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| Electrical Specification for: | 48V 1KW 1U AC-DC Power Supply |
| TelkooR Model: | PS-1048 |



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|-------------------|-------|-----------|--------------|----------|--------------|-----|------|
| CUSTOMER: GENERAL | SIZE | CAGE CODE | S5417 | DWG. NO. | 1048-DOC1-10 | REV | A |
| | SCALE | | RELEASE DATE | 22/02/08 | SHEET | 1 | OF 7 |

| REVISION HISTORY | | | | | |
|------------------|----------|-----------------------|-------------------|-----------|-------------|
| Rev Level | Rev Date | Change Made | Reason for Change | Effective | Approved By |
| A | 22/02/08 | Specification Release | | 22/02/08 | S.Sadot |
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Input:

Input Voltage: 90 - 264Vac, auto range, single phase
 Frequency: 47-63Hz
 Inrush Current: 35 A maximum at 230Vac
 Power Factor: 0.98 typical at 230Vac, full load
 0.99 typical at 115Vac, full load
 Efficiency >89% at 230Vac, full load rated power
 >85% at 120Vac, full load rated power
 Input Protection: Internal Line Fuse: IEC type, 3AG,10A 250Vac NORMAL ACTION
 Brown – Out: 75 to 300Vac for 50Msec

Output Voltages & Currents:

| Output | Output Voltage | I Min. Load | I Max. Load | Peak Load | Note |
|--------|----------------|-------------|-------------|-----------|----------|
| VO1 | - 48V | 0 | 20A | 22A | Floating |
| VSB | 5VSB | 0 | 1A | 1.2A | Floating |

Output Power: 1000W
 Line Regulation: ± 0.05% for Vin (Min) to Vin (Max).
 Load Regulation: ± 1.0% for load changes from zero to full load.
 Ripple & Noise V1: 1% p-p Max @ 20 MHz bandwidth with 1u ceramic and 10 electrolytic on measure point.
 Output Voltage Adjustment Range ± 5%
 Initial Set Point Tolerance: ± 150mV
 Overshoot & Undershoot: Less than 1% at turn ON-OFF
 Transient Load Response: ± 3% Max. deviation for load change of 50% to 100%, at slew rate of 1A/usec, recovery time less then 1mSec
 Turn On Delay: 2 sec. Maximum.
 Hold-up Time: 20mSec typical
 Turn-On Rise Time: 50mSec Max.
 Over-current Protection: 105 to 130% of IMax, constant current limit, with 5 second delay latching on Vo1, AC input must recycled to restart.
 Over-voltage Protection: Shut down at 115 to 135% of nominal output, AC input must recycled to restart.
 Temperature Protection: Shutdown due to excessive ambient temperature at over heating or malfunction of cooling fans. The sense point is at 90°C for the internal heat signal, unit recovers automatically typical hysteresis 30°C.
 Remote Sense on V1 Option
 Current Share ± 5% Max. N+1 Redundancy, up to 6 parallel units. Single wire .
 Hot Swap Internal O-Ring diode (FET)

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Signals & Commands

Important note: All signals and commands refer to +5VSB RTN.

(See attached pin assignment table)

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|-----------------------------|--|
| Inhibit: | Active low, main outputs shut down to zero. Only 5VSB output exists at this point. |
| PS ON: | Contact closure to 5VSB ground to start unit. |
| PWR OK: | Open collector TTL Level active low when the output or Input drops 10% below specification rate. |
| Temp. Warning | Open Collector active low when the temperature 10% below shut down . |
| Fan Fail: | TTL Compatible signal, normally High, goes low when fan fail. |
| I ² C bus option | Passive and Active Data on the I ² C bus Internal I ² C monitors :output voltage ,current ,power, temperature ,fans and input voltage health condition ,and remote on/off control via I ² C bus I ² C Passive data : s/n , model no. ,revision ,and/or user defined data |

Front Panel Indicator

AC In & DC Output In Range Green LED illuminates

Environmental Specifications:

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|--------------------------|--|
| Temperature: | Operating: -10°C to +50°C , de-rating linearly to 70 °C with 2.5%/°C. Storage: -40°C to +85°C. |
| Temperature Coefficient: | 0 to 70°C ± 0.02%/°C |
| Cooling: | Forced air by internal 2 fans |
| Humidity: | 5% to 95% RH non-condensation. |
| Altitude: | Operating 10,000 ft. Non- operating 40,000 ft. |
| Vibration: | Three orthogonal axes at 1 octave/min, 5 min dwell at four major resonances at 0.75G peak, 5Hz to 500Hz. |

Safety Regulatory & EMC Specifications (Designed to meet):

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|--|--|
| MEETS FCC CLASS B, CISPR 22 CLASS B,EN55022 CLASS B with an external TBD line filter | |
| EN61000-3-2 | HARMONICS |
| EN61000-3-3 | VOLTAGE FLUCTUATION |
| EN6000-4-2 | ESD +8KV AIR +4KV CONTACT DISCHARGE, performance criteria B |
| EN61000-4-3 | RADIATED IMMUNITY: 80-1000Mhz 3V/m, AM 80% (1KHz), criteria A |
| EN61000-4-4 | FAST TRANSIENT: 1KV for AC power port, 0.5KV for DC power I/O and signals Port, performance criteria B |
| EN61000-4-5 | SURGE: 2KV common mode and 1KV differential mode |
| EN61000-4-6 | 3VRMS, 80% A.M. BY 1kHz |
| EN61000-4-8 | 3A /m at 50Hz, performance criteria A. |
| EN61000-11 | VOLTAGE Dips and interruption: 30% reduction for 10mSec –Criteria B, 60% For 100mSec. Criteria C, 95% reduction for 5000mSec Criteria C. |
| Dielectric Withstand: | |
| Input to Case: | 1500VAC. |
| Input to Output: | 3000VAC |
| Output to Case: | 1500VDC |

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Safety Agency Compliance: UL 60950-1, EN 60950-1,
CE Mark

Leakage Current: <1.1mA @50/60 Hz, 230Vac input.

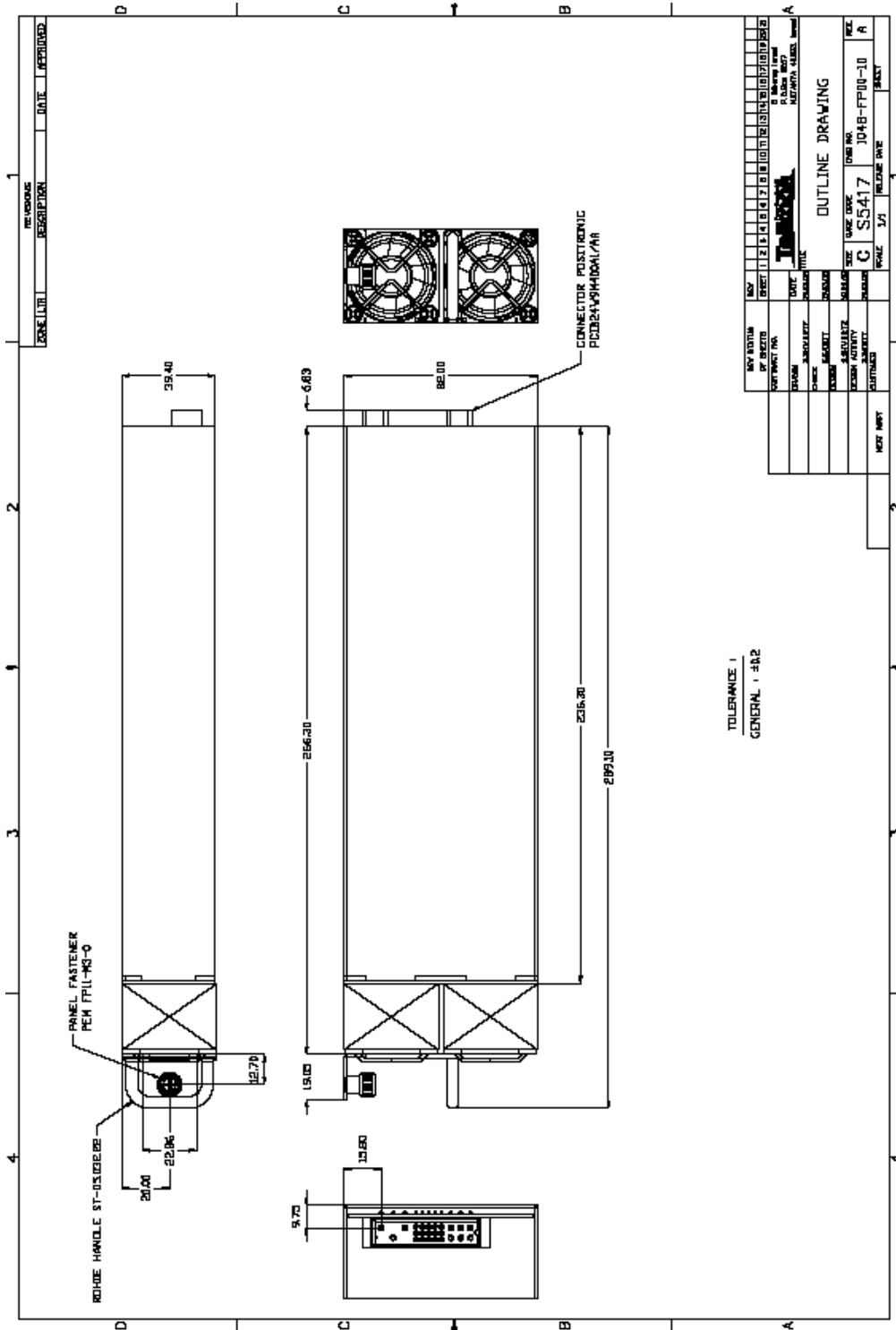
MTBF: 300,000 hours minimum per BELCOR 332,issue 6 specification @30 degrees C

Mechanical Dimensions

Size (LXWXH) 11.23" X 3.23" X1.55" (285.35mm x 78.7mm x 39.4mm)
Weight 1.6Kg
I/O Connector Positronic PCIB24W9M400A1/AA (Mating # PCIB24W9F400A1).

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Power Box Outline Drawing



| REV | REV | REV | REV | REV | REV | REV | REV | REV | REV | REV | REV | REV | REV | REV | REV | REV | REV | REV | REV |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE | DATE |
| DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION | DESCRIPTION |
| NEW DESIGN CHECKED BY: _____ DRAWN BY: _____ DATE: _____ SCALE: _____ SHEET NO: _____ TOTAL SHEETS: _____ | | | | | | | | | | TITLE: OUTLINE DRAWING CAGE NO: S5417 PART NO: 1048-FF00-10 REV: A | | | | | | | | | |

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Power Box Pin Assignment

| Pin # | Signal Name | Remarks |
|-------|----------------|--|
| 1,2 | -48V | 48V Floating |
| 3,4 | -48V RTN | 48V Floating |
| 5 | Not Connected | |
| 6 | Current Share | Single Wire N+1 up to 6 unit In Parallel |
| 7 | PS ON | Connect to 5VSB_GND to start the unit. |
| 8,9 | Not Connected | |
| 10 | Power Ok | Open Collector Active Low, indicates input line and DC Output fail |
| 11 | INHIBIT | Power Supply ON/OFF switch connect to 5VSB_GND. |
| 12 | Not Connected | |
| 13 | Temp.Warning | Open Collector Active Low, Indicate Temp. Waning . |
| 14 | 5VSB_GND | |
| 15 | 5VSB_GND | |
| 16 | SDA | I2C bus |
| 17 | SCL | I2C bus |
| 18 | 5VSB | 5V_Standby |
| 19 | GA2 | Geographic Address Bit 2 |
| 20 | GA1 | Geographic Address Bit 1 |
| 21 | GA0 | Geographic Address Bit 0 |
| 22 | Chassis Ground | Chassis Ground |
| 23 | Neutral | AC Supply |
| 24 | PHASE | AC Supply |

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