



Energy meter for alternating three-phase current

for direct connection up to 85 A

Type:

SINUS 85 50 MID

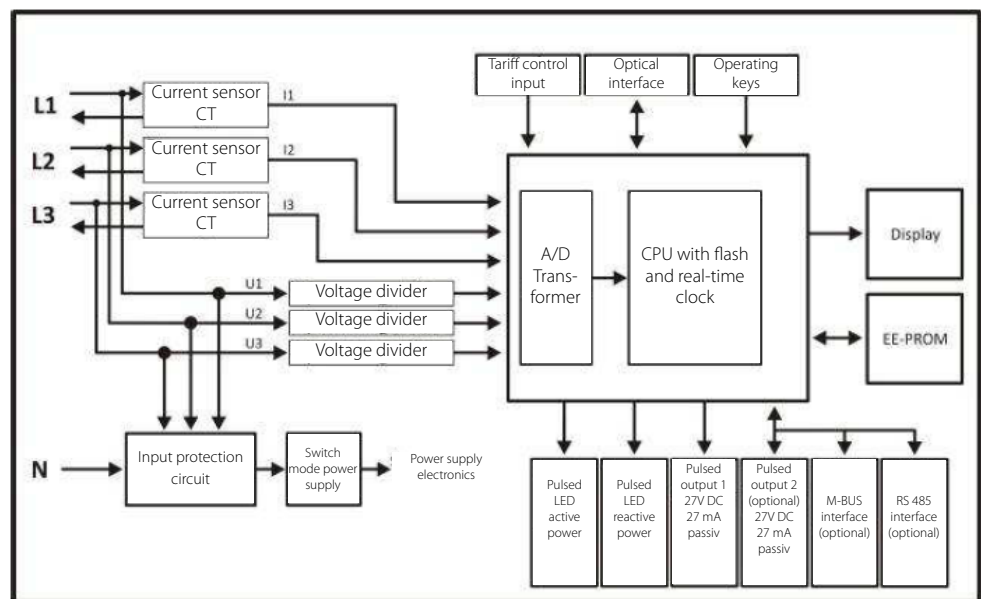
SINUS 85 M-BUS MID

SINUS 85 Modbus MID



Function

The meter consists of a multi-part plastic housing. One part is manufactured from transparent plastic and covers the LC display (liquid crystal display) below and the name plate. For connecting the meter, terminal screws accessible from the outside are provided. The electronic function circuit of the meter is installed on printed circuit boards and is located inside the plastic housing. The current to be measured is internally adapted to the input conditions of the electronic sensors via a current transformer per current circuit (per phase). The voltage to be measured is internally adapted to the input conditions of the electronic sensors via a voltage divider per voltage circuit (per phase). The current and voltage signals are transmitted to the A/D converter process via filter circuits. The digitalized measuring values are further processed in a downstream processor. Following the processing, the registered energy quantities are indicated in the display. The software controls the processing in the meter. In this way, functions for meter start/stop, pulse output, display control, storage and backup of measured values, start-up and switch-off behavior and error monitoring are realized.



Types and variants

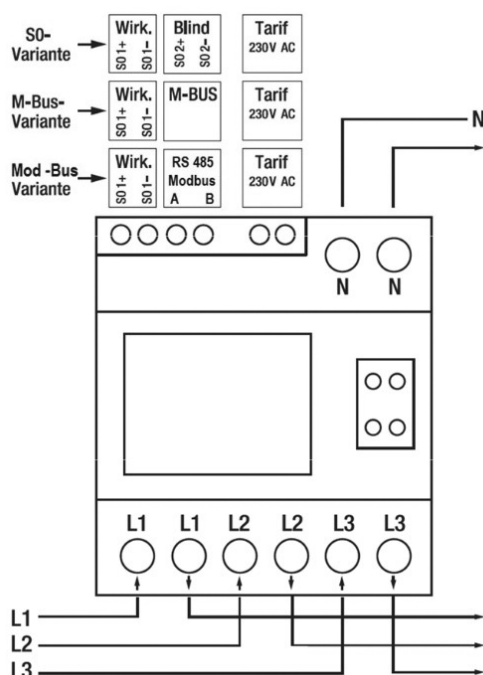
SINUS 85 50 MID

SINUS 85 M-BUS MID

SINUS 85 Modbus MID



Connections



Technical data

Types

SINUS 85 S0 MID; M-BUS MID; Modbus MID

Reference voltage range 3 x 230/400 (1 ± 10%) V - see meter imprint

Reference frequency range 50 (1 ± 2%) Hz - see meter imprint

Current information see meter imprint I_{min} - I_n (I_{max}) AMeter imprint I_{min} - I_{ref} (I_{max}) AInrush current I_{st} 0,002 A (symmetrical per phase)Minimum current I_{min} 0,25 A - see meter imprintTransfer current I_{tr} 0,5 ARated current I_{ref} 5 AMaximum current I_{max} 85 A

Accuracy class A (MPE = ± 3,5%) or class B (MPE = ± 2%)

Operation indicator/test output dev. LED, red flashing, t_{min} = 30 ms

Detection of standstill/reverse motion LED, red permanent lit

Registration indication LC-display (liquid crystal display)

Display capacity 5 digits kWh and 3 decimal places

Pulse constant optical R_L , standard 5.000 imp/kWh (0,2 Wh/imp) - see meter imprintPulse constant electrical R_A , standard 500 imp/kWh (2 Wh/imp) - see meter imprint

Pulse number/measuring time min 2 pulses and 20 s integration time

Pulse output electric. passiv potential free acc. to DIN EN 62053-31 class A and B

Pulse parameters electrical U_{max} = 30 V, I_{max} = 30 mA, inverse-polarity protectionPulse length (set) $t_{i max}$ = 35 ms (adjustable)

Operating voltage range 180 V to 265 V, voltage single-phase or three-phase

Operating frequency range 40 Hz to 65 Hz

Energy consumption voltage circuit approx. 0,6 VA, current circuit approx. 0,06 VA

Consideration of harmonic

wave energy content by measurement techniques up to approx. 4 kHz

Temperature range -25 °C to +55 °C, indoor

Protection class class II, protective insulation

Protection level housing IP 51 with terminal cover installed

Fastening snap on fastening on top hat rail 35 mm, DIN EN 60715

Electrical connection screw terminal max 6 mm²

Weight 270 g