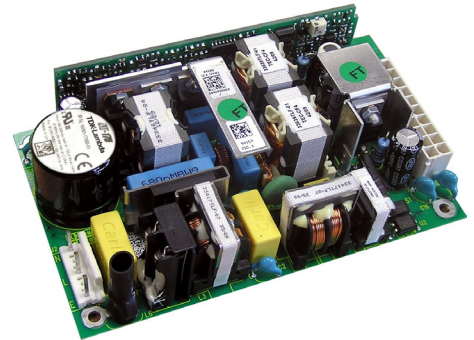
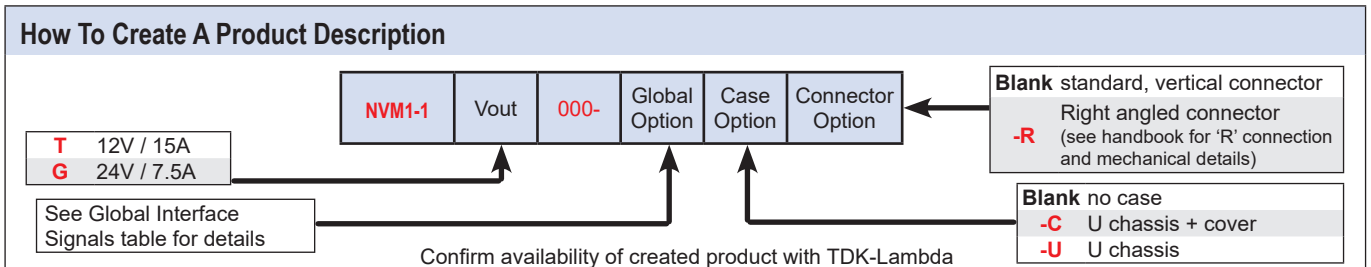


180W Configurable Medical power supply.



Features	Benefits
• High efficiency	Minimises heat in system
• Low profile	Fits 1U applications
• Dual fusing	Simplifies system design, reduces cost
• 2 x MOPPs isolation	Simplifies system design
• 3 year warranty	Low cost of ownership

Input			
Input Voltage	90-264Vac (100 - 240Vac nominal)	Input Frequency	45 - 63Hz
Input Harmonics	EN61000-3-2 compliant	Inrush Current	<40A at 25°C and 230Vac (cold start)
Input Fuse	Dual fused, Fast acting (not user accessible)		
Earth Leakage Current	80µA at 120Vac (60Hz), 170µA max at 240Vac (60Hz) Worst case leakage current is less than 200µA at 264Vac, 63Hz (normal condition, 0.33mA Single Fault Condition)		



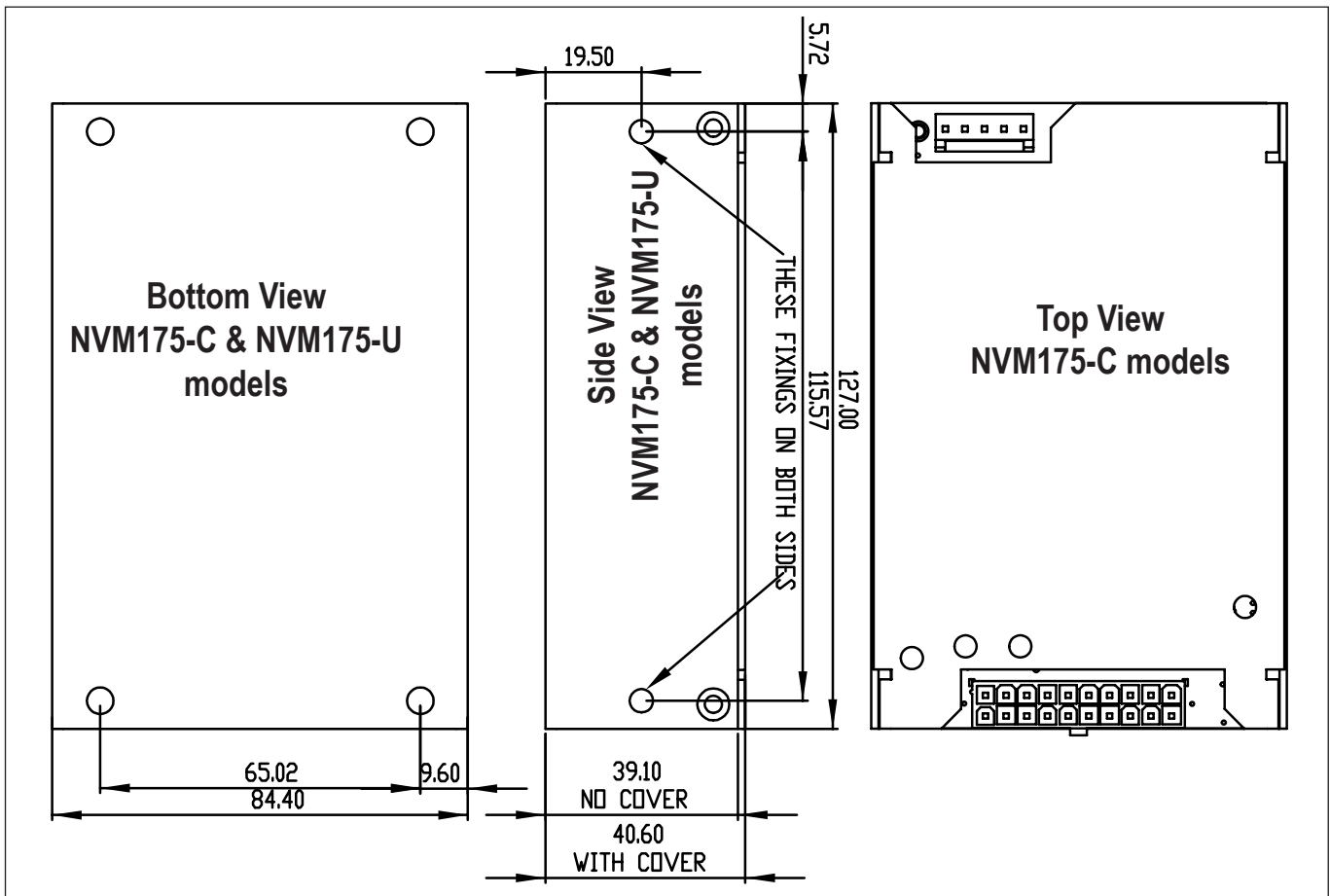
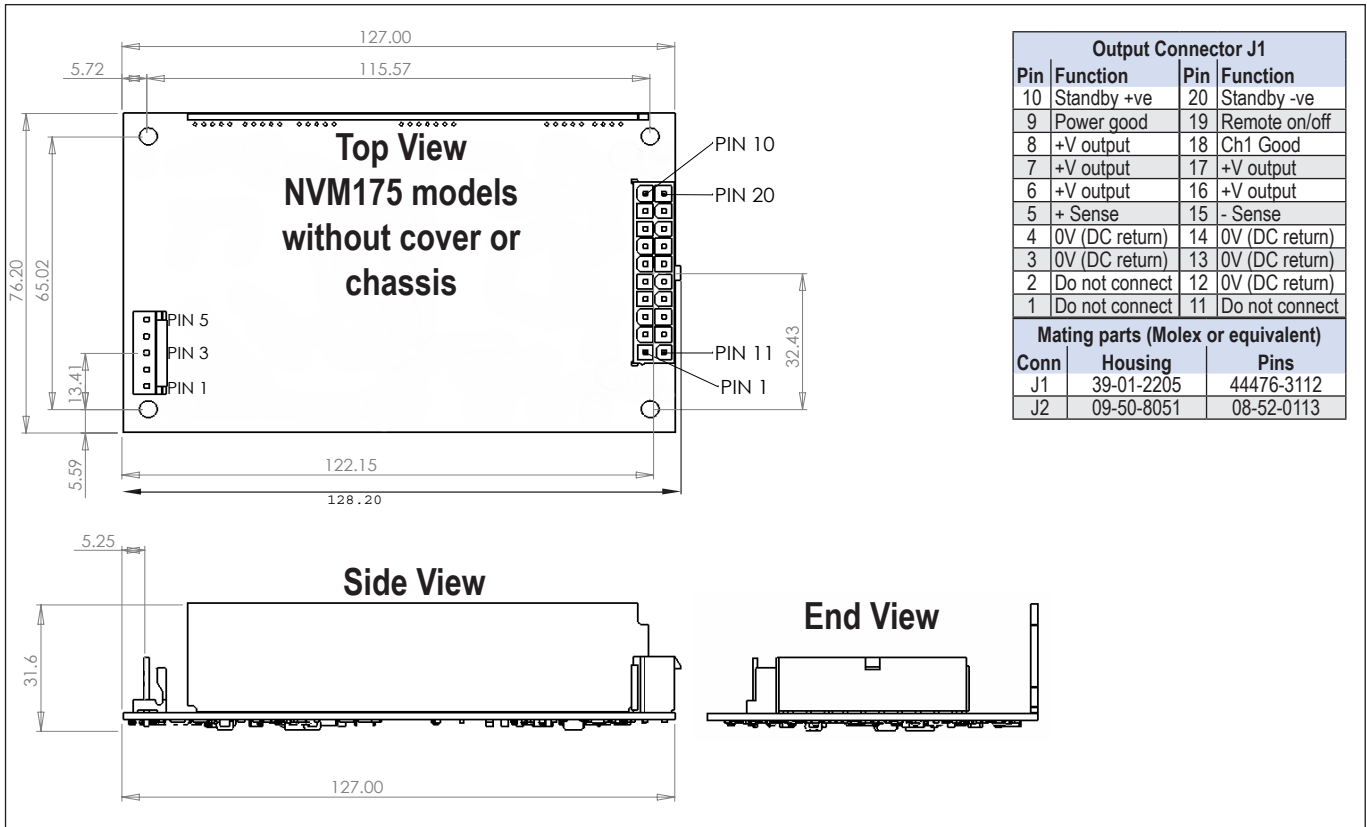
QUICK SELECTOR - example configurations

Model	Ch1	Standby	Remote On/Off
NVM1-1T000-S1	12V / 15A	12V / 0.2A	TTL high / OC to inhibit
NVM1-1G000-S1	24V / 7.5A	12V / 0.2A	TTL high / OC to inhibit

Output Specification

Turn on time	2s max	at 90Vac and 100% rated output power
Efficiency	up to 90%	
Hold up	16ms min	at 90Vac
Ripple and Noise	<1%	(or 50mV if higher) pk-pk, using EIAJ test method & 20MHz bandwidth
Voltage Accuracy	±1%	
Remote Sense	Yes	Channel 1. Max 0.5V total line drop
Minimum Load	No	on any output
Total Regulation	1% (or 50mV if greater)	Including Line (for 90-264Vac input change) and Load (for 0-100% load change)
Transient Response	<4%	of set voltage for 50% load change (in 50µs within the range 25-100% load)
Recovery	500µs	for recovery to 1% of set voltage
Over Voltage Protection	Yes	120-135% of Vout. Remove ac for 10 seconds then reapply to restart unit
Short Circuit Protection	Yes	
Over Temperature Protection	Yes	
Output Power	180W	

Isolation			
Input to Output	Reinforced	2 x MOPPs (3rd edition 60601) 4.5kVac	type tested to 4.5kVac (equivalent to 6.3kVdc), production tested to 4.3kVdc
Input to Earth	Basic	1 x MOOP (3rd edition 60601) 1.5kVac, 2.3kVdc	
Output to Earth		1 x MOPP (3rd edition 60601) 1.5kVac	
Environment			
Temperature		0°C to 50°C operational, -40°C to 85°C storage (max 12 months). Full load, with 2m/s air blown from input to output (approximately 10CFM)	
Derating		50°C to 70°C derate each output by 2.5% per °C with 2m/s air blown from input to output	
Low Temp Startup		-20°C	
Humidity		5 - 95% RH non condensing	
Shock		±3 x 30g shocks in each plane, total 18 shocks 30g shock = 11ms (+/-0.5msec), half sine Conforms to EN60068-2-27, EN60068-2-47, IEC68-2-27, IEC68-2-47, JIS C0041-1987. Conforms to MIL-STD-810E/F, Method 516.5, Pro I, IV, VI	
Vibration		Single axis 10 - 500 Hz at 2g (sweep and endurance at resonance) in all 3 planes Conforms to EN60068-2-6, IEC68-2-6 Conforms to MIL-STD-810E, Method 514.4, Pro I, Cat 1,9	
Altitude		5000 metres operational (3000 metres for medical approval, 4000m for 60601-1 3rd edition)	
Pollution		Degree 2, Material group IIIb	
Global Interface Signals			
	Standby	PSU good signal	Logic level to enable main output
S	12V / 0.2A	Power good	High
S1	12V / 0.2A	Power good	Low
S2	12V / 0.2A	Channel 1 good	High
S3	12V / 0.2A	Channel 1 good	Low
S5	5V / 0.5A	Power good	Low
Power good = logic low signal to indicate when ac supply is good and output 1 is within regulation			
Channel 1 good = logic low signal to indicate when output 1 is within regulation			
Approvals / Accreditations			
IEC/EN 62368-1, UL62368-1 / CSA 22.2 No 62368-1		File E135494	
IEC/EN 60950-1, UL60950-1 / CSA 22.2 No 60950-1		File E135494	
IEC/EN 60601-1, UL/CSA 60601-1, ANSI/AAMI ES60601-1 CAN/CSA-C22.2 No 60601-1-08		File E349607	
CE Mark (EN62368-1)		Low Voltage Directive (LVD), electromagnetic compatibility (EMC) and Restriction of Hazardous Substances (RoHS)	
UKCA (EN62368-1)		Electrical Equipment (Safety) Regulations, electromagnetic compatibility (EMC) and Restriction of Hazardous Substances (RoHS)	
CB certificate and Report available on request		<i>Please check with technical sales for status of approvals</i>	
Designed and manufactured under the control of ISO9001 and ISO13485 (including risk management).			
Immunity EN61000-6-2:2005, EN60601-1-2:2007			Criteria
Electrostatic Discharge	EN61000-4-2	Level 3	Air discharge 8kV, Contact discharge 6kV. Not applicable to open frame units
Electromagnetic Field	EN61000-4-3	Level 3	12V/m
Fast / Burst Transient	EN61000-4-4	Level 4	ac input tested to 4.4kV dc output tested to 2.2kV
Surge Immunity	EN61000-4-5	Level 3	Common mode - 2.2kV, Differential - 1.1kV
Conducted RF Immunity	EN61000-4-6	Level 3	12V
Power Frequency Magnetic Field	EN61000-4-8	Level 4	30A/m
Voltage Dips, Variations, Interruptions	EN61000-4-11	Class 3	Criteria B for 5 sec interruption and dips to 40% for 5 cycles below 154Vac nominal input
Emissions EN61000-6-3:2007, EN60601-1-2:2007			
Radiated Electric Field	EN55011, EN55032	(as per CISPR.11/22) Class B, FCC47 part 15 subpart B see application note for details.	
Conducted Emissions	EN55011, EN55032	(as per CISPR.11/22) Class B, FCC47 part 15 subpart B	
Conducted Harmonics	EN61000-3-2	Class A	
Flicker	EN61000-3-3	Compliant - d _{max} only	



- Notes:
1. All customer fixings M3
 2. Maximum thread penetration 4.5mm
 3. Maximum torque 0.9Nm
 4. All tolerances +/-0.5mm

Input and output connectors are not included with the product. They are available from TDK-Lambda

1 off input connector and 3 crimps part number is 94910.
1 off output connector and 20 crimps part number is 94668



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