NTS500-M Series

500 Watts

Medical

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

RoHS 2002/95/EC

PMBus

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 I^2C interface
- 2 year warranty

Safety

- **TUV:** 60601-1
- **cCSAus:** 60601-1
- **CB:** Certificate & report
- **CE:** 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 current:	< 0.3 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 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

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Network Power

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 meetEN61000-4; -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

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-M	12 V	0 A	16.6 A	41.7 A	47 A	±2%	120 mV
NTS505-M	24 V	0 A	8.3 A	20.8 A	23.4 A	±2%	240 mV
NTS508-M	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.

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)

SK8

PIN 1 +12 V Fan
PIN 2 Common

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 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 signals Molex 90142-0010
PINS: 90119-2110
or
Amp: 87977-3
PINS: 87309-8

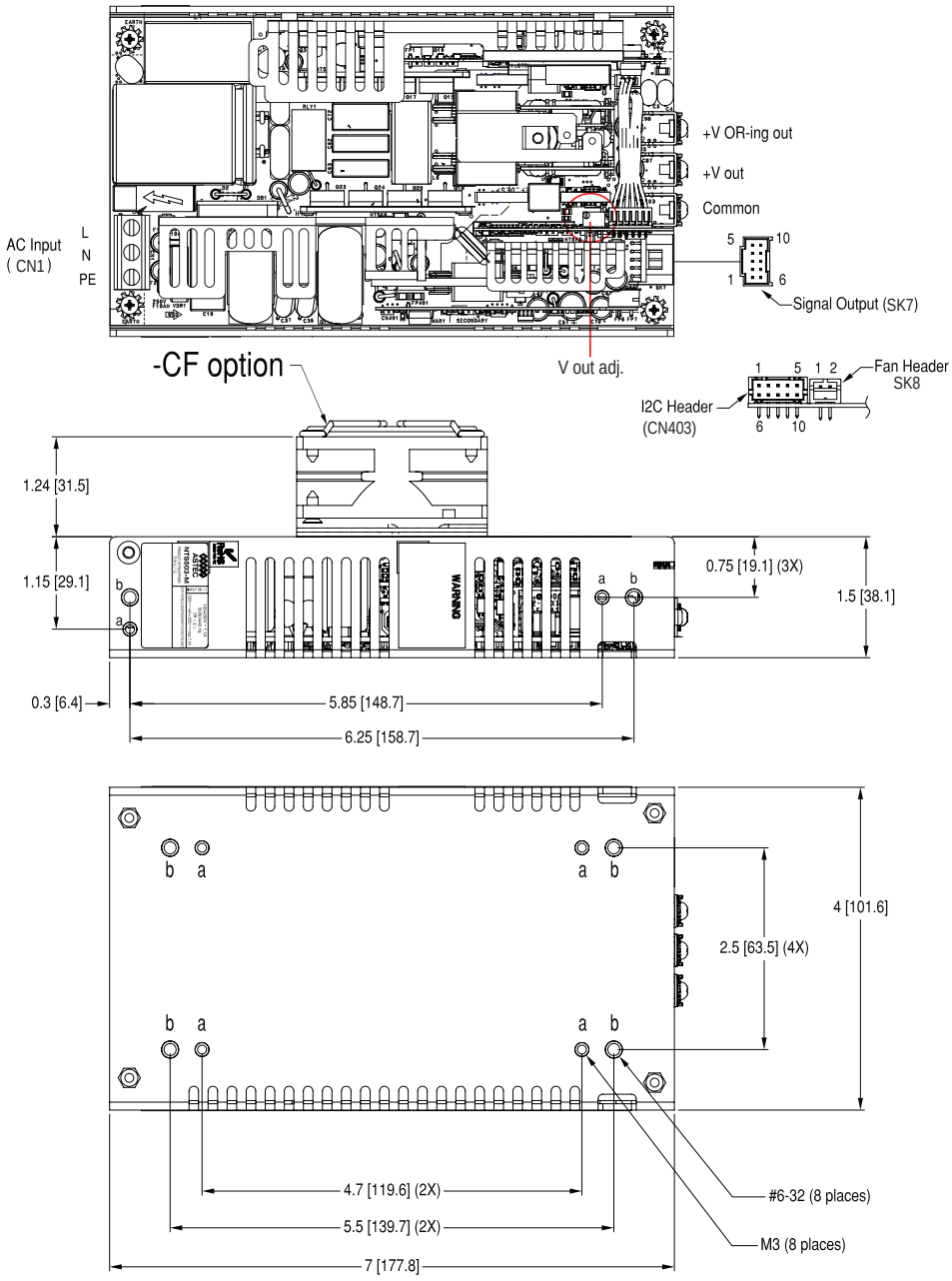
SK8 JST PHR-2
Pins: SPH-002T-PO.5S

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.

Mechanical Drawing



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