Datasheet

Twin 5 Plus

Technical Specification

Product Variant

Twin 5 Plus	Art. no. 9344527xx

General Product Specifications

Number of sockets	2
Types of sockets	2 x Type 2 socket, in accordance with IEC62196-2
Authentication methods	Plug & Charge RFID card Autocharge ISO 15118 Plug & Charge * Back office Third-party apps
Status indication	Integrated in display
Display	7" IPS color display, 1000 cd/m^2, resolution: 1024 x 600 pixels
Energy meter, per socket	MID certified 4 quadrant meter
Supported power systems	TN-S, TN-C-S, TT, IT * * 3 x 230 V / 400 V +N 3 x 230 V w/o N
Nominal output voltage (+/- 10%)	400 V (3 x 230 V)
Maximum design current per socket	32 A per phase
Maximum design power	1-phase: 7.4 kW 3-phase: 22 kW
Main Switch	4P, 80 A, 400 V Cable clamps on main switch, range: • 16 mm^2 per wire: solid wire (PVC cable) • Max. 6 mm^2 per wire: stranded wire with ferrules (PVC cable)
Cable diameters	Grommets available for: • 1 x 14-54 mm: Mains power in • 2 x 13-34 mm: Power out for (max.) 2 Twin 5 Plus in Smart Charging Network • 3 x 12-18 mm: Ethernet cable Cable clamp, range for 2-7 mm: cable for grounding electrode
Contactors	Per phase controllable relays Integrated per socket, simultaneous activation of all phases Extra safety relay in series for emergency situations
Overcurrent protection	Integrated in firmware, over current response scenarios: >110% after 100 seconds >125% after 5 seconds

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Short-circuit protection	MCB or 14 x 51 fuse up to 40 A per phase * * *
Residual current protection	Per socket RCD/RCCB, 4P type B 30 mA Rated breaking capacity: 14 kA
Available in- and outputs	2 x RJ-45 (Ethernet/LAN) RS-485 (Modbus RTU)
Rated insulation voltage U_i	500 V
Rated impulse withstand voltage U_{imp}	4000 V
Rated current I_n	2 x 32 A
Conditional rated short-circuit current I_{cc}	14 kA
Rated load factor RDF	0.9
Degree of pollution of the macro environment	3

* Will be available in future firmware releases, also depending on car and back office integration

* * Caution: not all vehicles support the IT system. In that case, or with 3-phase charging, an isolation transformer is required.

* * * The presence of a Grid Connection Box (GCB) may reduce the maximum input capacity and limit the output per socket or require Standard Load Balancing.

Smart Charging Network Support *

Maximum number of charging stations with a single grid connection	3
Design optimized for	3 x 35 A
Supported wiring schemes	Daisy chain
Terminals	5 x 4 connections L1, L2, L3, N, PE
Clamping range	2.5 mm^2 to 16 mm^2

Recommended cable dimensions for: * *	**3 x 25 A**	**3 x 35 A**
Diameter	5 x 4 mm^2	5 x 6 mm^2
Total length (max.)	80 m	60 m

* Assumes the use of accessory 803995905-ICU.

* * These recommendations are only indicative. The installer is responsible for the correct selection of cables and dimensions appropriate for the installation.

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Communication and Protocols

Vehicle communication	Mode 3 in accordance with IEC 61851-1 ed. 3 (2017) ISO 15118 communication (optional)
RFID reader	ISO/IEC 14443A/B, 13.56 MHz MIFARE Classic 1K/4K, MIFARE Ultralight, DESFire (EV1/EV2) Maximum length: 7 bytes
Internet/networking possibilities	GPRS 2G LTE Cat M1 4G Ethernet/LAN
Communication protocols	TCP/IP Websocket (JSON) Secure websocket (JSON)
Supported mobile communication bands	2G: EGPRS quad-band: 850 / 900 / 1800 / 1900 MHz 4G: LTE Cat M1 bands: 3, 8, 20
Communication protocol to central system	OCPP 1.6 OCPP 1.6 + SE OCPP 2.0.1

Cyber Security

SIM card	Mini SIM card (2G/4G) APN username and password
Central system authentication	TLS 1.2 x509 2048/4096 bit root certificate
EVSE authentication	HTTP Basic authentication • with TLS • with TLS and Client Side Certificates • without TLS
Remote console access (SSH, telnet)	Not supported
Diagnostic files	Encryption: AES 128 bit
Firmware update files	Encryption: AES 256 Signature: ECDSA NIST P384 (SHA384)
EVSE Internal Flash	Smart control board: AES-CBC Switch board: AES 256 bit
Root certificate	Installed in the factory, update through signed UpdateFirmware file, or remote via OCPP management system

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Available Memory

RFID card	Local list: 1000 (Configurable) White list: 1000 (Configurable)
Transaction database	20 000 transactions (Configurable)
Logging for diagnostics	Approx. 45 000 lines

Environmental conditions and product properties

Operating temperature	-25 °C to +55 °C (externally validated)
Relative atmospheric humidity	5 to 95 %
Electrical safety class	Class I
Ingress protection	IP54
Impact protection	IK10
Stand-by power consumption	10-17 W depending on brightness level

Casing

Type	Charging column
Mounting options	Directly on solid underground or on optional metal or concrete base
Material	Cold-rolled Stainless steel AISI/SAE 304, fine-structure powder coating
Color	RAL 7043 (Traffic Grey B) other colors on request
Locking	Lockable lever with space for 2 half (single) euro cylinders 30/10 or 35/10 mm (not included) Standard key included
Dimensions (H x W x D)	
Casing Packaging	1385 x 335 x 220 mm 1490 x 390 x 300 mm
Internal space for Grid Connection Box	750 x 250 x 160 mm
Weight	
Casing Total, incl. packaging	Approx. 40 kg Approx. 42.5 kg

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External protection according to EV/ZE-Ready

IEC 61000-4-16 or IEC 61543

	Level 3		Level 4	
Frequency range	**Continuous test V_{rms} (V)**	**Current (mA)**	**Continuous test V_{rms} (V)**	**Current (mA)**
1 kHz - 1.5 kHz	1	6.6	3	20
1.5 kHz - 15 kHz	1-10	6.6-66	3-30	20-200
15 kHz - 150 kHz	10	66	30	200

Standard and Selectable Settings Ex-Works

Description	Options
Authorization	Plug & Charge RFID reader * Autocharge *
Maximum charging current	16 A 32 A *
User availability if temporarily off-line	Accept all RFID cards Only accept locally registered RFID cards Charging not possible
Response if when plug is released on vehicle side	Stop transactions and release the plug Pause charging until cable plugged back in
Selected backend	Stand alone; ICU Connect * Others options *
Mobile network communication options *	2G: GPRS 4G: LTE-M Ethernet UTP/LAN Autodetect

The settings marked with a * may result in additional costs when purchasing your charging station. The default settings are always mentioned first. For more information about the options, please contact your sales representative.

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Available Products with Grid Connection Boxes

Grid Connection Fuses	**3 x 25 A**
Art. no.	*934452750*
Compliant with	Connection requirements for 3x 25 A charging stations V3
Short-circuit protection on board	3 x Fuse 20 A gG
Short-circuit protection setup selectivity	✓

Accessories

Product variant	**Article no.**
General accessories for Twin 5 Plus	
Concrete base	833829300-ICU
Dimensions (H x W x D)	570 x 350 x 220 mm
Weight	42 kg
Metal base	803828601-ICU
Dimensions (H x W x D)	598 x 204 x 300 mm
Weight	7.8 kg
Packaging (H x W x D)	50 x 295 x 620 mm
Additional RFID card	203120010-ICU
Smart Charging Network (SCN) module	803995905-ICU
Dimensions (H x W x D)	100 x 150 x 100 mm
Weight	Approx. 1.5 kg

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