

## P1MB MODULE

### P1/Modbus converter

DIN-sized protocol convertor which makes Smart meter P1 measurement values available by Modbus.



### Product overview

The Xemex's P1MB module is a DIN-sized converter module, converting Smart Meter P1 messages to Modbus over RS485 messages.

The module supports P1 ports defined according DSMR4 and DSMR5 specifications. The P1MB is connected to the P1 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 P1 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 P1 or external adapter)
- P1: P1 message correctly received
- 485: successful communication via Modbus

P1MB can be used in combination with the Xemex Dingate Multimeter, KWHIQ meter, LEWIZ, and other Modbus masters. These Modbus masters 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 P1MB 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 P1MB is ideal for use in solutions developed for monitoring energy flow in residential houses and small/medium sized companies that have a residential smart meter.

## Specifications

### General

- Connects direct to P1 port of smart meter
- Gets power from P1 port of smart meter
- 5V power supply connection

### Functional characteristics

- Translates P1 message from smart meter into Modbus memory map
- Acts as Modbus slave
- Configurable Baudrate on P1 and RS485 port
- Configurable Modbus slave address (default = 16)

### Interfaces - Dataports

- RJ11 P1 – Customer data port connection (1)
- RS485 (2-Wire + GND) up to 115200 Baud (3)
- Optional 5V power supply (2)

### LED indicators

- Power indication (4)
- P1 port connection (4)
- RS485 Modbus connection (4)

### Technical specification

- Operating voltage: External 5V connection  
5V from P1 interface smart meter
- Power consumption: < 50mA
- Temperature range: - 40°C -> +70°C
- Housing: DIN 43880 / 1 unit
- Dimensions: 90 x 18 x 65 mm

