TECHNICAL PRODUCT DATA SHEET

MENNEKES
MY POWER CONNECTION

AMTRON®
Professional+ PnC 22 C2

For charging electric vehicles in semi-public and public areas

MENNEKES
Elektrotechnik GmbH & Co. KG

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GERMANY

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Equipment features

General
- Mode 3 charging (IEC 61851-1)
- Plugs and sockets according to IEC 62196-2
- Communication with the vehicle according to ISO 15118
- Maximum charging power: 22 kW
- Connection: 1-phase / 3-phase
- Max. charging power configurable by qualified electrician
- Calibrated energy meter, readable from outside (MID-compliant for three-phase supply network connection only)
- LED status indicator
- Permanently connected charging cable with type 2 (7.5 m)
- Enclosure made of AMELAN
- Color: light gray (RAL 7035)
- Multi-function button
  - Check the residual current device for damage from the outside

User web interface (for EV drivers)
- Monitoring of charging processes
- Data export of all charging processes in CSV format
- Whitelist for RFID card management
- Solar charging specifications (for connecting to a home energy management system)

Authorisation options
- Autostart (without authorisation)
- RFID (ISO / IEC 14443 A)
  Compatible with MIFARE classic and MIFARE DESFire
- Via a backend system
- Plug and Charge
  - According to ISO 15118
  - Via vehicle ID (Autocharge)

Networking options
- Connection to a network via LAN / Ethernet (RJ45)
- Networking multiple products via LAN / Ethernet (RJ45)

Options for connecting to a backend system
- Via the integrated wireless modem (2G (GSM) / 3G (UMTS) / 4G (LTE))
  - Micro-SIM card required
- Backend connection of up to 50 charging points via a SIM card
- Via LAN / Ethernet (RJ45) and an external router
- Support for OCPP 1.5s, OCPP 1.6s and OCPP 1.6j communication protocols

Options for local load management
- Reduction of the charging current via an external control signal (downgrade) of the upstream, external energy meter type Siemens PAC2200
- Static load management
- Dynamic load management for up to 100 charging points (phase exact)
- Reduction of the charging current in case of uneven phase load (unbalanced load limitation)
- Local blackout by connecting an external Modbus TCP energy meter

Options for connecting to an external energy management system (EMS)
- Via Modbus TCP
- Via SEMP
- Via EEBus
- Dynamic control of the charging current via an OCPP system (smart charging)

Integrated protective devices
- DC residual current monitoring > 6 mA with tripping characteristics in accordance with IEC 62955
- Residual Current Device type A
- Circuit breaker
- Shunt release, in order to disconnect the charging point voltage from the mains in case of a fault (welded load contact, welding detection)

Compatible meter for blackout protection

MENNEKES recommends using the following devices:

1. Siemens PAC 2200:
- Indirect measurement via a transducer (5 A):
  - 7KM2200-2EA30-1JA1 (with MID approval)
  - 7KM2200-2EA30-1EA1 (without MID approval)
  - 7KM2200-2EA00-1JB1 (with MID approval)
- Direct measurement (up to 65 A):
  - 7KM2200-2EA40-1JA1 (with MID approval)
  - 7KM2200-2EA40-1EA1 (without MID approval)
  - 7KM2200-2EA40-1JB1 (with MID approval)

2. Phoenix EEM-MB371-EIP 2907976

3. Kostal Smart Energy Meter 10507524

4. TQ Energy Manager EM 420-LLRR

Technical data

AMTRON® Professional+ PnC 22 C2		1367202
Max. charging power Mode 3 [kW]	Charging point 1	22
Connection	Charging point 1	1-phase / 3-phase
Rated current I_{nA} [A]		32
Rated current of a Mode 3 I_{nC} charging point [A]		32
Rated voltage U_N [V] AC ± 10%		230 / 400
Rated frequency f_N [Hz]		50
Switching device load circuit (load contactor)		32A, 4p (100-250V 50/60Hz)
Max. back-up fuse [A]		80
Rated insulation voltage U_i [V]		500
Rated impulse withstand voltage U_{imp} [kV]		4
Conditional rated short-circuit current I_{CC} [kA]		10
Rated diversity factor RDF		1
Types of system earthing		TN/TT
EMC classification		A+B
Protection class		I
IP rating		IP54
Overvoltage category		III
Mechanical impact protection		IK10
Contamination rating		3
Installation		open air, interior
Stationary / Mobile		fixed
Use (according to IEC 61439-7)		ACSEV
External design		wall mounting
Dimensions H x W x D [mm]		475 x 259 x 220
Weight [g]		11177
Standard		IEC 61851, IEC 61439-7

The specific standards according to which the product was tested can be found in the declaration of conformity for the product.

Technical data

Permissible ambient conditions		
	Min.	Max.
Ambient temperature [°C]	-30	50
Average temperature over 24 hours period [°C]		35
Altitude [m above sea level]		2000
Relative humidity [%]		95

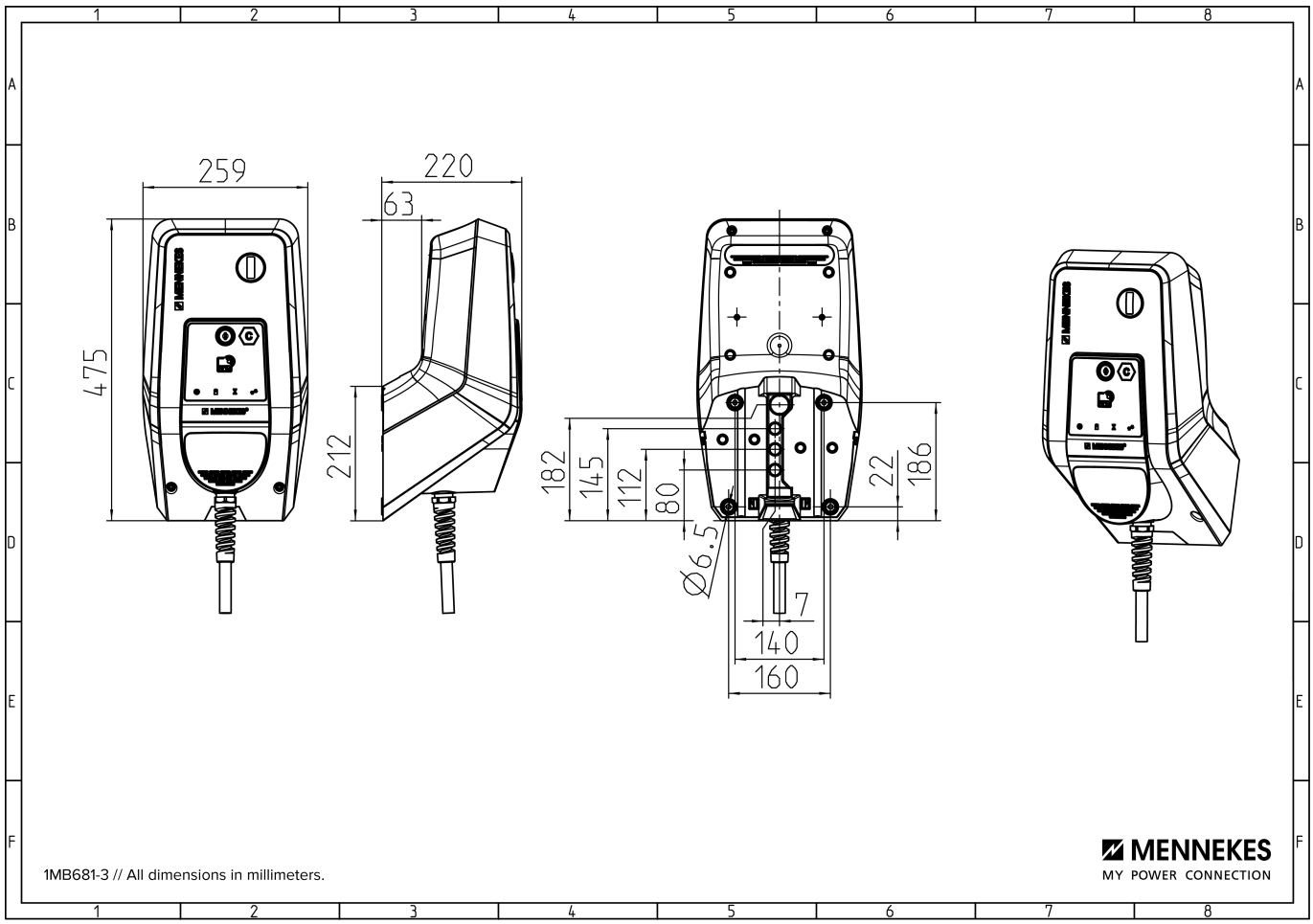
Protective devices	
Personal protection (RC)	40 / 0,03A, 4p, type A
Load safety (LS)	C-32A, 3p+N, 10kA
Control fuse (LS)	B-6A, 2p, 10kA

Technical data

Supply line terminal strip		
Number of terminals	5	
Conductor material	Copper	
	Min.	Max.
Clamping range - rigid [mm^2]	0.5	10
Clamping range - flexible [mm^2]	0.5	10
Clamping range with ferrule [mm^2]	0.5	10
Tightening torque [Nm]	1.5	1.8

Switching output für shunt release terminals		
Number of terminals	2	
	Min.	Max.
Clamping range - rigid [mm^2]	-	6
Clamping range - flexible [mm^2]	-	4
Clamping range with ferrule [mm^2]	-	4
Tightening torque [Nm]	0.8	0.8

Dimensional drawing



Example