

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) | |

rev 04.29.04

Support: (888) 41-ASTEC or (407) 241-2752

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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 Load ¹ | Regulation ² | 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 |

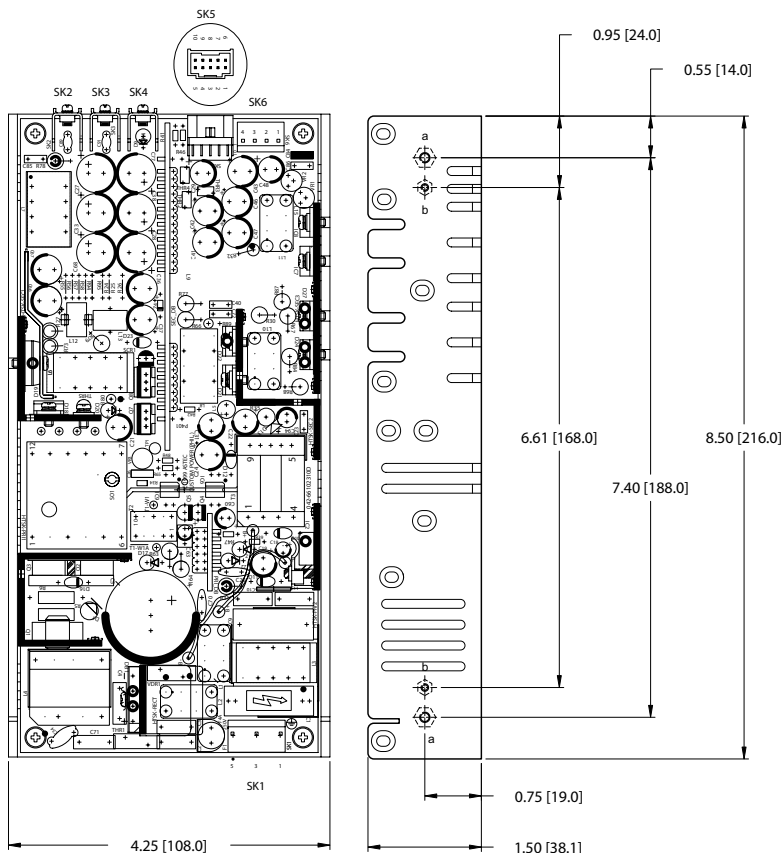
Mating Connectors

(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

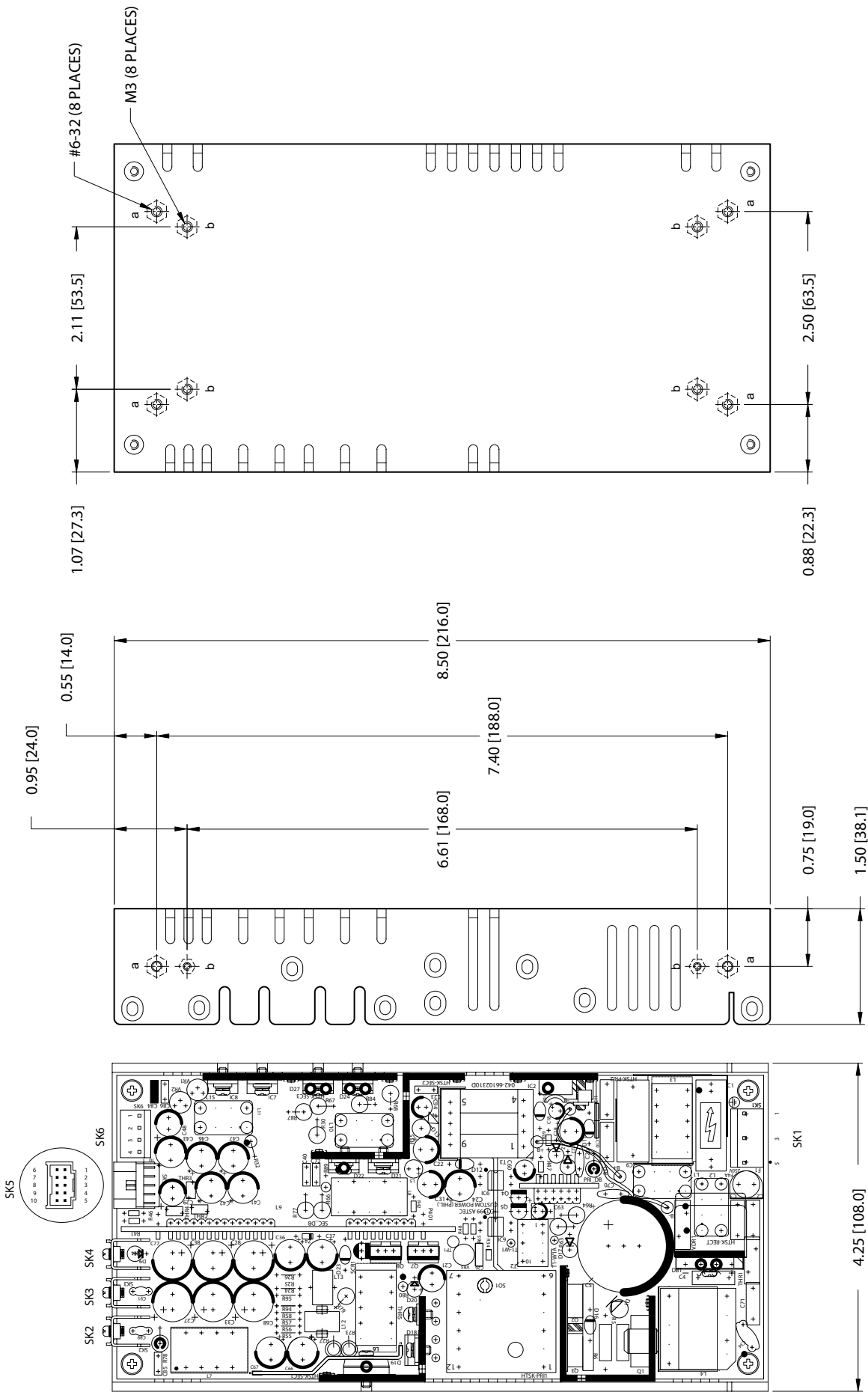
(SK5) Control Signals: Molex: 90142-0010
 PINS: 90119-2110
 or
 Amp: 87977-3
 PINS: 87309-8

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



NTO160 Series