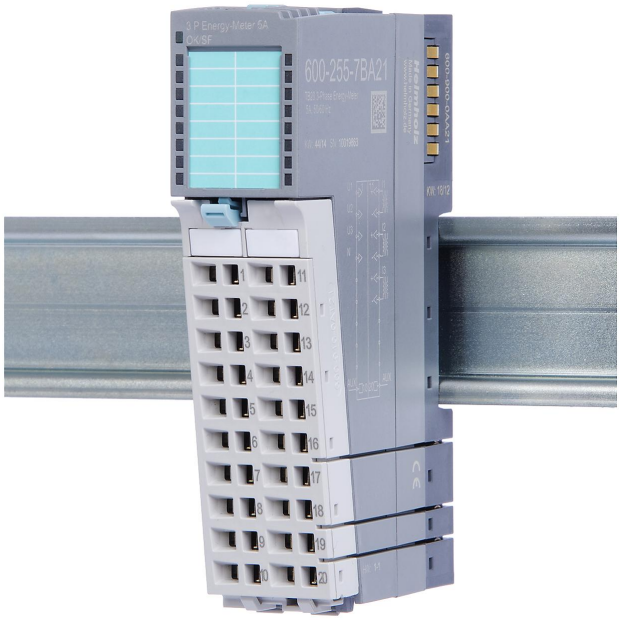
600-255-7BA21



Energy Meter

5 A

- Measures current, voltage, power, and energy
- 1 three-phase or 3 single-phase
- 3-wire and 4-wire voltage measurements
- Measures real, reactive, and apparent power and energy
- Energy meter with gate function

Info

The Energy Meter function module for the TB20 IO system records all essential measured values ⍰⍰from AC 230 V networks with regard to current and voltage measurement. Input voltages (3 phases + N) can be connected directly to the module.In addition to general status information, the module's configuration can be used to show up to 7 readings in the input image table.In the event of a system failure, the controllable meter's values will be stored in non-volatile memory. Input currents are coupled through current transformers. The Energy Meter module is designed for a maximum secondary current of 5 A.Other rated secondary currents, as well as the use of Rogowski coils, are available upon request. Note: Individual modules cannot be combined with the IO systems of other manufacturers. Parameters for the moduleOvervoltage / undervoltage thresholdOvercurrent thresholdZero transition timeoutEnable energy meter50/60 Hz line frequency3-wire or 4-wire voltage measurementProcess image table input values Parameters for phases A, B, and CPrimary currentSecondary currentPhase angle error correction (for current transformer phase angle error)Zero crossing, overvoltage / undervoltage , overcurrent diagnoses Configurable process input image table7 readings at the same timeRMS voltage A,B,CRMS current A,B,CA, B, C, and total real power/energyA, B, C, and total apparent power/energyA, B, C, and total reactive power/energyFrequencyA, B, C, and total power factorPhase angle between the voltages or between the currents Diagnostic messagesPhase shiftOvervoltage / undervoltageOvercurrentNo zero crossing (no phase)Configuration errors

Technical data

General information	
Order number	600-255-7BA21
Article name	Energy Meter, 5 A
Scope of delivery	Energy Meter, 5 A
Dimensions (DxWxH)	110 x 25 x 73 mm
Weight	Approx. 120 g
Number of inputs	Voltage L1, L2, L3, N, Current I1, I2, I3
Voltage	Max. 400 V AC
Current	Max. 5 A, secondary
from the backplane bus	Yes
Diagnoses	Undervoltage/overvoltage, Overcurrent, No zero crossing, Phase shift
Parameter configuration length	25/49 bytes
General error indicator	Red LED
Internal	Max. 150 mA
Power dissipation	Max. 2.0 W
Hot-swap capable	Yes

Ambient conditions	
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-20 °C ... +80 °C
Relative air humidity	95 % r H without condensation
Protection rating	IP 20
Certifications	CE, UL

CE	
Noise immunity	DIN EN 61000-6-2 "EMC Immunity"
Interference emission	DIN EN 61000-6-4 "EMC Emission"
Vibration and shock resistance	DIN EN 60068-2-6:2008 „Vibration", DIN EN 60068-2-27:2010 „Shock"