ARTESYN NPT40-M SERIES

55 Watts

Advanced Energy's Artesyn NPT40-M series of open-frame AC-DC power supplies comprises three triple output models, covering a variety of standard voltages from 3.3 to 24 VDC. Each model accepts a universal input of 90 to 264 VAC or 127 to 300 VDC. All models feature ITE and medical safety approvals. The series is primarily intended for use in information technology equipment (ITE) and light industrial systems, as well as for equipment intended for non-patient contact and non-patient critical use in low power medical, dental and laboratory applications.

AT A GLANCE

Total Power

45 to 55 Watts

Input Voltage

90 to 264 VAC
120 to 300 VDC

of Outputs

Triple

SPECIAL FEATURES

- Medical and ITE safety approvals
- Universal input
- Less than 1U high
- 2” x 4” footprint
- Overload and short circuit protection
- High MTBF
- Built in EMI filter (CISPR 22 Class B)
- 0°C to +80°C operation
- Input power < 74 watts
- Complies with EN61000-3-2
- Class I approved
- Class II approved (with Class A EMI)
- LPX100 enclosure kit available
- Dual AC fuses
- RoHS compliant

SAFETY

- TUV: 62368, 60601-1, 3rd edition
- UL: 62368, 60601-1
- CSA: 62368, 60601-1
- CB: Certificate and report 3rd edition
- CE: Mark (LVD)
- CQC: Mark
- UKCA: Mark

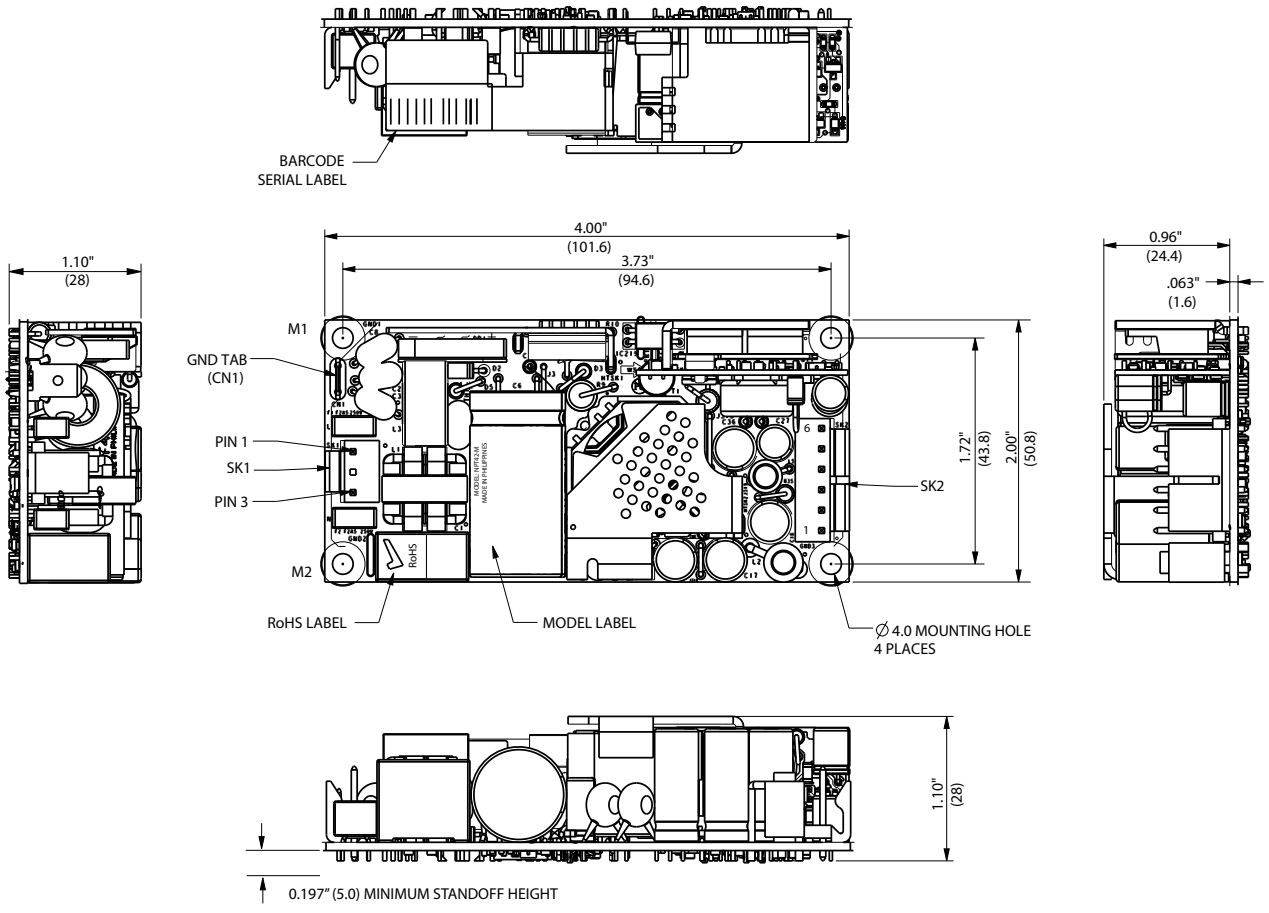
ELECTRICAL SPECIFICATIONS

Input	
Input range	90 to 264 VAC (wide range) 127 to 300 VDC
Frequency	47 to 440 Hz
Inrush current	< 50 A peak @ 230 VAC, cold start @ 25°C
Input power	< 74 Watts
Efficiency	75% average
EMI/RFI	FCC Class B conducted; CISPR 22 Class B conducted; EN55022 Class B conducted, VDE0878PT3 Class B conducted
Safety ground leakage current	275 µA @ 50/60 Hz; 264 Vac input
Output	
Maximum power	45 W for convection 55 W with 30CFM forced air
Hold-up time	10/20 ms 115/230 VAC input line
Overload protection	Short circuit protection on all outputs. Case overload protected @ 110% to 160% above peak rating
Overvoltage protection	6.5 to 7.5 VDC on the main output

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	0° to 50°C ambient derate each output at 2.5% per degree from 50°C to 80°C. -20°C start up
Storage temperature	-45°C to +85°C
Electromagnetic susceptibility	Designed to meet EN61000-4; -2, -3, -4, -5, -6, -8, -11 Level 3
Humidity	Operating; non-condensing 10% to 90% RH
Vibration	IEC68-2-6 to the levels of IEC721-3-2
MTBF demonstrated	> 550,000 hours at full load and 25°C ambient conditions

MECHANICAL DRAWING



ORDERING INFORMATION

Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30CFM Forced Air	Peak Load[1]	Regulation[2]	Ripple P/P (PARD)[3]
NPT42-M	+5 V	0.5 A	5 A	8 A	9 A	± 2%	50 mV
	+12 V	0.1 A	2.5 A	3 A	4 A	± 5%	120 mV
	-12 V	0 A	0.5 A	0.7 A	0.7 A	± 5%	120 mV
NPT43-M	+5 V	0.5 A	5 A	8 A	9 A	± 2%	50 mV
	+15 V	0.1 A	2 A	2.4 A	4 A	± 5%	150 mV
	-15 V	0 A	0.5 A	0.7 A	0.7 A	± 5%	150 mV
NPT44-M	+5 V	0.5 A	5 A	8 A	9 A	± 2%	50 mV
	+24 V	0.1 A	1.0 A	1.5 A	2 A	± 5%	240 mV
	+12 V	0 A	0.5 A	0.7 A	0.7 A	± 5%	120 mV

1. Peak current lasting < 30 seconds with a maximum 10% duty cycle.
2. At 25°C including initial tolerance, line voltage, load currents and output voltages adjusted to factory settings.
3. Peak-to-peak with 20 MHz bandwidth and 10 µF in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
4. Minimum loads are required.
5. This product is a Component Power Supply and is only for inclusion by professional installers within other equipment and must not be operated as a standalone product. EMC compliance to appropriate standards must be verified at the system level. This product is for sale to OEMs and System Integrators, including through Distribution Channels. It is not intended for sale to End Users.

PIN ASSIGNMENTS

Connector	NPT42-M	NPT43-M	NPT44-M
SK1-1	Line	Line	Line
SK1-3	Neutral	Neutral	Neutral
CN1	Ground	Ground	Ground
SK2-1	+5 V	+5 V	+5 V
SK2-2	+5 V	+5 V	+5 V
SK2-3	Common	Common	Common
SK2-4	Common	Common	Common
SK2-5	-12 V	-15 V	+12 V
SK2-6	+12 V	+15 V	+24 V

MATING CONNECTORS

AC Input	Molex 09-50-8031 PINS: 08-52-0113
DC Outputs	Molex 09-50-8061 PINS: 08-52-0113
Artesyn Embedded Power Connector Kit #70-841-006, includes all of the above.	

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is ± 0.02" (± 0.5 mm)
3. Mounting holes M1 and M2 should be grounded for EMI purposes.
4. Mounting hole M1 is safety ground connection.
5. Ground faston tab size is 6.35 mm x 0.80 mm
6. Specifications are for convection rating at factory settings at 115 VAC input, 25°C unless otherwise stated.
7. Warranty: 2 years
8. Weight: 0.3 lbs/0.14 kg

ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

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