

i-POWER

MPPT MODULE DATASHEET

IPS-483KP



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Designed for low-voltage, high-current sites—reliable performance in challenging solar conditions

IPS-483KP is optimized for shaded or irregular arrays, this MPPT handles low voltage and high current to deliver stable, reliable output. This unit is designed to be compatible with I-Power rectifiers, allowing for seamless installation in existing I-Power subracks or direct replacement of the rectifiers



PRODUCT OVERVIEW

Input Parameter	
Parameter	Description
Operating Voltage	58 VDC to 150 VDC (Startup >75 VDC)
Rated input voltage	100Vdc
MPPT voltage range	58 VDC to 120 VDC
MPPT accuracy	≥ 99% @load ≥ 400W
Input Current	≤ 46A

Output Parameter	
Parameter	Description
Output voltage	38V DC~58V DC Rated: 54.5V DC
Linear power derating	3000W (700V DC~150V DC) 3000~1800W (700V DC ~ 58V DC)
Regulated voltage	±0.6%Vo
Ripple and noise	≤200mVp-p (bandwidth ≤20MHz)
Standby power	≤4W
Startup duration	3s~11s (100Vdc@25°C, DC-on to 48V output)
Phone noise weighting	≤2mV
Wide-band noise	≤50mV (3.4kHz~150kHz) ≤20mV (0.15MHz~30MHz)

Certifications Standard

EMC

- EN 55032 RE Class A

Safety

- IEC/EN 62109-1
- IEC/EN 62368-1 compliant

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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i-POWER

Empowering Global Networks

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RM NO .32, BLOCK F, 9/F, MAI TAK INDUSTRIAL BUILDING,
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	>155±2Vdc < Input voltage: Warning light on, output off
Input over-voltage	Input voltage <145±5Vdc, automatic recovery
Input under-voltage	See input under-voltage protection curve for details
Input under-voltage	See input under-voltage protection curve for details
Output over-voltage protection	Internal over-voltage: 58.5VDC~60.5VDC, can be set via monitor When the internal over-voltage protection occurs, the module locks out External over-voltage: >63VDC, and lasts for more than 500ms When external over-voltage protection occurs, the module locks out Both can be recovered by re-powering on
Output current limiting	See module output characteristic curve
Output short-circuit protection	It can be short-circuited for a long time, and it can be automatically restored after the short-circuit disappears
Overtemperature	With over temperature protection

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