bp solar

180 Watt Photovoltaic Module – Saturn Technology

BP 7180

3011E-2 05/04

The BP 7180 forms part of the new high efficiency Saturn 7 Series "real power" range of solar modules. Our industry leading warranty is based on nominal power output and covers the IntegraBus™ bypass diodes, meaning more power for a longer period of time. Being the largest, most powerful module manufactured by BP Solar, the BP 7180 is ideal for installations where high power is needed in a limited area. The BP 7180 has been especially designed for grid connect applications such as large commercial roofs, residential systems and photovoltaic power plants.

Performance

Rated power	180W
Module efficiency	14.3%
Nominal voltage	24V
Warranty	90% power output over 12 years
	80% power output over 25 years
	Free from defects in materials and workmanship for 5 years

Configuration

BP 7180S	Clear Universal frame with output cables and polarized Multicontact (MC) connectors

Qualification Test Parameters

Temperature cycling range	-40ºC to +85ºC for 200 cycles
Damp heat test	85ºC and 85% relative humidity for 1000h
Front & rear static load test (eg: wind)	2400 Pa
Front load test (eg: snow)	5400 Pa
Hailstone impact test	25mm hail at 23m/s from 1m distance

Quality and Safety

- Manufactured in ISO 9001 and ISO 14003 certified factories.
- Conforms to European Community Directive 89/33/EEC, 73/23/EEC, 93/68/EEC
- Certified to IEC 61215.

Module power measurements calibrated to World Radiometric Reference through ESTI (European Solar Test Installation at Ispra, Italy)

Framed modules certified by TÜV Rheinland as Safety Class II (IEC 60364) equipment for use in systems up to 1000 VDC

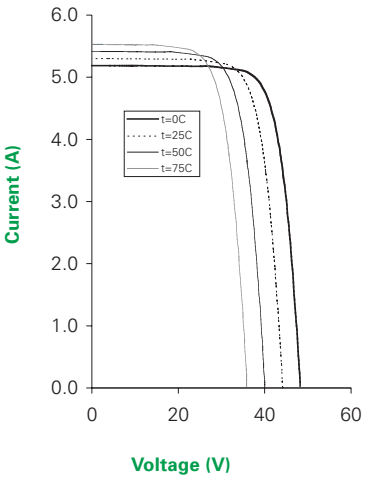
Framed modules listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating)

BP 7180S scale 1:14

Efficiency (%)

9-11	11-12	12-13	13-14	14-15

BP 7180 I-V Curves



TÜV

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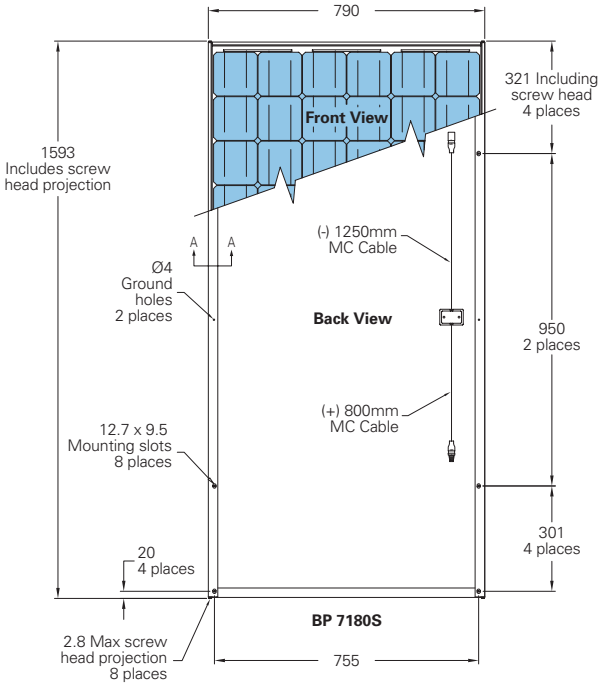
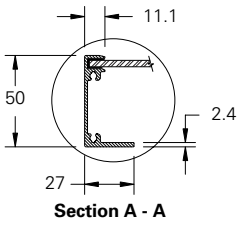
Module Diagram





Self-tapping grounding screw, instruction sheet and warranty document included with each module.

Typical Electrical Characteristics	BP 7180S
Warranted minimum power*	180W
Voltage at P_{max} (V_{mp})	36.2V
Current at P_{max} (I_{mp})	5.0A
Short circuit current (I_{sc})	5.4A
Open circuit voltage (V_{oc})	44.8V
Temperature coefficient of I_{sc}	(0.065±0.015)%/K
Temperature coefficient of V_{oc}	-(160±10)mV/K
Temperature coefficient of P_{max}	-(0.5±0.05)%/K
NOCT (Air 20°C; Sun 0.8kW/m^2; wind 1m/s)	47±2°C
Maximum series fuse rating	15A
Maximum system voltage	600V (IEC 61215 rating)
	1000V (TÜV Rheinland rating)

*As measured by BP Solar test equipment to the nearest watt.

Standard test conditions - irradiance of 1000W/m^2 at an AM1.5G solar spectrum and a temperature of 25°C.

Mechanical Characteristics	BP 7180S
Dimensions (mm) (Overall tolerances +/-3mm)	1593 x 790 x 50
Weight (kg)	15.4
Frame	Clear anodised aluminium alloy type 6063T6. Silver Universal frame.
Solar cells	72 cells (125mm x 125mm) configured geometrically for a 6 x 12 matrix connected in series.
Output cables	RHW AWG# 12 (3.3mm^2) cable with polarized weatherproof DC rated Multicontact connectors; asymmetrical lengths - 1250mm (-) and 800mm (+).
Diodes	IntegraBus™ technology includes for every 12 cells a Schottky bypass diode integrated into the printed circuit board bus
Construction	Front: High transmission 3mm tempered glass. Rear: White tedlar; Encapsulant: EVA.

Your BP Solar Distributor:

www.bpsolar.com