



Maximum Efficiency  
≥ 99.1%



Smart String Level  
Disconnection (SSLD)



Smart Self Cleaning  
Fan (SSCF)



Smart IV Curve  
Diagnosis Supported



Smart Connector  
Level Detection (SCLD)



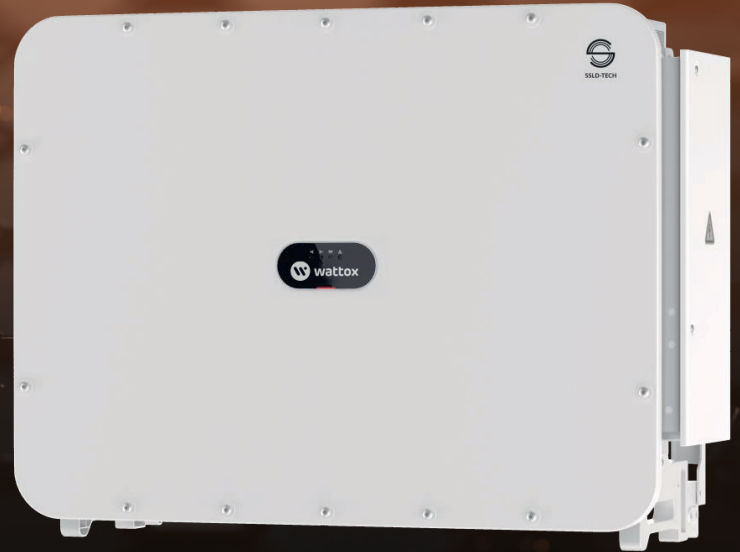
Smart Hybrid  
Cooling System



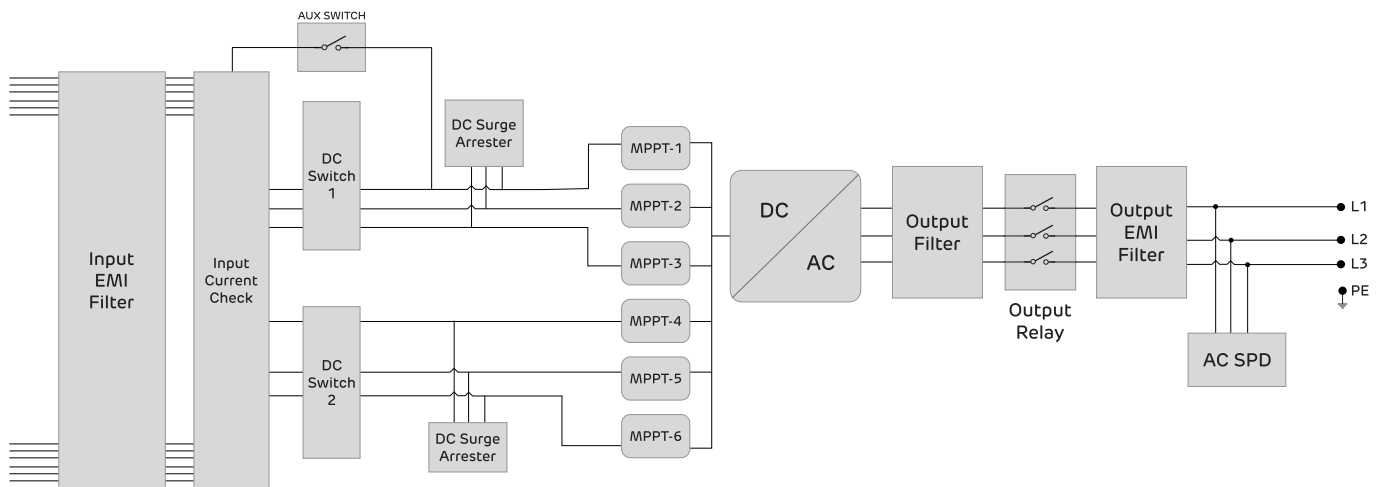
Smart Anti-icing Fan



Grid-Forming  
Supported



## Topology



# Wattox 506 KTL-H1

## Technical Specifications

### Efficiency

Maximum Efficiency	99.1%
European Efficiency	98.8%

### Input

Maximum Input Voltage	1500 V
Number of MPPT	6
Maximum Current per MPPT	105 A
Maximum Short Circuit Current per MPPT	180 A
Maximum PV Inputs per MPPT	6
MPPT Operating Voltage Range	500 V ~ 1,500 V
Nominal Input Voltage	1,200 V

### Output

Nominal AC Active Power	460 kW
Maximum AC Apparent Power	506 kVA
Maximum AC Active Power ( $\cos \varphi=1$ )	506 W
Nominal Output Voltage	1000 V, 3 W + PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Nominal Output Current	265.6 A
Maximum Output Current	292.2 A
Adjustable Power Factor Range	0.8 LG ... 0.8 LD
Total Harmonic Distortion	THDi < 1% (Rated)

### Protection

Residual Current Detection Unit and Anti-Islanding Protection	Yes
Smart String Level Disconnection (SSLD)	Yes
Smart Connector Level Detection (SCLD)	Yes
AC Overcurrent Protection and DC Reverse Polarity Protection	Yes
AC Surge Arrester and DC Surge Arrester	Type II
PV array String Fault Detection and DC Insulation Resistance Detection	Yes
Smart Self Cleaning Fan/Intelligent Fan Anti-Icing	Yes

### Communication

Display	LED Indicators
RS485, MBUS	No/Yes

### General

Dimensions (W x H x D)	1.065 x 800 x 400 mm
Weight (with mounting plate)	130 kg
Operating Temperature Range	-25°C ~ 60°C
Cooling Method	Smart Air Cooling
Maximum Operating Altitude without Derating	5000m (>4000m Derating)
Relative Humidity	0%~100% (Non-Condensing)
DC Connector	HH4SFD4TMS / HH4SMD4TMS
AC Connector	OT/DT Terminal Supported
Protection Degree	IP66
Anti-corrosion Protection	C5-Medium
Topology	Transformerless
Noise Level	75dB in Typical

### Standards Compliance

Certificates	IEC 62109-1/-2, IEC 62920, IEC 60947-2, EN 50549-2, IEC 61683, etc.
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