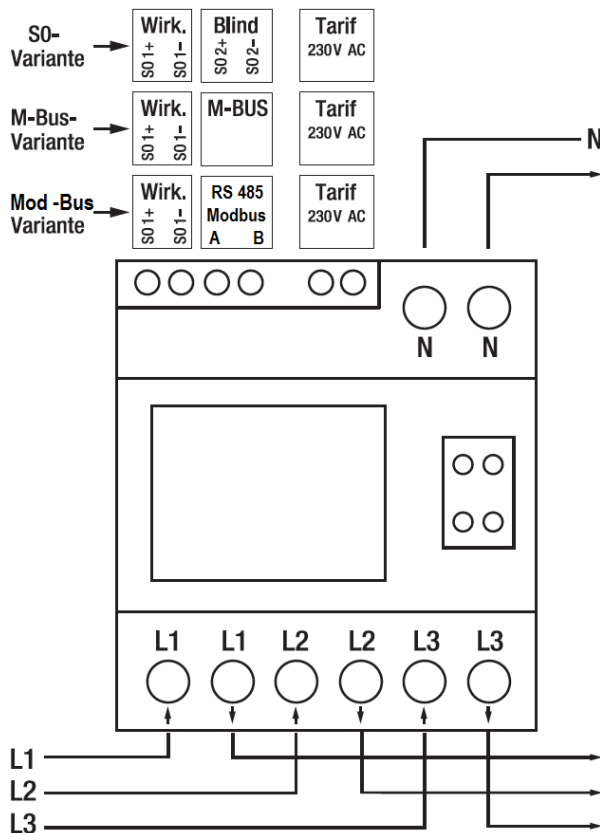


# Quick installation Guide

## 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 to the 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 mm<sup>2</sup> and max 25 mm<sup>2</sup>.

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 mm<sup>2</sup> and max 1,5 mm<sup>2</sup>.

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 of this device are in the manual (delivered with the device).

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# Quick installation Guide

## for SINUS Energy Meters

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

#### 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 off the current transformers may not be fuses.

The cable cross-section and the sort of voltage lines to the 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 mm<sup>2</sup> and max 6 mm<sup>2</sup>.

For the screws use a screwdriver type SL for slotted 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 mm<sup>2</sup> and max 1,5 mm<sup>2</sup>.

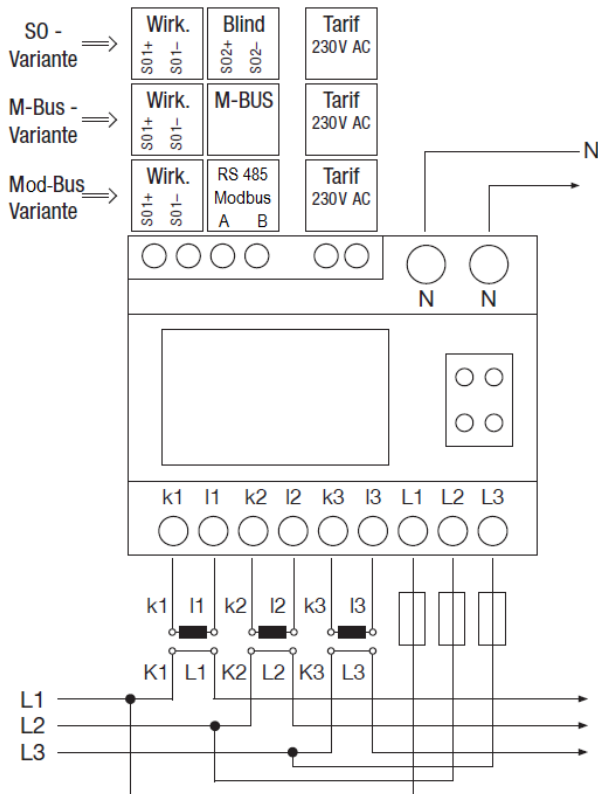
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CT K1: incoming line conductor L1 of the circuit  
 CT L1: outgoing line conductor L1 to load  
 CT k1: CT output S1/k conductor L1  
 CT I1: CT output S2/I conductor L1

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)