

TCM1000, Power Factor Corrected Single Output, Hot Swap



FEATURES:

- Diode isolated output for hot swap
- “Zero wire” slope program current sharing
- High power density 6.5 Watt/cu. in.
- Industry standard DIN connector
- 0.99 typical power factor
- Dc power good and ac power fail signals
- True remote inhibit
- Monotonic turn-on and turn-off
- Extended temperature operation
- High efficiency 87% typical (48 V units)
- Operating temperature range -20°C to +60°C

SPECIFICATIONS:

INPUT

Ac Input: 180-264 Vac, 47-63 Hz internally fused 10 A.
Power Factor: 0.99 typical at full load. Meets EN61000-3.2 Class A.
Inrush: Limited by thermistor, 40 A maximum (8ms), cold start.
Hold Up Time: 20 ms minimum after removal of ac power at full load.
Efficiency: 87% typical @ full load.
Ac Power Fail: Provides TTL “0” 5 ms before output voltage goes out of regulation band upon loss of ac power.

OUTPUT

Adjustability: User adjustable $\pm 5\%$ minimum.
Line Regulation: $\pm 0.2\%$
Load Regulation: $\pm 2\%$ (Slope Program) from 0 to 100% load changes.
Turn On Delay: 1 second typical.
Ripple & Noise: 0.5% p-p, measured at 20 MHz bandwidth.
Temperature Coefficient: 0.02% per degree C.
Stability: 0.1% over 8 hours, under constant line, load and ambient.
Transient Response: Output voltage returns to within 1% in less than 500 μ s for a 50% load change. Peak transient does not exceed 3%.

Overload Protection: Electronic current limit, 120% maximum.
Overvoltage Protection: Protects load against power supply induced overvoltage. Trip point is factory set so that output voltage cannot exceed 136% of nominal. Requires ac input to be cycled to reset.
Remote Inhibit: Contact closure or TTL “0” turns off output.
Dc Power Good: Provides a TTL “0” open collector when output is above 90% of nominal. Maximum pull-up voltage 30 Vdc; maximum sink current, 10 mA.

Redundancy: Built-in OR-ing diode, slope program current sharing, and DIN blade connector provide “hot swap” and “N+1” capabilities. Current sharing remains within 10% of the unit's full output rating given 0.2% initial accuracy in the output voltage setting.

Current Sharing: As calibrated at factory, modules will share current within 10% of full rated load.

Reverse Voltage: Protected against reverse voltage up to twice

output voltage rating. (internal OR-ing diode.)

ENVIRONMENTAL

Thermal Protection: Shuts down power supply if overheated. Automatic recovery.

Temperature Range: -20° to +50° C, full power, de-rate to 66% maximum power @ 71° C.

Safety Agencies: Approved to UL1950; CSA 22.2 #950; IEC 950 and TUV EN60950, Class 1 SELV, CE 73/23/EEC//93/68/EEC (low voltage directive).

Conducted RFI: Meets FCC Part 15, Class A; EN55022 Class B.

Output Isolation: Isolated from ground 100 Vdc.

Cooling: Self-cooled by internal ball-bearing fan.

OPTIONS

Option “R” - Rack Mount Panel: special panel that is required for rack mounting.

AC INPUT(180-264 VAC Continuous Range)

LOCATION	230 VAC	CONNECTOR
Z32	Line 1	Eurocard connector male DIN 41 612
D30	Line 2	
Z28	Safety Ground	level 1 - type H

DC OUTPUT

FUNCTION	LOCATION	NOTES	CONNECTOR
Output Voltage	Z12 D14 Z16 D18	(+) to Polarity	Eurocard connector-male DIN 41 612 Level 1-type H
	Z4 D6 Z8 D10	(-) to Polarity	

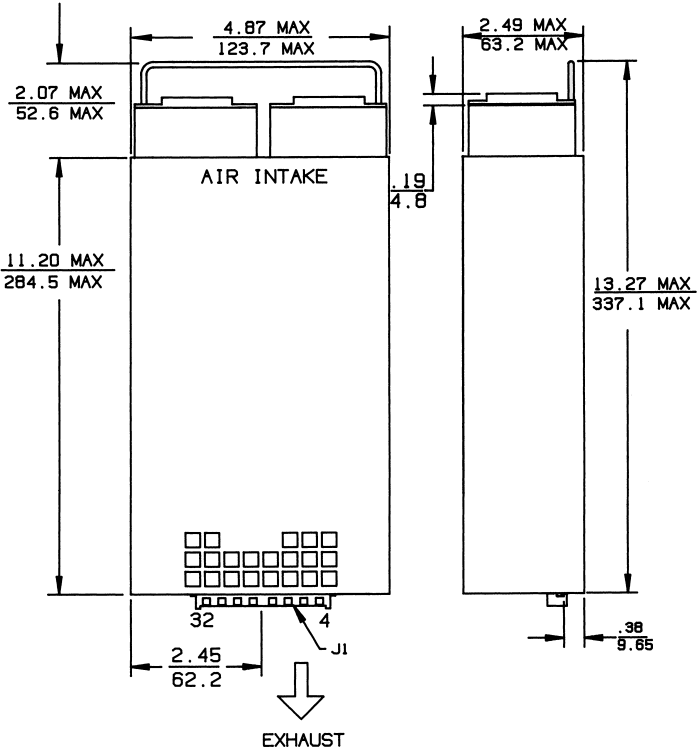
STATUS AND CONTROL

FUNCTION	LOCATION	NOTES	CONNECTOR
Dc Power Good	Z20	Reference to common	Eurocard connector
Ac Power Fail	D22		male DIN 41 612
Inhibit	Z24		level 1-type H

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Commercial Model	Power Out	Output No.	Output	Current	Total Regulation
TCM-1000-24	1000	1	24 V	41.6 A	±2%
TCM-1000-28	1000	1	28 V	35.7 A	±2%
TCM-1000-48	1000	1	48 V	20.8 A	±2%

TCM1000 MECHANICAL SPECIFICATIONS:



Dimensions: Inches
Millimeters