

# Measuring and Monitoring Relays

## Three Phase Monitors - Multifunctional

Rated control supply voltage $U_c$	Type	Order number
	CM-MPS.11S	1SVR730885R1300
	CM-MPS.11P	1SVR740885R1300
	CM-MPS.21S	1SVR730885R3300
	CM-MPS.21P	1SVR740885R3300
	CM-MPS.31S	1SVR730884R1300
	CM-MPS.31P	1SVR740884R1300
	CM-MPS.41S	1SVR730884R3300
	CM-MPS.41P	1SVR740884R3300
	CM-MPS.23S	1SVR730885R4300
	CM-MPS.23P	1SVR740885R4300
	CM-MPS.43S	1SVR730884R4300
	CM-MPS.43P	1SVR740884R4300
	CM-MPN.52S	1SVR750487R8300
	CM-MPN.52P	1SVR760487R8300
	CM-MPN.62S	1SVR750488R8300
	CM-MPN.62P	1SVR760488R8300
	CM-MPN.72S	1SVR750489R8300
	CM-MPN.72P	1SVR760489R8300

Phase to Phase	CM-MPS.11S	CM-MPS.11P	CM-MPS.21S	CM-MPS.21P	CM-MPS.31S	CM-MPS.31P	CM-MPS.41S	CM-MPS.41P	CM-MPS.23S	CM-MPS.23P	CM-MPS.43S	CM-MPS.43P	CM-MPN.52S	CM-MPN.52P	CM-MPN.62S	CM-MPN.62P	CM-MPN.72S	CM-MPN.72P	
160-300 V AC					■	■													
300-500 V AC							■	■											
350-580 V AC											■	■							
450-720 V AC													■	■					
530-820 V AC															■	■	■	■	■

Phase to Neutral	CM-MPS.11S	CM-MPS.11P	CM-MPS.21S	CM-MPS.21P	CM-MPS.31S	CM-MPS.31P	CM-MPS.41S	CM-MPS.41P	CM-MPS.23S	CM-MPS.23P	CM-MPS.43S	CM-MPS.43P	CM-MPN.52S	CM-MPN.52P	CM-MPN.62S	CM-MPN.62P	CM-MPN.72S	CM-MPN.72P	
90-170 V AC	■	■																	
180-280 V AC			■	■					■	■									

Rated frequency	CM-MPS.11S	CM-MPS.11P	CM-MPS.21S	CM-MPS.21P	CM-MPS.31S	CM-MPS.31P	CM-MPS.41S	CM-MPS.41P	CM-MPS.23S	CM-MPS.23P	CM-MPS.43S	CM-MPS.43P	CM-MPN.52S	CM-MPN.52P	CM-MPN.62S	CM-MPN.62P	CM-MPN.72S	CM-MPN.72P	
50/60 Hz	■	■	■	■	■	■	■	■					■	■	■	■	■	■	■
50/60/400 Hz									■	■	■	■							

Suitable for monitoring	CM-MPS.11S	CM-MPS.11P	CM-MPS.21S	CM-MPS.21P	CM-MPS.31S	CM-MPS.31P	CM-MPS.41S	CM-MPS.41P	CM-MPS.23S	CM-MPS.23P	CM-MPS.43S	CM-MPS.43P	CM-MPN.52S	CM-MPN.52P	CM-MPN.62S	CM-MPN.62P	CM-MPN.72S	CM-MPN.72P	
Single-phase mains	■	■	■	■	■	■			■	■									
Three-phase mains	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Monitoring function	CM-MPS.11S	CM-MPS.11P	CM-MPS.21S	CM-MPS.21P	CM-MPS.31S	CM-MPS.31P	CM-MPS.41S	CM-MPS.41P	CM-MPS.23S	CM-MPS.23P	CM-MPS.43S	CM-MPS.43P	CM-MPN.52S	CM-MPN.52P	CM-MPN.62S	CM-MPN.62P	CM-MPN.72S	CM-MPN.72P	
Phase failure	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Phase sequence	sel	sel	sel	sel	sel	sel	sel	sel	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj
Automatic phase sequence correction									adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj
Overtoltage	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Undervoltage	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Unbalance	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Neutral <sup>1)</sup>	■ <sup>2)</sup>	■ <sup>2)</sup>	■ <sup>2)</sup>	■ <sup>2)</sup>					■ <sup>2)</sup>	■ <sup>2)</sup>									

Thresholds	CM-MPS.11S	CM-MPS.11P	CM-MPS.21S	CM-MPS.21P	CM-MPS.31S	CM-MPS.31P	CM-MPS.41S	CM-MPS.41P	CM-MPS.23S	CM-MPS.23P	CM-MPS.43S	CM-MPS.43P	CM-MPN.52S	CM-MPN.52P	CM-MPN.62S	CM-MPN.62P	CM-MPN.72S	CM-MPN.72P	
adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj

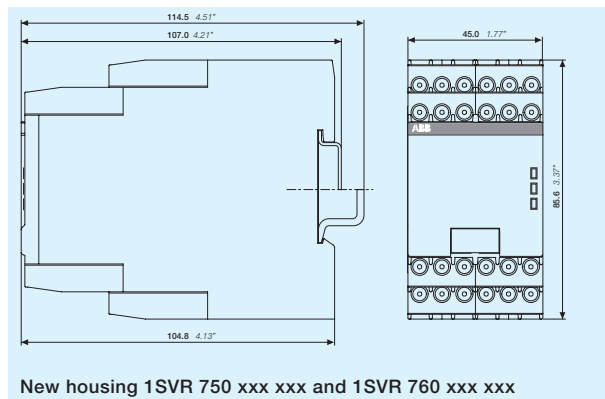
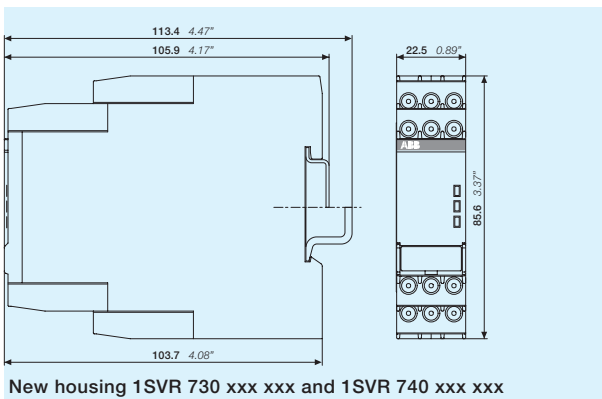
Timing functions for tripping delay	CM-MPS.11S	CM-MPS.11P	CM-MPS.21S	CM-MPS.21P	CM-MPS.31S	CM-MPS.31P	CM-MPS.41S	CM-MPS.41P	CM-MPS.23S	CM-MPS.23P	CM-MPS.43S	CM-MPS.43P	CM-MPN.52S	CM-MPN.52P	CM-MPN.62S	CM-MPN.62P	CM-MPN.72S	CM-MPN.72P	
On and OFF delay	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj	adj

Connection type	CM-MPS.11S	CM-MPS.11P	CM-MPS.21S	CM-MPS.21P	CM-MPS.31S	CM-MPS.31P	CM-MPS.41S	CM-MPS.41P	CM-MPS.23S	CM-MPS.23P	CM-MPS.43S	CM-MPS.43P	CM-MPN.52S	CM-MPN.52P	CM-MPN.62S	CM-MPN.62P	CM-MPN.72S	CM-MPN.72P	
Push-in terminals		■		■		■		■		■		■		■		■		■	
Double-chamber cage connection terminals	■		■		■		■		■		■		■		■		■		■

<sup>1)</sup> The external conductor voltage towards the neutral conductor is measured.  
<sup>2)</sup> Interrupted neutral monitoring

adj: adjustable  
 sel: selectable



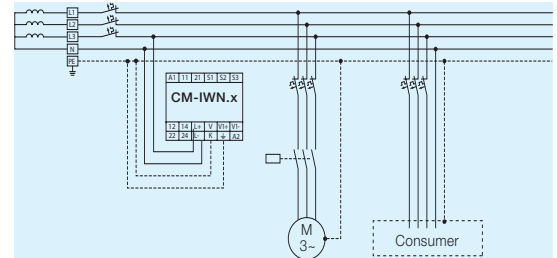
# Measuring and Monitoring Relays

## Insulation Monitoring Relays & Grid feeding monitoring relays

Type	Order number	CM-IWS.2S	CM-IWS.2P	CM-IWS.1S	CM-IWS.1P	CM-IWN.1S	CM-IWN.1P	CM-IWN.4S	CM-IWN.4P	CM-IWN.5S	CM-IWN.5P	CM-IWN.6S	CM-IWN.6P
		1SVR730670R0200	1SVR740670R0200	1SVR730660R0100	1SVR740660R0100	1SVR750660R0200	1SVR760660R0200	1SVR750660R0300	1SVR760660R0300	1SVR750660R0400	1SVR760660R0400	1SVR750660R0500	1SVR760660R0500
<b>Rated control supply voltage <math>U_s</math></b>													
24 - 240 VAC/DC													
<b>Measuring voltages</b>													
250 V AC (L-PE)													
400 V AC (L-PE)													
690 V AC (L-PE)													
300 V DC (L-PE)													
600 V DC (L-PE)													
1000 V DC (L-PE)													
<b>Measuring range</b>													
1 - 100 k $\Omega$													
2 - 200 k $\Omega$													
<b>System leakage capacitance, max.</b>													
10 $\mu$ F													
20 $\mu$ F													
500 $\mu$ F													
1000 $\mu$ F													
2000 $\mu$ F													
<b>Output</b>													
1 c/o													
1 x 2 c/o or 2 x 1 c/o													
<b>Operating principle</b>													
Open-circuit principle													
Open- or closed-circuit principle adjustable													
<b>Test</b>													
Front face button or control input													
<b>Reset</b>													
Front-face button or control input													
Fault storage / latching configurable													
Non volatile storage configurable													
Interrupted wire detection													
Threshold values configurable													

1) With coupling unit CM-IVN	screw version	CM-IVN.S: 1SVR750669R9400
	push-in version	CM-IVN.P: 1SVR760669R9400

Insulation monitors for unearthed supply systems (IT-Systems)



Type	Order number	CM-UFD.M21	CM-UFD.M22	CM-UFS.1
		1SVR510730R0300	1SVR560730F3400	1SVR630736R0300
<b>Rated control supply voltage <math>U_s</math></b>				
24-240 V AC/DC				
3 x 400 V AC (L-L) / 230 V AC (L-N)				
<b>Rated frequency</b>				
DC and 50/60 Hz respectively				
50 Hz				
DC or 50 Hz				
<b>Standards</b>				
VDE AR-N 4105				
DIN V VDE V 0126-1-1: Feb. 2006				
CEI 0-21				
<b>Suitable for monitoring</b>				
Single-phase mains				
Three-phase mains				
<b>Monitoring function</b>				
Over-/undervoltage				
Over-/underfrequency				
ROCOF (rate of change of frequency)				
10 minutes average value over-/undervoltage,				
10 minutes average value overvoltage				
Phase failure				
Vector shift				
<b>Thresholds</b>				
adj adj adj				