

# 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  $\mu$ 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
	Z4 D6 Z8 D10	(-) to Polarity	DIN 41 612 Level 1-type H

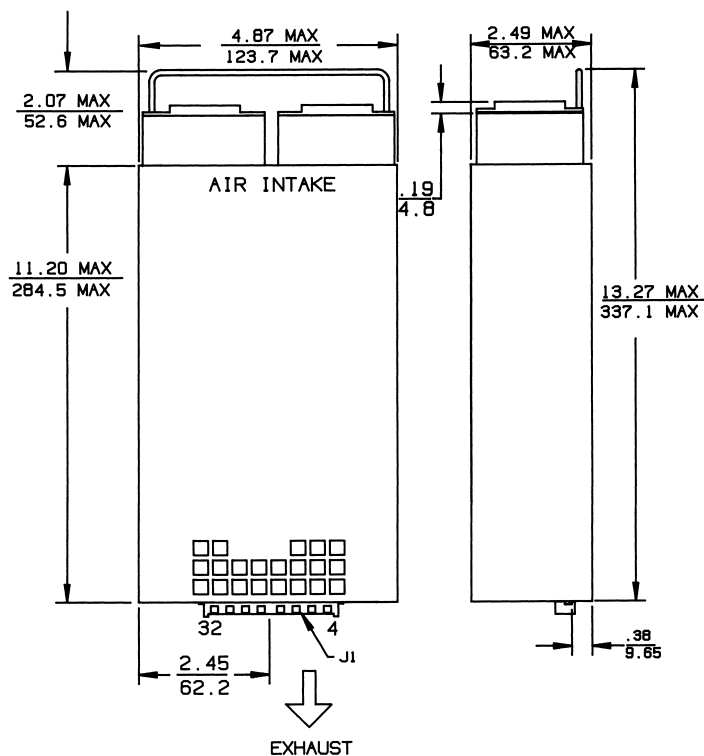
### STATUS AND CONTROL

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



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