

Photon-II 48V/3000W



Solar Charger

To Support renewable installations in telecom networks in areas of poor grid or no grid, Exicom has introduced Photon-II 48V/3000W solar charger. With the MPPT algorithm ensuring close to 100% panel utilization and converter efficiency up to 95.0% the galvanic isolated solar charger sets new standards for renewable power in telecom

Key Specification



High efficiency of 95.0% of solar charger and MPPT efficiency of >99%



Galvanic isolation required as per telecom standards



Inbuilt firmware for daily energy calculation of solar kWh



Wide input voltage range of 120 - 400Vdc ensures max utilization of daylight and supports optimization of I&C costs



Global Compliance



Works with M2000 controller platform with minor configuration change making future expansion flexible

Application

- Telecom : Renewable or hybrid base station sites, LTE / Wi Max, hub sites.
- Smart Cities : Solar powered smart poles, surveillance etc.
- Commercial & Industrial solar installations, DC homes

Photon-II 48/3000W

Technical Introduction

DC Input

Voltage (Nominal)	185 - 350 Vdc
Voltage (Operating)	120 - 400 Vdc
Input Protection	Off < 120-400 Vdc < off, Fuse on both lines (+ & -) Reverse Polarity protection MOV Transient protection
Galvanic Isolation	
Input to Output	3000 Vac
Input to Ground	1500 Vac
Output to Ground	650 Vdc

Photon 48/2000W

Technical Introduction

DC Output

Voltage	54.0 V; Adj 42.0 - 58.0 V
Output Power	3000 W above 185 Vdc 1830 W at 120 Vdc
Maximum Current	62.5 A @ 48 V
Current Sharing	± 5% of max current
Static Voltage regulation	± 0.5% for 90% - 10 % load
Dynamic Voltage Regulation	± 5% for 90% - 10 % load
Hold up time	> 10 ms
Ripple Noise	< 200 mVp-p , 30 MHz bandwidth
Output Protection	Over voltage shutdown, Short circuit proof Hot- plugin inrush current limiting, Output fuse Over temprature shut-off

Other Specification

Operating Temperature	- 40°C to + 75°C, linear derating from 45°C onwards
Storage Temperature	- 40°C to + 85°C
Cooling	5% to 95% non-condensing
Humidity	Forced Air
Acoustic Noise	Less than 55 dB (A)
MTBF	> 300,000 Hrs. (25°C ambient)
Communcation Interface	CAN bus
Control & Monitoring	M2000 controller
Dimension (wxhxd)	106 x41.5x360 (mm)
Weight	2.2 kg
LED Indications	
Green	On : No faults Flash- Charger comm. ok Slow flash - Sleep mode
Yellow (warnings)	On- Input low / high, Charger in power de-rate mode current limit
Red (Alarms)	On - Abnormal temp or input shutdown, Low o/p voltage alarm, over-voltage shutdown on output, Flash - Charger fan fail

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Technical Introduction

Applicable Standards

Electrical Safety	Environmental
EMC / EMI	1
Environmental	EN 55022 (Class B), EN 55024 EN 300019-1-1/-2/-3, ROHS Complied

Part No. Description

HE513380	Photon - II 48V / 3000 W Charger
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