

TCP-250

250 Watt U-Channel Power Supply

TECTROL 250 WATT 1U U-CHANNEL POWER SUPPLY



The TCP-250 provides up to 250 Watts of highly reliable DC power in a low profile 1U Open U-Channel frame.

The TCP-250 is available in industry standard 12, 24 and 48 volt models and can be modified or configured to supply different power output levels as required.

Its slim profile and compact form factor make the TCP-250 an excellent choice for a variety of telecommunications, data storage, computer peripheral and industrial instrumentation applications.

TCP-250 cooling options include standard convection cooled system airflow or an optional cover that provides integral fan cooling.

Multiple TCP-250 modules can be connected together to provide either parallel operation or N+1 redundancy for applications with high power requirements.

Warm swap capability is provided through the use of industry standard connectors.

FEATURES

- 250 Watt output power (no derating)
- Wide range (universal) input
- Low 1U profile provides high power density
- Non-redundant parallel operation or N+1 configuration
- High efficiency
- Single wire active current share
- Optional I²C Card
- Optional cover and fan assembly
- Configurable Power Shelf option
- Strenuously HALT tested to ensure maximum reliability and long life

AGENCY COMPLIANCE

- UL/cUL Approval
- TUV Approval
- CE Mark (to the LVD requirements of EN 60950)
- Harmonic Compliance to EN 61000-3-2 (Class A & D Limits)

EMISSIONS AND IMMUNITIES

- EN 55022 Class B Emissions
- EN 61000-3-2 Class D Harmonic Compliance
- EN 61000-4 Compliance

MAX OUTPUT POWER	OUTPUT (Volts)	OUTPUT (Amps)	AC INPUT (Volts)	MODEL NUMBER
250 W	48	5.2	90 to 264	TCP-250-48
250 W	24	10.4	90 to 264	TCP-250-24
250 W	12	16.7	90 to 264	TCP-250-12

TECHNICAL SPECIFICATION

INPUT SPECIFICATION

Full Range Input	90 to 264 Vrms, 50/60 Hz
AC Line Input	3 A @ 115 V & 1.5 A @ 230 V input voltage
Line Inrush Current	15 Apk @ 230 VAC 50 Hz; half cycle, cold start (25° C)
Power Factor	> 0.95 (typically 0.97)
Harmonic Compliance	Complies with EN 61000-3-2 Class D Limits
Leakage Current	1.1 mArms per module
Voltage Dip/Interruptions	Complies with IEC/EN 61000-4-11
Transients & Surges	Complies with IEC/EN 61000-4-5
Efficiency	> 80% full load, nominal line (including ORing diodes)

OUTPUT SPECIFICATION

Factory Set Output Voltage	48 ± 0.1 V (floating/isolated with regard to com/gnd)
Static Voltage Regulation	± 0.5% (line, load regulation, temperature)
Voltage Options	Can be factory preset to other voltages
Auxiliary Output	+5 V @ 100 mA
Ripple & Noise (PARD)	240 mV pp
Output Current	48 V nom @ 5.2 A
Module Power	250 W continuous operation @ 50° C
Current Share	Passive (slope) current share
Parallel Operation	Parallel non-redundant or N+1
Warm Swap Capability	Warm swappable
Remote Sense Compensation	0.5 V total for ORing diodes & connector drop
Transient Response	2% deviation from nominal set voltage, for a 25% load change. Recovery to within 1% within 500 µS.

PROTECTION

Overload Protection	Unit protected against overload and permanent short circuit. Auto recovery
Over Voltage Protection	< 60 V max guaranteed shutdown. Reset by recycling of the incoming AC supply.
Over Temperature Protection	Shutdown in the event of operation in excessive ambient temperature or blocked/failed airflow (self recovery following temperature reduction).
Signals	I/O Signals: Power Good
LED Indicators	Optional Power Good LED

MECHANICAL FORMAT

Input Connector	Molex Header 26-48-1055
Output Connector	Molex Header 26-48-1105 10 pins
Mechanical Outline	1.5" (H) x 4.8" (W) x 8.5" (L) 38.1 x 121.9 x 215.9 (mm)

ENVIRONMENTAL

Temperature Range	Operational: 0° to 50° C
Cooling / Air Flow	Convection cooling (can also be supplied with optional cover and integral cooling fan).

