



FEATURES

- BF Rated
• 4.0" x 8.0" x 2.58" Footprint
• PFD, Remote Sense, Output Inhibit
• Low Leakage Current

INPUT SPECIFICATIONS

Input Voltage Range ..... 90-264 VAC
Input Frequency ..... 47-63Hz
Input Current ..... 8.4A rms @ 115 VAC, 60Hz
..... 4.2A rms @ 230 VAC, 50Hz
Inrush Current ..... 20A @ 115 VAC or 40A @ 230 VAC,
at 25°C cold start
Earth Leakage Current ..... 300µA max. @ 264 VAC, 63Hz
Touch Current ..... 100µA max. @ 264 VAC, 63Hz

OUTPUT SPECIFICATIONS

Output Power Ratings ..... See table
Output Voltage ..... See table
Tolerance ..... ±2%
Ripple and Noise\* ..... 1% peak to peak max.
Remote Sense ..... Compensation for cable losses up
to 0.5V
Over Voltage Protection ..... Set at 115-140% of its nominal
output voltage
Over Current Protection ..... Protected to short-circuit
conditions
Thermal Shutdown ..... Protected to over-temperature
conditions
Temperature Coefficient ..... ±0.04%/°C max.
Transient Response ..... Max. excursion of 4% or better on
all models, recovering to 1% of
final value within 500 us after a
25% step load change
Standby Power ..... 5V/200mA max.
Fan Power ..... 12V/500mA max.

\* Peak to peak with 20MHz bandwidth and 10µF tantalum capacitor in parallel with a 0.1µF ceramic capacitor at rated line voltage and load ranges

GENERAL SPECIFICATIONS

Switching Frequency ..... 85 KHz typical
Operating Altitude ..... 5,000 meters max.
Efficiency ..... 90% typical
Hold-up Time ..... 12ms @ 110 VAC and 650W
Line Regulation ..... ±0.5% max. @ full load
Operating Temperature ..... -10°C to +70°C
Derating ..... Derate from 100% @ +50°C
linearly to 50% @ +70°C,
applicable to convection and
forced-air cooling conditions
Storage Temperature ..... -40°C to +85°C
Relative Humidity ..... 5% to 95% non-condensing
Withstand Voltage ..... 4,000 VAC, input-output (2MOPP)
1,500 VAC, input-ground (1MOPP)
1,500 VAC, output-ground (1MOPP)
MTBF ..... 250K hours minimum at full load,
25°C ambient, calculated per
MIL-HDBK-217F



MODELS LIST

Table with 6 columns: Product No., Voltage, Max. Current @ 30 CFM, Peak Current, Max. Power, Ripple & Noise\*. Rows include models TMC650-S12 through TMC650-S58.

NOTES:

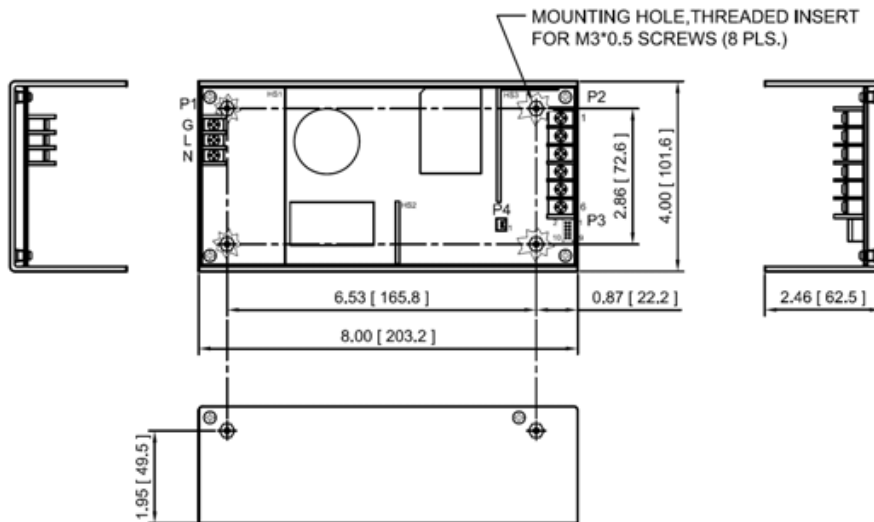
- 1. Standard form factor is U-bracket. Add suffix "C" for enclosed frame with cooling fan, e.g. TMC650-S24C.
2. 600-650W with 30 CFM forced air provided by the user for U-bracket units.
3. Peak output current with 10% duty cycle maximum for less than 15 seconds, average power not to exceed the maximum power rating.
4. All models may be operated at no-load without damage and output voltage fluctuates beyond 5% due to the burst-mode operation of the IC control in them for energy saving.

STANDARDS & COMPLIANCE

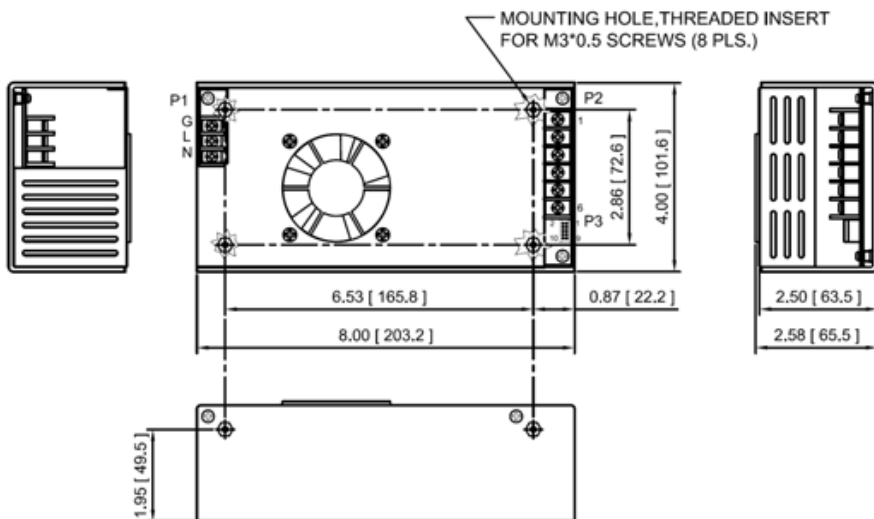
IEC/EN 60601-1-2:2014 ... EMC & Immunity Performance
EN 55011 ..... Class B, conducted & radiated
FCC, VCCI ..... Class B, conducted & radiated
EN61000-3-2 ..... Harmonic distortion, Class A & D
EN61000-3-3 ..... Line fluctuations & flicker
EN61000-4-2 ..... ESD, ±15 KV air and ±8 KV contact
EN61000-4-3 ..... Radiated immunity, 10V/m
EN61000-4-4 ..... Fast transient/burst, ±2 KV
EN61000-4-5 ..... Surge, ±1 KV diff., ±2 KV com.
EN61000-4-6 ..... Conducted immunity, 10Vrms
EN61000-4-8 ..... Magnetic field immunity, 30A/m
EN61000-4-11 ..... Voltage dip immunity,
30% reduction for 500ms,
100% reduction for 10ms
Safety Standards ..... IEC/EN/UL 60601-1 (Edition 3.1),
ANSI/AAMI ES 60601-1:2012,
CSA C22.2 No. 60601-1:2014,
IEC/EN 60950-1 (2nd Edition)
Agency Approvals ..... UL, cUL, TUV, CB, CE
Other Compliance ..... RoHS

### MECHANICAL SPECIFICATIONS

#### U-Bracket Form Factor



#### Enclosed Form Factor



#### NOTES:

1. Dimensions: inches [mm]
2. Tolerance: 0.02 [0.5] maximum
3. Input connector P1: Dinkle terminal P/N DT-35-B01W-03 with nickel plated M3 screws.
4. Output Connector P2: Dinkle terminal P/N DT-4N-B01W-06 with nickel plated M3.5 screws.
5. Output Connector P3: JST header B10B-PHDSS or equivalent, mating with JST housing PHDR-10VS or equivalent.
6. Fan connector P4: JST header S2B-ZR-3.4 or equivalent, mating with JST housing ZHR-2 or equivalent.
7. Weight: 1.8 kgs (3.97 lbs.) approx. for U-bracket form, 2 kgs (4.41 lbs) approx. for enclosed form.
8. Maximum penetration depth of fixing screws is 4mm from the outer surface of the chassis.

### CONNECTORS & SIGNALS

CONNECTOR	PIN	FUNCTION
P1 (AC)	1	AC GROUND
	2	LIVE
	3	NEUTRAL
P2	1, 2, 3	+V
	4, 5, 6	COMMON RETURN
P3	1	+V SENSE
	2	-V SENSE
	3	PFD
	4	COMMON RETURN
	5	N.A.
	6	N.A.
	7	INHIBIT
	8	N.A.
	9	+5V STANDBY
	10	+5V STANDBY RETURN
P4	1	+12V FAN
	2	COMMON RETURN

#### CONTROL SIGNALS

PFD	TTL high for normal operation, low upon loss of input power, turn-on delay time 100-750ms, turn-off delay time 1ms minimum
INHIBIT	Requires an external TTL high level signal to inhibit outputs for standard models