

# REFU*sol* 250K-6T

*For economical and grid-compliant operation*

The REFU*sol* 250K-6T is an 800 V utility-scale inverter for large PV plants and enables reliable and grid-compliant operation with high economic efficiency.



**Fuse-free DC protection reduces maintenance and failure risks**



**100% power output at 50 °C**



**150% DC/AC ratio for optimization of system costs**



**Integration with secure Germany-hosted monitoring systems**



Utility-scale PV plants require reliable and grid-compliant operation under demanding conditions.

The REFU*sol* 250K-6T combines high performance with stable thermal design and integration into monitoring systems.

The 150% DC/AC ratio enables economical system sizing, while full power output at 50 °C ensures stable operation. This makes the string inverter suitable for use in demanding environments and ensures high plant availability.



## System Control & Grid Integration

- Active and reactive power control
- Grid parameter management
- Compliance with European grid codes (e.g. NC RfG)



## Monitoring & System Architecture

- Modbus and PBUS interfaces
- Integration into monitoring and control systems
- Remote commissioning and parameterization



## Protection & Reliability

- IP66 and C5 protection for harsh environments
- Optimized thermal management
- Technical support from Germany

# TECHNICAL DATA

REFUso1 250K-6T  
854P250

Art. No.

## DC DATA

Max. recommended PV power (kWp)	375
Max. input voltage (V)	1500
Rated input voltage (V)	1160
Start-up input voltage (V)	550
Operating voltage range (V)	500 – 1500
MPPT voltage range (V)	860 – 1300
Number of independent MPPT(s)	6
Number of DC inputs	4 for each MPPT
Max. current per MPPT (A)	60
Max. short circuit current per MPPT (A)	100
DC connection	MC4

## AC DATA

AC output power (kVA)	250 @ 50°C
Max. output current (A)	180.5
Nominal grid voltage (V)	3P/PE: 800
Grid voltage range (V)	640 – 920
Nominal grid frequency (Hz)	50 / 60
Grid frequency range (Hz)	45 – 55 / 55 – 65
Active power adjustable range (%)	0 – 100
Total harmonic distortion (THDi) (%)	< 3
Adjustable power factor range	1 (0.8 inductive ... 0.8 capacitive)
AC connection	AC terminal blocks

## PERFORMANCE

Max. efficiency (%)	99,05
EU efficiency (%)	98,8

## PROTECTION

DC switch	Integrated
Safety protection	Anti-islanding, DC reverse polarity, ground fault, PV array string fault monitoring, RCMU, over temperature, over voltage, over current
String monitoring	each MPPT
Protection class / Over voltage category	Class I / DC: OCV II ; AC: OCV III
SPD	DC: Type II / AC: Type II
AFCI / PID recovery	yes / yes

## COMMUNICATION

RS485 / USB	yes / yes
PLC	Yes

## GENERAL DATA

Ambient temperature (°C)	-30 ... +60
Self-consumption at night (W)	<3
Topology	transformerless
Type of protection	IP66
Permissible RH range (%)	0 ... 100
Max. operating latitude (m above sea level)	4000 (derating above 3000)
Weight (kg)	111
Cooling	Intelligent air cooling
Dimensions (H x W x D) (mm)	828 x 1159 x 366
Certification	IEC/EN 62109-1/2, EN 50549-1/2, VDE-AR-N 4110/4120, IEC/EN 61000-6-2/4, IEC/EN 62311, EN 50561-1, EN 50412-2, IEC 62116, IEC 61727, IEC 60068-2-1/2/14/30, IEC 61683, EN 62311, EN 300 328 V2.2.2, EN 301 489-17 V3.2.4, EN 301 489-1 V2.2.3, VDE 0126-1-1
Display	LED / BLE / App
Warranty	10 years