ENCLOSED MEDICAL SWITCHING POWER SUPPLY SERIES 12 - 48VDC 700W

TAAM700

Features:

- Optional built-in current share (configurable to 1.26kW)
- High efficiency up to 92%
- Remote ON/OFF function
- 5V standby at 1A
- BF rated outputs
- Ultra-high power density 17.8W/in^3

Description:

The TAAM700 series of medical certified AC/DC switching power supplies provides 625 - 700 watts of continuous output power, enclosed within a small 6.7” x 3.66” footprint. The compact size and high power density makes this power supply perfect for medical applications. All models meet FCC PART 15 and EN55032 class B emission limits, and are certified to UL, IEC, CE, and more.

Model	Voltage	Current	Total Power	Load Regulation	Line Regulation	Maximum Capacitive Load	Efficiency	Ripple & Noise (P-P)
TAAM700-12C	12VDC	52.08A	625W	±1%	±0.5%	5,000µF	89%	160mV
TAAM700-13C	15VDC	41.66A	625W	±1%	±0.5%	3,750µF	90%	160mV
TAAM700-14C	24VDC	29.16A	700W	±1%	±0.5%	2,500µF	91%	240mV
TAAM700-15C	28VDC	25.00A	700W	±1%	±0.5%	2,000µF	92%	280mV
TAAM700-18C	48VDC	14.58A	700W	±1%	±0.5%	1,250µF	92%	480mV

Notes:

1. Ripple and Noise is measured with a 0.1µF ceramic capacitor and a 47µF electrolytic capacitor in parallel with a resistive load, drawing the rated current. The measurement is bandwidth limited at 20MHz.
2. DC Hi-Pot testing is strongly recommended over AC Hi-Pot testing. Please consult with TT Electronics before attempting an AC Hi-Pot test.
3. For single wire current share option, add ”-CS” as suffix. For example: TAAM700-14C-CS.

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Specifications	
Input	
Input Voltage	85 - 264VAC (See Derating Curve)
Input Frequency	47 - 63Hz
Input Current	8A max at 115VAC 3.5A max at 230VAC
Inrush Current (Typical)	<55A peak at 115VAC, cold start <90A peak at 230VAC, cold start
Power Factor	>0.9 at full load at 230VAC
Output	
Total Output Power	See Table
Output Voltage	See Table
Hold Up Time	≥5mS at 115VAC
Turn on Delay	<3S
Voltage Adjustability	±5%
+5V Standby	5V @ 1A, ±10% tolerance
Protection Features	
Over Voltage Protection	130 - 160%, Auto-recovery
Over Current Protection	115 - 160%, Auto-recovery
Over Temperature Protection	90 - 110°C, Auto-recovery
Over Power Protection	115 - 160%, Auto-recovery
Short Circuit	Level 1 (nominal): Continuous, Auto-recovery Level 2 (instantaneous high current): Latching, Cycle AC input
Environmental	
Operating Temperature	$^{-}30$ - $^{+}70$°C (See Derating Curve)
Storage Temperature	$^{-}35$ - $^{+}85$°C
Operating Humidity	10 - 95% non-condensing
Altitude	<5000m operational and storage
Atmospheric Pressure	56 - 106kPa
Vibration	Vibration IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)
Shock	IEC60068-2-27
Signals	
DC OK Signal (Power Good)	Turn on: 3.7 - 5.7V; Turn off: 0 - 1V
Remote Control	+RC/-RC Power on = Open; Power off = Short

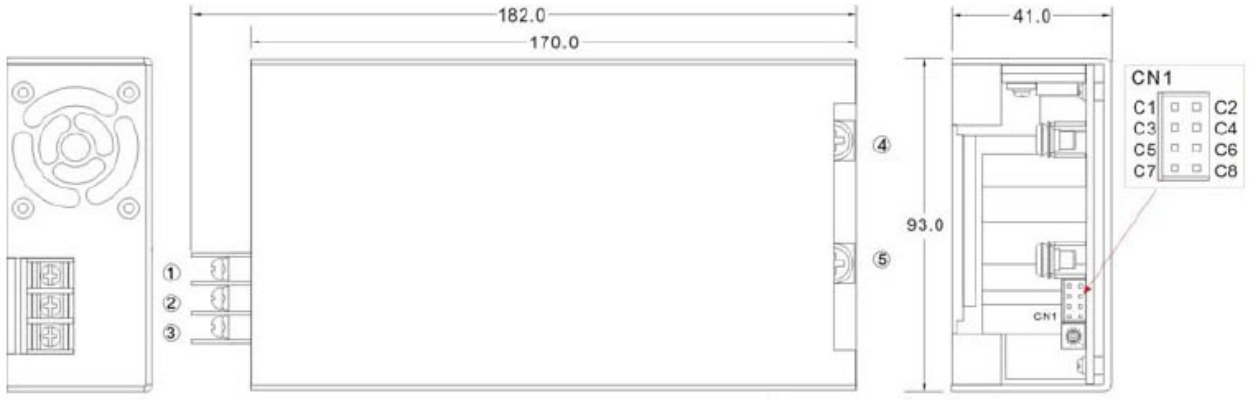
Specifications (continued)	
General Specifications	
Dimensions	6.7”(170.2mm)L x 3.66”(93.0mm)W x 1.61”(41mm)H
Weight	1.96lbs (890g)
MTBF	>100,000 hours per MIL-HDBK-217F at full load and 25°C ambient
Meets Efficiency Level	Level VI
AC Input	Line, Neutral, and Earth Ground screw terminals.
DC Output	One positive(+) and one negative(-) screw terminal.
Safety	
Approvals	UL/cUL60601-1 IEC60601-1 EN60601-1
Isolation	
Input to Output	5656VDC
Input to PE	2828VDC
Output to PE	2828VDC
EMC	
Emissions	EN55032|EN55011 Class A Radiated & Class B Conducted EN55024: 2010 | EN60601-1-2 4th Edition FCC PART 15 Class A Radiated & Class B Conducted
Electrostatic Discharge Radiated Immunity EFT Surge Immunity Conducted Immunity Power Frequency Magnetic Field Immunity Dips/Interruptions	IEC61000-4-2: ±15kV Air, ±8kV contact IEC61000-4-3: 10V/m IEC61000-4-4: ±2kV IEC61000-4-5: 1kV DM, 2kV CM IEC 1000-4-6: 3Vrms IEC61000-4-8: 1A/m IEC61000-4-11: Voltage dip immunity, 30% reduction for 500ms, 100% reduction for 10ms

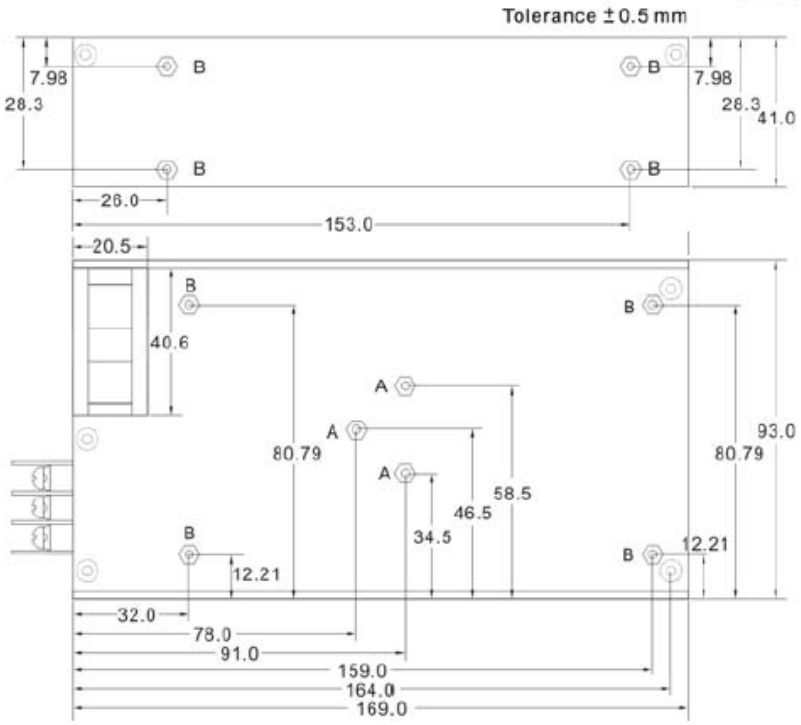
Note:

1. CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.

Diagrams

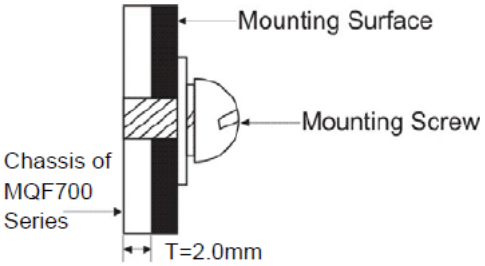
Mechanical Outline





*For fixture to chassis mounting, please use threaded holes labeled **B**.
B=M3x0.5P
Torque: 0.31±0.05 Nmm

ASSEMBLY INSTRUCTIONS
*U Case T=2.0mm
Customer is advised to screw into the threads no more than 2.0mm



PIN#	Single	Terminal
A,B	PE	—
1	FG	ANYTEK YK-301-3P
2	AC IN (N)	
3	AC IN (L)	
4	+DC OUT	M5 Pan HD screw in 2 positions Torque to 90 Ncm (8 lbs-in) max.
5	-DC OUT	

Diagrams (continued)

Connector Pin (CN1)

PIN#	Function	Mating Housing	Terminal	Mating Housing	Terminal
C1	+S	PHD-H20-2X4P	PHD-T20	PHDR-08VS	SPHD-001T-P0.5
C2	-S				
C3	NC/CS*				
C4	-5V SB				
C5	GND/ -RC				
C6	+RC				
C7	PG				
C8	+5V SB				

* Current share (if installed)

Function Descriptions

PIN#	Function	Description
C1	+S	Remote sensing (+), leave open circuit if not used
C2	-S	Remote sensing (-), leave open circuit if not used
C3	NC/CS	Single wire current share, if installed (See -CS option)
C4	-5V SB	This pin connects to the negative terminal (-V)
C5	GND/ -RC	This pin connects to the negative terminal (-V). Return for DC-OK signal output.
C6	+RC	Turns the output on and off by electrical or dry contact between pin C5 (GND / -RC), Short: Power OFF, Open: Power ON.
C7	PG	DC-OK signal is a DC output. (DC-OK)
C8	+5V SB	Stand by voltage output 4.5~5.5V, ground referenced to pin C4 or C5 (GND). The maximum load current is 1A.

Derating Curves