1 Scope
This document applies for the Power Meter PM7000i with LAN and RS485 communication interfaces. An PM7000i can only be put into operation with a Power Sensor PS7000 for the detection of energy flows from electric power generators, e.g. a PV generator with inverter, and the app Energy Manager from Bosch or MyEnergyMaster from Buderus.

2 Safety instructions

Danger to life from electric shock
Dangerous voltages are present on live components.
- Use the appliance only in a dry environment.
- Keep the appliance away from liquids.
- Install the appliance only in approved casings or electrical distributors downstream of the energy meter of the energy supply company (EVU) so that the connections for the external and neutral conductors are behind a cover or protection against accidental contact.
- Casing or electrical distributors must not be achievable using keys or tools in order to limit access to authorised personnel.
- Before installation or maintenance work, switch the electrical distributor voltage-free.
- Before installation or maintenance work, secure the electrical distributor against unintentional reconnection.
- Before cleaning, switch the appliance voltage-free.
- Dry the appliance only using a dry cloth.
- Observe the prescribed minimum distances between the network cable and live installation components and use suitable insulation.
- In event of incomplete scope of delivery or damage:
  - Contact your dealer.
  - Additional material required for connection per LAN (not included in the scope of delivery).
  - Network cable

3 Intended use
The PM7000i is a measuring unit that determines electrical measurement at the connection point and makes them available via LAN or RS485. This product is NOT an electricity meter for active consumption within the meaning of EU Directive 2004/22/EC (MD). The data that the PM7000i collects about the energy recovery of your system may differ from the data of the main energy meter. In accordance with its classification in overvoltage category III, the PM7000i may only be connected in the sub-distribution or electric circuit distribution on the consumer side behind the energy meter of the energy supply company. The PM7000i is suitable only for indoor use. The PM7000i is approved for use in Member States of the EU.
- Use PM7000i only if it is undamaged and in accordance with the instructions in the enclosed documentation.

Any other use as well as the use of damaged products may result in damage to property or personal injury. For safety reasons, it is forbidden to modify the product including the software or to install components that are not expressly recommended or distributed by Bosch Thermotechnik GmbH for this product. Any use of the product other than that described in the intended use is not considered intended use. Unauthorised modifications, conversions or repairs as well as opening the product are prohibited.
- Read and observe the enclosed documentation and keep it accessible at all times.

4 Scope of delivery
- Power Meter PM7000i
- Installation Instructions
- 2 × Plug for RS485 interface
- Additional replacement data plate with QR code and password for the Web service interface of the PM7000i

5 Product description
The Bosch Power Meter PM7000i is a bidirectional meter with LAN/Ethernet interface. The PM7000i transfers the data encrypted to the Energy Manager from Bosch or MyEnergyMaster from Buderus. At least one Bosch Power Sensor PS7000 is required additionally in order to be able to detect the energy flows of an inverter or energy storage device.

6 Delivery configuration
LLRR: 2 × LAN and 2 × RS485 interface (only with suitable RS485 cable)

7 Operation of the PM7000i at 45 °C
Ambient temperature
Danger to life due to electric shock or fire
For ambient temperatures higher than 45 °C, there is a danger to life due to electric shock or fire.
- Continuous operation of the PM7000i at 45 °C is not permissible.

8 Electrical connection

Danger to life from electric shock
Dangerous voltages are present on live components.
- Before installation or maintenance work, switch the electrical distributor voltage-free.
- Secure against unintentional reconnection.
- Ensure that the conductors that should be connected to the PM7000i are de-energised.
- Installation and maintenance work on this PM7000i must be carried out only by an authorised electrician.

The PM7000i is supplied with current via the powered conductor L1. At least the powered conductor L1 and the neutral conductor N must be connected to the PM7000i to measure the energy correctly and be put into operation.

9 Electrical connection for direct measurement
- Using a fuse, ensure e.g. that the maximum permissible current per phase is not exceeded.
- Mount the PM70000 on the mounting rail.
  - Hook the PM7000i in on the upper edge of the mounting rail.
  - Press on the PM7000i until it snaps into place.
- Connect the conductor to the PM7000i. In doing so, observe the permissible connection cross-section and tightening torque for screw terminals.
  - With a three-phase mains power supply, connect powered conductor L1, L2, and L3 as well as the neutral conductor to the PM70000 according to the connection diagram (Fig. 2)
  - With a single phase mains power supply, connect powered conductor L and neutral conductor N to the PM70000 according to the connection diagram.

10 Connection of the PS7000 to the RS485 interface
The following points must be observed for the connection of the PS7000 to the RS485 interface of the PM7000i.
- Requirements on the cable:
  - rated voltage / cable insulation: 300 V RMS
  - Cable cross-section: 0.25 to 0.5 mm²
  - Cable type: rigid or flexible
  - Recommended: use the standard cable from AlphaWire with designation 2466C. Alternatively, a CAT5e cable can also be used.
- Requirements on routing:
  - In the connection area of the RS485 interface of the PM7000i, it must be mechanically ensured that individual wires of the connecting cable have a distance of at least 10 mm to live parts.
  - The connecting cable must be routed separately from the power cables in the distributor and on the installation route.
- For more information:
  - observe the installation instructions of the PS7000.
13 Connect the PM7000i with the local network

- Cover the PM7000i with the cover or the protection against accidental contact of the sub-distinction.
- Connect the network cable to the network connection of the PM7000i.
- Connect the other end of the network cable to the internet router of the customer.
- Supply current to the sub-distribution again. The LEDs of the PM7000i light up during the starting procedure. As soon as the PM7000i has connected successfully to the local network of the customer, the network LEDs light up green.

14 Commissioning the PM7000i

Commissioning of the PM7000i is carried out using the Energy Manager app (Buderus: MyEnergyMaster).

- Energy Manager for iOS or Android

- MyEnergyMaster for iOS or Android

For safety-relevant aspects, Bosch Thermotechnik GmbH explicitly recommends allowing updates for the Power Meter PM7000i.

15 Measuring other consumers

The PS7000 is required to measure other generators (e.g. inverters or energy storage devices). The sensor is equipped with folding transformers that can measure the current flow of each individual phase connected to the generator. For installation and further information:

- Observe the instructions of the PS7000.

16 Web service interface PM7000i

- Necessary only for service purposes and for troubleshooting, not for commissioning.
- Access by means of entering the IP address in the web browser.

17 Reset network settings of the PM7000i

- Press the reset button with a tipped object as follows:
  - once briefly (0.5 s - 2 s) and then twice briefly (0.5 s - 2 s).
  - once briefly (0.5 s - 2 s) and then twice briefly (0.5 s - 2 s).
  - once briefly (0.5 s - 2 s) and then twice briefly (0.5 s - 2 s).

The serial BUS LED flashes orange twice briefly to confirm.

20 Trouble shooting

Status LED does not light up
The PM7000i is not supplied with current.

- Ensure that at least powered conductor L1 and the neutral conductor N are connected to the PM7000i.

The network LED does not light up or the PM7000i cannot be found in the network.

- The network cable is not connected correctly to the network connection.
- Connect the PM7000i to the same router / switch.
- Connect the PS7000 to the same router / switch.

The serial BUS LED flashes orange or red/green.

- In the web service interface under sensor setting, check the message which PS7000 power sensors no longer provide a response.
- Check cabling to PS7000 or replace the PS7000 completely.

The status LED lights up or flashes red
There is a pending fault.

- Restart the PM7000i ( Chapter 19).
- Contact the service technician or installer if the fault persists.

The PM7000 provides unrealistic readings
The PM7000 has not been connected correctly.
- Check the connection of L1 to L3 again.
- Check if the current converters are connected to the input to the corresponding phase.
- Check if the current converters are installed in the correct direction.

21 Environmentally friendly disposal

- Dispose of the PM7000 as per the locally applicable waste disposal regulations for electronic scrap.

22 Open source licences

This product includes open source software that has been developed by third parties. The licence texts with the corresponding notices can be found at "www.bosch-thermotechnik.com" and further on the product page of the Energy Manager of Bosch or MyEnergyMaster of Buderus.

23 Updates and data protection

For ongoing information on new updates:
- Visit the official product page of Bosch Thermotechnik GmbH.
- View updates via the web service interface.
- If updates are not installed, this may result in the appliance no longer functioning or not functioning correctly. For legal reasons, a manual update with customer approval is the default setting. Bosch Thermotechnik GmbH is not liable for malfunctions that may occur at later time if the update is not installed or the update server cannot be reached.

The privacy statements can be found in the app of the Energy Manager by Bosch or MyEnergyMaster by Buderus.

24 Contact

In event of technical problems:
- Contact your service technician / installer.
- Bosch Contact customer services:
  - Telephone: 0711 40040900
  - E-mail: info.thermotechnik@de.bosch.com
  - Website: www.bosch-thermotechnik.com