

- » Product design in accordance with TS EN 60255 stand
- » 18mm thin product body conforming to DIN Standard
- » TRMS measurement,
- » Red LED indicators for fault notification,
- » Orange LED indicator for relay status
- » Adjustable knobs for time and limit values,
- » 5A SPDT relay output,
- » Microprocessor based,
- » Optional Phase Sequence, Phase Loss, High-Low Voltage, Neutral Break Protection,
- » Star, delta and single phase connection options,
- » High precision and high mechanical strength.

Product Guide

Products	Stock Code	Connection Type	Phase Loss Protection	Phase Sequence Protection	Low Voltage Only Protection	Neutral Break Protection
V1Y-WFN 230	270279	3P4W	✓		✓	✓
V1Y-WS 300	270280	3P4W	✓	✓	✓	✓
V1D-WS 520	270281	3P3W	✓	✓	✓	
V1Y-WUN 120-480	270292	3P3W & 3P4W	✓		✓	✓
V1Y-WUN.9 120-480	270293	3P3W	✓		Low Voltage Only	✓
V1U-M2W 230	270295	1P2W	✓	✓	✓	✓
V1U-M2W 120	270296	1P2W	✓	✓	✓	✓
V1U-U.9 230	270305	1P2W	✓	✓	✓	✓

Technical Details

Operating Voltage		85 - 300 V LN $\pm 20\%$ 145 - 520 V LL $\pm 20\%$	
Operating Frequency		50 - 60 Hz	
Supplying Terminals (Burden)		L2-L3 (3P4W \rightarrow 4,8 k Ω / 3P3W \rightarrow 7 k Ω) U1-U2 (V1U-xxx for)	
Voltage Measurement Terminals		L1-L2-L3-N U1-U2 (V1U-xxx for)	
Nominal Voltage		120 V LL (V1U-M2W 120 for) 230 V LN (V1Y-WFN 230, V1Y-WS 300, V1U-M2W 230 and V1U-U.9 230 for) 120 (208) - 277 (480) (V1Y-WUN 120-480 for) 400 V LL (V1D-WS 520 for)	
Voltage Protection Range	V1Y-WFN 230	Low	150 - 210 VAC
		High	240 - 300 VAC
	V1Y-WS 300	Low	150 - 210 VAC
		High	240 - 300 VAC
	V1D-WS 520	Low	260 - 360 VAC
		High	415 - 520 VAC
	V1Y-WUN 120-480	Low & High	$\pm (5 - 30\%) U_n$
		Low	(75%) U_n
	V1Y-WUN.9 120-480	High	-
		Low	(75 - 115%) U_n
V1U-M2W 230	High	(80 - 130%) U_n	
	Low	(75 - 115%) U_n	
V1U-M2W 120	High	(80 - 130%) U_n	
	Low	(75%) U_n	
V1U-U.9	High	-	
	Low	(75%) U_n	
Energization Delay		< 1 sn	
Phase Loss Threshold Value		$U_n \times 60\%$	
Histerisis		3%	
Output Contact		1 C/0	
Max. Switching Voltage / Current / Power		250VAC / 5A / 1250VA - 30VDC / 5A / 150W	
Fault Delay Period	Phase Loss	ton= 2 sn / toff: 500msn	
	Phase Sequence	ton= 2 sn / toff: 500msn	
	High/ Low Voltage	ton= 0.1 - 10 sn / toff: 0.1 - 10 sn	
		ton= 2 sn / toff: 0.1 - 15 sn (V1Y-WUN 120-480) ton= 2 sn / toff: 5 - 15 dk (V1Y-WUN.9 120-480 and V1U-U.9 230 for)	
Neutral Break	ton= 2 sn / toff: 500msn		
Over Voltage Category (IEC 60664)		CAT III	
Cable Cross Section		2.5 mm ² (Only Copper Conductor) / 14 AWG Solid / Stranded	
Screw Tightening Torque		0.5 Nm	
Cable Stripping Size (Min/Max)		8 mm / 9 mm	
Power Consumption		< 13 VA	
Operating Temperature Range		-20 / +60 °C	
Protection Degree (IEC 60529)		IP 20	
Activated I/O's at the max temperature		Relay	1
		PTC Input	2

Fault Types	Relay Actions	LED Display
Phase Loss: In case of any of the measuring signals falls below %60 of the rated voltage, phase loss fault occurs. Relay activation and the LED notification are shown in the adjacent figure.		Err1 Err2
Neutral Break: In products with neutral connection, if there is a neutral break fault detection feature, in case of a break in the neutral line or if the neutral connection is not made, neutral break fault occurs. Relay activation and the LED notification are shown in the adjacent figure.		Err1 Err2
Phase Sequence: When the angles between the signals entering the L1, L2 and L3 inputs are less than 60° and more than 180°, a phase sequence fault occurs in cases where the phases are not connected in sequence. Relay activation and LED notification are shown in the adjacent figure.		Err1 Err2
High Voltage Fault: If the signal that applied from the L1, L2 and L3 signals, is higher than the set high voltage limit, a high voltage fault occurs. Relay activation and the LED notification are shown in the adjacent figure.		Err1
Low Voltage Fault: If the signal that applied from the L1, L2 and L3 signals, is lower than the set low voltage limit, a low voltage fault occurs. Relay activation and the LED notification are shown in the adjacent figure.		Err2

