

Embedded Power for
Business-Critical Continuity

NTS500 Series

500 Watts

Total Power: 200 - 500 Watts
Input Voltage: 85 - 264 Vac
120 - 300 Vdc
of Outputs: Single



Rev. 05.27.08
NTS500 Series
1 of 3

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
- 5V standby
- 12V 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

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 current:	<0.5 mA @ 50/60 Hz, 264 Vac input

Output

Maximum power:	200 W for convection; 500 W with 30 CFM forced air
Adjustment range:	±5%
Standby output:	5 V @ 1 A regulated, ±5%
Fan output:	12 V @ 0.5 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

Safety

TUV: 60950
cCSAus: 60601-1
NEMKO: 60950
AUSTEL: 60950
Certificate and report
Mark (LVD)

Logic Control

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.

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 susceptibility:	Designed to meet EN61000-4; -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
MTBF demonstrated:	1M 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 (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 μ F (tantalum capacitor) in parallel with a 0.1 μ F capacitor at rated line voltage and load ranges.
4. 5 V standby and 12 V fan output cannot be used above 50 °C with convection cooling.

Pin Assignments

Connector

CN1	PIN 1	Line
	PIN 3	Neutral
	PIN 5	Ground
SK7	PIN 1	V1 swp
	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)
CN403	PIN 1	Ground
	PIN 2	A2_out
	PIN 3	A1_out
	PIN 4	A0_out
	PIN 6	I ² C_sda_out
	PIN 7	5 V_I ² C
	PIN 8	n/c
	PIN 9	n/c
	PIN 10	n/c

Adjustment Potentiometers

P1	+V1 Output adjust
P3	+5 VSB adjust

Mating Connectors

SK4,5,6	Molex 19141-0058
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SK7 Control signals	Molex 90142-0010
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	PINS: 90119-2110
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or

Amp: 87977-3
PINS: 87309-8

SK8	Molex 22-01-2025
	Pins: 08-52-0123

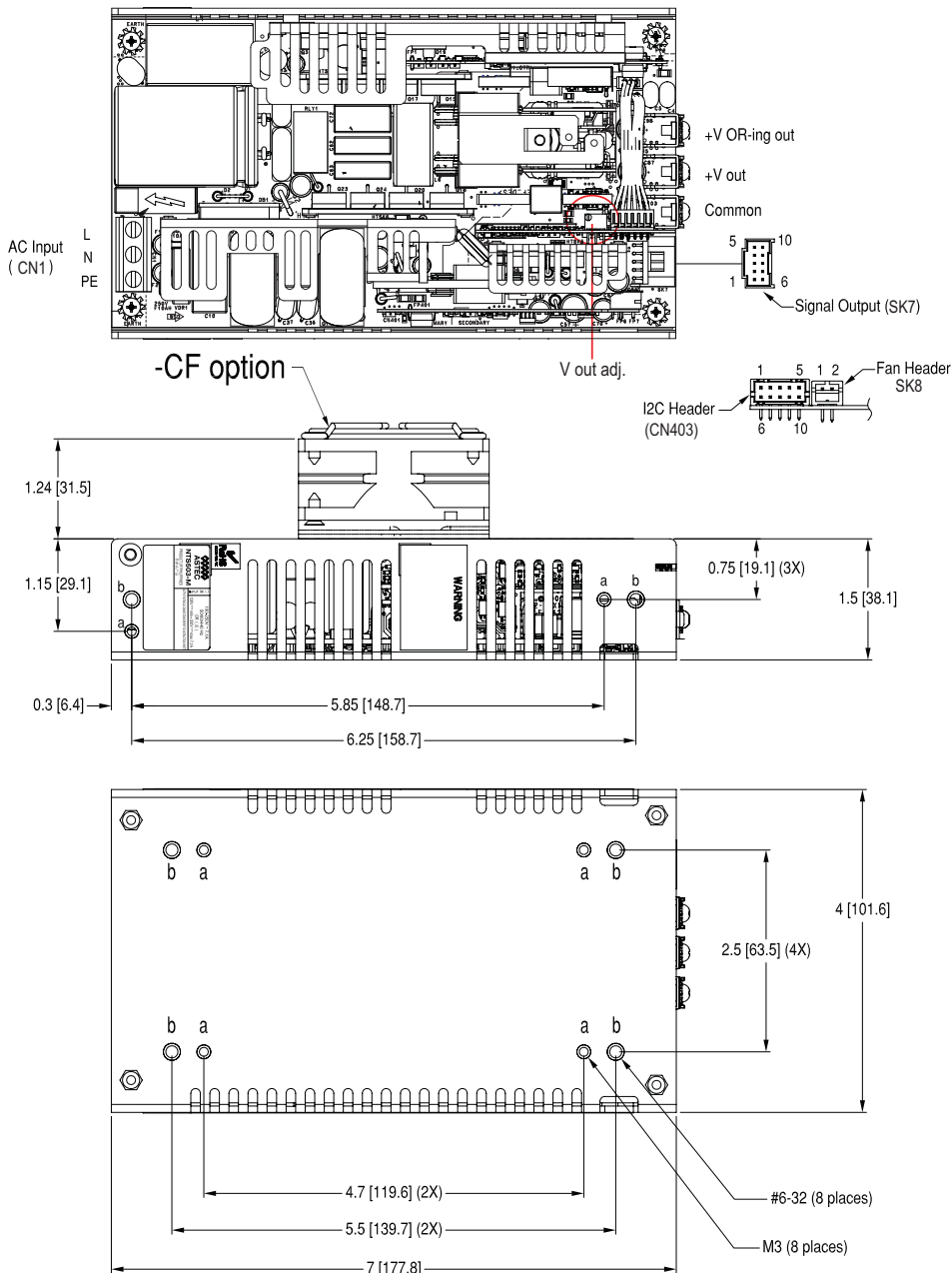
CN403	JST PHDR-10VS
	Pins: JST 5PHD-002T-PO.5-L/P or Landwin 2050 S1000
	Pins: 2053T011P

Astec 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 $\pm .02$ ".
3. Specifications are at factory settings
4. Mounting maximum insertion depth is 0.12".
5. Warranty: 2 year
6. Weight: 2.016 lbs (1.11 kg)

Mechanical Drawing



Americas

5810 Van Allen Way
Carlsbad, CA 92008
USA
Telephone: +1 (760) 930 4600
Facsimile: +1 (760) 930 0698

Europe (UK)

Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX
United Kingdom
Telephone: +44 (0) 1384 842 211
Facsimile: +44 (0) 1384 843 355

Asia (HK)

14/F, Lu Plaza
2 Wing Yip Street
Kwun Tong, Kowloon
Hong Kong
Telephone: +852 2176 3333
Facsimile: +852 2176 3888

For global contact, visit:

www.powerconversion.com
techsupport.embeddedpower@emerson.com

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