TMC400 Series
400 Watts AC/DC Medical & ITE Power Supplies

FEATURES
• 90~264 VAC Input with Active PFC
• 4” x 7” x 1.58” Compact Size
• 0.98 Power Factor
• Low Leakage Current
• Efficiency up to 92%

INPUT SPECIFICATIONS
Input Voltage Range .......... 90~264 VAC
Input Frequency ................... 47~63Hz
Input Current .......................... 4.2A rms @ 115 VAC, 60Hz
Inrush Current ....................... 20A @ 115 VAC or 40A @ 230 VAC,
at 25°C cold start
Earth Leakage Current ........... 220μA 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
Overvoltage Protection .......... Set at 115-140% of its nominal
output voltage
Overcurrent 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, 100mA max. @ P4 connector
Fan Power ............................. 12V, 250mA max. @ P5 connector

* 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 .......... 85KHz typical
Power Factor ...................... 0.98 typical, with active PFC
Efficiency .......................... 89% typical @ 115 VAC,
92% typical @ 230 VAC
Hold-up Time ...................... 12ms at 110 VAC
Line Regulation ................. ±0.5% max. at full load
Operating Temperature ........ -10°C to +70°C
Derating ............................. Derate from 100% @ +50°C
linearly to 50% @ +70°C
Storage Temperature .......... 40°C to +85°C
Relative Humidity ............... 5% to 95% non-condensing
Withstand Voltage .............. 4000 VAC from input to output
1500 VAC from input to ground
500 VAC from output to ground
MTBF .................. 350K hours minimum at full load,
25°C ambient, calculated per
MIL-HDBK-217F

MODELS LIST

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Voltage</th>
<th>@ Convection</th>
<th>@ 7 CFM Forced Air</th>
</tr>
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<tbody>
<tr>
<td>TMC400-S12</td>
<td>12V</td>
<td>25.00A</td>
<td>300W</td>
</tr>
<tr>
<td>TMC400-S15</td>
<td>15V</td>
<td>20.00A</td>
<td>300W</td>
</tr>
<tr>
<td>TMC400-S18</td>
<td>18V</td>
<td>16.67A</td>
<td>300W</td>
</tr>
<tr>
<td>TMC400-S24</td>
<td>24V</td>
<td>12.50A</td>
<td>300W</td>
</tr>
<tr>
<td>TMC400-S28</td>
<td>28V</td>
<td>10.72A</td>
<td>300W</td>
</tr>
<tr>
<td>TMC400-S36</td>
<td>36V</td>
<td>8.34A</td>
<td>300W</td>
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<tr>
<td>TMC400-S48</td>
<td>48V</td>
<td>6.25A</td>
<td>300W</td>
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NOTES:
1. U-bracket format is standard. Add suffix "C" for enclosed format with
cooling fan, e.g. TMC400-S12C.
2. All models may be operated at no-load.

STANDARDS & COMPLIANCES
EN55011, EN55022 .......... Class B conducted, Class A radiated
FCC ............................... Class B conducted, Class A radiated
VCCI ............................... Class B conducted, Class A radiated
EN61000-3-2 ..................... Harmonic distortion, Class A & D
EN61000-3-3 ..................... Line flicker
EN61000-4-2 ..................... ESD, ±8 KV air and ±6 KV contact
EN61000-4-3 ..................... Radiated immunity, 3V/m
EN61000-4-4 ..................... Fast transient/burst, ±2 KV
EN61000-4-5 ..................... Surge, ±1 KV diff., ±2 KV com.
EN61000-4-6 ..................... Conducted immunity, 3 Vrms
EN61000-4-8 ..................... Magnetic field immunity, 3A/m
EN61000-4-11 ................. Voltage dips immunity,
30% reduction for 500ms,
60% reduction for 100ms,
>95% reduction for 10ms

Safety Standards .......... UL/IEC/EN 60601-1 (3rd Edition),
ANSI/AAMI ES 60601-1 (1st Edition),
CSA C22.2 No. 60601-1 (2nd Edition),
IEC/EN 60950-1-2 (2nd Edition)
Agency Approvals .......... UL, TUV, CB, CE
Other Compliance .......... RoHS

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TMC400 Series

MECHANICAL SPECIFICATIONS

U-Bracket Format

CONNECTORS & SIGNALS

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>PIN</th>
<th>FUNCTION</th>
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</thead>
<tbody>
<tr>
<td>P1 (AC)</td>
<td>1</td>
<td>AC GROUND</td>
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<tr>
<td></td>
<td>2</td>
<td>AC LIVE</td>
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<tr>
<td></td>
<td>3</td>
<td>NEUTRAL</td>
</tr>
<tr>
<td>P2</td>
<td></td>
<td>+OUTPUT</td>
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<tr>
<td>P3</td>
<td>1</td>
<td>COMMON RETURN</td>
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<tr>
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<td>2</td>
<td>+V SENSE</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>-V SENSE</td>
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<tr>
<td>P4</td>
<td>4</td>
<td>PFD</td>
</tr>
<tr>
<td>P5</td>
<td>5</td>
<td>INHIBIT</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>+5V STANDBY</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>DC OK</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>PS OFF</td>
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</tbody>
</table>

NOTES:
1. Dimensions: inches [mm]
2. Tolerance: 0.02 [0.5] maximum
3. Input connector P1 is Dinkle terminal P/N DT-35-B01W-03 with M3, nickel plated screws
4. P2, P3, P4: M3 x 0.5 screw connectors
5. Connector P4: Molex header 87833-08 or equivalent, mating with Molex housing 51110-0850 or equivalent
6. Fan connector P5: Molex header 53048-0210 or equivalent, mating with Molex housing 51021-0200 or equivalent
7. Weight: 1.0 Kg (2.23 lbs.) approx. for U-bracket form, 1.14 Kgs. (2.52 lbs.) approx. for enclosed form.
8. Maximum penetration depth of fixing screws is 4mm from the outer surface of chassis.

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