Eve Double Pro-line

General

Product variants	Article no.
Pro-line	
Eve Double Pro-line, 1 phase, 2x socket Type 2, single feeder	904461031
Eve Double Pro-line, 1 phase, 2x socket Type 2, dual feeder	904461032
Eve Double Pro-line, 3 phase, 2x socket Type 2, single feeder	904461021
Eve Double Pro-line, 3 phase, 2x socket Type 2, dual feeder	904461022
Eve Double Pro-line, 3 phase, 2x socket Type 2, single feeder, RCD Type A	904461001
Eve Double Pro-line, 3 phase, 2x socket Type 2, dual feeder, RCD Type A	904461002
Pro-line DE	
Eve Double Pro-line DE, 3 phase, 2x socket Type 2, single feeder	904461101
Eve Double Pro-line DE, 3 phase, 2x socket Type 2, dual feeder	904461102
Pro-line FR	
Eve Double Pro-line FR, 1 phase, 2x socket Type 2S (shutters), single feeder	904461215
Eve Double Pro-line FR, 1 phase, 2x socket Type 2S (shutters), dual feeder	904461216
Eve Double Pro-line FR, 3 phase, 2x socket Type 2S (shutters), single feeder	904461205
Eve Double Pro-line FR, 3 phase, 2x socket Type 2S (shutters), dual feeder	904461206

Specifications of Eve Double product lines

Specification	Pro-line	Pro-line DE	Pro-line FR
1 phase	✓	-	✓
3 phase	✓	✓	✓
NFC card reader	✓	✓	✓
Mobile network communication	✓	✓	✓
Ethernet/LAN dedicated network connection	✓	✓	✓
Energy meter, per outlet	MID certified	MID certified, encrypted data transport	MID certified
Eichrecht support	-	✓	-
Residual Current Device (RCD) onboard	✓	✓	✓
Max. 6mA DC detection	✓ / -	-	-
Short-circuit protection onboard	-	-	-
Support for E-socket	-	-	✓ (2x)
Giro-e Support	-	✓	-
Socket Type 2	✓	✓	-
Socket Type 2 with shutters	-	-	✓

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General product specifications

Number of outlets	2	
Types of outlets	Type 2 socket, in accordance with IEC62196-2 Type 2 socket shutters, in accordance with IEC62196-2, ed. 2 (Pro-line FR)	
Authentication methods	Plug & Charge RFID charge card Girocard (Pro-line DE) Central system Third-party apps	
Status indication	Integrated in display	
Display	7" TFT colour display Resolution: 800 x 480 pixels	
Supported power systems	TN-S, TN-C-S, TT, IT *	
Nominal output voltage (+/- 10%)	230V, 1-phase products 400V (3x230V), 3-phase products	
Maximum design current	32A per phase **	
Maximum design power	7.4kW, 1-phase products 22kW, 3-phase products	
Main switch	1 feeder cable 1-phase: 4P, 80A, 400V 3-phase: 4P, 80A, 400V	2 feeder cables 1-phase: 4P, 80A, 400V 3-phase: 8P, 40A, 400V
Cable diameters	Cable gland, clamping range for 14-25.5mm cable thickness Cable clamps on main switch, range: • 16mm² per wire: solid (VD) wire • Max. 6mm² per wire: stranded (VDS) wire with ferrules	
Contactors	Per phase controllable relays Integrated per outlet, simultaneous activation of all phases Extra safety relay in series for emergency situations	
Overcurrent protection	Integrated in firmware, overcurrent response scenarios: 105% after 1,000 seconds 110% after 100 seconds 120% after 10 seconds 150% after 2 seconds	
Residual current protection	Per outlet integrated RCD, 30mA Rated breaking capacity: 10kA Type B (All models, except Type A models*) *Type A models (904461001, 904461002) Integrated 6mA DC fault current detection Response time: 1-5 seconds	
Available in- and outputs	RJ45 (Ethernet/LAN) RJ11 (Active Load Balancing)	

REMARKS

* Caution: not all vehicles support the IT system. In that case, or with 3-phase charging, an isolation transformer is required
** When input current per phase exceeds the design current, use of Standard Load Balancing is required

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Communication and protocols

Controller	NG920
Vehicle communication	Mode 3 in accordance with IEC 61851-1 ed. 3 (2017)
NFC card 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
Supported mobile communication bands	2G: EGPRS quad-band: 850 / 900 / 1800 / 1900 MHz 4G: LTE Cat M1 bands: 3, 8, 20
Communication protocol Central System	OCPP 1.5 (JSON) OCPP 1.6 (JSON) 2nd edition, certified OCPP 2.0 (JSON)
Supported RJ45 protocols	OCPP TCP/IP
Supported RJ11 protocols	DSMR 4.0-4.2 and SMR5.0 (P1 port) I/O for supporting external relay
Modbus (Master)	TCP/IP

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 (recommended) or without TLS
Remote console access (SSH, telnet)	Not supported
Diagnostic files	Encryption: AES 128 bit
Firmware update files	Encrypted and digitally signed Encryption: SHA256 hash (pkcs1/PSS padding with 2048 RSA key) Signature: RSA public key 2048 bit
EVSE Interal Flash	AES 128 bit (erased when read)
Root certificate	Installed in the factory, update through signed UpdateFirmware file, or remote via OCPP management system.

Available memory

Tokens	Local list: approx. 800 tokens (via the Backend) White list: approx. 1,200 tokens (local)
Transaction database	Approx. 1,500 transactions (of 4hrs with 15min Wh-metering values)
Logging for diagnostics	Approx. 45,000 lines

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Operating conditions

Operating temperature	-25°C ... +40°C
Relative atmospheric humidity	5 - 95 %
Electrical safety class	Class I
Degree of protection (casing)	IP54
IK protection (mechanical impact)	IK10
Stand-by power consumption	Pro-line: approx. 9 - 12W Pro-line FR: approx.. 9 - 12W Pro-line DE: approx. 10 - 13W

Casing

Type	Wall-mounted unit
Mounting options	Wall mounting or mounting post (accessory)
Material	Fibre-reinforced polyester (Sheet Moulding Compound - SMC)
Colour	RAL9016 (Traffic White): front side RAL 7043 (Traffic Grey B): rear
Locking	Torx TR25 tamper resistant screws
Dimensions (H x W x D)	
Casing	590 x 338 x 230 mm
Packaging	700 x 398 x 320 mm
Weight	
Casing	Approx. 15 kg
Total, incl. packaging	Approx. 22 kg

Installation instructions

Input: minimal recommended cable diameters (based on assumed max. 50m cable length)	**1-phase 3.7kW charging, 16A selected per phase** 904461031, 904461215: 3 x 4 mm^2 904461032, 904461216: 3 x 4 mm^2 (per cable) **3-phase 11kW charging, 16A selected per phase** 904461021, 904461001, 904461101, 904461205: 5 x 4 mm^2 904461032, 904461002, 904461102, 904461206: 5 x 4 mm^2 (per cable) **1-phase 7.4kW charging, 32A selected per phase** 904461031, 904461215: 3 x 6 mm^2 904461032, 904461216: 3 x 6 mm^2 (per cable) **3-phase 22kW charging, 32A selected per phase** 904461021, 904461001, 904461101, 904461205: 5 x 6 mm^2 904461032, 904461002, 904461102, 904461206: 5 x 6 mm^2 (per cable)

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Installation instructions

Short-circuit protection		With breaker circuits:	With fuses:
	single feeder cable, 1-phase:	1 x 40A, 1P, type B or C	1 x 35A gG
	single feeder cable, 3-phase:	1 x 40A, 3P, type B or C	3 x 35A gG
	two feeder cables, 1-phase:	2 x 40A, 1P, type B or C	2 x 35A gG
	two feeder cables, 3-phase:	2 x 40A, 3P, type B or C	6 x 35A gG
Residual current protection (possibly i.c.w. circuit breakers)	Optional: Residual Current Device (RCD): 100mA S (Selective), 4P Type A: 904461001, 904461002 Type B: All other models Rating: • 3.7kW/11kW charging: minimum 20A • 7.4kW/22kW charging: 40A		
Nominal input voltage	• V_{L1-N}: 230V (+/-10%) • V_{L2-N}: 230V (+/-10%) • V_{L3-N}: 230V (+/-10%) • V_{L1-L2}: 400V (+/-10%) • V_{L1-L3}: 400V (+/-10%) • V_{L2-L3}: 400V (+/-10%) • V_{PE-N}: ≈ 0V		
Nominal frequency	50 Hz		
Grounding	TN system: separate PE cable TT system: separately installed grounding electrode < 100 Ohm spreading resistance IT system: connected to a shared reference (common earth) with other metal parts		

External protection according to EV/ZE-Ready

IEC 61000-4-16 or IEC 61543

	Level 3		Level 4	
Frequency range	Cont. test Vrms (V)	Current (mA)	Cont. test Vrms (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

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Standard and selectable settings ex works

Description	Options
Authorisation	Plug & Charge RFID*
Maximum charging current	16A 32A*
Smart Charging	Off Standard Load Balancing * Active Load Balancing (P1)* Smart Charging Network*
Own logo in display	Off (Alfen logo) On (your own logo)*
Languages supported	English, Dutch, German, French, Spanish, Portuguese, Italian, Norwegian, Swedish, Finnish
User availability if temporarily offline	Accept all RFID passes Only accept locally registered RFID cards Charging not possible
Response if plug is released on vehicle side	Stop transactions and release the plug Pause charging until cable plugged back in
Selected management system	Stand alone, ICU Connect* Other options*
Network communication options *	2G: GPRS 4G: LTE-M UTP/LAN Autodetect
Payment Solutions	Off Giro-e ready * (Pro-line DE models only)

REMARKS

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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OCPP specifications

Supported feature profiles and functionalities

	OCPP 1.5	OCPP 1.6	OCPP 2.0
Core (Transactions, Availability, remote control, Authorization, Meter value, Data transfer)	●	●	●
FirmwareManagement	●	●	●
Reservation	●	●	●
LocalAuthlistManagement	-	●	●
RemoteTrigger	-	●	●
SmartCharging	■	●	●
Security	-	●**	●
Provisioning	-	●	●
Tariff and Cost	■	■	●
ISO 15118 certificate management	-	-	-
Diagnostics	●	●	●
Display message	-	-	●

REMARKS

■ Using Alfen-specific messages and/or keys
● Follows OCPP specifications
- Not implemented
** By implementation of Security Extension

Alfen specific OCPP 1.6/2.0.1 performance parameters

Meter value interval request	900
Heartbeat interval	30
Maximum number of data fields per message	9
Authorization of charge cards	
Size of list	800
Size of list transfer	50
Smart Charging Specifications	
Charging profiles	45
Periods in one charging profile	100
Maximum Stack level of charging profiles	15

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Accessories

General accessories for Eve Double	
Mounting post	Art. 934459001
Pole dimensions (H x W x D)	1.430 x 180 x 80 mm
Material	Aluminum, with powder coating
Colour	RAL 7043 (Traffic Grey B)
Packaging (H x W x D)	1.460 x 360x 280 mm
Weight	
Casing	8 kg
Total, incl. packaging	Approx. 12 kg
Concrete base	Art. 833829300-ICU
Dimensions (H x W x D)	570 x 350 x 220 mm
Weight	42 kg
Metal base	Art. 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	Art. 203120010-ICU

Accessories for Eve Double Pro-line FR	
Mounting post FR	Art. 934459002
Pole dimensions (H x W x D)	1.430 x 180 x 80 mm
Material	Aluminium with powder coating
Colour	RAL 7043 (Traffic grey B)
Packaging (H x W x D)	1.460 x 360x 280 mm
Weight	
Casing	8 kg
Total, incl. packaging	Approx. 12 kg
Cable cover Socket Type E	Art. 803873064-ICU (Mounting post spare part)
Socket Type E	Art. 803873065-ICU

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