

i-POWER

MPPT MODULE DATASHEET

IPS-483KS



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Compact yet powerful, ideal for high-voltage solar applications

IPS-483KS is ideal for high-voltage series setups, this MPPT maximizes energy yield over long distances and changing light conditions. With a footprint identical to I-Power rectifiers, this unit can be easily installed in existing I-Power subracks



PRODUCT OVERVIEW

Input Parameter	
Parameter	Description
Operating Voltage	120 VDC to 420VDC (Start-up voltage is greater than 160 VDC)
Rated input voltage	320 VDC
MPPT voltage range	120 VDC to 340 VDC
MPPT accuracy	≥ 99 % @load ≥ 400W
Input Current	≤ 17 A

Output Parameter	
Parameter	Description
Output voltage	42 VDC - 58 VDC Rated: 54.5V DC
Linear power derating	3000 W (200V DC~425 VDC) 3000~1800W (200V DC ~ 120V DC)
Regulated voltage precision	±0.6%Vo
Ripple and noise	≤200mVp-p (bandwidth ≤20MHz)
Standby power	≤4W
Startup duration	3s~8s (Instant Start Mode)
Phone noise weighting	≤2mV
Wide-band noise voltage	≤50mV (3.4kHz~150kHz) ≤20mV (0.15MHz~30MHz)

Certifications Standard

EMC

- EN 55032 CE class B, RE EN55035, IEC 61000-3-2, IEC61000-3-3

Safety

- EN62368-1 , IEC62368-1

Lightning Protection

- 5kA, 8/20 us

Control and Monitoring

LED



- Green – Normal
- Yellow – Alarm
- Red – Fault

Communication Protocol

- CAN

Contact Us

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221 WAI YIP ST, KWUN TONG, HONG KONG

Mechanical and Cooling System	
Parameter	Description
Dimensions (H x W x D)	41.5 mm × 106.4 mm× 291 mm
Weight (Without packaging)	<2Kg
Cooling mode	Forced air cooling, built-in fan (linear speed regulation)

Reliability	
Parameter	Description
MTBF	>500,000 hours (25°C)

Environment	
Parameter	Description
Operating temperature	-10°C~+75°C Note: -10~55°C normal 55~65°C derated to 80% 65~75°C derated to 0 off Starts at -40°C after power-on
Storage temperature	-40°C~+75°C
Relative humidity	5%~95% (no condensation)
Altitude	≤ 4000m (Above 3000m, derate 1°C per 200m)
Noise	≤55dB(A) (25°C)

Protection Features	
Parameter	Description
Input over voltage protection	>430±5Vdc : Input voltage: Warning light on, output off
Input over-voltage recovery	Input voltage <415±5Vdc, automatic recovery
Input under-voltage protection	Input voltage <110±5Vdc output off
Input under-voltage recovery	150V±5Vdc < Input voltage, automatic recovery
Output over-voltage protection	Internal OV: 58.5VDC~60.5VDC (set via controller) External OV: >63VDC for >500ms Both require re-powering on
Output current limiting protection	See module output characteristic curve
Output short-circuit protection	Can be short-circuited for long time, auto restore after short circuit disappears
Overtemperature protection	With over temperature protection

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