

SMART DC GRID COMPONENTS

PM10

SMART DC GRID. SMART FEATURES.



NEXT GENERATION DC GRID TECHNOLOGY

DC GRIDS ARE THE MOST EFFICIENT AND THUS COST EFFECTIVE OPTION FOR RURAL ENERGY ACCESS AT LOCATIONS WITH HIGH BUILDING DENSITY AND FOR PUBLIC BUILDINGS LIKE SCHOOLS AND HEALTH POSTS. BOS PM10 OFFERS THE POSSIBILITY TO SET UP A SMART DC GRID.

PM10: Unidirectional DC Power Meter for each user.

DC loads can be powered, used electricity is metered and paid based on real consumption. Different payment models can be programmed. The PM Power Meter receives signals from the PT Power Transmitter and thus offers smart tariffs and load switching. It comes with an integrated USB charging port. The 24V-Version has a built-in DC/DC converter and powers usual 12V loads. For the PM power meter, the PayG pay model is optionally available.

SMART DC GRID COMPONENTS

PM10/PT20

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MAIN TECHNICAL DATA

Role in DC grid
Nominal system voltage
Voltage range
Cont. current
Protection features
Smart grid modes
Integrated USB charging port
Dimensions / Weight
Max. wire size
Ambient temperature
Mounting material
Enclosure style

PM10 24V

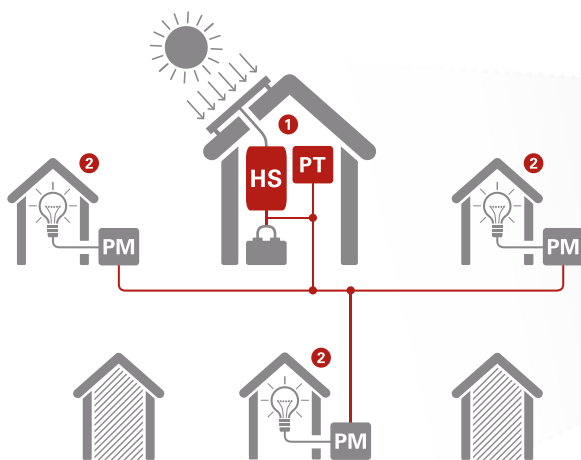
PM10

DC power meter at each user	
24 V in 12 V out	12 V
10 - 15 VDC @12 V 18 - 30 VDC @24 V	10 - 16 VDC
5 A (10 A peak / 5 sec)	
Wrong polarity, overcurrent and short circuit protection	
Master board sends out signals for day time, night time, excess energy and low energy which the meters receive	
1 port 5 V/0.5 A	
330x260x138 mm/500 g	
16 mm ²	
0 - 40 °C (operation out of range leads to worse accuracy)	
included for wall mounting	
IP65 dust and water protected (design enclosure optional)	

DATASHEET IS SUBJECT TO CHANGE. REVISION MAY 2018.

Recommended wiring for 12V small grid (also in-house)

4 mm² 3 phase cables, max. 20 m radius around Central Energy Station

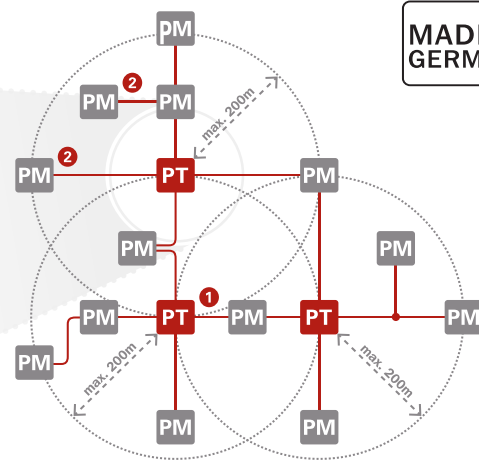


- 1 Central energy station
- 2 DC grid connected user

Central Energy Station consist of BOS HS System with integrated PT Power Transmitter.

Recommended wiring for 24V extended village grid

10 mm² 3 phase cables, max. 200 m radius around Central Energy Station



- 1PT: Power Transmitter at each energy station
- 2PM: Power at each user

Place with high energy consumption (shops, restaurants) should be energy stations to avoid power losses.