

- » 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 Asymmetry, Phase Sequence, Phase Loss, High-Low Voltage, PTC and Neutral Break Protection
- » Star and delta connection options,
- » High precision and high mechanical strength.

Product Guide

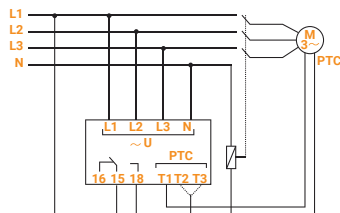
Products	Stock Code	Connection Type	Phase Loss Protection	Phase Sequence Protection	Asymmetry Protection	PTC	High/Low Voltage Protection	Neutral Break Protection
PIY-ASF 230	270277	3P4W	✓	✓	✓			✓
PID-ASF 400	270278	3P3W	✓	✓	✓			
PIY-MIWASFN 170-280	270282	3P4W	✓	✓	✓		✓	✓
PID-MIWASF 295-480	270283	3P3W	✓	✓	✓		✓	
PIY-M2WSP 170-280	270286	3P4W	✓	✓	✓	✓	✓	✓
PID-M2WSP 295-480	270287	3P3W	✓	✓	✓	✓	✓	
PIY-MIWASFN 100-200	270288	3P4W	✓	✓	✓		✓	✓
PID-MIWASF 175-345	270289	3P3W	✓	✓	✓		✓	
PIY-M2WSP 100-200	270290	3P4W	✓	✓	✓	✓	✓	✓
PID-M2WSP 175-345	270291	3P3W	✓	✓	✓	✓	✓	

*M1xxx, signify that the high and low limits are set as a percentage with a single knobs.

*M2xxx, signify that the high and low limits are set from different knobs.

Technical Details

Operating Voltage	85 - 300 V LN $\pm 20\%$ (PIY-ASF 230, PIY-M2WSP 170-280 ve PIY-MIWASFN 170-280 for) 75 - 250 V LN $\pm 20\%$ (PIY-MIWASFN 100-200 ve PIY-M2WSP 100-200 for) 145 - 520 V LL $\pm 20\%$ (PID-ASF 400, PID-M2WSP 295-480 ve PID-MIWASF 295-480 for) 130 - 430 V LL $\pm 20\%$ (PID-MIWASF 175-345 ve PID-M2WSP 175-345 for)	
Operating Frequency	50 / 60 Hz	
Supplying Terminals (Burden)	L2-L3 (3P4W \rightarrow 4,8 k Ω / 3P3W \rightarrow 7 k Ω) Note: Any two terminals on products with PTC	
Voltage Measurement Terminals	L1-L2-L3-N	
PTC Inputs (Burden)	T1-T2 (4,7 M Ω) T1-T3 (6,85 M Ω)	
Nominal Voltage	230 V LN (PIY-ASF 230 for) 400 V LN (PID-ASF 400 for) 100 - 200 V LN (PIY-M2WSP 100-200 ve PIY-MIWASFN 100-200 for) 170 - 280 V LN (PIY-M2WSP 170-280 ve PIY-MIWASFN 170-280 for) 175 - 345 V LN (PID-M2WSP 175-345 ve PID-MIWASF 175-345 for) 295 - 480 V LL (PID-M2WSP 295-480 ve PID-MIWASF 295-480 for)	
Voltage Protection Range Low&High	$\pm (5 - 30\%) / \text{Off}$	
Energization Delay	<1 sn	
Phase Loss Threshold Value	$U_n \times 60\%$	
Asymmetry Threshold Value	$\pm (5 - 30\%) / \text{Off}$	
Histerisis	3%	
PTC Alarm Threshold Value	Short Circuit	20 Ω
	High Value	2,7 k Ω
Output Contact	1C/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
	Asymmetry	ton= 2 sn / toff: 0,1 - 10 sn
	Low/high voltage	ton= 2 sn / toff: 0,1 - 10 sn
	Neutral break	ton= 2 sn / toff: 500msn
	PTC	ton= 2 sn / toff: 1sn
Over Voltage Category (IEC 60664)	CAT III	
Cable Cross Section	2,5mm 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
Asymmetry Fault: Asymmetry value is calculated by dividing the max. difference between the phase voltage by the nominal voltage. According to this formula, if the asymmetry value is higher than the asymmetry limit, an asymmetry fault occurs. 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 Err2
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.		Err1 Err2
PTC Fault: a. PTC High Value Fault: When T1-T2 or T1-T3 detects high value, PTC high value fault occurs. Relay activation and LED notification are shown in the adjacent figure. b. PTC Short Circuit Fault: If short circuit fault is detected in the device, PTC short circuit fault occurs when there is a short circuit between PTC inputs T1-T3. Relay activation and LED notification are shown in the adjacent figure.		Err1 Err2

