

A1MB MODULE

A1/Modbus converter

DIN-sized protocol convertor which makes Smart meter A1 measurement values available by Modbus.



Product overview

The Xemex's A1MB module is a DIN-sized converter module, converting Smart Meter A1 messages to Modbus over RS485 messages.

The module supports A1 ports defined according DSMR4 and DSMR5 specification. The A1MB is connected to the A1 port of the Smart Meter via a cable with RJ11 connectors on both ends. The Modbus of the module is connected via 3-wires to the RS485 (A(+), B(-) and S), acting as slave device to a Modbus master.

The unit will be powered via the power present on the A1 port of the Smart Meter. External power supply, via external power adapter, can be added optionally should that be required.

User interface is covered by 3 LED's on the front side of the module:

- PWR: Power present (via A1 or external adapter)
- A1: A1 message correctly received
- 485: successful communication via Modbus

A1MB can be used in combination with the Xemex Dingate Multimeter, KWHIQ meter, LEWIZ, and other Modbus masters. These devices log standard information such as import / export energy values. The logging of other information is dependent on the Modbus map implemented. Contact us for an overview of all available Modbus maps. The A1MB can also work in chain with other Modbus / RS485 slaves as long as a well implemented Modbus master is present. Application note is available on request.

The A1MB is ideal for use in solutions developed for monitoring energy flow in industrial smart meters.

Specifications

General

- Connects direct to A1 port of smart meter
- Gets power from A1 port of smart meter
- 5V power supply connection

Functional characteristics

- Translates A1 message from smart meter into Modbus memory map
- Acts as Modbus slave
- Configurable Baudrate on A1 and RS485 port
- Configurable Modbus slave address (default = 16)

Interfaces - Dataports

- RJ11 A1 – Customer data port connection (1)
- 485 (2-Wire + GND) up to 115200 Baud (3)
- Optional 5V power supply (2)

LED indicators

- Power indication (4)
- A1 port connection (4)
- RS485 Modbus connection (4)

Technical specification

- | | |
|----------------------|--|
| - Operating voltage: | External 5V connection
5V from A1 interface smart meter |
| - Power consumption: | < 50mA |
| - Temperature range: | - 40°C -> +70°C |
| - Housing: | DIN 43880 / 1 unit |
| - Dimensions: | 90 x 18 x 65 mm |

