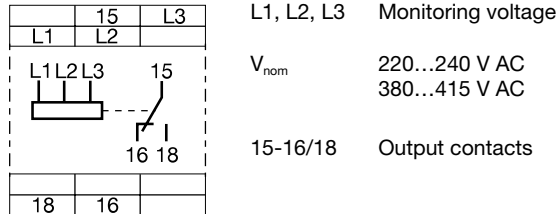
The phase monitor CM-ASS is used to monitor three-phase supply voltages for phase unbalance, phase loss (even if 95 % of the phase voltage is regenerated) and phase sequence.

CM-ASS: When all voltages are acceptable and the phase sequence is correct, the output relay energizes. The output relay is de-energized 500 ms after the adjusted phase unbalance level has been exceeded or immediately after loss of one phase. The energized yellow LED indicates an energized output relay. The switching threshold for the permissible unbalance can be adjusted between 5 and 15 %. In the case of motors which continue running with only two phases, regenerative voltage of more than 95% may be produced, so the output relay may not de-energize on the loss of a phase.

Function



Connection



Accessories



See accessory pages for specifications.

Ordering Table

Type	Supply voltage = monitoring voltage	Monitoring frequency	Part Number
CM-ASS	3 x 220...240 V AC	50 Hz	1SVR 430 864 R 1100
	3 x 380...415 V AC	50 Hz	1SVR 430 864 R 3100
CM-ASS	3 x 220...240 V AC	60 Hz	1SVR 430 865 R 1100
	3 x 380...415 V AC	60 Hz	1SVR 430 865 R 3100

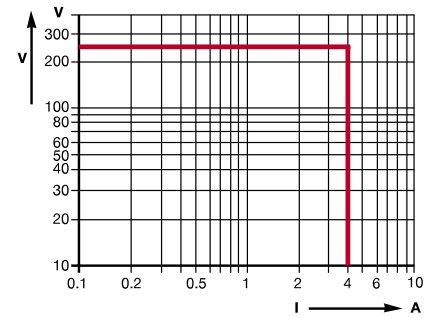
Phase Unbalance, Phase Loss Monitors CM-ASS SPDT Relay Output

Technical Data

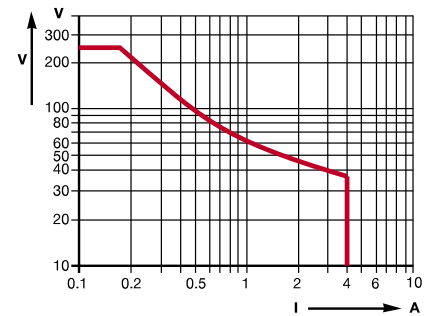
Input	
Supply voltage - power consumption = Measuring voltage	220...240 V AC - 2 VA 380...415 V AC - 2 VA
Tolerance of supply voltage	-20 % ... +20 %
Supply voltage frequency	50 or 60 Hz (see ordering table)
Time delay	
Trip delay time fixed	500 ms for phase unbalance fault
Timing error over the supply voltage range	≤ 0.5 %
Timing error over the temperature range	≤ 0.06 % / °C
Measuring Circuit	
Monitoring voltage V _{nom} .	L1, L2, L3
Frequency	220...240 V AC, 380...415 V AC 50 or 60 Hz (see ordering table)
Phase unbalance adjustable (% of trip point)	5...15 %
Unbalance hysteresis	20 %
Temperature error over the temperature range	≤ 0.06 % / °C
Error over the supply voltage range	≤ 0.5 %
Display of Operational Status	
Output relay energized	R-LED, yellow
Output	
Rated voltage	15-16/18 VDE 0110, IEC 947-1
Rated switching voltage max.	250 V
Rated switching current	250 V AC
	4 A (at 230 V)
	3 A (at 230 V)
	4 A (at 24 V)
	2 A (at 24 V)
Maximum mechanical life/ operations	30 x 10 ⁶ operations
Maximum electrical life (to AC 12 / 230 V / 4 A)	3 x 10 ⁵ operations
Short-circuit proof, max. fuse rating	10 A / fast acting
General Data	
Rated impulse withstand voltage V _{imp}	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 mm ²)
Weight	Approx. 0.33 lb (150 g)

Load Limit Curves

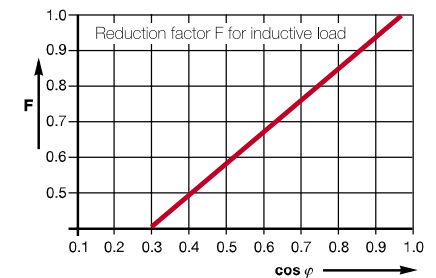
AC Load (Resistive)



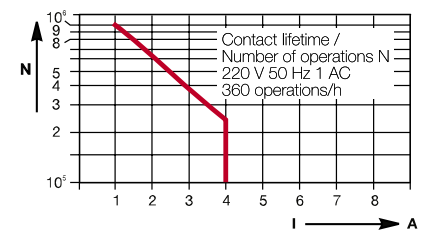
DC Load (Resistive)



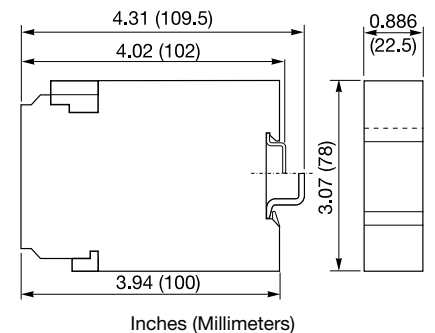
Reduction Factor for Inductive AC Load



Contact Lifetime



Mechanical View



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