

REFU*sol* 50K-3T

The power for mid-size PV plants

- Multi MPP-Tracking
- Separate connection area
- AC low voltage mode

The completely new REFU*sol* 50K-3T inverter is developed for a maximum of flexibility in commercial and industrial PV systems.

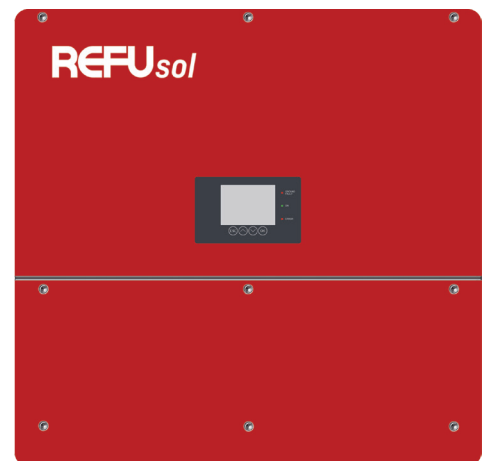
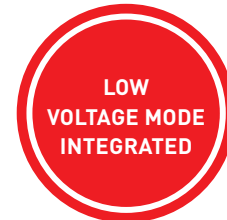
With three MPP trackers, each system design can be realized, including different orientations and tilts. Compact dimensions paired with a high power density per weight gives more installation location flexibility – on the rooftop or on ground mounted systems. With 50 kVA output power, it fits to any mid-size project.

The RS485 and the optional Ethernet interface can be connected on the same RS485 Bus or Ethernet network for Park Control applications without the need for reconfiguration. Therefore, the devices are also best suited for extending existing PV plants equipped with REFU*sol* inverters.

Surge protection devices type II are pre-equipped on the DC side for additional protection.

The REFUlog monitoring portal comes for free with each inverter during the warranty period of 5 years. The WiFi stick or Ethernet plug for easy integration into the local network is available as accessory.

For South America, an AC low voltage operation mode for 120V / 208V or 127V / 220V grid connections can be easily set up.



TECHNICAL DATA

Technical Data
Art. No.

50K-3T
851P050.300

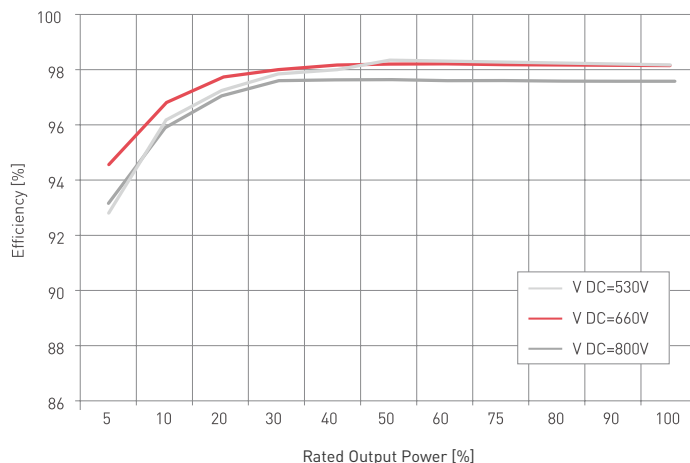
DC DATA

Max. recommended PV power (kW)	75
Number of independent MPPT	3
Number of DC inputs per MPPT	4 / 3 / 3
Max. DC voltage (V)	1,000
DC start-up voltage (V)	250
Rated DC voltage (V)	620
Operating DC voltage range (V)	250 ... 960
MPPT range at nominal power (V)	530 ... 800
Max. operational /short-circuit current per DC input	11 / 14
Max. power per MPPT (kW)	22 / 16 / 16
Max. operational current per MPPT (A)	40 / 30 / 30
Max. short circuit current (ISC) per MPPT	48 / 36 / 36
Max. inverter back-feed current to the array (mA)	<6

AC DATA

AC rated / max. power (@220/380V, 60Hz) (kW)	50 / 50
AC rated / max. power (@120/208V or 127/220V, 60Hz) (kW)	26 / 27.5
Nominal AC voltage (V)	3/N/PE: 220/380, 230/400, 120/208, 127/220
AC voltage range (V)	175 ... 480 (acc. to local standard)
Nominal frequency / Frequency range (Hz)	50, 60 / 44 ... 55, 54 ... 66 (acc. to local standard)
Active power adjustable range (%)	0 ... 100
Max AC current (A)	80
Max. THD (%)	<3
Nominal power factor / Range	1 / adjustable +/- 0.8
Max. efficiency (%)	98.5
European efficiency (%)	98.3
MPPT efficiency (%)	>99.9
Self-consumption at night (W)	<1
Feed-in from (W)	50

EFFICIENCY DIAGRAM



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AMBIENT CONDITIONS

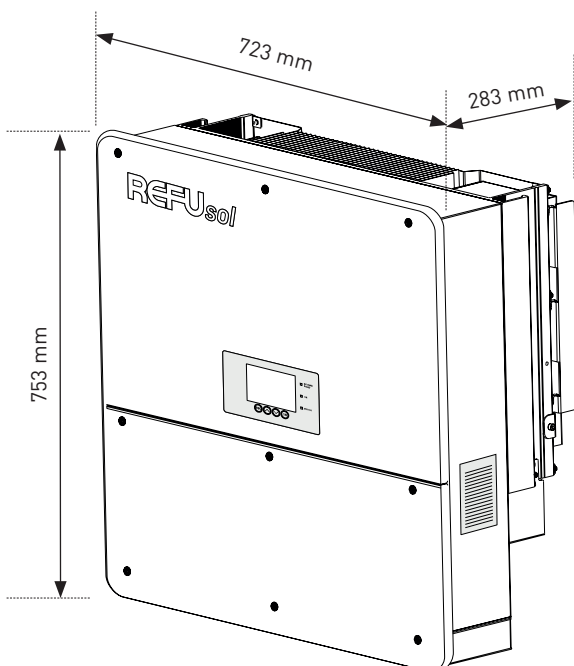
Cooling	Fan
Ambient temperature (°C)	-25 ... +60 (> 45 derating)
Rel. air humidity (%)	0 ... 100
Max elevation (m above sea level)	4,000
Noise level (dBA)	<60
Type of protection (IEC 60529)	IP65

SAFETY AND PROTECTION FUNCTIONS

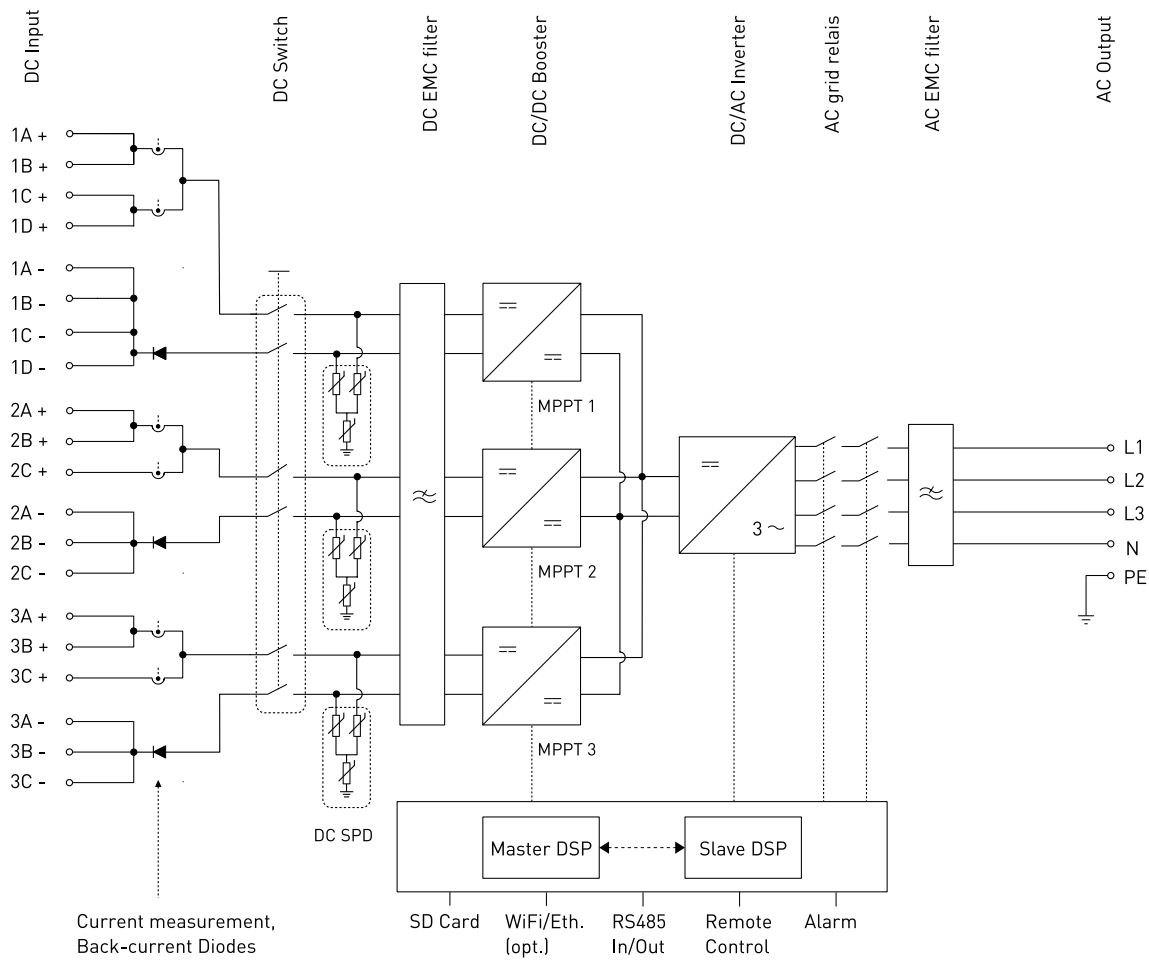
DC switch	integrated
Safety protection	Anti-islanding, DC reverse polarity, Overtemperature, Overvoltage, Overcurrent, RCMU, ground fault protection
Surge protection	DC: type II standard / AC: type III standard
String Monitoring	each 1-2 strings
String Fuses	-
Protection class (IEC 62103)	I
Overvoltage category (EN 60664-1)	DC: II, AC: III
External environment pollution degree	3

GENERAL DATA

Topology	Transformerless
Interfaces	Standard: RS485, WiFi, SD Card slot, Remote control, Multi-function relay Optional: Ethernet, GPRS
Dimension H×W×D (mm)	753 × 723 × 283
Weight (kg)	68
Certification	EN 61000-6-2, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12, IEC62109-1/2, IEC62116, IEC61727, IEC61683, IEC 60068 (1,2,14,30)

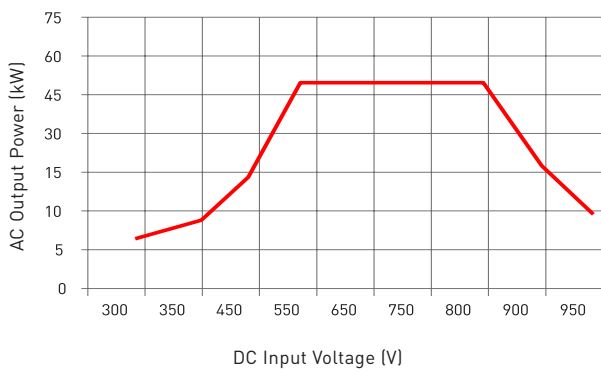
PRODUCT VIEW


SINGLE LINE DIAGRAM

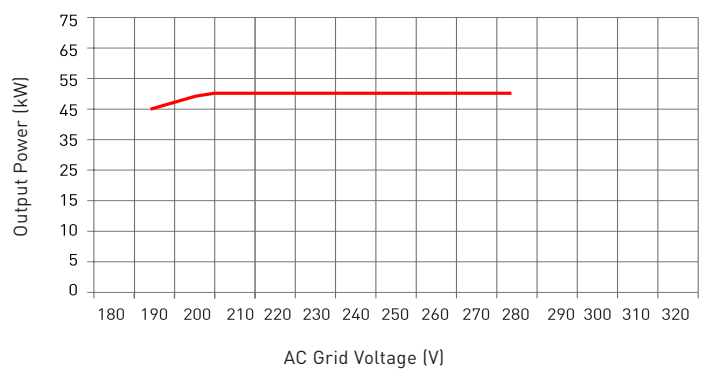


PERFORMANCE DIAGRAMS

Output Power vs. Input Voltage



Output Power vs. Grid Voltage



No responsibility is taken for the correctness of this information. Subject to modification.