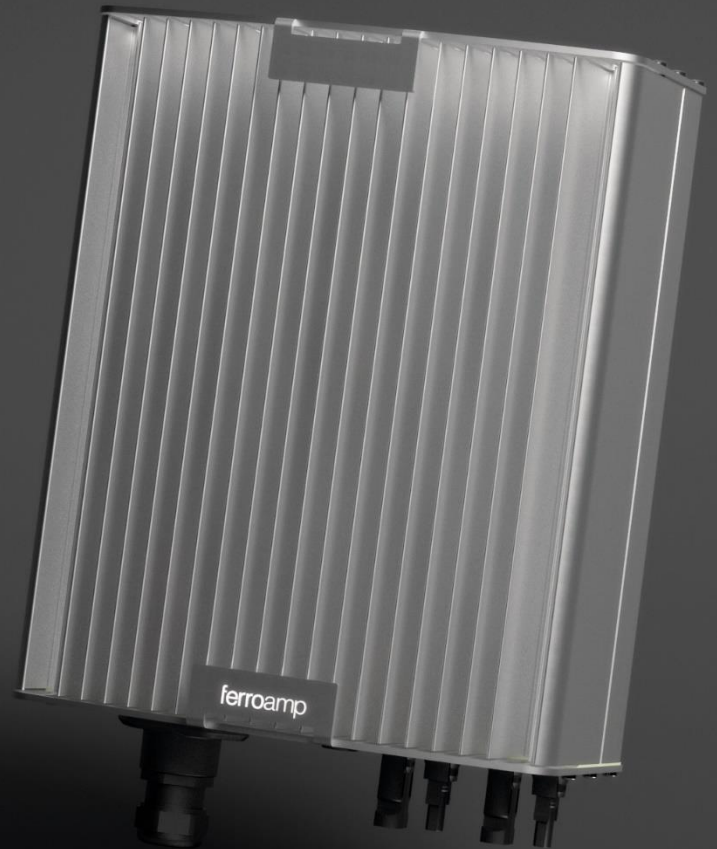


Solar String Optimizer

Single 8 / Dual 16 kW

String level optimization for DC grids

- String level MPPT and monitoring
- State of the art efficiency 99,5%
- Integrated safety shut down
- Fast installation with less cables



The new smarter way of building PV systems

Ferroamps second generation of Solar String Optimizers brings a new flexible way of planning, installing and maintaining PV systems. Each optimizer has its' built in MPP tracker and safety functions so that an installation can be built with any number of strings with maximum safety and also expanded when the need grows. Silicon carbide technology enables a peak efficiency of 99,5% for maximum usage of the solar energy. The optimizer is designed for interfacing directly to Ferroamps DC nanogrid architecture that enables solar energy to be stored or used directly on the DC side for optimum flexibility and minimal losses. The optimizer can also work in other DC grid applications where solar energy is used. Integrated power throttling to zero allows the optimizer to be used in battery charging applications and off-grid systems. The optimizer is designed for compliance with coming stricter requirements in EMC standards for solar installations.

SSO Single / Dual ¹⁾

8 / 16 kW

ferroamp

PV Input	SSO Single
Maximum PV input power	8 000 W
Absolute maximum input voltage	1 000 V
Number of MPP trackers	1
Maximum MPP current ²⁾	13.5 A
MPPT operating range ³⁾	100 – 720 V
Starting voltage	100 V
String inputs	1
DC Output	
Nominal EnergyHub DC grid voltage	760 V
EnergyHub DC grid voltage range	740 – 780 V
Voltage range for other DC grid applications ⁴⁾	400 – 800 V
Maximum DC grid output current	12.5 A
DC grid connection	3-wire (L+, L-, PE)
Maximum DC grid fuse	25 A gPV
Max efficiency	99,5%
European weighted efficiency	99,2%
System communication	Narrow band power line communication (PLC)
Output voltage during fault, shut down or disconnected from DC-bus	0 V
Physical	
Dimensions H x W x D (including connectors)	360 x 250 x 150 mm
Weight	7.0 kg
Color	Natural anodized
Installation ⁵⁾	
Ambient temperature ⁶⁾	-25°C – 45°C
Humidity; Maximum altitude	0 – 100% RH; 2000m
Degree of protection	IP 65
PV connector	MC4
DC bus output connector	Push in, 2,5 - 4 mm ² , max cable diameter 6 - 12 mm
Compliance	
LVD	EN 62109-1, EN 62109-2 (protective class I, overvoltage cat. II)
EMC	EN 61000-6-2, EN 61000-6-3, CISPR 11 Ed.6.2 2019 Class B
RoHS	Yes
Protection functions ⁷⁾	PV polarity reversal, DC polarity reversal, DC bus short circuit, Overtemperature, Residual current breaker (30 mA), String insulation monitoring

- 1) Product in development, availability to be announced at product launch.
- 2) SSO single may limit current to 12.5A, this has negligible impact on annual energy yield.
- 3) For stable operation with high I_{MPP} strings, the 720 V_{MPP} limit must be reduced by 80 V per ampere above I_{MPP} 12.5 A.
- 4) Consult Ferroamp prior to using SSO in other DC grid applications. Input MPP voltage should have 20 V margin to DC voltage.
- 5) Consult Ferroamp for design guidelines for projects exceeding 64 SSOs or 200 m cable length.
- 6) Output power may be derated if ambient temperature exceeds 45°C.
- 7) Reverse PV polarity protection up to 13.5 A short circuit current, higher currents might damage the unit.

Items included in delivery are: SSO, wall mounting bracket, ferrules, MC4 connectors (requires crimping tool), and installation manual.

