50-165 Watts
NTQ160 Series

Total Power: **50-165 Watts**
Input Voltage: **85-264 VAC**
# of Outputs: **Quad**

Special Features

- Active power factor correction
- EN61000-3-2 compliance
- Remote sense on outputs one and two
- Power fail and remote inhibit
- 5V Standby output
- DC Power good
- Single wire current sharing on outputs one and two
- Wide range adjustable on outputs 1 & 2
- Built-in Class B EMI filter
- Overvoltage protection
- Overload protection
- Thermal overload protection
- Outputs 3 & 4 are floating

Environmental

Operating temperature: 0° to 50°C ambient; derate each output at 2.5% per degree from 50° to 70°C

Electromagnetic susceptibility: Designed to meet EN61000-4, -2, -3, -4, -5, -6, -8, -11 Level 3

Humidity: Operating; non-condensing 10% to 95%

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

Storage temperature: -40° to 85°C

Temperature coefficient: ± .04% per °C

MTBF demonstrated: >1 million hours at full load and 25°C ambient conditions

Electrical Specs

Input

Input range	85-264 VAC
Frequency	47-63 Hz
Inrush current	38 A max., cold start @ 25°C
Efficiency	65% typical at full load @ 115 VAC input
EMI filter	FCC Class B conducted and radiated, CISPR 22 Class B conducted and radiated, EN55022 Class B conducted and radiated, VDE 0878 PT3 Class B conducted and radiated.
Power factor	0.99 typical
Safety ground leakage current	<1 mA @ 50/60 Hz, 264 VAC input

Output

Maximum power	50W convection, 165 W with 30 CFM forced air
Adjustment range	1.8V - 3.5V; 3.0V - 5.5V on outputs one and two
Hold-up time	20 ms @ 165 W load
Overload protection	Short circuit protection on all outputs. Case overload protected @ 110-145% above peak rating. Latching type recycle AC to reset.
Overvoltage protection	Tracks outputs 1 & 2: 20% to 35% above output setting
Standby output	5V@ 2 A regulated ±5%

Logic Control

Power failure	TTL logic signal goes high 100-500 msec after V1 output; it goes low at least 4 msec before loss of regulation
Remote Inhibit	Requires contact closure to inhibit outputs
Remote sense	Compensates for 0.5 V lead drop minimum, will operate without remote sense connected. Reverse connection protection.
DC O	TTL logic signal goes high after main output is in regulation. It goes low when there is a loss of regulation.

Safety

VDE	0805/EN60950 (IEC950)	21310-3336-0021 (129066)
UL	UL1950	E186249
CSA	CSA 22.2-234 Level 3	LR109492C
NEMKO	EN 60950/EMKO-TUE (74-sec) 203	P00100493
BABT	EN60950/EN41003	650251, NC/00069
CB	Certificate and report	9661, 9662, 8788
CE	Mark (LVD)	

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ASIA

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Ordering Information

Model Number	*Output Voltage*	*Minimum Load*	*Maximum Load with Convection Cooling*	*Maximum Load with 30 CFM Forced Air*	*Peak Load1*	*Regulation2*	*Ripple P/P (PARD)3*
NTQ162	+3.3 V(1.8 - 3.5V)	2 A	15 A	30 A	38 A	±2%	50 mV
	+5 V (3 - 5.5V)	0 A	10 A	20 A	22 A	±2%	50 mV
	12 V*	0 A	2 A	4.5 A	5 A	±3%	120 mV
	12 V*	0 A	2 A	4.5 A	5 A	±3%	120 mV
NTQ163	+5 V (3 - 5.5V)	2 A	15 A	30 A	32 A	±2%	50 mV
	+3.3 V (1.8 - 3.5V)	0 A	10 A	20 A	22 A	±2%	50 mV
	12 V*	0 A	2 A	4.5 A	5 A	±3%	120 mV
	12 V*	0 A	2 A	4.5 A	5 A	±3%	120 mV
NTQ165	+3.3 V (3 - 5.5V)	2 A	15 A	30 A	32 A	±2%	50 mV
	+2.5 V (1.8 - 3.5V)	0 A	10 A	20 A	22 A	±2%	50 mV
	5 V*	0 A	2 A	4 A	5 A	±3%	120 mV
	12 V*	0 A	2 A	4 A	5 A	±3%	120 mV

** outputs are floating*

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 2.5 A on the V1 output and 1 A on the V2 output for each power supply.
5. Total output current between V1 and V2 is 40A maximum.

Ordering Information

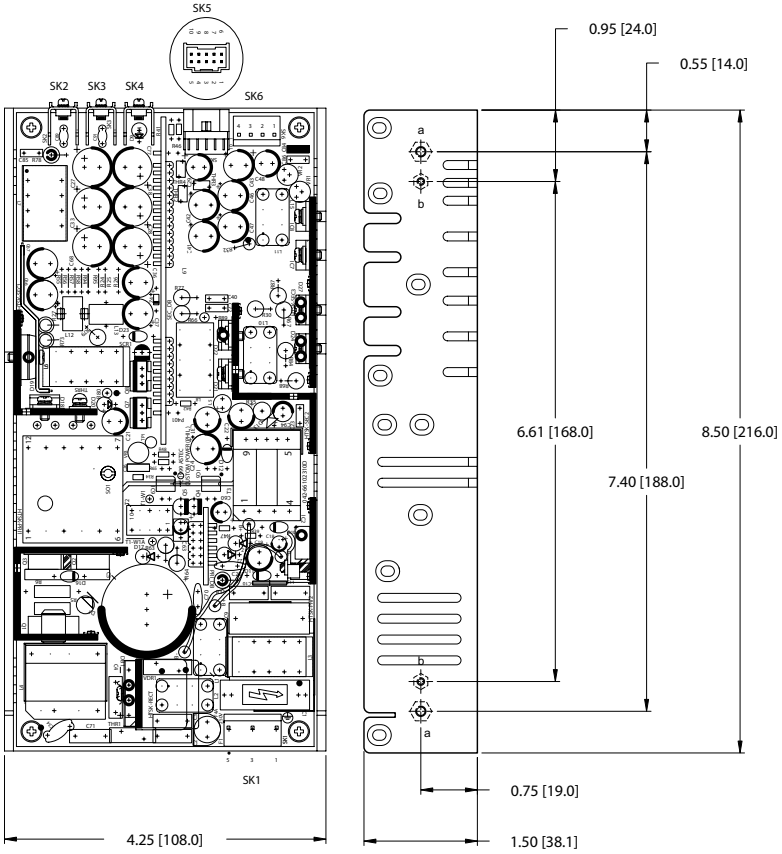
Connector

SK1	PIN 1	Ground
	PIN 3	Neutral
	PIN 5	Live
SK2		V1
SK3		*Common*
SK4		V2
SK6	PIN 1	V4 Common
	PIN 2	V4
	PIN 3	V3 Common
	PIN 4	V3
SK5	PIN 1	V2 SWP
	PIN 2	5V Standby
	PIN 3	+V2 Sense
	PIN 4	V1 SWP
	PIN 5	COMMON
	PIN 6	+V1 Sense
	PIN 7	Sense COMMON
	PIN 8	Remote Inhibit
	PIN 9	DC Power Good
	PIN 10	Power Fail

Mating Connectors

(SK1) AC Input:	Molex: 09-50-8051 (USA)
	Molex: 09-91-0500 (UK)
	PINS: 08-58-0111
SK2,3,4:	Molex BB-124-08
(SK6) ±12V	Molex:09-50-8041 (USA)
	Molex: 09-91-0400 (UK)
	PINS: 08-58-0111
(SK5) Control Signals:	Molex: 90142-0010
	PINS: 90119-2110
	or
	Amp: 87977-3
	PINS: 87309-8

Astec Connector Kit #70-841-014, includes all of the above



Notes:

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance ±.02".
3. Remote inhibit requires an external contact closure to activate
4. Mounting maximum insertion depth is 0.12".
5. Warranty: 1 year
6. Weight: 2.38 lb. /1.08 kg