/ EVC22-3AC-20

SMA eCharger

Unlock the full charging power of the sun

- **The best from EV & PV with unique SMA experience**
- **Highest level of safety, reliability and maximum convenience**

powered by ennexOS

SMA Smart Connected

PV optimized charging
- Intelligent charging modes
- Automatic phase switching
- Boost function
- Multi-EVC operation

Safe, reliable and convenient
- Easy planning
- Flexible installation
- Safe and reliable operation
- Convenient service

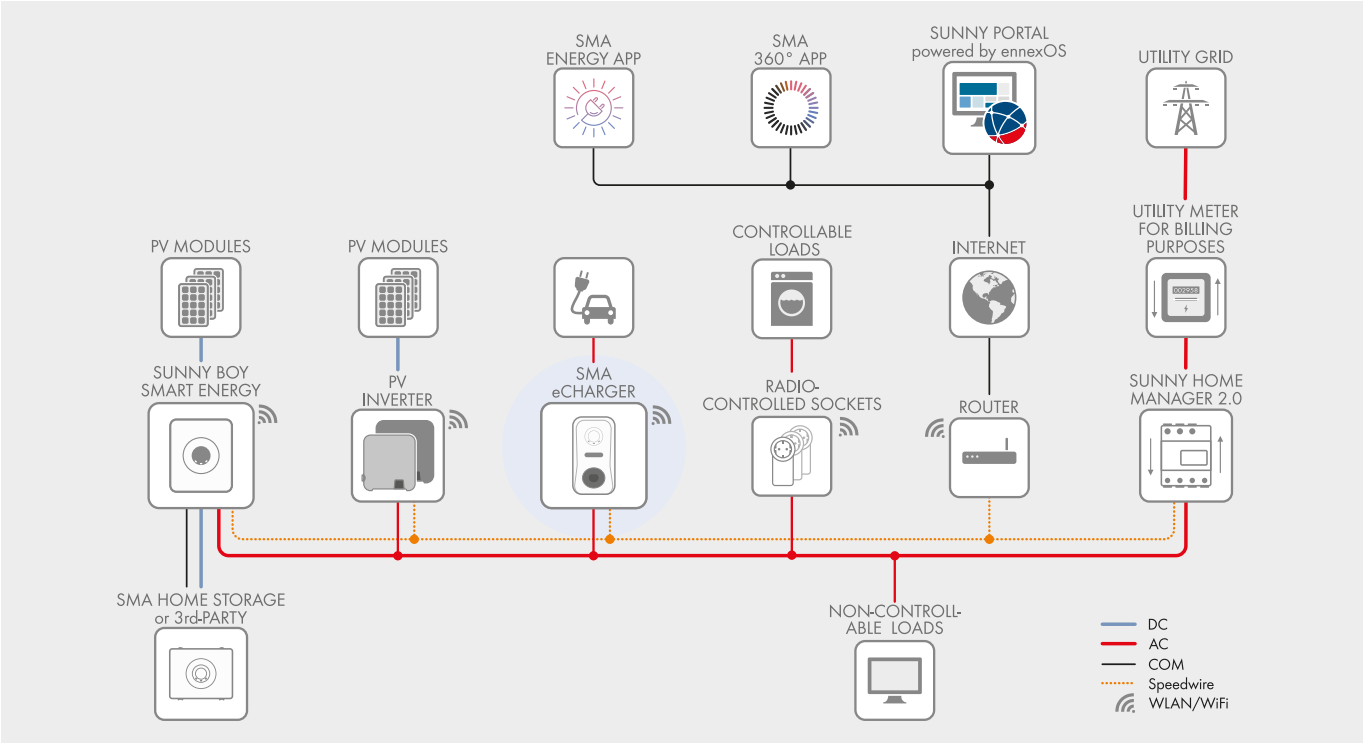
SMA eMobility Portal[1)]
- Easy user management
- Overview of charging processes and utilization
- Billing of charging processes[2)]

Ready for the future
- Future compatibility with flexible rates
- AC-Bidi ready[3)]

The new PV-optimized SMA eCharger makes switching to e-mobility easy. From hassle-free installation to user-friendly management, the SMA eCharger is designed for convenience, easy management and durability - and ready for the future energy transition on the road.

The SMA eCharger is tailored specifically to meet user needs. Its intelligent charging modes offer forecast-based operations, adapting seamlessly to user behavior. Thanks to the automatic phase-switching feature, EVs can be charged with self-generated electricity, even during periods of low solar power generation. With its unique combination of grid and single-phase PV power, it charges vehicles up to 2x faster than standard wallboxes, complying with grid regulations.
Installation and operation are flexible, safe and convenient, supported by SMA Smart Connected and a 5-year warranty. Prepared for future demands, the SMA eCharger integrates smoothly with dynamic tariff structures, while its AC-Bidi compatibility ensures future-proof functionality.

1) In preparation, available with a later software update
2) Energy measurement compliant with MID and calibration regulations in preparation with a later hardware release expected in 2026
3) Future availability as a chargeable e-product, compatible with selected vehicle models and subject to final standardization



Technical Data	SMA eCharger 22
Inputs and outputs (AC)	
Charge power	1.38 kW to 22 kW (configurable)[1]
Nominal voltage	1N~, AC, 230 V / 3N~, AC, 400 V
Nominal frequency	50 Hz / 60 Hz
Nominal current	max. 32 A per line conductor
AC-connection via a spring terminal	5 x 2.5 mm² to 5 x 10 mm² inflexible / 5 x 2.5 mm² to 5 x 6 mm² flexible
Vehicle connection (in accordance with IEC 62196-1/2)	Type 2 charging socket with shutter
Communication	
Ethernet / Wi-Fi / RS485	● (2 ports) / ● / ●
Backend communication	OCPP 1.6 JSON[2]
Vehicle communication	IEC 61851-1/2 Mode 3, ISO 15118 [2]
Digital inputs / digital output	6 / 30 VDC[2]
Protective devices	
Internal DC residual current detection	6 mA functional according to IEC 62955
Compatibility with external residual-current devices	RCD Typ A ≤ 30 mA
Power outage protection	●
Ambient conditions during operation	
Operating temperature range	−25°C to +50°C with infinitely variable derating
Storage temperature range	−25°C to +70°C
Degree of protection (in accordance with IEC 60529) / impact resistance	IP 54 / IK 10
Protection class (in accordance with IEC 62103) / Overvoltage category	I / III
Max. permissible value for relative humidity (non-condensing)	95%
Altitude above MSL	0 m to 2000 m
General Data	
Dimensions (W / H / D)	270 mm / 495 mm / 190 mm
Weight	5.0 kg
Grid configurations	TN / TT / IT
Device display	LED status display, display, impuls LED2) (1000 imp/kWh)
Standby self-consumption	< 6.5 W
Features / accessories	
Charging cable 5.0 m / 7.5 m / 10.0 m	○ / ○ / ○
Authorization	RFID in accordance with standards ISO IEC 14443
Data logs	SEMP, SMA Modbus
Warranty	Five years
Certificates and approvals (more available on request)	CE, DIN EN IEC 61851-1, DIN EN ISO 15118, DIN IEC / TS 61439-7, IEC 62955
System compatibility (as of November 2023)	Webconnect, SMA Sunny Home Manager 2.0
Visualization and control	SMA Energy App, SMA 360° app, SMA eMobility Portal[2], SUNNY PORTAL, SUNNY PORTAL powered by ennexOS
RFID cards (MIFARE DESFIRE EV3)	2x RFID cards included in the scope of delivery
SMA Smart Connected	●
Model type number	EVC22-3AC-20

● Standard equipment ○ Optional – Not available Data at nominal conditions Last revised: 03/2025

1) Password-protected limitation of charging power, e.g., B. possible to 11 kW 2) In preparation, available with a later software update

SMA eCharger accessories

Charging cable holder

Cable holder for wall mounting, suitable for suspending charging cables both indoors and outdoors. Ideal for loads up to approx. 6 kg

Technical Data	Charging cable holder
General Data	
Dimensions (W / H / D)	114 / 68 / 176 mm
Weight	0.51 kg
Color	RAL 9011
Material	Steel, zinc-plated
Surface	Powder-coated
Material number	EVC-CBL-HLD-10

SMA eCharger stand (single-sided)

Robust charging stand for free-standing, one-sided installation of the SMA eCharger (EVC22-3AC-20), including cable holder, terminal compartment for integrable distributors, outdoor socket ready for installation and an optional screw fitting with ground structure EVC-GD-PDSTL-10.
Suitable for loads up to approx. 40 kg (single-sided).

Technical Data	SMA eCharger stand (single-sided)
General Data	
Dimensions (W / H / D)	473.2 / 1506.5 / 380 mm
Weight	39 kg
Color	Base plate RAL 7040 / cable holder RAL 9011 Cladding & middle section RAL 9003
Material	Steel, zinc-plated
Surface	Powder-coated
Material number	EVC-PDSTL-1-20

SMA eCharger stand (double-sided)

Robust charging stand for free-standing, double-sided installation of two SMA eChargers (EVC22-3AC-20), including cable holders, terminal compartment for integrable distributors, and outdoor socket ready for installation, with an optional screw fitting with ground structure EVC-GD-PDSTL-10.
Suitable for loads up to approx. 40 kg (single-sided); total load approx. 80 kg.

Technical Data	SMA eCharger stand (double-sided)
General Data	
Dimensions (W / H / D)	498.4 / 1506.5 / 380 mm
Weight	37.6 kg
Color	Base plate RAL 7040 / cable holder RAL 9011 Cladding & middle section RAL 9003
Material	Steel, zinc-plated
Surface	Powder-coated
Material number	EVC-PDSTL-2-20

Ground structure for charging stand

Mounting frame to anchor the charging stand of the SMA eCharger into the ground, suitable for use in concrete foundations or gravel beds (compatible with EVC-PDSTL-1-20 and EVC-PDSTL-2-20).

Technical Data	Ground structure for charging stand
General Data	
Dimensions (W / H / D)	350 / 600 / 350 mm
Weight	7.1 kg
Material	Stainless-steel sheet 1.4016
Material number	EVC-GD-PDSTL-10

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