

Technical Datasheet



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Technical description

The **MAHLE chargeBIG 6 charging system** consists of a central control unit – the MAHLE chargeBIG6 charging distributor – with up to 6 three-phase charging points with permanently attached cable and type 2 plug. The system is available with a charging capacity of 11kW and 22kW. The central charging distributor contains the necessary electronic components such as charge controller, residual current circuit breaker and Overvoltage protection. The charging solution meets the requirements of IEC61851-1 and is CE compliant.

For more information on the charging system and the chargeBIG service portfolio, please visit www.chargeBIG.com.

Electrical data

Current rating (configurable connection values)	Complete system with 6 charging points: 3x 36A, 3x 63A oder 3x125A (configurable); Complete system three-phase with N conductor (connection to LVU). Voltage supply for each charging point can be connected separately. Connection via household meter possible. Individual charging points three-phase with 6–32 A dynamic range.
Supply voltage (Europe)	230V / 400V
Supply frequency	50 Hz / 60 Hz
Network type	TT / TN / TNS / TNCS
Protection rating	I
Over-voltage protection category	Type 2 EN 61643-11
Rated short-time withstand current	< 6 kA RMS value according EN 61439-1
Current protection (in domestic Installation)	System with charge-point specific supply Charging point with up to 22 kW charging capacity: 32 A; System with combined supply 2x63 A
Residual current device and DC fault	Detection 30 mA FI Type A with 6 mA RDC-MD for every charge-point
Charging capacity	Three-phase 4 to 22kW dynamically controlled depending on configuration, connected load, number of connected vehicles and control parameters
Output voltage	230V single-phase / 400V three-phase

Protection class

IP protection

Charging distributor IP65; Plug IP44

Connections

Cable feed

Charging distributor: cabling from below via cable entries

Recommended cross-section
(depending on cable and installation type)

Supply cable for installation with charge-point specific supply: 5 x 6 mm² copper (32 A nominal current); N and PE in the charging cabinet are separated.
Supply cable for installation with central power supply: up to two supply lines with 5 x 16 mm² copper
Between charging cabinet and plug holder: cable 7 x 6 mm², see standard DIN VDE 0285-525-2-51, max. 70 m
E.g. rigid cable 7 x 6 mm² for three-phase charging points with 22 kW NYM-J or NYY-J with / without cable conduit

Lead terminal

Spring clamp terminal 6mm² / Spring clamp terminal 16mm²

Standard charging cable variants

Three-phase type 2 cable: up to 32 A / 400VAC according to EN62196-1, 3.5 m cable length 5 m possible on customer request

Environmental conditions

Charge point operating temperature range -25 °C to +70 °C (with direct sunlight)

Charging cabinet operating Temperature -25 °C to +55 °C (without direct sunlight)

Temperature behavior

At the respective specified operating temperature ranges, the system provides the charging current continuously. To increase charging availability, the charging current is dynamically reduced if the temperature is exceeded in-admissibly. After cooling down, the charging current specifications will be increased to normal operation.

Cooling system

Passive

Storing temperature

Up to 70 °C

Permissible relative humidity

5% to 95% non-condensing

Altitude

Max. 2000 m above sea level

Communication, functions and interfaces

Access authorization for charging point

Optional access authorization for charging point via key switch

Load management

Central load management for 1 to 6 charging points configurable to 36A, 63A or 125A total phase current

Loading strategies

Pool based equal power distribution charging strategy without prioritization

Communication

Ethernet over RJ-45

Mechanical data

Dimensions complete system
in mm (H x W x D)

Loading system (630 x 600 x 180) wall mounting with 6 screw points
Column: square tube made of stainless steel (1200 x 100 x 100) plug holder (approx. 90 x 107 x 107) wall mounting: plug holder (110 x 110 x approx. 100)

Requirements foundation
for charging points
dimensions in mm (H x W x D)

Foundations (> 400 (min. frost line)x500x500)
Concrete C30/37 LP for XC4, XD1, XF4 (e.g. C25/30 LP for XC4, XD1, XF2)
Reinforcing steel: BSt 500 S (or BSt 500 M) or screw foundations