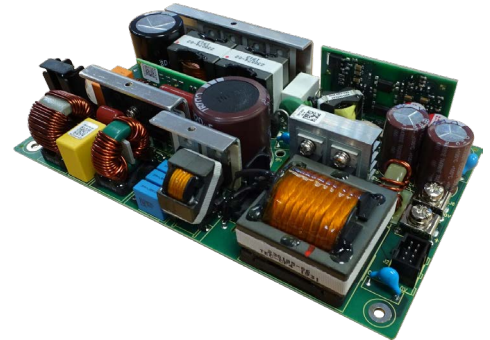


500W, Configurable, Class I or II AC-DC, power supply

Features	Benefits
• BF ready medical isolation (MOPP)	Eases design into systems (including BF)
• Class I / II with level B EMC	Eliminates need for additional EMC filters
• Defibrillator proof	Suitable for BFD applications <small>refer to technical support</small>
• Low airflow requirement	Allows quieter system design
• 5 year warranty	Low cost of ownership



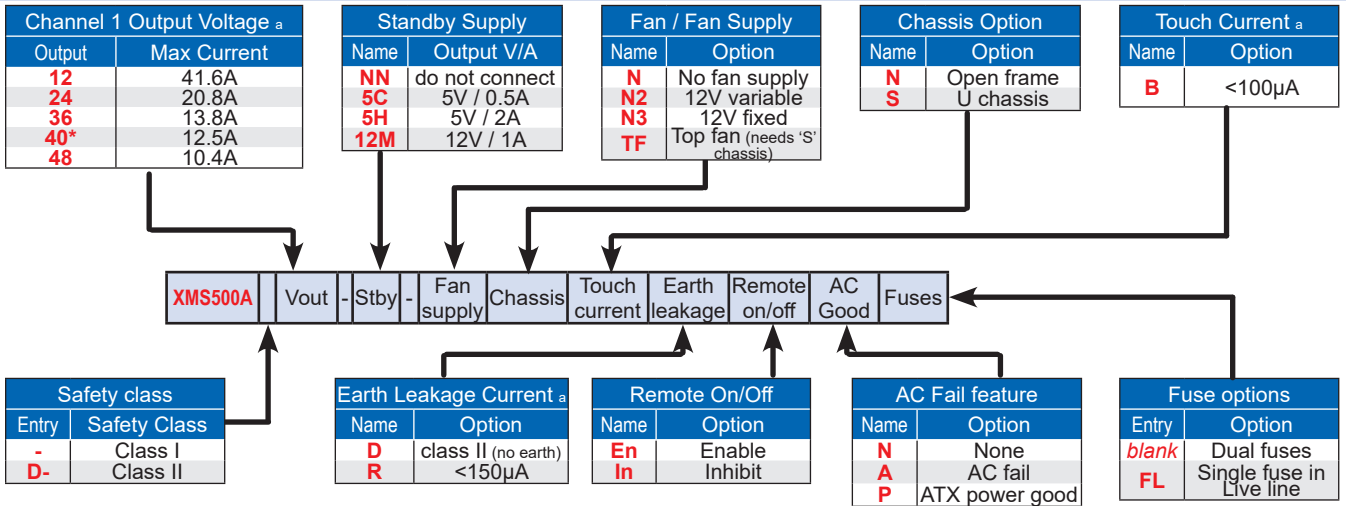
Input			
Input Voltage	85-264Vac (100-240Vac nominal) able to withstand input voltages of up to 300Vac for up to 5 seconds	Input Frequency	47 - 63Hz
Input Harmonics	EN61000-3-2 compliant	Power Factor	0.95 min at 110Vac input
Input Fuse	Dual fusing (single fuse optional) Fast acting (not user replaceable)	Inrush Current	<40A at 25°C and 264Vac (cold start) (meets EN61000-3-3).
Earth Leakage Current	specified at 264Vac (63Hz). see 'How To Create A Product Description' for options		

Quick Selector (Standard models). Additional variants available - see 'How To Create A Product Description'						
Output		Cover / Chassis / Fan type	Class I		Class II	
Volts	Current		Product Description	Order code	Product Description	Order code
12V	41.6A	Open Frame	XMS500A-12-5H-N2NBRInA	XMSA001V	XMS500AD-12-5H-N2NBDInA	XMSA00F9
		U chassis	XMS500A-12-5H-N2SBRInA	XMSA002C	XMS500AD-12-5H-N2SBDInA	XMSA00GP
		Top fan	XMS500A-12-5H-TFSBRInA	XMSA003M	XMS500AD-12-5H-TFSBDInA	XMSA00HS
24V	20.8A	Open Frame	XMS500A-24-5H-N2NBRInA	XMSA004V	XMS500AD-24-5H-N2NBDInA	XMSA00JP
		U chassis	XMS500A-24-5H-N2SBRInA	XMSA0055	XMS500AD-24-5H-N2SBDInA	XMSA00KS
		Top fan	XMS500A-24-5H-TFSBRInA	XMSA006B	XMS500AD-24-5H-TFSBDInA	XMSA00L7
36V	13.8A	Open Frame	XMS500A-36-5H-N2NBRInA	XMSA007V	XMS500AD-36-5H-N2NBDInA	XMSA00MP
		U chassis	XMS500A-36-5H-N2SBRInA	XMSA0085	XMS500AD-36-5H-N2SBDInA	XMSA00NS
		Top fan	XMS500A-36-5H-TFSBRInA	XMSA009B	XMS500AD-36-5H-TFSBDInA	XMSA00P8
48V	10.4A	Open Frame	XMS500A-48-5H-N2NBRInA	XMSA00B6	XMS500AD-48-5H-N2NBDInA	XMSA00R7
		U chassis	XMS500A-48-5H-N2SBRInA	XMSA00C9	XMS500AD-48-5H-N2SBDInA	XMSA00S8
		Top fan	XMS500A-48-5H-TFSBRInA	XMSA00DT	XMS500AD-48-5H-TFSBDInA	XMSA00TR

Standard models include:-
 '5H' standby (5V / 2A), 'N2' fan supply (12V / 0.25A for 12V main output versions, 12V / 0.15A all others - variable supply voltage) [except on Top fan variants], 'B' touch current (<100µA),
 'In' remote on/off (inhibit) and 'A' AC Fail. Class I standard models include 'R' earth leakage (<150µA).

Isolation						
Input to Output	Reinforced	2 x MoPP, 4kVac		Output to Earth (class I only)	Basic	1 x MoPP, 1.5kVac
Input to Earth (class I only)	Basic	1 x MoPP, 1.5kVac		Output to Earth (class I only)	Basic	1 x MoPP, 1.5kVac

How To Create A Product Description



^a - additional variants available, consult sales office

* Confirm availability of required product with sales office

Output Specification

Output Power	500W	Continuous with specified airflow or top fan.
Total Regulation	better than 2%	Including Line regulation of 0.1% (for 90-264Vac input change), Load regulation of 1% (for 0-100% load change) and thermal regulation of 0.02%/°C (0-50°C)
Ripple & Noise	1%	pk-pk, using EIAJ test method & 20MHz bandwidth
Voltage Setting Accuracy	±1%	at 50% load
Turn on Time	1.0s max	at 90 Vac & 100% rated output power
Efficiency	up to 92%	At 230Vac, 100% load
Hold up	20ms	minimum at 100% load
Min Load	None	
Transient Response		
Deviation	<5%	of set voltage for 25% to 100% load change
Recovery time	<2ms	for recovery to 2% of set voltage
Short circuit protection	Yes	Hiccup mode, auto recovery after removal of short circuit
Over Temperature protection	Yes	Latching, need to cycle ac to restart unit.
Over Voltage Protection	Yes	Latching, need to cycle ac to restart unit.

Signals

Remote on/off J2, pin 5	Enable (-En option) - Connect to Standby + to enable channel 1. Open circuit or 0V to inhibit. Inhibit (-In option) - Connect to Standby + to inhibit channel 1. Open circuit or 0V to enable. Maximum current required = 1mA
AC fail	Provides ac fail functionality. Logic high = ac fail, 0V = ac good, 12ms minimum warning time
ATX Power good	ATX Power good = ac good, main output enabled and good output voltage for last 200ms. Logic high = ATX power good 0V = not ATX power good, 12ms minimum warning time

Additional Outputs

Fan supply options	N	None
	N2	12V / 0.25A for 12V main output versions, 12V / 0.15A all others. Output voltage varies with heat sink temperature. See application note for details.
	N3	12V / 0.25A for 12V main output versions, 12V / 0.15A all others. Constant voltage.
	TF	Top fan (fan supply not for customer use as used by factory fitted top fan)
Standby Supply options	NN	None
	5C	5V / 0.5A
	5H	5V / 2A
	12M	12V / 1A

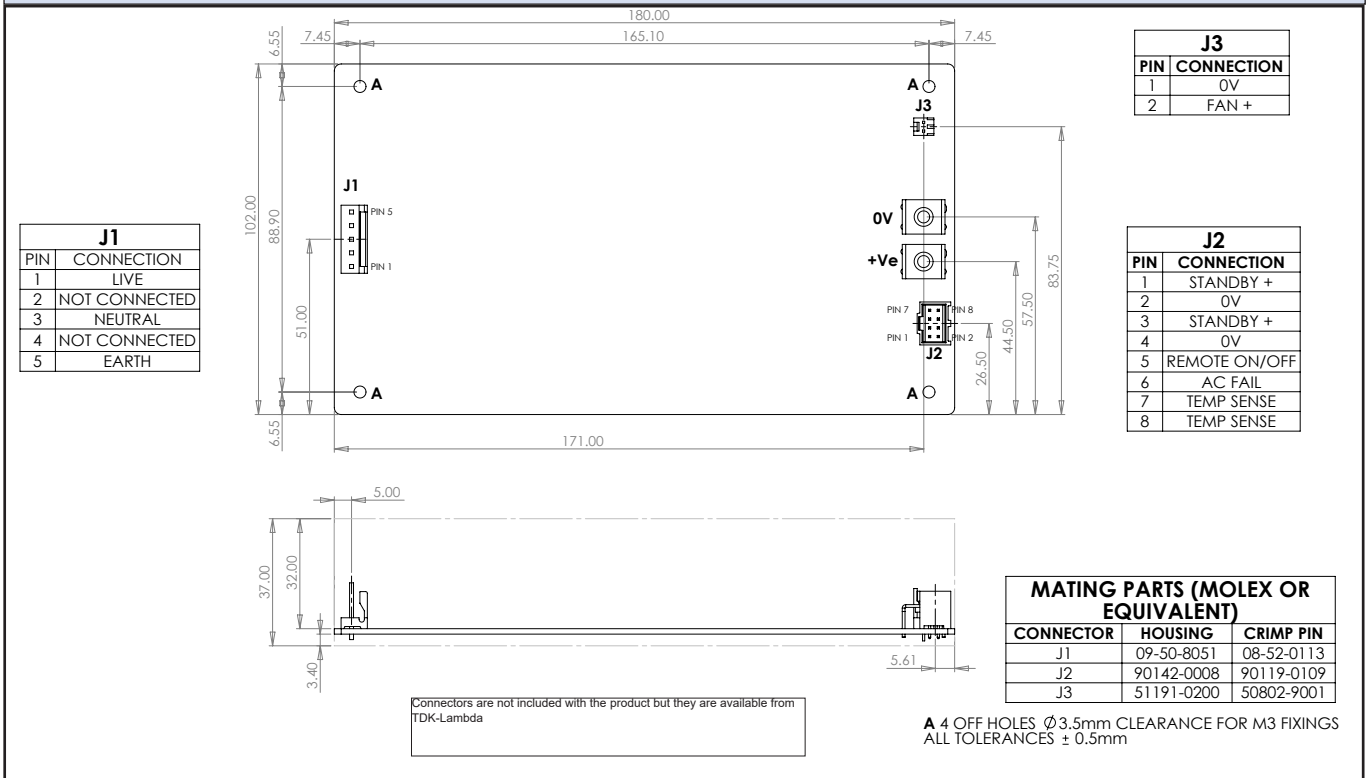
Environment	
Temperature	0°C to 50°C operational Full load with top fan (TF) fitted or 1m/s air blown (approximately 10 CFM). See handbook for maximum component temperatures. Convection cooled operation is possible by maintaining the specified component temperatures. Storage -40°C to 85°C (70°C for Top Fan versions).
Derating	50°C to 70°C, derate output by 2.5% per °C
Low Temp Startup	-20°C
Humidity	5 - 95% RH non condensing
Shock	±3 x 30g shocks in each plane, total 18 shocks 30g shock = 11ms (+/-0.5msec), half sine Conforms to EN60068-2-27, EN60068-2-47, IEC68-2-27, IEC68-2-47, JIS C0041-1987. Conforms to MIL-STD-810G, Method 516.6, Pro IV, VI
Vibration	Single axis 10 - 200 Hz at 2g (sweep and endurance at resonance) in all 3 planes Conforms to EN60068-2-6, IEC68-2-6 Conforms to MIL-STD-810G, Method 514.4, Pro I, Cat 1,9
Altitude	-200 to 5000 metres operational (3000m for 60601-1) (-200 to 5000m storage/transportation)
Pollution	Degree 2, Material group 3

Emissions EN61000-6-3		
Radiated Emissions	EN55011, EN55032	(as per CISPR.11/22) Class B, FCC47 part 15 subpart B see application note for details
Conducted Emissions	EN55011, EN55032	(as per CISPR.11/22) Class B, FCC47 part 15 subpart B
Conducted Harmonics	EN61000-3-2	Class A
Flicker	EN61000-3-3	Compliant - d _{max} only

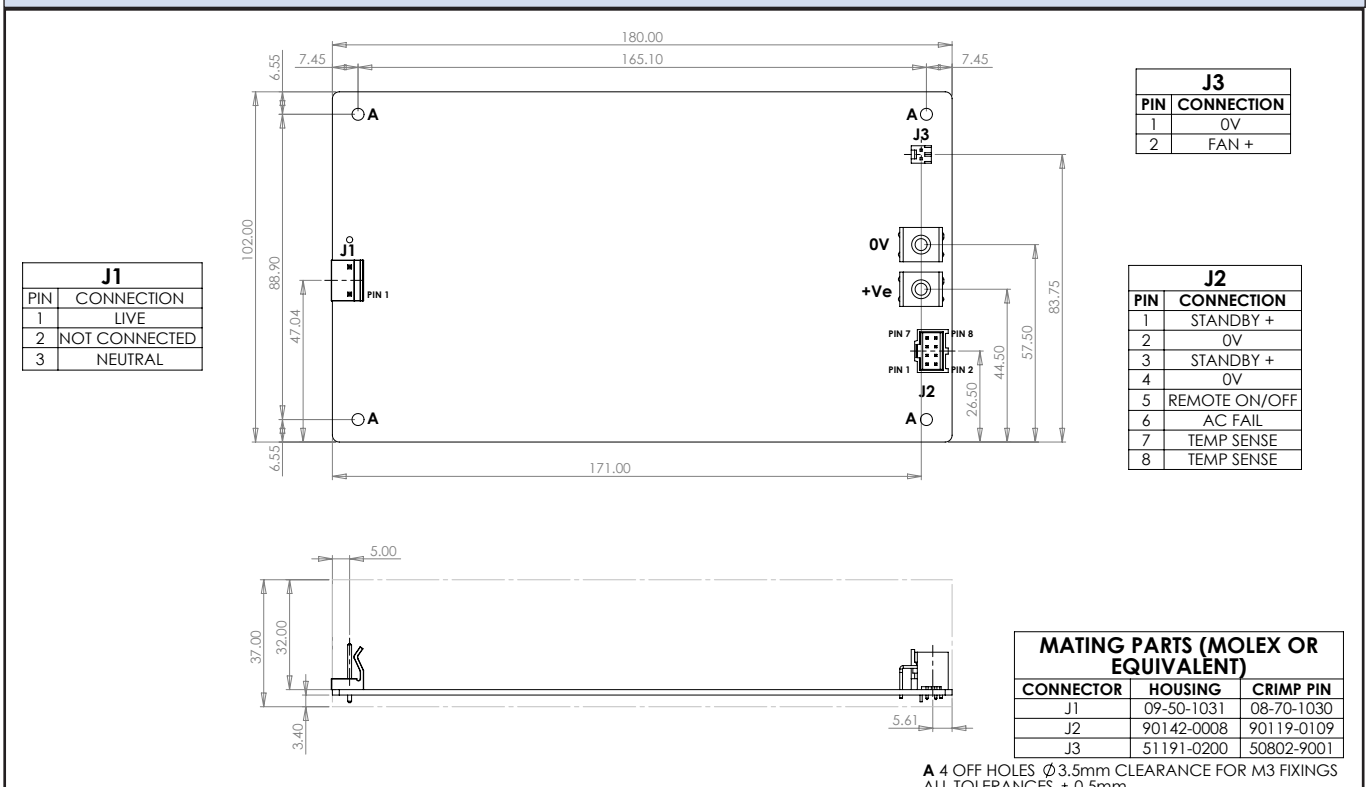
Immunity EN61000-6-2:2005, EN60601-1-2:2015				Criteria
Electrostatic Discharge	EN61000-4-2	Level 4	Only when fitted in a chassis Level 3 on signal pins	A
Electromagnetic Field	EN61000-4-3	Level 3		A
Fast / Burst Transient	EN61000-4-4	Level 4		A
Surge Immunity	EN61000-4-5	Level 3		A
Conducted RF Immunity	EN61000-4-6	Level 3		A
Power Frequency Magnetic Field	EN61000-4-8	Level 3		A
Voltage Dips, Variations, Interruptions	EN61000-4-11	Class 3	Criteria B for 5 sec interruption Criteria B for 10/12 cycle interruption EN60601-1-2 compliant	A
Ring Wave	EN61000-4-12	Level 3		B
Voltage Fluctuations	EN61000-4-14	Class 3		A

Approvals / Accreditations	
IEC/EN 62368-1, UL62368-1 / CSA 22.2 No 62368-1	File E135494
IEC/EN 60950-1, UL60950-1 / CSA 22.2 No 60950-1	File E135494
IEC/EN 60601-1, UL/CSA 60601-1, ANSI/AAMI ES60601-1 CAN/CSA-C22.2 No 60601-1-08	File E349607
CE Mark (EN62368-1)	Low Voltage Directive (LVD)
UKCA (EN62368-1)	Electrical Equipment (Safety) Regulations, electromagnetic compatibility (EMC) and Restriction of Hazardous Substances (RoHS)
CB certificate and Report available on request	<i>Please check with technical sales for status of approvals</i>
Designed and manufactured under the control of ISO9001 and ISO13485 (including risk management).	

Outline & Connection Drawings - Class I (with earth)

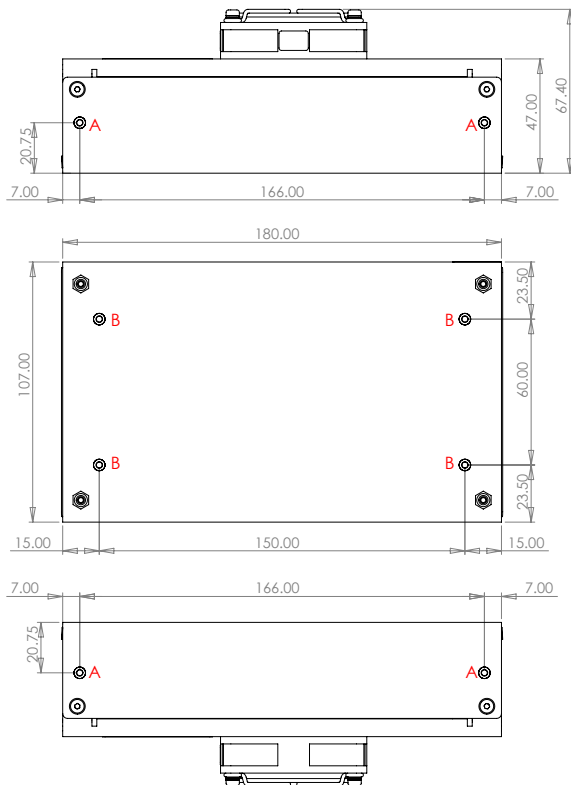


Outline & Connection Drawings - Class II product

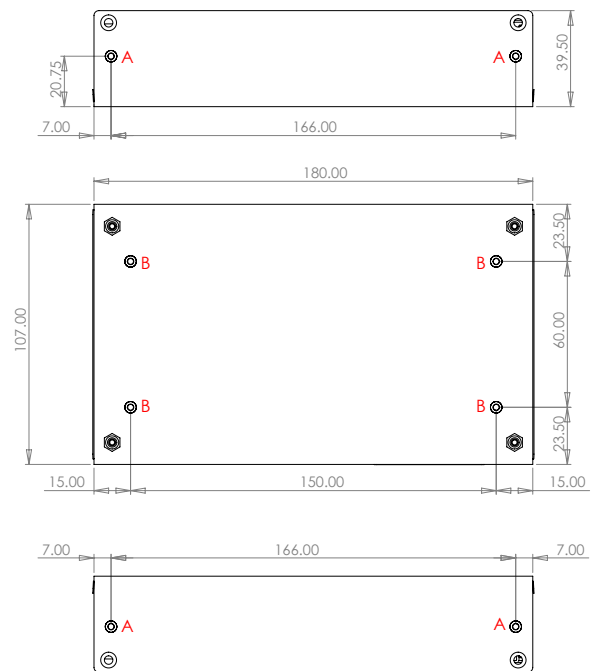


Outline Drawings

STANDARD CHASSIS + TOP FAN



STANDARD CHASSIS



A HOLES: 4 OFF FIXING HOLES FOR M3, MAXIMUM PENETRATION 3mm.
B HOLES: 4 OFF FIXING HOLES FOR M3 MAXIMUM PENETRATION 2.4mm
 MAXIMUM TORQUE 0.5-0.6Nm
 ALL TOLERANCES ± 0.5 mm

All specifications at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.



TDK-Lambda France SAS
 Tel: +33 1 60 12 71 65
 ttf.fr.powersolutions@tdk.com
 www.emea.lambda.tdk.com/fr



Italy Sales Office
 Tel: +39 02 61 29 38 63
 ttf.it.powersolutions@tdk.com
 www.emea.lambda.tdk.com/it



Netherlands
 ttf.nl.powersolutions@tdk.com
 www.emea.lambda.tdk.com/nl



TDK-Lambda Germany GmbH
 Tel: +49 7841 666 0
 tlg.powersolutions@tdk.com
 www.emea.lambda.tdk.com/de



Austria Sales Office
 Tel: +43 2256 655 84
 tlg.at.powersolutions@tdk.com
 www.emea.lambda.tdk.com/at



Switzerland Sales Office
 Tel: +41 44 850 53 53
 tlg.ch.powersolutions@tdk.com
 www.emea.lambda.tdk.com/ch



Nordic Sales Office
 Tel: +45 8853 8086
 tlg.dk.powersolutions@tdk.com
 www.emea.lambda.tdk.com/dk



TDK-Lambda UK Ltd.
 Tel: +44 (0) 12 71 85 66 66
 tlu.powersolutions@tdk.com
 www.emea.lambda.tdk.com/uk



TDK-Lambda Ltd.
 Tel: +9 723 902 4333
 tli.powersolutions@tdk.com
 www.emea.lambda.tdk.com/il-en



TDK-Lambda Americas
 Tel: +1 800-LAMBDA-4 or 1-800-526-2324
 tla.powersolutions@tdk.com
 www.us.lambda.tdk.com



TDK Electronics do Brasil Ltda
 Tel: +55 11 3289-9599
 sales.br@tdk-electronics.tdk.com
 www.tdk-electronics.tdk.com/en



TDK-Lambda Corporation
 Tel: +81-3-6778-1113
 www.jp.lambda.tdk.com



TDK-Lambda (China) Electronics Co. Ltd.
 Tel: +86 21 6485-0777
 tlc.powersolutions@tdk.com
 www.lambda.tdk.com.cn



TDK-Lambda Singapore Pte Ltd.
 Tel: +65 6251 7211
 tls.marketing@tdk.com
 www.sg.lambda.tdk.com



TDK India Private Limited, Power Supply Division
 Tel: +91 80 4039-0660
 mathew.philip@tdk.com
 www.sg.lambda.tdk.com

