# Twin 5

## **Technical Specification**





#### **Product Variant**

Twin 5 Art. no. 9344526xx

### **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	User interface equipped with LEDs	
Energy meter, per socket	MID certified 4 quadrant meter	
Supported power systems	TN-S, TN-C-S, IT <b>*</b> 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	<ul> <li>4P, 80 A, 400 V</li> <li>Cable clamps on main switch, range:</li> <li>16 mm<sup>2</sup> per wire: solid wire (PVC cable)</li> <li>Max. 6 mm<sup>2</sup> per wire: stranded wire with ferrules (PVC cable)</li> </ul>	
Cable diameters	Grommets available for:  1 x 14-54 mm: Mains power in 2 x 13-34 mm: Power out for (max.) 2 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	

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Overcurrent protection	Integrated in firmware, overcurrent response scenarios: >110% after 100 seconds >125% after 5 seconds
Short-circuit protection	MCB or 14x51 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 RJ45 (Ethernet/LAN) RS-485 (Modbus RTU)

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

### 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	Star topology Daisy chain	
Terminals	5 x 4 connections L1, L2, L3, N, PE	
Clamping range	$2.5\mathrm{mm}^2$ to $16\mathrm{mm}^2$	

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

<sup>\*</sup> Assumes the use of accessory 803995905-ICU.

#### **Communication and Protocols**

Controller board	AHP
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

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<sup>\* \*</sup> 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.

<sup>\* \*</sup> 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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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 (JSON) OCPP 1.6 + SE OCPP 2.x (upgradeable)
Supported RJ-45 protocols	OCPP TCP/IP
Modbus (master)	TCP/IP RTU

### 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	

### **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

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### **Operating Conditions**

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

### Casing

Туре	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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Level 4



### External protection according to EV/ZE-Ready

Level 3

IEC 61000-4-16 or IEC 61543

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Frequency range	Continuous test V <sub>rms</sub> (V)	Current (mA)	Continuous test V <sub>rms</sub> (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 <b>*</b>
Smart Charging	Off
	Standard Load Balancing *
	Active Load Balancing (Modbus TCP/IP and Modbus RTU) *
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
	Autonetect

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.	934452650
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	
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