



Caution

- Turn off and if possible lock all sources supplying the energy meter and the equipment that is connected to it before working on it.
- Always use a properly rated voltage sensing device to confirm that the power is off.
- The connecting wire, connecting the device to the outside circuit, should be sized in accordance with local regulations for the maximum amount of the current breaker or other overcurrent protection devices used in the circuit.
- An external switch or a circuit-breaker should be installed on the supply wires, which will be used to disconnect the meter and the device supplying energy.
- It is recommended that this switch or circuit-breaker is placed near the meter because that is more convenient for the operator. The switch or circuit-breaker should comply with the specifications of the building's electrical design and all local regulations.
- An external fuse or thermal cut-off used as an overcurrent protection device for the meter must be installed on the supply side wires. It's recommended that this protection device is also placed near the meter for the convenience of the operator. The overcurrent protection device should comply with the specifications of the building's electrical design and all local regulations.



Warning

- The installation should be performed by qualified personnel familiar with applicable codes and regulations.
- Use insulated tools to install the device. A fuse, thermal cut-off or single-pole circuit breaker should be fitted on the supply line and not on the neutral line.
- The meter is intended to be installed in a Mechanical Environment 'M1', with Shock and Vibrations of low significance and Electromagnetic Environment 'E2', as per 2014/32/EC Directive. The module is intended for indoor use. The module shall be installed inside a suitable IP rated enclosure, in accordance with local codes and regulations.
- To prevent tampering, an enclosure with a lock or a similar device can be used.
- The meter has to be installed against a fire resistant wall.
- The meter has to be installed in a well-ventilated and dry place.
- The meter has to be installed in a protective box if the meter is exposed to dust or other contaminants.
- The meter can be installed and used after being tested and can be sealed afterwards.
- The meter can be installed on a 35mm DIN rail.
- The meter should be installed on a location where the meter can be read easily.
- In case the meter is installed in an area with frequent surges for example due to thunderstorms, welding machines, inverters etc., the meter is required to be protected with a Surge Protection Device.
- The device should be sealed immediately after installing it in order to prevent tampering.
- The device should be installed with a torque screw driver.

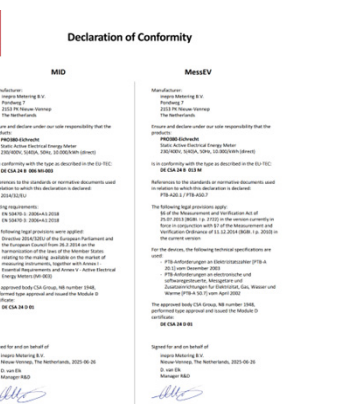
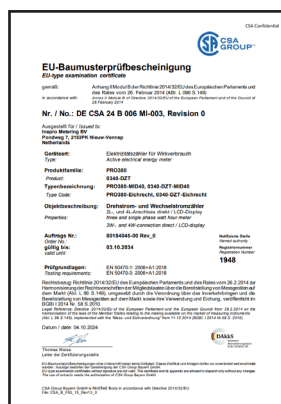
This short user manual does not contain every applicable safety regulation for using this meter. Also it might be required because of company, local government regulations or (inter)national laws to take additional measures. We have checked the contents of this manual and every effort has been made to ensure that the descriptions are as accurate as possible. However, deviations from the description cannot be completely ruled out, so that no liability can be accepted for any errors or omissions in the information given. Versions might be different in default programming based on the customers order.

inepro® Metering



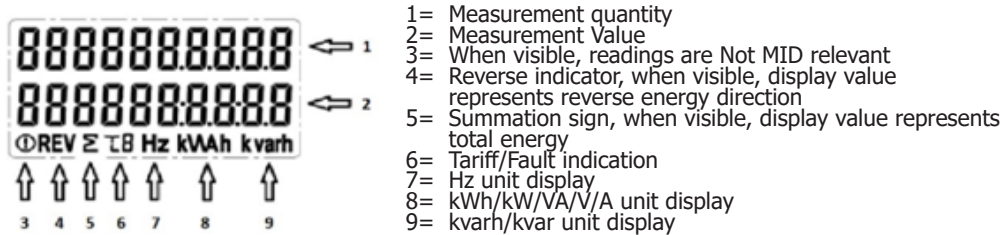
PRO380-Eichrecht

Short user manual Version 1.08



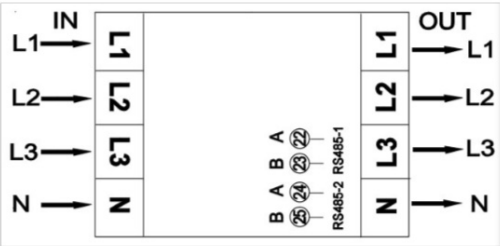
Display of device info

Energy meters have an LCD display with following layout.



Connection diagram

Model 0340 direct connected - 3P 4W



Auxiliary terminal connection:

	RS485-1		RS485-2	
Auxiliary terminal	22	23	24	25
RS485 terminal	A	B	A	B

Mechanical characteristics of input:

Main inputs: Rigid (flexible) 1.5mm²... 25(16) mm²
Contacts capacity: M6
Connection screws: 2.5 Nm (L/N clamp)
Max torque:

Communication terminals: 1 mm²... 2.5 mm²
Contact capacity: M3
Connection screws: 0.2 Nm (Modbus)
Max torque:

Electrical characteristics of input:

Type (connection): three phase
Reference current (Iref): 5 A
Maximum current (Imax): 40 A
Minimum current (Imin): 0.25 A
Transitional current (Itr): 0.5 A
Starting current: 20 mA
Power consumption at Iref: <0.1VA
Nominal voltage (Un): 3x230V / 400V (AC)
Nominal frequency (fn): 50Hz
Minimum measuring time: 10s
Flammability class: V0
Casing: PC flame resistant plastic
Power consumption per phase at Un: <10VA

Accuracy

Active energy: class 1 EN 62053-21
class 2 EN 62053-23
class B EN 50470-3

LCD

Type:
Number of energy display rows:
Number of digits:
Backlight:

LCD cycle time:

LED:

Pulse rate:

RS485 serial communication:

Bus type:
Protocol:
Baud rate:

Address range:
Maximum bus load:
Range:

Combination code: Available options:

Use opto port:

Safety and ambient conditions

Temperature and climatic condition according to EN 62052-11.

Dust/water protection:
Operation temp. range:
Storage temp. range:
Operation humidity:
Storage humidity:
Utilisation category:
Degree of pollution:
Protective class:
Installation mode:
Connection:
Standard:
Mechanical environment:
Electromagnetic environment:

LCD
2
9 (6+3)
White backlight
LCD update interval: 1000ms
Default 3 seconds, can set from 1 to 30

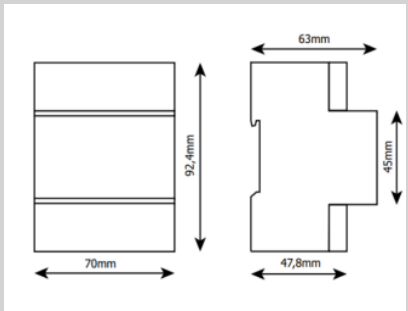
10000 imp/kWh

RS485
Modbus RTU with 16 bit CRC
1200, 2400, 4800, 9600(default), 19200, 38400,
57600, 115200
1-247 user settable (default 1)
31 meters per bus*
≤1000m

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

When enabled, the tool assumes it is connected via the opto port (instead of RS485), so it will use fixed communication settings (Baud rate: 9600, Parity: EVEN, Modbus id: 1).

Mechanical characteristics



Width: 70 mm
Length: 92.4 mm
Screen: 45 mm
Height: 63 mm
Max diameter power connection clamps: 25 mm² (flex core)
35 mm² (solid core)
Weight: 0.342kg (net)

Normative standards and certificates

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