POWERMASTER Windows Google Play DIGITAL POWER RoHS 2011/65/EU lead-free

PSH150 is an advanced DIN rail 1-phase input, 150W SMPS (Switched Mode Power Supply) with a distinctive feature: **10kV isolation between primary and secondary**.
This allows it to be used in energy management, telecom, renewable energy and other demanding applications.

■ *Main Features*

- Class II wiring (PE connection not required)
- 10kVac primary to secondary isolation (suitable for energy management applications)
- Wide output voltage range 5…55Vdc, user settable
- Auxiliary 12V/100mA power supply
- High efficiency and compact size
- Digital Power regulation
- User settable current limitation threshold
- Remote ON/OFF or other remote control functions possible through INHIBIT input
- Modbus over USB and RS-485 interfaces for control and monitoring
- Multiple protections
- Can be paralleled for power or redundancy (integrated ORing circuitry)
- Up to 50°C operating temperature with no derating
- Wall mount fixing possible
- Suitable for POWERMASTER software (available for Windows and Android OS)

TECHNICAL DATA

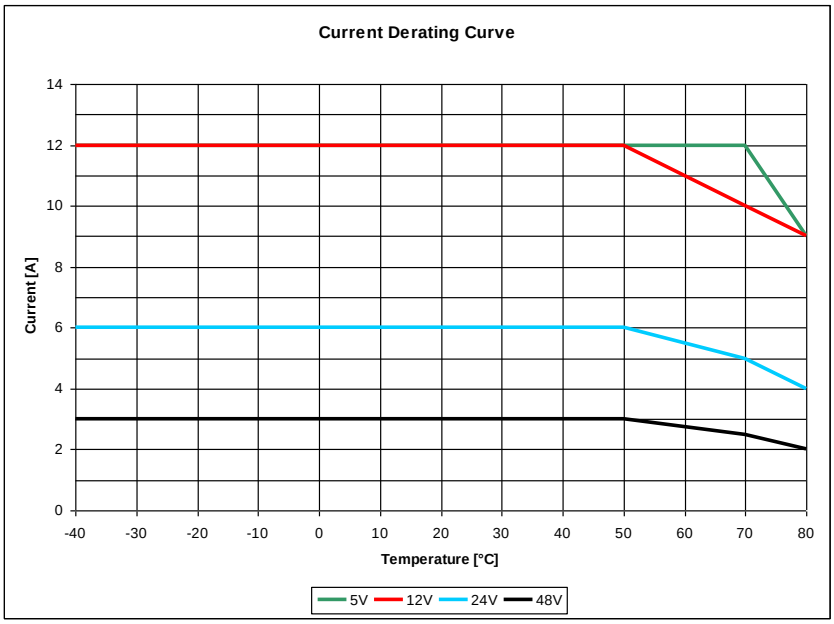
Model type	PSH150
OUTPUT DATA	
Rated voltage	5…55Vdc
Adj. output voltage range	5…55Vdc (1V resolution programmable)
Continuous current	12.0A @ 5…12Vdc, 6.0A @ 24Vdc, 3.0A @ 48Vdc or Vout x Iout= 150W Max. for Vout > 48Vdc
Overload limit	12.5A to 3.0A (depending on Vout)
Short circuit peak current	12.5A to 3.1A (depending on Vout)
Load regulation	≤ 2% @ 5Vdc, ≤ 1% @ 12Vdc, ≤ 0.5% @ ≥24Vdc
Ripple & Noise[1]	≤ 100mVpp
Hold up time	≥ 40ms
Battery charger function	C.C. / C.V. (setup via front panel or POWERMASTER application)
Battery chemistries	▪ Lead Acid ▪ Nickel ▪ Lithium
Protections	▪ Overload and short circuit protection ▪ Thermal protection ▪ Input undervoltage lockout (UVLO) ▪ Input overvoltage protection (VDR)
Output overvoltage protection	≥ 62Vdc
Status Signals User Interface	▪ 7 segment, 3 digits display ▪ 3 Status LEDs ▪ 3 programming keys ▪ **INHIBIT** - Isolated remote ON/OFF input, active for 5…30Vdc ▪ **12V AUX** - Auxiliary 12Vdc / 100mA ▪ **DC OK** - dry contact (SPDT, 24Vdc / 1A) ▪ **Modbus** over **USB** and **RS-485** interfaces
Parallel connection	Possible for power and redundancy (integrated ORing circuitry)
INPUT DATA	
Input AC rated voltage Frequency	Nominal: 120…240Vac Range: 90…277Vac 47...63Hz
Input DC rated voltage	110...400Vdc
Input AC rated current Vin = 120Vac Vin = 240Vac	 1.4A 0.5A
Input DC rated current Vin = 110Vdc Vin = 400Vdc	 1.0A 0.4A
Standby power	< 4W
Power Factor Correction	Active > 0.9
Inrush peak current	≤ 45A
Touch (leakage) current	≤ 0.1mA
Internal Protection fuse	Fuse 8AT (not user replaceable)
Recommended external protection	MCB 6A C curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations.
GENERAL DATA	
Efficiency	> 78% … > 86% (depending Vout)
Dissipated power	< 16W … < 24W (depending Vout)
Operating temperature[2]	- 40°C…+ 70°C
Derating	Depending on Vout and Vin over 50°C See charts on Fig.1
Storage temperature	- 40°C...+ 80°C
Humidity	5…95% r.H. non condensing
Life time expectation	351'777h (40.1 years) at 25°C ambient full load
Overvoltage category Pollution degree	▪ EN60255-27 IV ▪ IEC60664-1 2
Input / output isolation	10kVac
Safety Standards	▪ UL508 (reference) ▪ EN60255-27 (reference)
EMC Emission	▪ EN55011 (CISPR11) Class A ▪ EN55022 (CISPR22) Class A ▪ EN61000-3-2 Class A
EMC Immunity	▪ EN61000-4-2 Level 4 ▪ EN61000-4-3 Level 4 ▪ EN61000-4-4 Level 4 ▪ EN61000-4-5 Level 4 Tested up to 6kV ▪ EN61000-4-11 Level 2
Protection degree	▪ EN60529 IP20
Vibration sinuosoidal	▪ IEC60068-2-6 (5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z)
Shock	▪ IEC60068-2-27 (30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total)
IN/OUT Connection terminals	2.5mm², screw type pluggable (24...12AWG)
Auxiliary connection terminals	Up to 0.5mm², Fast pluggable type (20AWG)
Communication interface connector	RS-485 through RJ45 Female USB-B Type (virtual Com Port)

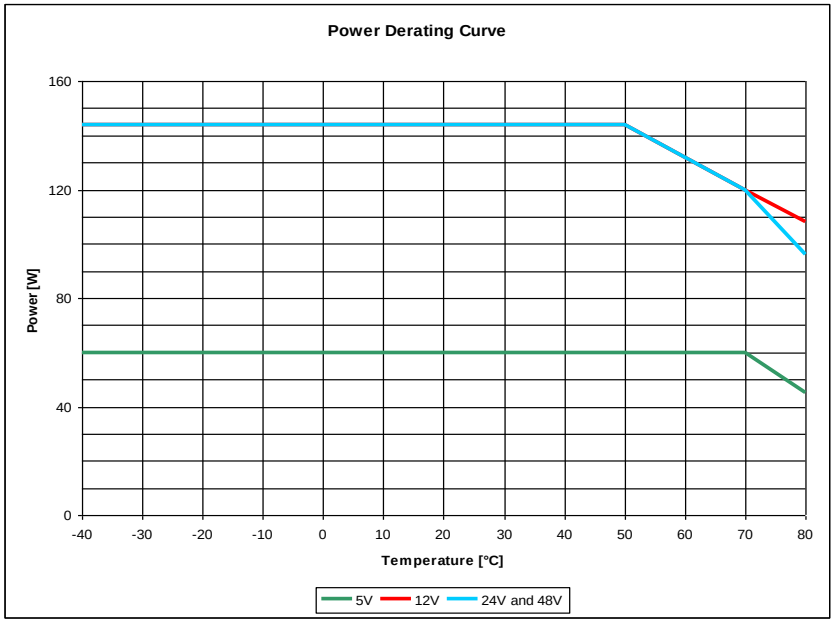
Case material	PPO, Flame retardant UL94 V-0
Weight	0.75kg
Size (W x H x D)	179.5 x 100.3 x 64.5mm

1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.
2) Start-up type tested: - 40°C, possible at nominal voltage with load deration.

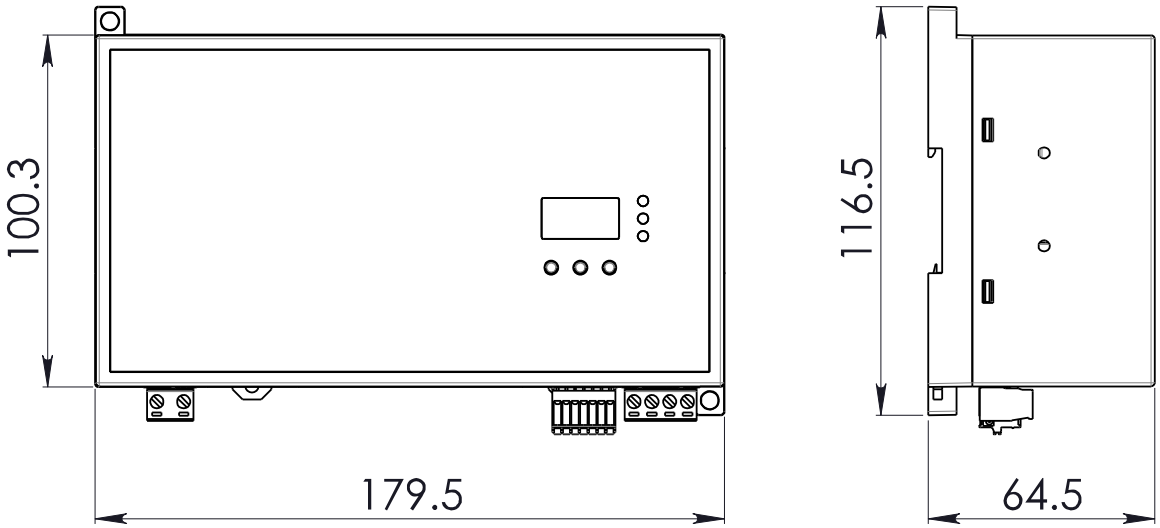
Notes:
- For more details, performance and descriptions regarding all parameters not indicated in the above table, please refer to the user manual downloadable from www.nextys.com
- Technical parameters are typical, measured in laboratory environment at 25°C and 240Vac / 50Hz, at nominal values, after minimum 5 minutes of operation.
- Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.
- Data may change without prior notice in order to improve the product.

Fig.1

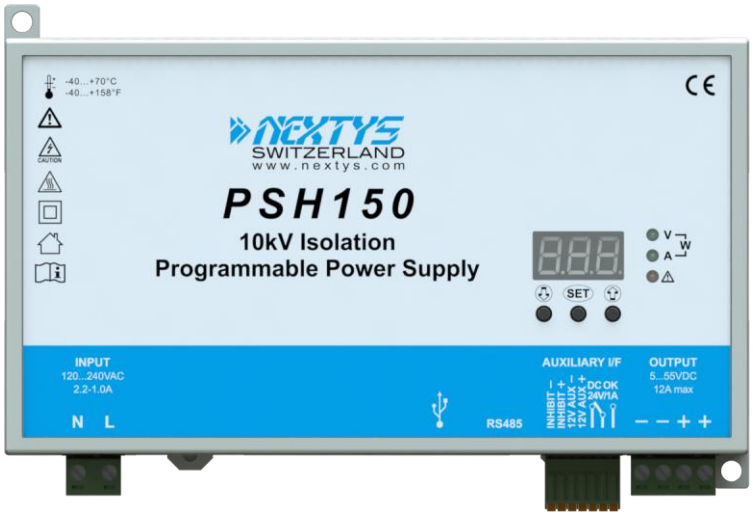




DIMENSIONS



CONNECTION



Input Connection:

Single phase:
- L = Line
- N = Neutral

DC:
- L = + Positive DC
- N = - Negative DC

Output Connection:

- + = Positive DC
- - = Negative DC

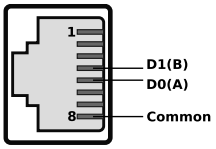
Auxiliary Connections:

INHIBIT: (5…30Vdc)
- + = Positive DC
- - = Negative DC

12V AUX: (12Vdc / 100mA)
- 12V+ = Positive DC
- 12V- = Negative DC

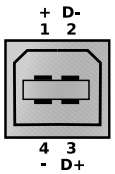
DC OK:
- NO
- NC
- COM

RS-485



- PIN4 = TX/RX D1
- PIN5 = TX/RX D0
- PIN8 = GND

USB-B Type



- 1 = VBUS (+5V)
- 2 = Data (D-)
- 3 = Data (D+)
- 4 = GND