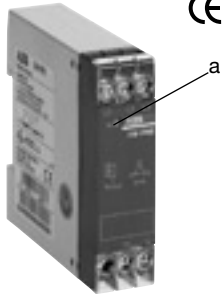


Phase Loss Monitor

CM-PBE 3 Phase or 1 Phase Supply

N/O Relay Output



CE

a

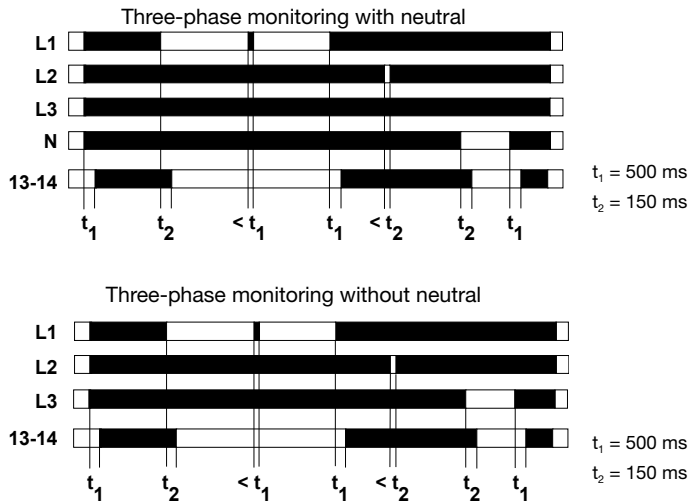
- a R: yellow LED - relay status
- Monitoring of three-phase and single-phase supply voltage for phase loss
- Optionally with neutral monitoring
- No phase sequence monitoring
- Voltage monitoring range:
L1-L2-L3: 3 x 380...440 V AC
L-N: 220...240 V AC
- 1 n/o contact
- LED for status indication

Description

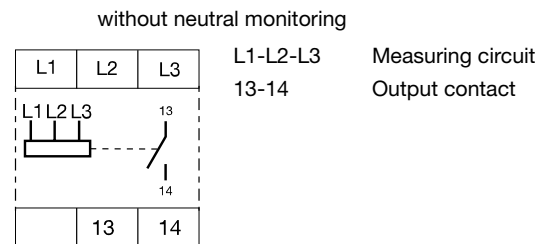
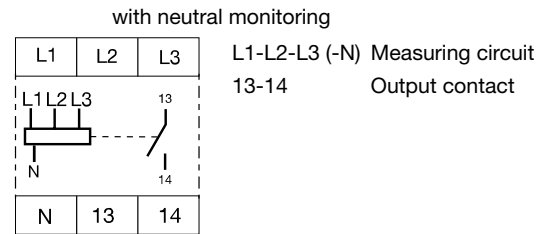
The CM-PBE phase loss monitor is used to monitor supply voltages for phase loss ($V_{meas} < 60\% \times V_{nom}$). If all three phases are present, the output relay energizes. If phase loss occurs, the output relay de-energizes and the yellow LED turns off. The relay re-energizes automatically as soon as the voltage returns to the nominal range, plus a 5% hysteresis. The version with neutral monitoring can also be used in single-phase supplies by jumpering the three phase terminals (L1, L2, L3) and connecting only one phase.

If used with motors which continue running on only two phases, the CM-PBE 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



Approvals: c us LISTED

Accessories



See accessory pages for specifications.

Ordering Table

	Part Number
with neutral monitoring	1SVR 550 881 R 9400
without neutral monitoring	1SVR 550 882 R 9500

Phase Loss Monitor

CM-PBE 3 Phase or 1 Phase Supply

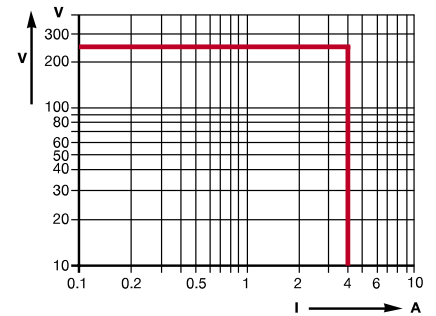
N/O Relay Output

Technical Data

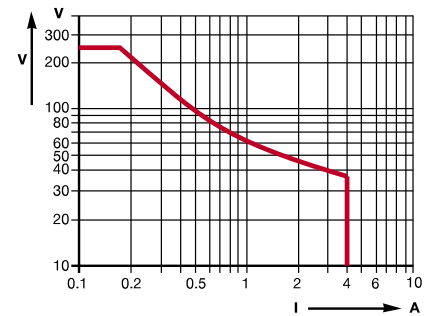
Input		L1 - L2- L3 (-N)
Supply voltage	L - N	220...240 V AC
	L - L	380...440 V AC
Tolerance		-15%...+15%
Supply voltage frequency		50...60 Hz
Frequency tolerance		± 10%
Measuring Circuit		
Trip point on phase failure		60% (V_{nom})
Switch-on value		65% (V_{nom})
Frequency		50...60 Hz
Frequency tolerance		± 10%
Response time		≤ 40ms
Time Delay		
Delay on operate		500 ms
Trip delay on phase failure		100 ms
Tolerance of delay on operate		± 20%
Display of Operational Status		
Output relay energized		LED yellow
Output		13-14
Rated voltage	VDE 0110, IEC947-1	Relay, 1 n/o contact
Rated switching voltage max.		250 V
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		3 x 10 ⁶ operations
Maximum electrical life (acc. to AC 12 / 230 V / 5 A)		1 x 10 ⁵ operations
Short-circuit proof, max. fuse rating		10 A / fast acting
General Data		
Rated impulse withstand voltage V_{imp}		4 kV (overvoltage category III)
Isolation voltage	Input - output	400 V
Operating temperature		-20°C ... +60°C
Storage temperature		-40°C ... +80°C
Mounting to DIN-rail (EN 50022)		Snap-on mounting/Screw mounting using an adapter
Cable size stranded with wire end ferrule		2 x 16 AWG (2 x 1.5 mm ²)
Weight		Approx. 0.17 lb (75 g)

Load Limit Curves

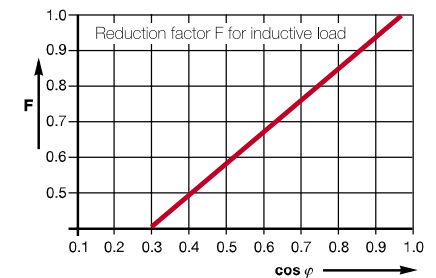
AC Load (Resistive)



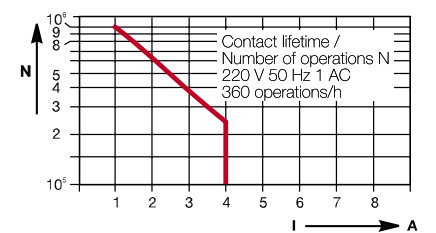
DC Load (Resistive)



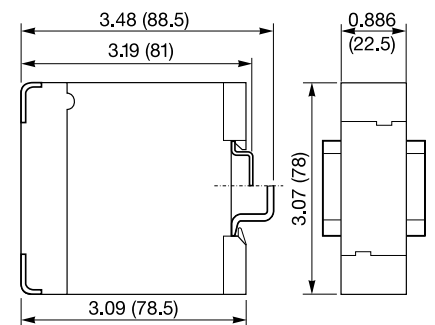
Reduction Factor for Inductive AC Load



Contact Lifetime



Mechanical View



Inches (Millimeters)

7