

PRO380-Eichrecht

Meeting strict legal calibration standards for energy readings



Accurate, transparant and verified metering data for fair energy billing



Specifications

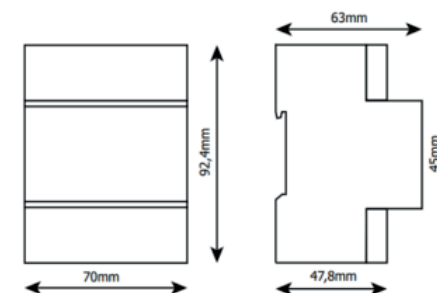
■ Casing:	PC flame resistant plastic
■ Flammability rate:	UL-94 V0
■ Voltage:	3x230/400V AC
■ I _{max} :	40A
■ I _{ref} (reference):	5A
■ I _{tr} (transitional):	0.5A
■ Frequency:	50Hz/60Hz
■ LED:	10,000 pulses/kWh
■ Display:	LCD - Segment, 6+3 digits
■ LCD update interval:	1000ms
■ Backlight:	Blue
■ Installation mode:	DIN rail
■ Connection:	Direct, screw clamp
■ Max diameter power connection clamps:	25 mm ² (flex core) 35 mm ² (solid core)
■ Tariff:	2
■ Communication:	RS485 (Modbus RTU)
■ Data model (Eichrecht):	OCMF 1.3.1

Performance

■ Operating humidity:	≤75%
■ Storage humidity:	≤95%
■ Operating temperature:	-40°C - +70°C
■ Accuracy class	
■ Active energy (EN50470-3):	B
■ Active energy (EN62053-21):	1
■ Reactive energy (EN62053-23):	2
■ Utilisation category:	UC1
■ IP class:	IP51
■ Protective class:	II

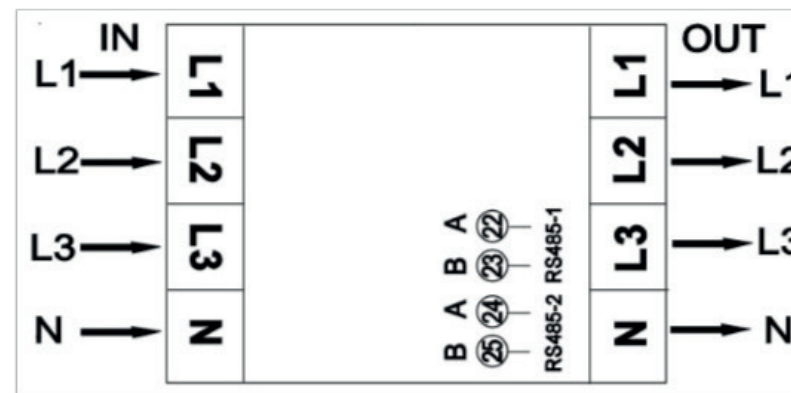
Dimensions

■ Length:	92.4 mm
■ Width:	70 mm
■ Height:	63 mm
■ Weight:	342 g (net)



Connection diagram

Direct connected - 3P 4W



L1 (IN) Phase 1 input – L1 (OUT) Phase 1 output
 L2 (IN) Phase 2 input – L2 (OUT) Phase 2 output
 L3 (IN) Phase 3 input – L3 (OUT) Phase 3 output
 N (IN) Neutral input – N (OUT) neutral output

22/23 RS485-1 A/B - Modbus communication contact
 (Primary, read/write)
 24/25 RS485-2 A/B - Modbus communication contact
 (Secondary, read-only)

Basic errors

■ 0.02 In:	±1.5%
■ 0.05 In-I _{max} :	±1.0%

Communication specifications

■ Bus type:	2xRS485
■ Protocol:	Modbus RTU (16-bit CRC)
■ Baud rate:	1200, 2400, 4800, 9600 (default), 19200, 38400, 57600, 115200
■ Address range:	1 (default)-247 user settable
■ Modbus parity:	Even (default), none and odd
■ Maximum bus load:	60 meters per bus*
■ Range:	≤1000m

*Note that the maximum number of meters is dependent on the converter, baud rate (the higher the baud rate, the smaller the number of meters which can be used) and the circumstances under which the meters are installed.

Normative standards & certificates

- MID (2014/32/EU)
- PTB-A20.1/PTB-A50.7 certified for Eichrecht
- IEC/EN 62052-11, 62053-21, 62052-31 & 62053-23
- EN50470-1 & EN50470-3 & WELMEC 7.2

Combination codes

The meter allows you to display the total energy (usage) shown on the display in accordance with different calculation methods.

1. Forward only
2. Reverse only
3. Forward + Reverse
4. Forward – Reverse (default)

EV specific features

The authenticity of the values used for billing is guaranteed by the generation of public and private keys. The data that the Electric Vehicle Supply Equipment (EVSE) transmits in OCMF 1.3.1 format, through the Eichrecht-compliant meter, to the back-end, is signed using a private key and can be verified using a public key that is displayed on the meter.

Given the public key, customers can verify the meter values using an independent application such as Transparency software.

