Product Sheet
Versie 1.0
CSMB 1.0 communication module

CSMB 1.0
CT Current Sensor with Modbus output

The CSMB can be used for both, single phase or poly phase installations.

Product overview

The Xemex CSMB module is a CT current sensor with a RS485 / Modbus RTU Interface in a Din rail housing. It is used for current metering applications, e.g. Active Load Balancing in EV charging applications.

It measures the current consumption of the household. Real time total current consumption is available to the charge point via the Modbus interface. With this information the charge point can calculate the current capacity which is available for charging a car.

Up to 3 CT transformers can be connected to the CSMB device. These CT transformers can be installed around the power lines without disturbing the installation. The CSMB can be used for both, single phase or poly phase installations.

The unit is powered via external DC power adapter.

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

- PWR: Power present
- CS: Current Level Indicator
- MB: Modbus request received

The Xemex CSP1 module is ideal for Modbus meter based Active Load Balancing applications in EV charging installations.

E info@xemex.eu
T +32 (0)3 201 95 95
W www.xemex.eu

NL Burgemeester Burgerslaan 40
5245 NH 's-Hertogenbosch
BE Metropoolstraat 11a
B2900 Schoten

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Technology

Physical Characteristics

- Housing: DIN 43880 / 1 unit
- Weight:
- Dimensions: 90 x 18 x 65 mm

Environmental conditions

- Protection class II
- Operating temperature -25 °C - +75 °C
- Storage temperature -40 °C - +85 °C
- Relative humidity < 75 % year's average at 21 °C
- < 95 % less than 30 days/year, at 25 °C
- Pollution Degree 2
- Altitude < 2000m
- Application area Residential, Indoors in suitable meter cabinet

Power Requirements

- DC adapter 12 V, < 65mA

Modbus Interface

- Connector Screw terminal connector for A, B and Shield
- Bus termination 120 Ohm, switchable on/off
- Protocol modbus RTU over RS485
- Max cable length: 100 meter
- Cable location: indoor + outdoor

Metering Interface

- Connector Screw terminal connectors for max 3 Current Transformers
- Measuring principle Current measurement by Current transformer
- Current range 1A ... 80A
- CT ratio 2000
- Input impedance 20 Ohm
- Accuracy Typically <5 % at 23 °C
- Max Cable length 1 meter

Standards and certifications

- Safety: IEC 60950-1, IEC 62052-11
- EMC: IEC 61000-4-2, IEC 61000-4-3
  IEC 61000-4-4, IEC 61000-4-5
  IEC 61000-4-6, IEC 61000-4-11