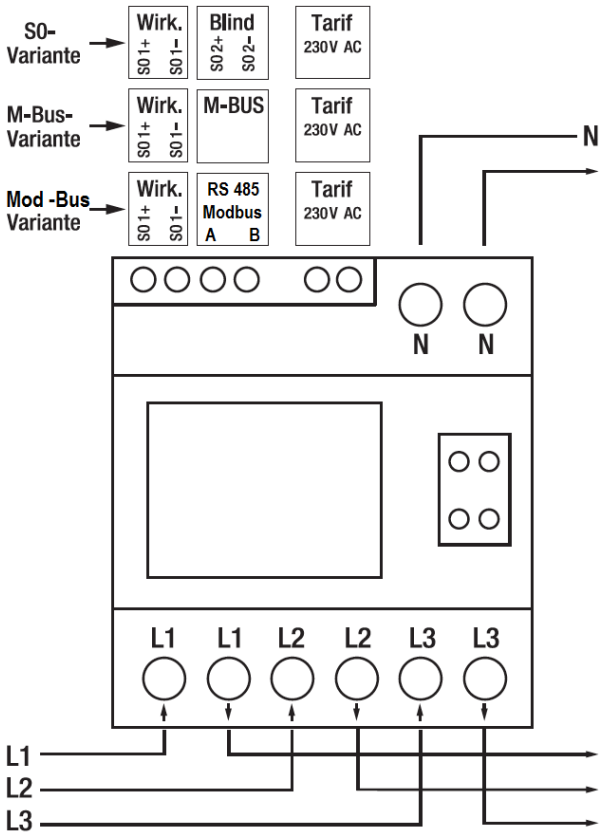
Quick installation Guide
for SINUS Energy Meters

SINUS 85 S0 / M-Bus / Modbus



L1↑: incoming line conductor L1 of the circuit
L1↓: outgoing line conductor L1 to load

L2↑: incoming line conductor L2 of the circuit
L2↓: outgoing line conductor L2 to load

L3↑: incoming line conductor L3 of the circuit
L3↓: outgoing line conductor L3 to load

N: neutral conductor of the circuit
N: (neutral conductor of the circuit)

Installation notes for SINUS Energy Meters

Always take note of the specifications on the type label!

For an energy meter with the voltage specifications ***3x230/400V*** on type label please note the following values:

Reference voltage U_n = 3x230/400V
(3-phase four-wire alternating current system)

For an energy meter with the current specifications ***0,25-5(85) A*** on type label please note the following values:

Initial current	I_{st}	=	0,02 A
Minimal current	I_{min}	=	0,25 A
Suppressed leakage current	I_{tr}	=	0,5 A
Reference current	I_{ref}	=	5 A
Maximal current	I_{max}	=	85 A

with symmetrically loaded phases.

Always follow the specifications for the measurement operating requirements on the type label.
As pre-fuse please install only in the measurement voltage circuits fuses with max. 80 A.

The used wires have to be chosen regarding to current density and installation requirements, so that the conductors at all time don't heat up to more than +55°C closer than 20cm tot he energy meter. The load capacity of wires and cables is defined in DIN VDE 0298-4.

The size of the current-, voltage- and neutral terminals is for min 2,5 mm² and max 25 mm².

For the screws use a screwdriver type SL for slotted screws with a size of 5,5mm x 1,0mm. The M5 terminal-screws should be tightened with a torque of 2,5 Nm.

The size of the additional terminals is for min 0,25 mm² and max 1,5 mm².

For the screws use a screwdriver type SL for slottet screws with a size of 3,5mm x 0,6mm. The M5 terminal-screws should be tightened with a torque of 0,4 Nm.

Wires with splitted core should end in a wire termination. The torques for screws at clamping units are defined in DIN EN 60999-1.

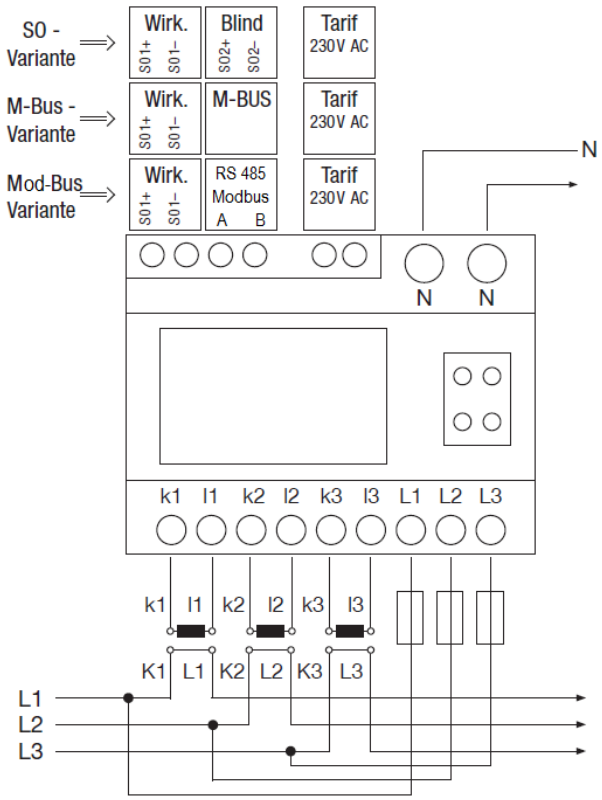
Further important information for use af this device are in the manual (delivered with the device).

TIP Thüringer Industrie Produkte GmbH
Bahnhofstraße 26 – D-99842 Ruhla

Tel.: +49 36929 64029 0 – Fax: +49 36929 64029 29
www.stromzaehler.de

Quick installation Guide
for SINUS Energy Meters

SINUS 5//1 S0 / M-Bus / Modbus



CT K1: incoming line conductor L1 of the circuit
CT L1: outgoing line conductor L1 to load
CT k1: CT output S1/k conductor L1
CT I1: CT output S2/I conductor L1

CT K2: incoming line conductor L2 of the circuit
CT L2: outgoing line conductor L2 to load
CT k2: CT output S1/k conductor L2
CT I2: CT output S2/I conductor L2

CT K3: incoming line conductor L3 of the circuit
CT L3: outgoing line conductor L3 to load
CT k3: CT output S1/k conductor L3
CT I3: CT output S2/I conductor L3

Meter k1: to CT-output S1/k conductor L1
Meter I1: to CT-output S2/I conductor L1

Meter k2: to CT-output S1/k conductor L2
Meter I2: to CT-output S2/I conductor L2

Meter k3: to CT-output S1/k conductor L3
Meter I3: to CT-output S2/I conductor L3

Meter L1: Measurement voltage input (L1)
Meter L2: Measurement voltage input (L2)
Meter L3: Measurement voltage input (L3)

Meter N: neutral conductor of the circuit
Meter N: (neutral conductor of the circuit)

Installation notes for SINUS Energy Meters

Always take note of the specifications on the type label!

For an energy meter with the voltage specifications ***3x230/400V*** on type label please note the following values:
Reference voltage U_n = 3x230/400V
(3-phase four-wire alternating current system)

For an energy meter with the current specifications ***0,01-1(6) A*** on type label please note the following values:

Initial current	I_{st}	=	0,002 A
Minimal current	I_{min}	=	0,01 A
Suppressed leakage current	I_{tr}	=	0,05 A
Reference current	I_{ref}	=	1 A
Maximal current	I_{max}	=	6 A

with symmetrically loaded phases.

Always follow the specifications for the measurement operating requirements on the type label.
As pre-fuse please install only in the measurement voltage circuits fuses with max. 6 A.
The secondary circuits oft he current transformers may not be fuses.

The cable cross-section and the sort of voltage lines tot he energy meter have to be chosen regarding to the place, pre-fuses and installed length between the meter and voltage source and if necessary regional valid regulations. The load capacity of wires and cables is defined in DIN VDE 0298-4.

The selection of the cable cross-sections of the current line has to regard to the secondary CT nominal current, apparent power, over current range of the CTs, the length of the cable between meter and voltage source and if necessary regional valid regulations.

The size of the current-, voltage- and neutral terminals is for min 0,5 mm² and max 6 mm².

For the screws use a screwdriver type SL for slottet screws with a size of 4,0mm x 0,6mm. The M5 terminal-screws should be tightened with a torque of 0,5 Nm.

The size of the additional terminals is for min 0,25 mm² and max 1,5 mm².

For the screws use a screwdriver type SL for slotted screws with a size of 3,5mm x 0,6mm. The M5 terminal-screws should be tightened with a torque of 0,4 Nm.

Wires with splitted core should end in a wire termination. The torques for screws at clamping units are defined in DIN EN 60999-1.

Further important information for use af this device are in the manual (delivered with the device).

TIP Thüringer Industrie Produkte GmbH
Bahnhofstraße 26 – D-99842 Ruhla

Tel.: +49 36929 64029 0 – Fax: +49 36929 64029 29
www.stromzaehler.de