TCP1U-400
400 Watt Front-End Power Supply

TECTROL 400 WATT 12/24/48 VOLT 1U FRONT-END POWER SUPPLY

The TCP1U-400 provides up to 400 Watts of highly reliable DC power in a low profile 1U module that is designed to deliver reliable bulk power to distributed power architecture applications that require high power density.

The TCP1U 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.

A versatile mechanical format allows the TCP1U to be housed horizontally in a 1U profile shelf, or vertically in a 2U shelf. This flexibility allows parallel or redundant installation of up to 5 modules in a standard 84 HP width 1U 19" rack, or up to 10 modules in a 2U rack.

Hot swap capability is implemented through the use of an industry standard connector that combines both AC power and DC output connections in a single "blind mate" configuration.

Optional digital interfaces such as I^2C can be configured on the TCP1U to meet application-specific needs.

FEATURES

- 400 Watt output power
- Wide range (universal) input
- Low 1U profile provides high power density
- Full hot swap capability
- Non-redundant parallel operation or N+1 configuration
- High efficiency
- Active or passive "droop" current share
- Integral Isolation (ORing) Diodes
- I^2C EEPROM Bus Chip 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)
- NEBS Compliant

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
400 W	48	8.3	90 to 264	TCP1U-400-48
400 W	24	17	90 to 264	TCP1U-400-24
350 W	12	30	90 to 264	TCP1U-350-12

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TECTROL
Total Power Solutions®

TECHNICAL SPECIFICATION

INPUT SPECIFICATION

Full Range Input	90 to 264 Vrms, 50/60 Hz
AC Line Input	4.6 A @ 115 V & 2.3 A @ 230 V input voltage
Line Inrush Current	15 Apk @ 115 VAC 60 Hz; 30 A @ 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	0.75 mArms per module
Voltage Dip/Interruptions	Complies with IEC/EN 61000-4-11
Transients & Surges	Complies with IEC/EN 61000-4-5
Efficiency	> 75% full load, nominal line (including ORing diodes)

OUTPUT SPECIFICATION

Factory Set Output Voltage	12, 24 and 48 V models (floating/isolated)
Static Voltage Regulation	± 1% (line, load regulation, temperature)
Remote Voltage Adjust	Optional 12 V (10 to 15 V), 24 V (20 to 29 V) & 48 V (40 to 58 V)
Ripple & Noise (PARD)	240 mV pp for 12 & 24 V; 480 mV pp for 48 V
Output Current	48 V nom @ 11 A; 24 V nom @ 17 A; 12 V nom @ 30 A
Module Power	400 or 350 W
Current Share	Active (standard) or droop (optional)
Parallel Operation	Parallel non-redundant or N+1
Hot Swap Capability	Fully hot swappable, blind mate connector
Remote Sense Compensation	Compensates for ORing diodes, connector & load connection voltage drops
Transient Response	2% deviation from nominal set voltage, for 25% step load change. Recovery to within 1% within 500 µS.

PROTECTION

Overload Protection	Unit protected against a permanent short circuit.
Over Voltage Protection	Shutdown at 115% of nom. 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: AC Fail, DC Good; OTP P/S Present; Remote On; Analog Control Voltage; optional EEPROM SCL/SDL & Address Lines.
LED Indicators	Power Fail, DC Good.

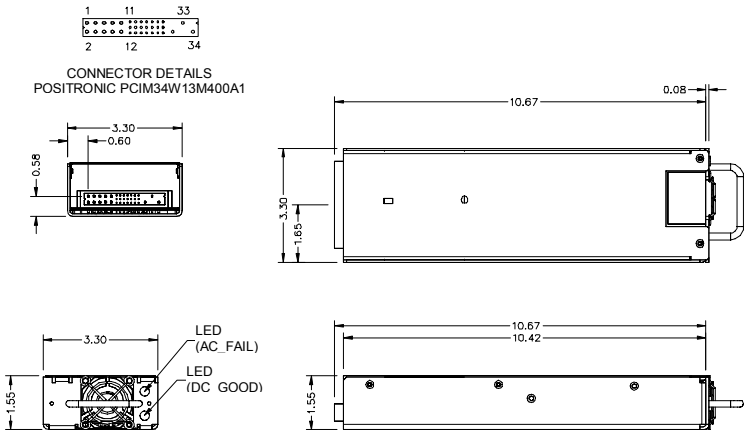
MECHANICAL FORMAT

Input/Output Connector	Positronic PCIM34W400A1 connector; AC input and DC Output in a single connector for true hot swap capability (mating connector type PCIH47F34W300A1).
Mechanical Outline	1.55" (H) x 3.30" (W) x 10.87" (L) 39.37 mm x 83.82 mm x 276.10 mm

ENVIRONMENTAL

Temperature Range	Operational: 0° to 50° C, FL no derating
Cooling / Air Flow	Integral high performance 40 mm fan. Airflow direction; inlet at fan face; exhaust at connector face.

PIN ASSIGNMENT	FUNCTION
1	+12V
2	+12V
3	COM
4	+12V
5	COM
6	COM
7	N/C
8	N/C
9	N/C
10	N/C
11	+5V STAND_BY
12	+12V SENSE
13	+12V SENSE_RTN
14	PSU PRESENT
15	AC_FAIL
16	OTP
17	REM EN
18	DC_OK
19	SHARE BUS
20	ANALOG CONTROL
21	A0
22	A1
23	A2
24	SCL
25	SDA
26	N/C
27	N/C
28	N/C
29	N/C
30	N/C
31	N/C
32	CHASSIS
33	NEUTRAL
34	LINE



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