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[Artesyn Embedded Technologies](#)

[NTQ123-DC](#)

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Embedded Power for Business-Critical Continuity

NTQ123-DC Series

70 - 125 Watts

Total Power: 70-120 Watts
Input Voltage: 36 - 72 VAC
of Outputs: Quad



Rev. 06.16.08
 NTQ123-DC Series
 1 of 3

Special Features

- -48 VDC input
- Remote sense on outputs one and two
- Power fail and remote inhibit
- Single wire current sharing on outputs one and two
- Adjustable main outputs
- Built-in Class B EMI filter
- Overvoltage protection
- Overload protection
- Thermal overload protection

Safety

VDE 0805/EN60950 (IEC950)
UL UL1950
CSA CSA 22.2-234 Level 3
NEMKO EN 60950/EMKO-TUE (74-sec) 203
CB Certificate and report
CE Mark (LVD)

Electrical Specifications

Input

Input range	36 - 72 VDC
Inrush current	38 A max., cold start @ 25°C
Efficiency	65% typical at full load
EMI filter	FCC Class B conducted; CISPR 22 Class B conducted; EN55022 Class B conducted; VDE 0878 PT3 class B conducted and radiated.
Safety ground leakage current	<1 mA @ 72 Vdc input

Output

Maximum power	70 W for convection; 125 W with 30 CFM forced air
Adjustment range	±5% minimum
Hold-up time	20ms @ 120 W load, -48 Vdc input
Overload protection	Short circuit protection on all outputs Case overload protected @ 110-145% above peak rating
Overvoltage protection	3.3 V output; 5 V output: 10% to 35% above nominal output

Logic Control

Power failure	TTL logic signal goes high 100-500 msec after 5 V output; it goes low at least 4 msec before loss of regulation
Remote inhibit	Requires an external TTL Signal to inhibit outputs
Remote sense	Compensates for 0.5 V lead drop minimum, will operate without remote sense connected. Reverse connection protection.



Environmental Specifications

Operating temperature:	0° to 50°C ambient. Derate each output 2.5% per degree from 50° to 70°C
Storage temperature:	-40°C to +85°C
Temperature coefficient:	±0.4% per °C
Electromagnetic susceptibility:	Designed to meet EN61000-4, -2, -3, -4, -5, -6, -8, -11 Level 3
Humidity:	Operating; non-condensing 5% to 95% RH
Vibration:	Three orthogonal axes, sweep at 1 oct/min, 5 min. dwell at four major resonances 0.7 G peak 5 Hz to 500 Hz, operational
MTBF demonstrated:	>1 million hours at full load and 25°C ambient conditions

Ordering Information

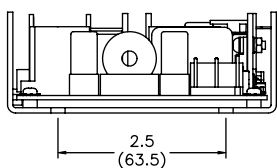
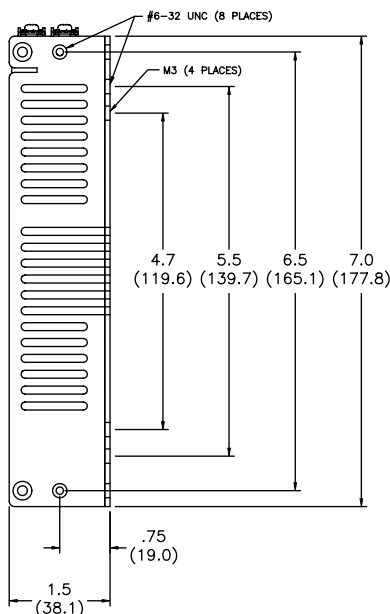
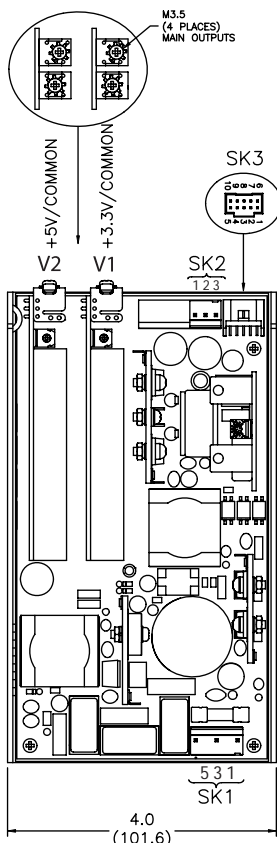
Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30CFM forced Air	Peak Load ¹	Regulation ²	Ripple P/P (PAR) ³
NTQ123-DC	+3.3 V (2.5 - 5.7)	2 A	14 A	25 A	28 A	±2%	50 mV
	+5 V (2.5 - 5.7)	0 A	12.5 A	24 A	28 A	±2%	50 mV
	+12 V	0 A	1 A	2 A	4 A	±3%	120 mV
	-12 V	0 A	0.5 A	1 A	1.5 A	±3%	120mV

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. In parallel minimum loads are 2 A on the 5 V output and 2 A on the 3.3 V output for each power supply

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Mechanical Drawing



Pin Assignments

SK1	PIN 1	Ground
	PIN 3	-48 Vdc
	PIN 5	Return
SK2	PIN 1	+12 V
	PIN 2	Common
	PIN 3	-12 V
SK3	PIN 1	3.3 V SWP
	PIN 2	-3.3 V sense
	PIN 3	+3.3 V +sense
	PIN 4	5 V SWP
	PIN 5	Common
	PIN 6	+5 V ssense
	PIN 7	-5 V sense
	PIN 8	+ inhibit
	PIN 9	- inhibit
	PIN 10	Power fail

Mating Connectors

(SK1) DC Input: Molex: 09-50-8051 (USA)
Molex: 09-91-0500 (UK)
PINS: 08-58-0111

V1 & V2: Molex BB-124-08

(SK2) ±12 V: Molex: 09-50-8031 (USA)
Molex: 09-91-0300 (UK)
PINS: 08-58-0111

(SK3) Control Signals: Molex: 90142-0010
PINS: 90119-2110
or
Amp: 87977-3
PINS: 87309-8

Astec Connector Kit #70-841-012, includes all of the above

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is ±0.02" (±0.5mm)
3. Remote inhibit requires an external 5 V @ 10 mA to activate
4. Mounting maximum insertion depth is 0.12"
5. Warranty: 2 year
6. 1.49 lb./ 0.68 kg

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