



■ Main Features

- Up to 240W output power (voltage dependent)
- Converts any voltage between 11V and 55V to any voltage between 5V and 55V
- High efficiency and compact size
- Constant current or hiccup mode limitation, user settable
- Digital Power regulation
- Isolated topology (2.2kVdc)
- Modbus over USB interface for control and monitoring
- Multiple integrated protections
- Parallelable for power or redundancy (integrated ORing circuitry)
- Suitable for **POWERMASTER** software (available for Windows and Android OS)

TECHNICAL DATA

Model type	NDW240	
OUTPUT DATA		
Rated voltage	5...55Vdc	
Adj. output voltage range	5...55Vdc	
Continuous current / power	10A / 240W (see charts on Fig.1)	
Overload limit in constant current mode	11A / 264W (see charts on Fig.1)	
Overload limit in hiccup mode (max. 5s)	15A / 360W (see charts on Fig.1)	
Short circuit peak current	18A	
Load regulation	≤ 4% @ 5Vdc, ≤ 2% @ 12Vdc, ≤ 1.5% @ ≥ 24Vdc	
Ripple & Noise ¹	≤ 200mVpp	
Hold up time	≥ 5ms	
Protections	<ul style="list-style-type: none"> ▪ Overload and short circuit: Constant current or Hiccup mode (user settable) ▪ Thermal protection ▪ Output overvoltage 	
Output overvoltage protection	120% of Vout active self tracking	
User interface	<ul style="list-style-type: none"> ▪ 7 segment, 2 digit display ▪ 3 programming keys ▪ DC OK - dry contact (NO, 24Vdc / 1A) ▪ Modbus over USB interface 	
Measurement precision	<ul style="list-style-type: none"> ▪ Output voltage : range: 5-55V +/- 1% +/- 1 digit ▪ Output current : range: 0-16A +/- 3% +/- 1 digit ▪ Input voltage : range: 10-52V +/- 3% +/- 1 digit 	
Parallel connection ²	Possible for power or redundancy with integrated ORing circuitry	
INPUT DATA		
Input DC rated voltage	Nominal: 12...48Vdc Range: 11...55Vdc (UL certified)	
Input DC rated current	12A	
Protections	<ul style="list-style-type: none"> ▪ Input Overvoltage > 60V active shutdown ▪ Reverse polarity ▪ Fuse 20A mini ATO blade (not user replaceable) 	
Recommended external protection (use DC rated devices)	20A Fuse or MCB 20A C curve	
GENERAL DATA		
Efficiency	77% ... 92% (depending on Vin/Vout)	
Dissipated power	< 28W (depending on Vin/Vout)	
Operating temperature ³	- 40°C...+ 70°C UL certified up to 60°C	
Derating	Depending on Vin and Vout over 60°C See charts on Fig.2	
Storage temperature	- 40°C...+ 80°C	
Humidity	5...95% r.H. non condensing	
Life time expectation	180'542h (20.61 years) at 25°C ambient full load	
MTBF	<ul style="list-style-type: none"> ▪ MIL-HDBK-217F > 600'000h at 25°C ambient full load 	
Overvoltage category	<ul style="list-style-type: none"> ▪ EN50178 I 	
Pollution degree	<ul style="list-style-type: none"> ▪ IEC60664-1 2 	
Protection Class	<ul style="list-style-type: none"> ▪ Class I 	
Input / output isolation	2.2kVdc	
Input / ground isolation	2.2kVdc	
Output / ground isolation	0.75kVdc	
Safety Standards	<ul style="list-style-type: none"> ▪ UL508 (certified E356563) ▪ EN60950 (reference) 	
EMC Emission	<ul style="list-style-type: none"> ▪ EN55011 (CISPR11) Class B 	
EMC Immunity	<ul style="list-style-type: none"> ▪ EN61000-4-2 Level 3 ▪ EN61000-4-3 Level 3 ▪ EN61000-4-4 Level 2 ▪ EN61000-4-5 Level 1 	
Protection degree	<ul style="list-style-type: none"> ▪ EN60529 IP20 	
Vibration sinusoidal	<ul style="list-style-type: none"> ▪ IEC 60068-2-6 (5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z)) 	
Shock	<ul style="list-style-type: none"> ▪ IEC 60068-2-27 (30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total) 	
IN/OUT Connection terminals	2.5mm ² , screw type pluggable (24...12AWG)	
Communication interface connector	Mini USB-B Type (virtual Com Port)	
Case material	Aluminum	
Weight	0.400kg	
Size (W x H x D)	40.0 x 115.0 x 110.0mm	

1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.

2) Pay attention, set the operating mode to "parallel" when connecting more units in parallel, see Instruction Manual for details.

3) Start-up type tested: - 40°C, possible at nominal voltage with load deration.

Notes:

- Technical parameters are typical, measured in laboratory environment at 25°C and 24Vdc input and output voltage, 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

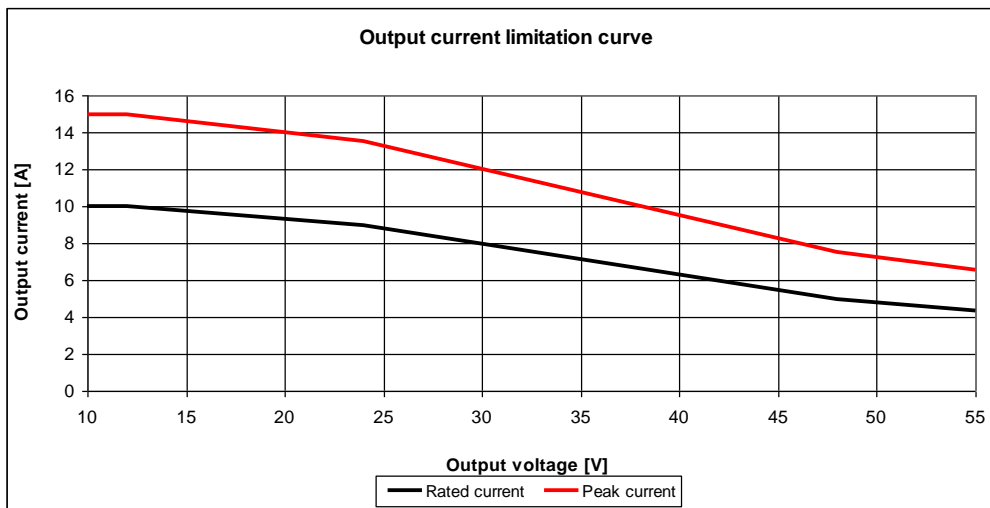
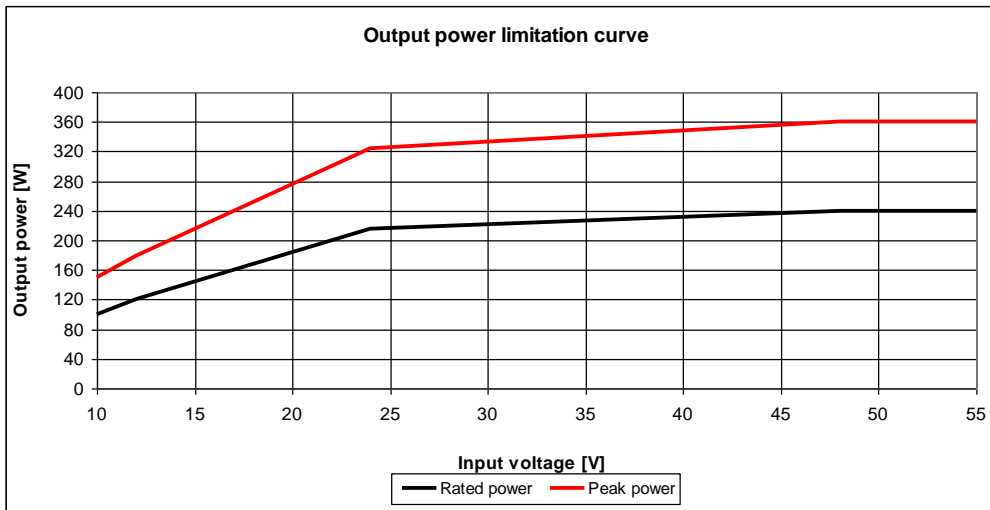
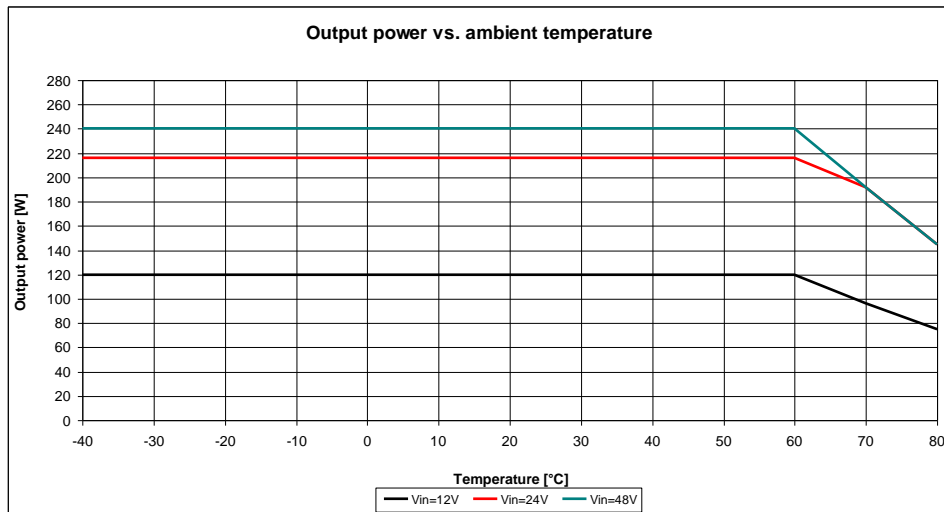
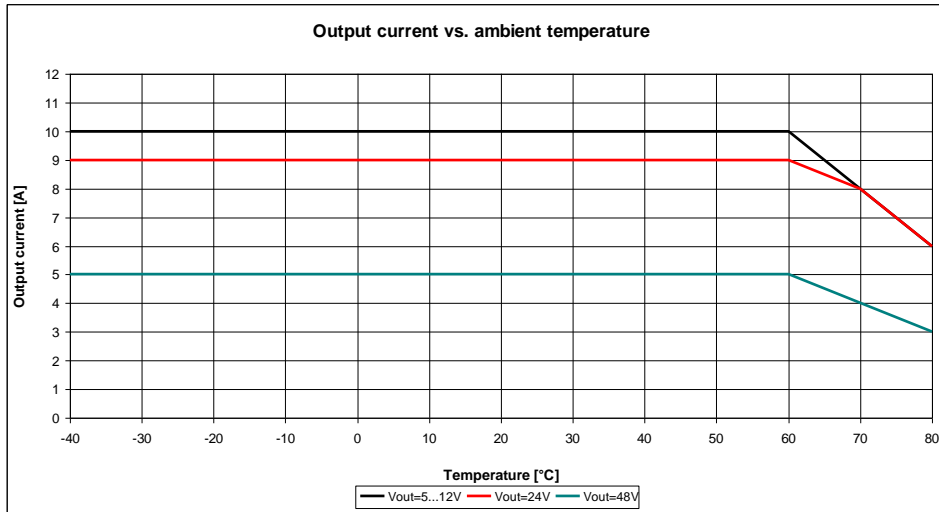
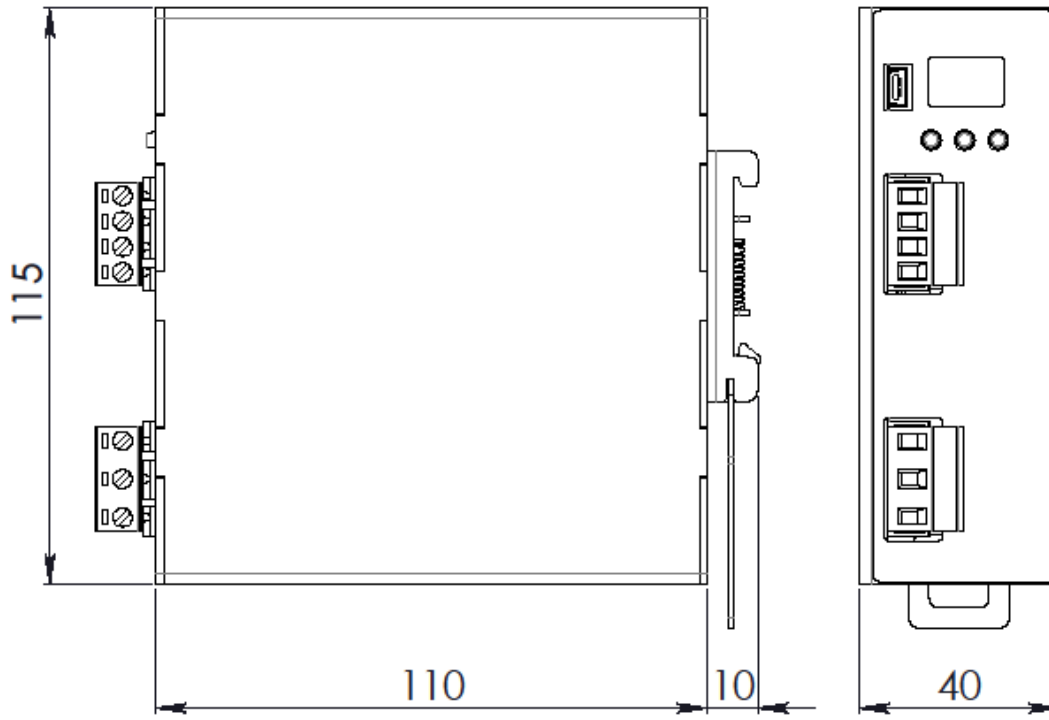


Fig.2



DIMENSIONS



CONNECTION



Input Connection:

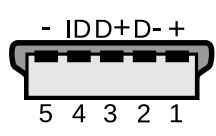
- + = Positive DC
- - = Negative DC
- ⊕ = Earth ground

Output Connection:

- + = Positive DC
- - = Negative DC

Signalling:
DC OK: Dry contact
 ▪ NO
 ▪ COM

Mini USB-B Type



- 1 = VBUS (+5V)
- 2 = Data (D-)
- 3 = Data (D+)
- 4 = Not connected (ID)
- 5 = GND