POWERMASTER Windows GET IT ON Google Play DIGITAL POWER c UL us LISTED CE RoHS 2011/65/EU Pb lead-free

■ *Main Features*

- High efficiency and compact size
- Active PFC
- Overload 150% (3600W peak!)
- Active input surge suppression circuit for reliability
- Digital Power regulation
- CPU control allows flexibility and multiple programmable features
- Battery charger function included
- Thermally regulated “long life” fan optimal cooling in harsh operating conditions
- Wide output voltages range
- Operating on 2 phases possible with power derating
- Suitable for POWERMASTER software (available for Windows and Android OS)

TECHNICAL DATA

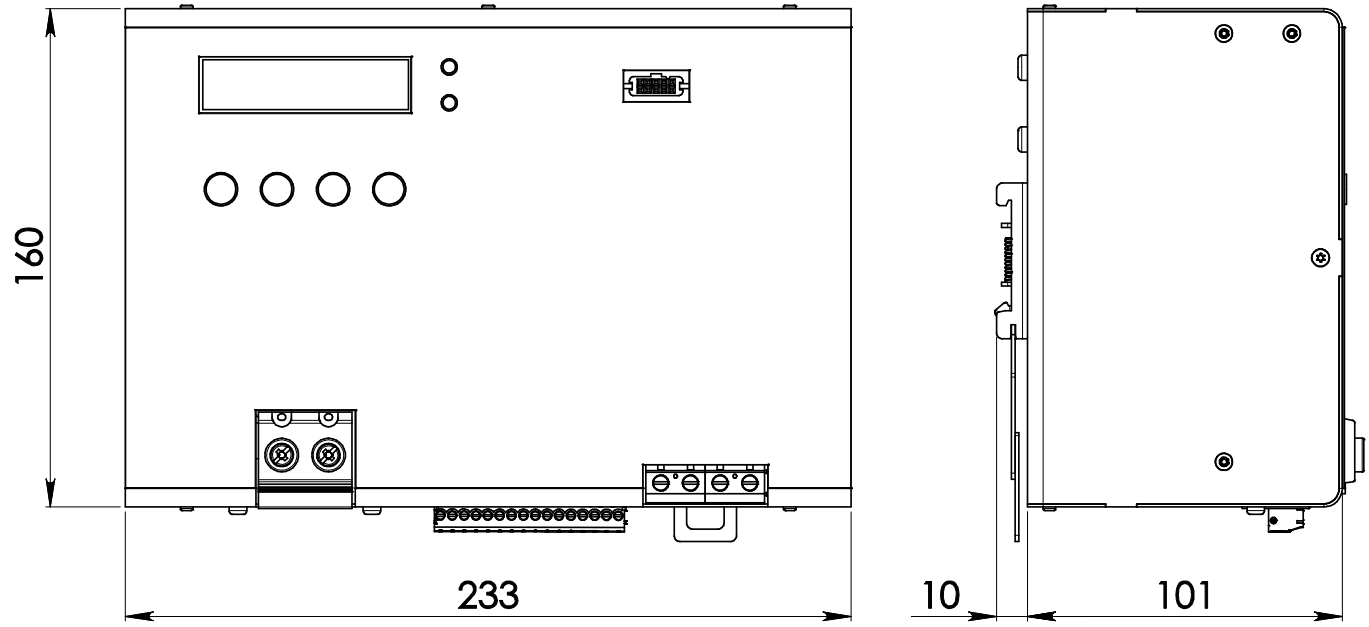
Model type	NPS2400-24	NPS2400-48	NPS2400-72	NPS2400-170
OUTPUT DATA				
Rated voltage	24Vdc	48Vdc	72Vdc	170Vdc
Adj. output voltage range	11.9…29Vdc	23…56Vdc	50…87Vdc	85…175Vdc
Continuous current	100A	50A	33A	14A
Overload limit in constant current mode	100A	50A	33A	14A
Overload limit in hiccup mode (max. 5s)	150A	75A	50A	21A
Load regulation	≤ 1% with Remote Sense active and at Vout nom.			
Ripple & Noise[1]	≤ 200mVpp			
Hold up time	≥ 10ms			
Protections	▪ Overload (with user settable threshold) ▪ Short circuit ▪ Thermal protection ▪ Output overvoltage			
Output overvoltage protection	≥ 33Vdc	≥ 68Vdc	≥ 100Vdc	≥ 200Vdc
Status Signals	▪ **DC OK / CHARGE** - green LED ▪ **ALARM** - red LED ▪ Dry contact (SPDT, 24Vdc / 1A) ▪ Alphanumeric LCD display			
User interface	▪ LCD with 4 keys ▪ 0…10V voltage and 4…20mA current output for output current 0…100% IN ▪ Auxiliary 12V / 100mA isolated power supply ▪ Load voltage sense ▪ Optoisolated remote shut down input ▪ USB communication interface via communication module (COMM-BOX) ▪ Optional: remote temperature sensor for battery charging (WNTC-2MT)			
Operating modes	▪ Overboost: allows 150% output power for 5sec, then off for 10sec ▪ Constant current: adjustable 10…100% load ▪ Battery charger: for lead acid, nickel and lithium batteries			
Parallel connection	Possible for power or redundancy (includes internal ORing circuit)			
INPUT DATA				
Input AC rated voltage[2] Frequency	Nominal: 2/3 phases, 400…500Vac (UL certified) Range: 340…550Vac 47…63Hz			
Input DC rated voltage	520…725Vdc			
Input AC rated current Vin = 400Vac Vin = 500Vac	 4.5A 3.5A			
Input DC rated current Vin = 520Vdc Vin = 725Vdc	 5.2A 3.8A			
Power Factor Correction	Active / > 0.9			
Inrush peak current[3] / I^2t	≤ 12.5A active Inrush current limiter / 0.63A^2s			
Touch (leakage) current	≤ 0.6mA			
Internal protection fuse	None, external fuse must be provided			
Recommended external protection	Fuse 3x 10AT or 3x MCB 10A C curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations.			
GENERAL DATA				
Efficiency	> 92%		> 93%	> 92%
Dissipated power	< 200W		< 180W	< 200W
Operating temperature[4,5]	- 40°C…+ 70°C UL certified up to 50°C			
Derating	- 60W/°C over 50°C Automatic power derating (1200W) for 2 phases operation			
Storage temperature	- 40°C…+ 80°C			
Humidity	5…95% r.H. non condensing			
Life time expectation	458'253h (52.3 years) at 25°C ambient full load			
MTBF	▪ MIL-HDBK-217F	> 700'000h at 25°C ambient full load		
Overvoltage category Pollution degree	▪ EN50178 ▪ IEC60664-1	III 2		
Protection Class	▪ CLASS	I		
Input / output isolation	4.2kVdc			
Input / ground isolation	2.2kVdc			
Output / ground isolation	0.75kVdc			
Safety Standards	▪ UL508 ▪ IEC/EN61010-1 ▪ IEC/EN61010-2-201 ▪ IEC/EN60950	(certified E356563)		
EMC Emission	▪ EN55011 (CISPR11) ▪ EN55022 (CISPR22) ▪ EN61000-3-2	Class A Class A Class A		
EMC Immunity	▪ EN61000-4-2 ▪ EN61000-4-3 ▪ EN61000-4-4 ▪ EN61000-4-5 ▪ EN61000-4-11	Level 3 Level 3 Level 4 Level 4 Level 2		

Protection degree	▪	EN60529	IP20
Vibration sinuosoidal	▪	IEC 60068-2-6	(5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z)
Shock	▪	IEC 60068-2-27	(30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total)
Connection terminals Input		1.5…6mm², screw type header (16...10AWG)	
Connection terminals Output		Up to 35mm², screw type header (2AWG)	
Connection terminals Auxiliary		1.5mm², screw type pluggable 16 pin (16AWG)	
Case material		Aluminum	
Weight		2.8kg	
Size (W x H x D)		233.0 x 160.0 x 101.0mm	

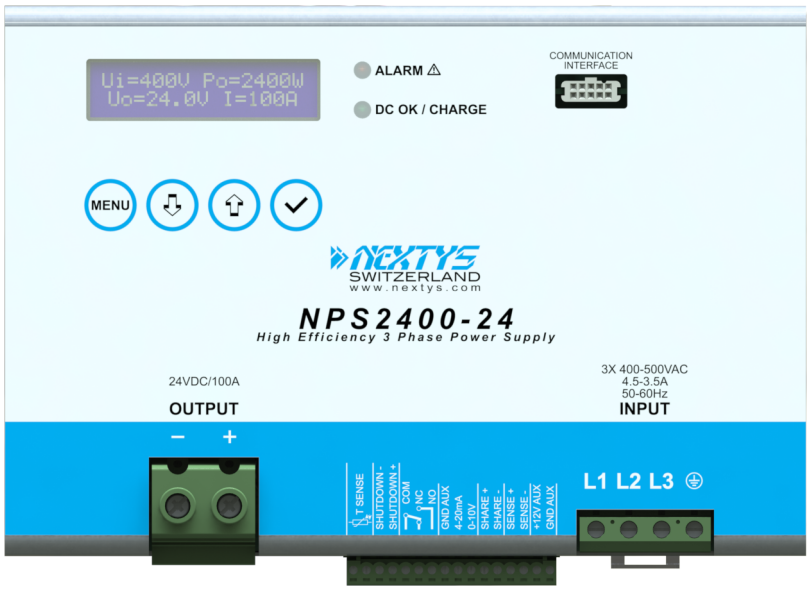
1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP and a 47µF Electrolytic capacitors.
2) Automatic power derating (1200W) for 2 phases operation.
3) Peak current measured after 0.2ms from main connection; 400Vac/50Hz; Ambient temperature at 25°C; Cold Start.
4) Start-up type tested: - 40°C, possible at nominal voltage with load deration.
5) For temperature ≤ - 20°C the LCD is not operating, but the unit will operate correctly.

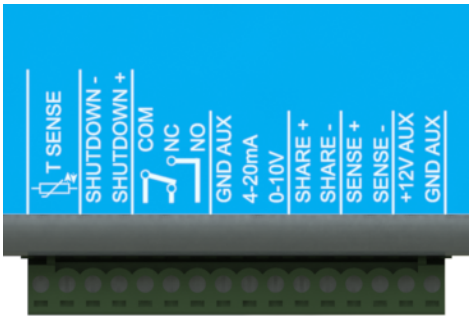
Notes:
- For more details, performance and description regarding all parameters not indicated in the above table, please refer to user manual, downloadable from www.nextys.com
- Technical parameters are typical, measured in laboratory environment at 25°C and 400Vac / 50Hz, at nominal values, after minimum 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.

DIMENSIONS



CONNECTION





Input Connection:

3 phases:
- L1 = phase 1
- L2 = phase 2
- L3 = phase 3
- ⏚ = Earth ground

DC:
- L1 = + Positive DC
- L2 = - Negative DC
- L3 = do not connect
- ⏚ = Earth ground

Output Connection:

- + = Positive DC
- - = Negative DC

Auxiliary Connections:

- TSENSE = Temperature sensor
- SHUTDOWN = Remote shutdown (+/-)
- Dry contact = Auxiliary Relay COM / NC / NO
- GNA AUX = Auxiliary Supply GND
- 4-20mA = Output current measurement 4…20mA
- 0-10V = Output current measurement 0…10V
- SHARE = Load share BUS (+/-)
- SENSE = Remote voltage sense (+/-9
- +12V AUX = Auxiliary Supply 12Vdc / 100mA
- GNA AUX = Auxiliary Supply GND