NTS500 Series

500 Watts

of Outputs:

Total Power: 200 - 500 Watts **Input Voltage:** 85 - 264 Vac 120 - 300 Vdc

Single

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Special Features

- Active power factor correction
- IEC EN61000-3-2 compliance
- Remote sense
- Power fail and remote inhibit
- Single wire current sharing
- Built-in EMI filter
- Low output ripple
- 5 V standby
- 12 V fan output
- Overvoltage protection
- Overload protection
- Thermal overload protection
- DC power good
- Built in OR-ing diode / FET
- Optional fan cover (-CF suffix)
- PM Bus compliant
- Digital I²C interface
- 2 year warranty
- POE isolation on NTS508

Safety

• TUV: 60950 • cCSAus: 60950 • NEMKO: 60950

CB: Certificate & reportCE: Mark (LVD)

Electrical Specifications

Input

Input range: 85 - 264 Vac (wide range)

Frequency: 47 - 63 Hz

Inrush current: 50 A max., cold start @ 25 °C

Efficiency: 85% typical at full load, nominal line

EMI filter: FCC Class B conducted and radiated; CISPR22 Class B

conducted and radiated; EN55022 Class B conducted and radiated; VDE0878PT3 Class B conducted and radiated.

Safety ground leakage < 0.5 mA @ 50/60 Hz, 264 Vac input

current:

Output

Maximum power: 200 W for convection; 500 W with 30 CFM forced air

Adjustment range: ± 5%

Standby output: 5 V @ 1 A convection, 2 A forced air, regulated, ± 5%

Fan output: 12 V @ 1 A, -5 %, +7%, 0.5 A for -CF version

Hold-up time: 20 ms @ 500 W load, 115 VAC nominal line at factory voltage setting

Overload protection: Short circuit protection on all outputs. Case overload

protected @ 115 - 130% above peak rating

Overvoltage protection: 20 - 35% above nominal output





Power failure:

TTL logic signal goes high 100 - 500 msec after main output. It goes low at least 4 msec before loss of regulation

Remote on/off:

Requires an external contact closure to inhibit outputs

DC OK:

TTL logic goes high after the output is in regulation. It goes low when there is loss of regulation.

Remote sense:

Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected.

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Pin Assignments

Connector CN1

SK7

PIN 1 Line PIN 3 Neutral PIN 5 Ground

PIN 1 V1 swp

1 5 P 6 10 P

PIN 2 - Remote Sense PIN 3 + Remote Sense

PIN 4 5 VSB (standby) PIN 5 5 VSB return PIN 6 +12 V

PIN 7 Common PIN 8 Inhibit

PIN 9 DC power good (DC OK) PIN 10 Power Fail (POK)

SK8

1 2 PII

PIN 1 +12 V Fan

CN403

PIN 1 5 V_I²C PIN 2 Ground PIN 3 A2 PIN 4 A0

PIN 5 SVCC2_OR PIN 6 I²C_SDA PIN 7 I²C_SLC

PIN 7 I²C_SLC PIN 8 A1 PIN 9 N/C

PIN 10 +12 V_RTN_CTRL

Adjustment Potentiometers P1 +V1 Output adjust

Mating Connectors

SK4,5,6 Molex 19141-0058

SK7 Control Molex 90142-0010 **signals** PINS: 90119-2110

or

Amp: 87977-3 PINS: 87309-8

SK8 JST PHR-2

Pins: SPH-002T-PO.5S

CN403 JST PHDR-10VS

Pins: JST 5PHD-002T-PO.5-L/P or Landwin 2050 S1000

Pins: 2053T011P

Emerson Connector Kit #70-841-024 includes all of the above

Notes:

- 1. Specifications subject to change without notice.
- 2. All dimensions in inches (mm), tolerance is ±.02".
- 3. Specifications are at factory settings
- 4. Mounting maximum insertion depth is 0.12".
- 5. Warranty: 2 year
- 6. Weight: 3.016 lb. / 1.18 kg.

Environmental Specifications

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

50° to 70°C.

Storage temperature: -40 °C to +85 °C

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

Humidity: Operating; non-condensing 10% to 90% RH

Vibration: Three orthogonal axes, sweep at

1 oct/min, 5 min. dwell at four major resonances

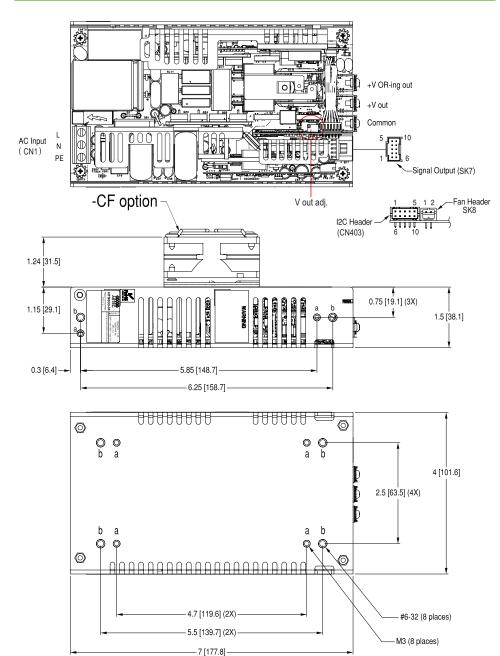
2 G peak 8 Hz to 500 Hz, operational

Ordering Information							
Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30CFM Forced Air	Peak Load¹	Regulation ²	Ripple P/P (PARD) ³
NTS503	12 V	0 A	16.6 A	41.7 A	47 A	±2%	120 mV
NTS505	24 V	0 A	8.3 A	20.8 A	23.4 A	±2%	240 mV
NTS508	48 V	0 A	4.2 A	10.4 A	11.7 A	±2%	480 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 (tantalum capacitor) in parallel with a 0.1 μF capacitor at rated line voltage and load ranges.
- 4. 12 V fan output cannot be used above 50 °C with convection cooling.

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Mechanical Drawing



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