

CSO 05000 Modbus

ABB Serial Communication Adapter

ABB is now introducing the new CSO 05000 Modbus RTU/ASCII Communication adapter



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ABB's new CSO 05000 Modbus RTU/ASCII communication adapter offers communication with ABB electricity meters by the Modbus RTU or ASCII protocol over RS485.

The CSO 05000 Modbus RTU/ASCII communication adapter supports readout of:

- Serial number
- Active/Reactive of imported and exported energies
- Instrument values
- Monthly/Daily values

To provide for a easy configuration and quick deployment, the CSO 05000 is configured by a terminal software through RS232.

The CSO 05000 Modbus SCA is a DIN-rail mount serial communication adapter for automatic meter reading (AMR) in Modbus RTU/ASCII networks. The adapter converts the M-bus protocol from the electricity meter's optical interface to

Modbus entities thus making it possible to use data from ABB electricity meters in a Modbus RTU/ASCII network.

The Adapter follows ABB's Pro M standard, which defines mechanical dimensions, way of mounting and design.

To provide full flexibility, the CSO 05000 has the following features:

- DIN-rail mounting
- Compact design (2 DIN module design)
- Easy installation
- Easy add-on to existing electricity meters

Mounting

The adapter should be placed on the left side of the ABB electricity meter, so that the optical interface of the meter faces that of the adapter. It is important that the electricity meter and the adapter are mounted closely together. Make sure that the optical emitters and receivers of the electricity meter and the adapter have free sight.

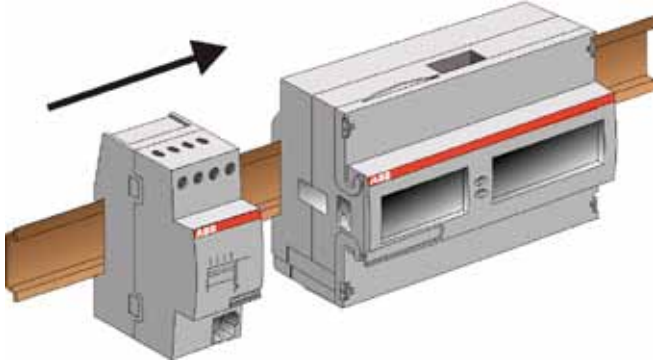
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Installation & Technical data

How to install the adapter

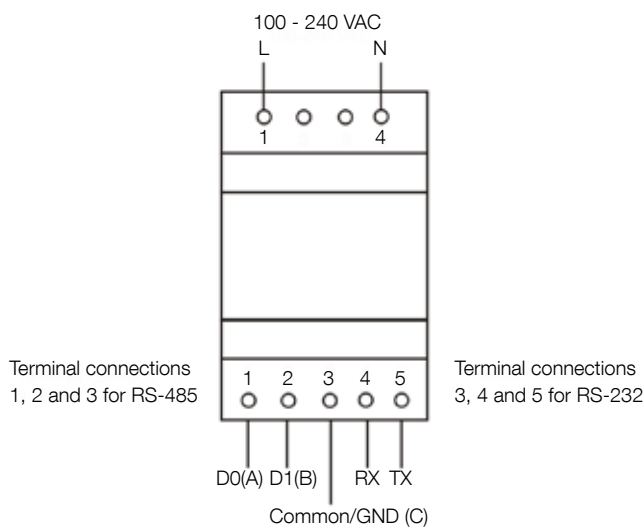
Follow these steps to install the adapter.

- 1 Disconnect the power supply.
- 2 Place the adapter to the left of the meter and snap it onto the DIN-rail.



- 3 Strip the power wires and connect them to terminal 1 and 4 at the top of the adapter, see the wiring diagram below. (Recommended tightening torque 0.5 Nm)
- 4 Strip the communication and configuration wires and connect them to the terminals at the bottom of the adapter, see the wiring diagram below. (Recommended tightening torque 0.5 Nm).
- 5 Reconnect the power.
- 6 Verify that the LED shines with a steady green light.

The illustration below shows how to connect the power and the communication wires to the terminals on the adapter.



Technical Data

Electrical

- Nominal voltage 100-240 VAC
- Voltage range -20% to +15% of nominal voltage
- Frequency 50/60 Hz \pm 5%
- Terminal wire area 0-2.5 mm²
- Tightening torque 0.5 Nm

Mechanical

- Polyamide housing
- Protection class IP 20 according to IEC 60529 (with the terminal for Modbus communication attached to the SCA)

Environmental

- Operating temperature range -25° to +70°
- Storage temperature range -25° to +70°
- Humidity 75% yearly average, 95% for 30 days/year

Interface

- Terminal wire area solid 0-2.5 mm² (IMQ) 12 AWG (UL)
- Terminal wire area stranded 0-1.5 mm² (VDE) 12 AWG (UL)
- Communication interface RS-485
- Protocol Modbus RTU/ASCII
- Baudrate 600 - 115200
- Configuration interface RS-232

Standards

- LVD 2006/95 EEC
- EMC 2004/108 EEC
- IEC 61000-6, -2 and IEC 61000-6, -3

Ordering info

Type	Order Code	Pack qty	Weight [g]	Weight with packing [g]
CSO 05000	2CMA137124R1000	1	102	141

For more information please contact:

ABB AB Cewe-Control

Box 1005
SE-611 29 NYKÖPING, Sweden
Phone: +46 155 29 50 00
Fax: +46 155 28 81 10
www.abb.com

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