Medical Grade ATX PC Power Supplies

Tumbler Technologies + TRUMPower offers its TMPC series of 300-700W AC/DC medical ATX PC power supplies, which are approved to the 3rd edition of UL 60601-1, IEC 60601-1, and EN 60601-1 medical standards, including ANSI/AAMI ES 60601-1: 2005, CAN/CSA-C22.2 No. 60601-1:08, EN 60601-1:2006, IEC 60601-1:2005 standards and risk management. The lineup includes the 300W, 400W, 500W, 600W, and 700W models.

The power supplies comply with ATX12V and EPS12V standards. The TMPC-600 and TMPC-700 come with DC voltage outputs and maximum loads of +3.3V/24A, +5V/30A, quadruple +12V/16A, -12V/0.5A, +5Vsb/3.5A and -5V/0.2A. The TMPC-400 and TMPC-500 consist of DC voltage outputs and maximum loads of +3.3V/30A, +5V/30A, dual +12V/17A, -12V/0.8A, +5Vsb/2A, -5V/0.3A respectively. 3.3V sensing, power good signal and remote on/off control are standard on the power supplies. The units are furnished with a standard output cableset, which includes the 20+4 pin ATX motherboard connector, 4-pin and/or 8-pin Molex, SATA power connectors, etc. that is suitable for most PC-related applications. Alternatively, custom cablesets can be ordered as requested by the customer.

On the 400W and 500W power supplies, earth leakage current is 90µA @ 115 VAC or 150µA @ 230 VAC typically. The TMPC400-72 is a lower leakage version of < 90µA @ 264 VAC. Earth leakage current on the 600W and 700W units are 100µA and 150µA maximum @ 115 VAC/60 Hz and @ 264 VAC/50 Hz, respectively. With efficiency higher than 82% at full load, the TMPC-600 and TMPC-700 series are 80 plus bronze-certified. The efficiency of the 300-500W models is typically 70%-75% at full load.

The power supplies comply with EN 60601-1-2, EN 61000-3-2, EN 61000-3-3, and FCC, EN 55011, EN 55022, CISPR22, VCCI class B radiated & conductive emissions EMC/EMI standards. CB scheme test reports are available. In addition, the unit

carries CE marking and complies with RoHS requirements. MTBF of the power supply at full load is higher than 145K hours at 25°C ambient, calculated per MIL-HDBK-217F.

All models feature 90-264 VAC universal input and active PFC, which meets EN 61000-3-2 standards. The 300-500W power supplies measure 5.51” (L) x 5.91” (W) x 3.39” (H) and the 600-700W power supplies have dimensions of 6.50” (L) x 5.91” (W) x 3.39” (H). They are also equipped with a power switch and a thermally controlled ball-bearing fan with noise-killer. Additional key features include overvoltage and overcurrent protection on all outputs, low ripple and noise and 0ºC to +50ºC operating temperature.

The TMPC series are in mass production and are available from stock to 8 weeks ARO.

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