



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

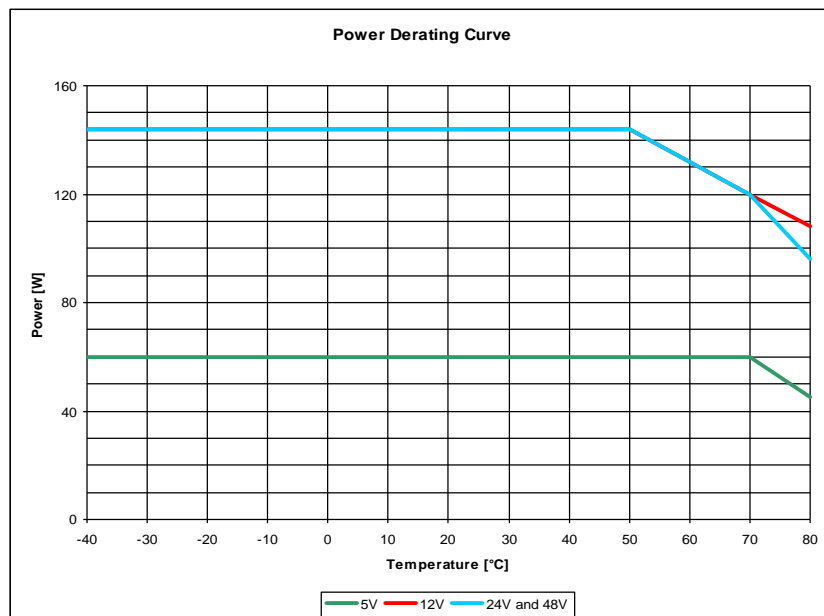
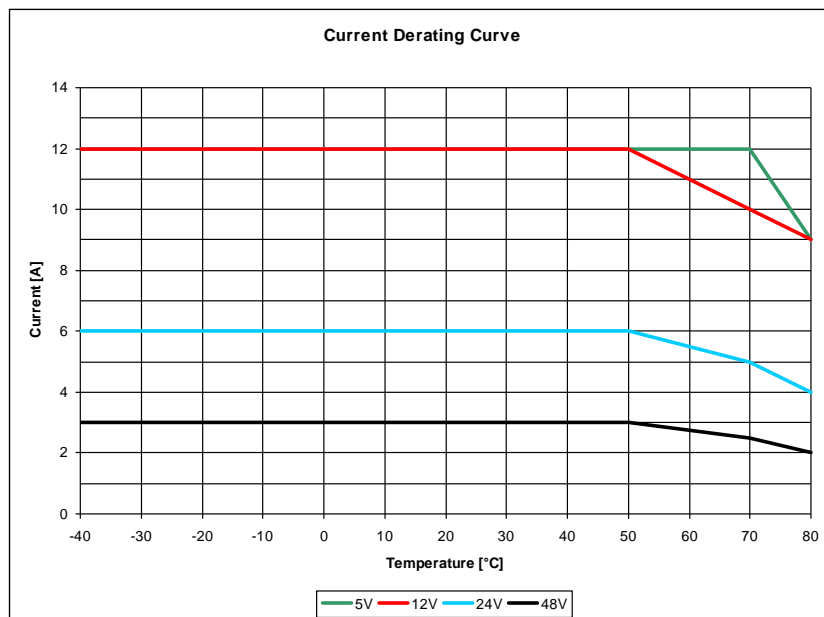
-] Class II wiring (PE connection not required)
-] 10kVac primary to secondary isolation (suitable for energy management applications)
-] Wide output voltage range 5...55Vdc, user settable
-] Auxiliary 12V/100mA power supply
-] High efficiency and compact size
-] Digital Power regulation
-] User settable 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

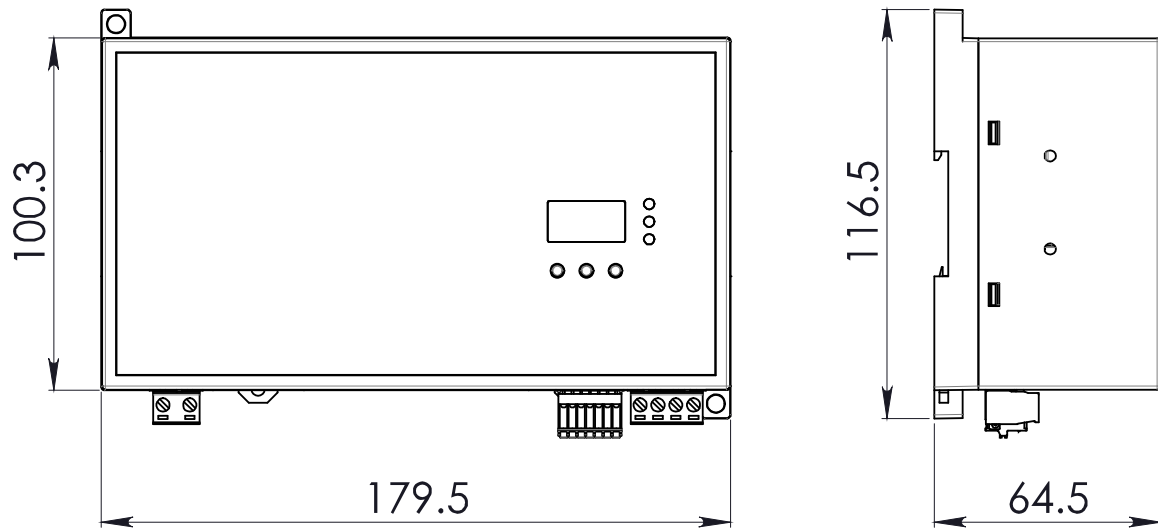
Model type	PSH150	
OUTPUT DATA		
Rated voltage	5...55Vdc	
Adj. output voltage range	5...55Vdc (1V resolution programmable)	
Continuous current	12.0A @ 5...12Vdc, 6.0A @ 24Vdc, 3.0A @ 48Vdc or $V_{out} \times I_{out} = 150W$ Max. for $V_{out} > 48Vdc$	
Overload limit	12.5A to 3.0A (depending on V_{out})	
Short circuit peak current	12.5A to 3.1A (depending on V_{out})	
Load regulation	$\leq 2\%$ @ 5Vdc, $\leq 1\%$ @ 12Vdc, $\leq 0.5\%$ @ $\geq 24Vdc$	
Ripple & Noise ¹	$\leq 120mV_{pp}$	
Hold up time	$\geq 30ms$	
Battery charger function	C.C. / C.V. (setup via front panel or POWERMASTER application)	
Battery chemistries	<ul style="list-style-type: none"> ▪ Lead Acid ▪ Nickel ▪ Lithium 	
Protections	<ul style="list-style-type: none"> ▪ Overload and short circuit protection ▪ Thermal protection ▪ Input undervoltage lockout (UVLO) ▪ Input overvoltage protection (VDR) 	
Output overvoltage protection	$\geq 62Vdc$	
Status Signals User Interface	<ul style="list-style-type: none"> ▪ 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 $V_{in} = 120Vac$ $V_{in} = 240Vac$	2.2A 1.0A	
Input DC rated current $V_{in} = 110Vdc$ $V_{in} = 400Vdc$	1.1A 0.6A	
Standby power	< 4W	
Power Factor Correction	Active > 0.9	
Inrush peak current	$\leq 45A$	
Touch (leakage) current	$\leq 0.1mA$	
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 V_{out} and V_{in})	
Dissipated power	< 16W ... < 24W (depending V_{out} and V_{in})	
Operating temperature ²	- 40°C...+ 70°C	
Derating	Depending on V_{out} and V_{in} 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	<ul style="list-style-type: none"> ▪ EN60255-27 IV ▪ IEC60664-1 2 	
Input / output isolation	10kVac	
Safety Standards	<ul style="list-style-type: none"> ▪ UL508 (reference) ▪ EN60255-27 (reference) 	
EMC Emission	<ul style="list-style-type: none"> ▪ EN55011 (CISPR11) Class A ▪ EN55022 (CISPR22) Class A ▪ EN61000-3-2 Class A 	
EMC Immunity	<ul style="list-style-type: none"> ▪ EN61000-4-2 Level 4 ▪ EN61000-4-3 Level 4 ▪ EN61000-4-4 Level 4 ▪ EN61000-4-5 Level 4 ▪ EN61000-4-11 Level 2 Tested up to 6kV	
Protection degree	<ul style="list-style-type: none"> ▪ EN60529 IP20 	
Vibration sinusoidal	<ul style="list-style-type: none"> ▪ IEC60068-2-6 (5-17.8Hz: $\pm 1.6mm$; 17.8-500Hz: 2g 2hours / axis (X,Y,Z) 	
Shock	<ul style="list-style-type: none"> ▪ IEC60068-2-27 (30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total) 	
IN/OUT Connection terminals	2.5mm ² , screw type pluggable (24...12AWG)	
Auxiliary connection terminals	Up to 0.5mm ² , 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

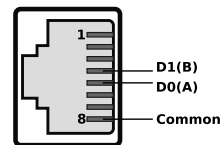
Output Connection:

- += Positive DC
- -= Negative DC

Auxiliary Connections:

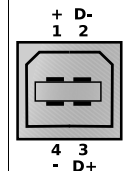
- INHIBIT:** (5...30Vdc)
- += Positive DC
 - -= Negative DC
- 12V AUX:** (12Vdc / 100mA)
- 12V+ = Positive DC
 - 12V- = Negative DC
- DC OK:**
- NO
 - NC
 - COM

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