DC-DC CONVERTER up to 1500Vdc input

WR150

- ***Wide range of input voltage:*** *250Vdc … 1500Vdc*
- ***Output voltage :*** *12V, 15V, 24V, 48V*
- ***Power :*** *120W to 150W*
- ***Total protection***
  - *input under voltage,*
  - *reversed input voltage,*
  - *short circuit in output,*
  - *Overcurrent and overvoltage*
- ***Efficiency:*** *85%*
- ***Temperature:*** *-40°C to 70°C*
- ***input / output isolation:*** *4000Vac*
- ***Application:***
  - *Renewable energies,*
  - *Photovoltaic inverter,*
  - *Energies storage system,*
  - *Industrial control*

The WR150 is a DC-DC regulated converter with an ultra wide input range from 250V to 1500Vdc.
This product is characterized by high efficiency and reliability, high isolation and an optimum protection level.
The converter offers multiple protection functions and guarantees stable and safe operation .

Description:

Mounted in aluminum dissipation case with fixing flange.
Output power from 120W to 150W in natural convection.
Shield on 5 faces, silicon encapsulation and conformal coating,
Shock and vibration proof,
Wiring by 1.5mm² wires. 10cm length.
Overloads protection,
Continuous short circuit protection,
thermal protection (output power limiting).
Build-in EMC filter (EN55022 class A).
Voltage input: 250V to 1500V with build-in system to cut off output when undervoltage (235Vdc typical).
Single output voltage: 12V, 15V, 24V, 48Vdc

Synoptic for Typical application

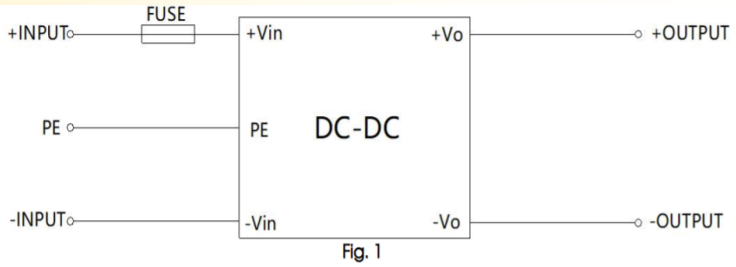


Fig. 1

Model	Recommended value
FUSE	4A/1500VDC, required

Technical specifications:

Output voltage accuracy: +/-2% typical
Line voltage regulation (input variation) : +/-1%
Load voltage regulation (output current variation) : +/-2%
Output ripple and noise : < 300mVp-p (20MHz bandwidth)
Temperature coefficient : +/-0.02% / °C
Operating temperature: –25°C to +55°C full power
Operating temperature: –25°C to +70°C with derating
Derating in temperature: 2.5% / °C above 55°C
Output current limitation : 110% peak, protection by cut off output and self-recovery by impulses.

Version and order code:

Request a quote

WR150 / out *120W / 150W*

out **:** DC output voltage : 12V,15V, 24V, 48V

TECHNICAL SPECIFICATIONS

POWER SUPPLY

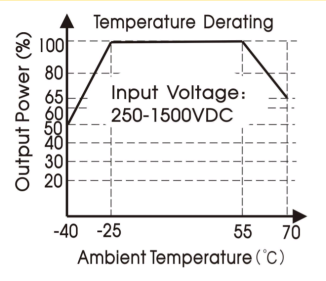
Input DC voltage: 250V …. 1500V.
Reverse polarity protected
Input current: 1A maxi @250Vdc ; 0.4A maxi @800Vdc.
Inrush current: 100A @800Vdc ; 200A @ 1500Vdc

OUTPUTS

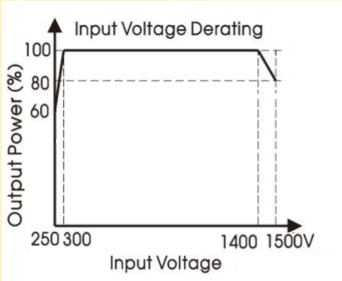
Voltage output :	12Vdc or 15Vdc 120W
	24Vdc or 48Vdc 150W
Load regulation	+/-2% (full load)
Line regulation	+/-1% (full load input)

Transient response setting time 1 ms (typical)
(25% load step change)

Output power function of temperature



Output power function of Input voltage



ENVIRONMENT

Operating temperature	-25 to 55 °C (without derating)
Storage temperature	-40 to 85 °C
Humidity	95 % (not condensing)
Protection rating	IP40
Dielectric strength	4000 Vrms continuous
Insulation resistance	> 100 Mohms at 1000Vdc
input/output capacity	1200pf typical
Safety standards	EN 62109
Efficiency maxi	between 84 and 88%.
Vibration	10-55Hz, 10G, 30 minutes X,Y,Z.
Weight	model dependant, 0.9kg

Shocks IEC 60068-2-27 (operating)	15 G / 11 ms
Bump IEC 60068-2-29 (transportation)	40 G / 6 ms
Vibrations IEC 60068-2-6 (operating)	1 G / 10 - 150 Hz
Vibrations IEC 60068-2-6 (transportation)	2 G / 10 - 150 Hz

MTBF (MIL-HDBK-217F)	>800 000 hours (+25°C)
Life time	>150 000 hours (+30°C)

Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

Immunity standard for industrial environments EN 61000-6-2		Emission standard for industrial environments EN 61000-6-4
EN 61000-4-2 ESD	*EN 61000-4-8 AC MF*	*EN 55011*
EN 61000-4-3 RF	*EN 61000-4-9 pulse MF*	*group 1*
EN 61000-4-4 EFT	*EN 61000-4-11 AC dips*	*class A*
EN 61000-4-5 CWG	*EN 61000-4-12 ring wave*	
EN 61000-4-6 RF	*EN 61000-4-29 DC dips*	

WIRING AND OUTLINE DIMENSIONS: