Datasheet

Eve Double Pro-line

Technical Specifications

ALFEN
POWER TO ADAPT

Product Variants

	Article no.
Pro-line	
Eve Double Pro-line, 1 phase, 2x type 2 socket, 1 power supply cable	904461031
Eve Double Pro-line, 1 phase, 2x type 2 socket, 2 power supply cables	904461032
Eve Double Pro-line, 3 phase, 2x type 2 socket, 1 power supply cable	904461021
Eve Double Pro-line, 3 phase, 2x type 2 socket, 2 power supply cables	904461022
Eve Double Pro-line, 3 phase, 2x type 2 socket, 1 power supply cable, RCD Type A	904461001
Eve Double Pro-line, 3 phase, 2x type 2 socket, 2 power supply cables, RCD Type A	904461002
Pro-line DE	
Eve Double Pro-line DE, 3 phase, 2x type 2 socket, 1 power supply cable	904461101
Eve Double Pro-line DE, 3 phase, 2x type 2 socket, 2 power supply cables	904461102
Eve Double Pro-line DE, 3 phase, 2x type 2 socket, 1 power supply cable, 1x SPD	904461101SPD
Eve Double Pro-line DE, 3 phase, 2x type 2 socket, 2 power supply cables, 2x SPD	904461102SPD
Pro-line FR	
Eve Double Pro-line FR, 1 phase, 2x type 2 shutter socket, 1 power supply cable	904461215
Eve Double Pro-line FR, 1 phase, 2x type 2 shutter socket, 2 power supply cables	904461216
Eve Double Pro-line FR, 3 phase, 2x type 2 shutter socket, 1 power supply cable	904461205
Eve Double Pro-line FR, 3 phase, 2x type 2 shutter socket, 2 power supply cables	904461206

Specification per variant

	Pro-line	Pro-line DE	Pro-line FR
1-phase	•	—	•
3-phase	•	•	•
RFID card authentication	•	•	•
Mobile network communication	•	•	•
Ethernet/LAN dedicated network connection	•	•	•
Energy meter, per socket	MID certified	MID certified, encrypted data transport	MID certified
"Eichrecht" conformity	—	•	—

Alfen ICU B.V.
PO box 1042, 1300 BA Almere, The Netherlands
Hefbrugweg 79, 1332 AM Almere, The Netherlands

Datasheet

Eve Double Pro-line

Technical Specifications

	Pro-line	Pro-line DE	Pro-line FR
Residual Current Device (RCD) on board	•	•	•
Surge Protection Device (SPD)	—	o	—
Max. 6 mA DC detection	• / —	—	—
Short-circuit protection on board	—	—	—
Direct Payment Solution *	o	o	o
Type 2 socket	•	•	—
Provision of electrical connection for E-socket * *	—	—	o (2x)
Type 2 socket with shutters	—	—	•

• = Standard

o = Optional

— = Not available

* Giro-E is only optional for Eve Double Pro-line DE

* * Provision of electrical connection for E-Socket is only available on shutter socket variants

Technical Specifications

Number of sockets	2	
Types of sockets	Type 2 socket, in accordance with IEC62196-2 Type 2 shutter socket, in accordance with IEC62196-2, ed. 2 (Pro-line FR)	
Nominal output voltage (+/- 10%)	230 V, 1-phase products 400 V (3x230 V), 3-phase products	
Maximum current	32 A per phase *	
Maximum power	1-phase products: 7.4 kW 3-phase products: 22 kW	
Permissible cos phi	0.9-1	
Earthing systems	TN-S, TN-C-S, TT, IT * *	
Stand-by power consumption	Pro-line: approx. 9 to 12 W Pro-line FR: approx. 9 to 12 W Pro-line DE: approx. 10 to 13 W	
Main Switch	1 power supply cable 1-phase: 4P, 80 A, 400 V 3-phase: 4P, 80 A, 400 V	2 power supply cables 1-phase: 4P, 80 A, 400 V 3-phase: 8P, 40 A, 400 V
Contactors	Integrated per socket, simultaneous activation of all phases Extra safety relay in series for emergency situations	

Alfen ICU B.V.
PO box 1042, 1300 BA Almere, The Netherlands
Hefbrugweg 79, 1332 AM Almere, The Netherlands

Datasheet

Eve Double Pro-line

Technical Specifications

Overcurrent protection	Integrated in firmware, over-current response scenarios: 105% after 1,000 seconds 110% after 100 seconds 120% after 10 seconds 150% after 2 seconds
Residual current protection	Per socket integrated RCD, 30 mA Rated breaking capacity: 10 kA Type B (All models, except Type A models * * *) Integrated 6 mA DC fault current detection Response time: 1-5 seconds
Overvoltage category	OVC III
Rated insulation voltage U_i	500 V
Rated impulse withstand voltage U_{imp}	4 kV
Rated diversity factor RDF	1
Display	7" TFT color display Resolution: 800 x 480 pixels Brightness: 650 cd/m^2
Status indication	Integrated in display
Authentication methods	Plug & Power (Not available on Pro-line DE) RFID card Girocard (only for Pro-line DE)

* When input current per phase exceeds the design current, use of Standard Load Balancing is required

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

* * * Type A models: 904461001, 904461002

Environmental conditions

Operating temperature *	- 25 °C to + 40 °C
Electrical safety class	Class I
Ingress protection	IP54
Impact protection	IK10
Environmental conditions	Indoor / outdoor use
Electromagnetic environment class	E2 * *
Mechanical environment class	M1 * *
Pollution degree	PD2

Alfen ICU B.V.
PO box 1042, 1300 BA Almere, The Netherlands
Hefbrugweg 79, 1332 AM Almere, The Netherlands

Datasheet

Eve Double Pro-line

Technical Specifications

* More information about the indicated operating temperature:

- The stated charging performance is solely applicable to the charging station itself. The actual performance depends on the vehicle and the grid connection.
- A front cover in a colour other than RAL9016 Traffic White, and the addition of customizations, can increase the heat transfer from solar radiation transferred to the charging station. This also affects the charging performance.

** according to 2014/32/EU (Measuring Instruments Directive)

Charging stations which are installed outside without protection will be affected by weather conditions and will discolour. Alfen recommends to install the charging stations in a sheltered environment to optimize the lifetime of the product.

Information on Radio Frequency

Alfen charging stations are approved according to the Radio Equipment Directive (2014/53/EU). The frequency bands and maximum power of this equipment are listed here. All radio equipment is mentioned in this table, the presence or activation for each radio equipment depends on the specific configuration. These are maximum values for all models and component sub-suppliers.

Maximum power = rated power + maximum tolerance

Radio equipment	Frequency / Frequency bands	Max. power
DCS1800/PCS1900	1800 / 1900 MHz	32 dBm
GSM850/EGSM900	850 / 900 MHz	35 dBm
LTE-FDD	B3/B8/B20	23 dBm
RFID card	13.56 MHz	32 dBm

Communication and Protocols

Controller board	NG920
Vehicle communication	Mode 3 in accordance with IEC 61851-1 ed. 3 (2017)
RFID card reader authentication	ISO/IEC 14443A/B, 13.56 MHz MIFARE Classic 1K/4K, MIFARE Ultralight, DESFire (EV1/EV2) Maximum length: 7 bytes
Mobile communication	LTE Cat-M1 2G
Back office communication	OCPP 1.5 (JSON) OCPP 1.6 (JSON) 2nd edition, certified OCPP 2.0.1 (JSON) *
Ethernet	RJ-45: 1×10/100 Base-T
Available inputs for Smart Charging	RJ-11: DSMR 4.0-4.2 and SMR 5.0 (port P1) RJ-45: Modbus TCP/IP Client (Energy Management System) or Modbus TCP/IP (external energy meter) Suspend Signal §14a EnWG

* Consult the Alfen Knowledge Base for the latest overview.

Alfen ICU B.V.
PO box 1042, 1300 BA Almere, The Netherlands
Hefbrugweg 79, 1332 AM Almere, The Netherlands

Datasheet

Eve Double Pro-line

Technical Specifications

OCPP Specifications

Supported feature profiles and functionalities

	OCPP 1.6	OCPP 2.0.1
Core (Transactions, Availability, remote control, Authorization, Meter value, Data transfer)	✓	✓
Advanced security	✓	✓
Firmware Management	✓	✓
Reservation	✓	✓
LocalAuthlistManagement	✓	✓
Remote Trigger	✓	✓
Smart Charging	✓	✓
Security	✓	✓
Provisioning	✓	✓
Diagnostics	✓	✓
Tariff & Costs	◆	◆

✓ Follows OCPP specifications

◆ Using Alfen-specific messages and/or license keys

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 RFID 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

Alfen ICU B.V.
PO box 1042, 1300 BA Almere, The Netherlands
Hefbrugweg 79, 1332 AM Almere, The Netherlands

Datasheet

Eve Double Pro-line

Technical Specifications

ALFEN
POWER TO ADAPT

Available Memory

RFID card	Local list: approx. 800 tokens (via the Back office) White list: approx. 1 200 tokens (local)
Transaction database	Approx. 1 500 transactions (of 4 h with 15 min Wh metering values)
Logging for diagnostics	Approx. 45 000 lines

Cyber Security

Specification supported SIM card	Mini SIM card (2G/4G), gold plated APN username and password
Charging Station Management System authentication	TLS 1.2 x 509 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 Internal Flash	AES 128 bit (erased when read)
Root certificate	Installed in the factory, update through signed UpdateFirmware file, or remote via OCPP management system.

Casing

Type	Wall-mounted charging station
Mounting options	Wall mounting Pole mounting (optional)
Material	Fibre-reinforced polyester (Sheet Moulding Compound - SMC) UV resistant: UL746c - f1 Flame retardant: UL94 - 5VB
Colour	RAL 9016 (Traffic White): front side RAL 7043 (Traffic Grey B): front side (optional) RAL 7043 (Traffic Grey B): rear
Locking	Torx T25 tamper resistant screws
Dimensions (H x W x D)	
Casing Packaging	590 x 338 x 230 mm 700 x 398 x 320 mm
Weight	
Casing Total, incl. packaging	Approx. 18.5 kg Approx. 20 kg

Alfen ICU B.V.
PO box 1042, 1300 BA Almere, The Netherlands
Hefbrugweg 79, 1332 AM Almere, The Netherlands

Datasheet

Eve Double Pro-line

Technical Specifications

Installation instructions

Residual current protection Optional (depending on installation and local regulations)	RCD 4P ≥100 mA Type A Selective Rating: 40 A	
Short-circuit protection	Rated conditional short-circuit current: 10 kA	
	With breaker circuits:	With fuses:
1 power supply cable, 1-phase:	1x 40 A, 1P, type B or C	1 x 35 A gG
1 power supply cable, 3-phase:	1x 40 A, 3P, type B or C	3 x 35 A gG
2 power supply cables, 1-phase:	2x 40 A 1P, type B or C	2 x 35 A gG
2 power supply cables, 3-phase:	2x 40 A 3P, type B or C	6 x 35 A gG
Nominal input voltage	V_{L1-N}: 230 V (+/-10%) V_{L2-N}: 230 V (+/-10%) V_{L3-N}: 230 V (+/-10%) V_{PE-N}: ≈ 0 V	V_{L1-L2}: 400 V (+/-10%) V_{L1-L3}: 400 V (+/-10%) V_{L2-L3}: 400 V (+/-10%)
Advised cable cross-section of the power supply cable (based on assumed max. 50 m cable length)	14-25.5 mm clamping range of the cable gland 1-phase: 3 x 6 mm^2 3-phase: 5 x 6 mm^2 • Solid wire (PVC cable): max. 10 mm^2 • Stranded wire with ferrules (PVC cable): max. 6 mm^2	
Nominal frequency	50 Hz	
Earthing system	TN system: separate PE cable TT system: separately installed earthing electrode < 100 Ω spreading resistance IT system: connected to a shared reference (common earth) with other metal parts	

Alfen ICU B.V.
PO box 1042, 1300 BA Almere, The Netherlands
Hefbrugweg 79, 1332 AM Almere, The Netherlands

Datasheet

Eve Double Pro-line

Technical Specifications

Standard and Selectable Settings ex Works

Authorization	Plug & Power (Not available on Eve Double Pro-line DE) RFID card *
Maximum charging current	16 A 32 A *
Smart Charging	Off Standard Load Balancing (1 power supply cable variants only) * Active Load Balancing * Smart Charging Network *
Personalized display	Off (Alfen logo) On (your own logo) *
Languages supported	English, Dutch, German, French, Spanish, Portuguese, Italian, Norwegian, Swedish, Finnish, Czech, Danish, Hungarian, Icelandic, Latvian, Polish, Romanian, Slovak, Slovenian, Catalan, Croatian.
Direct Payment Solution	Off On * • QR code payments • Payment Terminal • Giro-E (only for Eve Double Pro-line DE)

* Optional feature. Adding it will result in additional costs when purchasing your charging station. The default settings are always mentioned first. For more information about the optional features, contact your sales representative.

Accessories

	Article no.
Eve Double Pole	803881380-ICU
Eve Double Duo Pole	803881390-ICU
Eve Double Pole Barrier Free	803881440-ICU
Concrete base	833829300-ICU
Metal base	803828601-ICU
Wall Cover Eve Double	803881382-ICU
Additional RFID Card	203120010-ICU
Payment Terminal Wall Mount	904464010
Payment Terminal Double pole (Eve Double Pole not included)	904461300
Payment Terminal Double Duo pole (Eve Double Duo Pole not included)	904461310

Alfen ICU B.V.
PO box 1042, 1300 BA Almere, The Netherlands
Hefbrugweg 79, 1332 AM Almere, The Netherlands