UL TEST REPORT AND PROCEDURE

Standard:	ANSI/AAMI ES60601-1 (2005(R) 2012/A1:2012) (Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance) CAN/CSA-C22.2 No. 60601-1 (2014) (Medical Electrical Equipment - Part 1: General Requirements for Basic Safety and Essential Performance)
Certification Type:	Component Recognition
CCN:	QQHM2, QQHM8 (Power Supplies, Medical and Dental)
Product:	
Model:	EML30USxx-y (xx = 03, 05, 09, 12, 15, 24, 36 or 48; y = P, T, E, S or SD)
Rating:	Input Rated: 100-240 V~, 50/60 Hz, 0.4-0.8 A Output Rated: See Enclosure "Miscellaneous" for maximum output details.
Applicant Name and Address:	XP POWER LLC SUITE 150 1241 E DYER RD SANTA ANA CA 92705 UNITED STATES

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Melissa DeGuia Reviewed by: Ben Dahlen

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.

ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.

iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

The subject product is a component power supply intended to be used as part of Medical Electrical Equipment.

Unit is assessed as Class II power supply providing 2MOPP between input and output (all versions), and between input and outer surface of plastic enclosure.

Model Differences

Models are electrically similar with exception to the Mains Transformer (T1) - secondary windings, and minor secondary components that allow for different output voltage ratings. See Enclosure "Miscellaneous" 7-01 for details.

Suffixes P, T, E, S and SD define the following construction differences:
P - PCB mount;
T - chassiss mount;
E - encapsulated;
S - provided with screw terminals;
SD - screw terminals with DIN clip attached.

Technical Considerations

- Classification of installation and use : for building-in
- Device type (component/sub-assembly/ equipment/ system) : Component
- Intended use (Including type of patient, application location) : To supply regulated power

- Mode of operation : Continuous
- Supply connection : To be determined in end product
- Accessories and detachable parts included : None
- Other options include : None
- The product was investigated to the following additional standards:: ANSI/AAMI ES60601-1:2005/C1:2009+A1(2012) (includes National Differences for USA); CAN/CSA-C22.2 No. 60601-1:08+A1 (2014) (includes National Differences for Canada), EN 60601-1:2006+A1 (2013) + IEC 60601-1, Edition 3.1 (2012)
- The product was not investigated to the following standards or clauses:: Electromagnetic Compatibility (IEC 60601-1-2), Clause 14, Programmable Electronic Systems, Biocompatibility (ISO 10993-1)
- The degree of protection against harmful ingress of water is:: Ordinary
- Scope of Power Supply evaluation defers the following clauses to the be determined as part of the end product: Clause 7.5 (Safety Signs), Clause 7.9 (Accompanying Documents), Clause 9 (ME Hazard), Clause 10 (Radiation), Clause 14 (PEMS), Clause 16 (ME Systems)
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer’s specification of: 50°C for 100% load, derated linearly to 50% load at 70°C.

Engineering Conditions of Acceptability

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- Consideration should be given to measuring the temperature on power electronic components and transformer windings when the power supply is installed in the end-use equipment. The end use product shall ensure that the power supply is used within its ratings.
- Leakage Current Testing, including when measured with a non-frequency-weighted device (Clause 8.7.3e), shall be considered in the end product application.
- The power supply provides 2MOPP between input and output (all versions), and between input and plastic enclosure (encapsulated version).
- Mains transformer (T1) employs a Class B (130°C) insulation system.
- The output circuits have not been evaluated for direct patient connection (Type B, BF or CF).
- The products were tested on a 20 A branch circuit. If used on a branch circuit greater than this, additional testing may be necessary.
- The end product should ensure that the requirements related to accompanying documents, clause 7.9, are met.
- The available voltage for the secondary outputs does not exceed 25 Vac or 60 Vdc, under normal and single fault conditions.
- The input/output connectors and terminals are intended for factory wiring only.
- The need for Marking Durability and Marking Legibility Testing to be considered as part of the end product installation
- Suitable Fire/ Mechanical/ Electrical Enclosure to be provided as part of the end product
- The end-product Electric Strength Test is to be based upon a maximum working voltage of Primary-SELV: 484 Vpk.
- Power supply employs mains fuses with less than 1500A @ 250 V breaking capacity. The issue needs to be addressed in end-product RM file, and necessary evaluation conducted during end-use product certification
- Power supply has no mains disconnect device; suitable device(s) shall be provided in end-use product.
- Component is not provided with symbol 9 of Table D.1 (symbol IEC 60417-5172, DB: 2003-02). End-use product evaluation to determine the acceptability.
- Power supply was evaluated as a Class II component. Suitable Creepage and

Clearance distances complying with Clause 8.9 shall be evaluated when installed in an end product investigation.

Additional Information

Marking Plate is considered representative of all models covered under this Report.

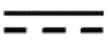
When submitting this Test Report to other Certification Body, the manufacturer is responsible for providing any additional information that the Body may need in order to issue its Mark, including testing for compliance with the applicable collateral standards.

Additional Standards

Models covered under this Report have been additionally evaluated to AAMI ES60601-1:2005 (R2012), CSA CAN/CSA-C22.2 No. 60601-1:14 and IEC 60601-1 Edition 3.1 (2012).

The product fulfills the requirements of: IEC 60601-1:2012 (AM1)

Markings and instructions

Clause Title	Marking or Instruction Details
Company identification	Classified or Recognized company's name, Trade name, Trademark or File
Model	Model number
Serial number or lot or batch identifier	Serial number or lot or batch identifier (Serial bar code located on side of component designated CX1)
Date of manufacture or use by date	Date of manufacture or use by date (Four digits located on top of component designated CX1)
Supply Connection	Voltage range, ac/dc, phases if more than single phase
Alternating current	
Direct current	
Supply Frequency	Rated frequency range in hertz
Power Input	Amps, VA, or Watts
Output	Rated output voltage, power, frequency.

Special Instructions to UL Representative

Production-Line Testing Requirements

Test Exemptions - The following models are exempt from the indicated test

Model	Grounding Continuity	Dielectric Voltage Withstand	Patient Circuit Dielectric Voltage Withstand
EML30USxx-y (xx = 03, 05, 09, 12, 15, 24, 36 or 48; y = P, T, E, S or SD)	Exempt	Test	Exempt

Solid-State Component Test Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during either Dielectric Voltage Withstand Test:

Component
N/A

Sample and Test Specifics for Follow-Up Tests at UL

The following tests shall be conducted in accordance with the Generic Inspection Instructions

Plastic Enclosure or Part	Test	Sample(s)	Test Specifics
N/A			

TABLE: List of Critical Components

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Enclosure - For E type and S type models only	WAH HONG INDUSTRIAL CORP	WH-9100	V-0 rated, 130C. Overall 7.8 by 3.8 by 2.9 cm, min. 1.3 mm thick. Provided with bottom base, overall 9.5 by 3.9 cm, min. 1 mm thick. Bottom base provided with opening, overall approx. 4.4 by 0.8 cm. See Enclosure XX-XX for details	QMFZ2 (E150608)	UR
Potting Compound	Fong Yong Chemical Co Ltd	SFY-161 or SFY-171	Min V-1, 150°C	QMFZ2, QMFZ8 (E120665)	UR
Potting Compound – Alternate	Dow Corning (Shanghai) Co Ltd	CN-8760 CN-8760G	Min V-1, 150°C	QMFZ2/8 (E251343)	UR
Potting Compound – Alternate	Wevo-Chemie GMBH or equivalent	PU 552 FL or equivalent	Min V-1, 130°C	QMFZ2, QMFZ8 (E108835)	UR
Potting Compound – Alternate	Interchangeable	Interchangeable	Min V-1, 130°C	QMFZ2, QMFZ8	UR
Connector / CN1 for models EML30USXX-T	Chyao Shiunn Electronic Industrial Ltd	JS-9001	250V, 3A min., 85°C	ECBT2 (E113875)	UR
Connector / CN1 for models EML30USXX-T (Alternate)	Japan Solderless mfg Co.,Ltd	XH	250V, 3A min., 85°C	ECBT2 (E60389)	UR
Connector / CN1 for models EML30USXX-T (Alternate)	Japan Solderless mfg Co.,Ltd	PH	250V, 2A min., 85°C	ECBT2 (E60389)	UR
Connector / CN1 for models EML30USXX-T (Alternate)	Chyao Shiunn Electronic Industrial Ltd	JS-1001	250V, 3A min., 85°C	ECBT2 (E113875)	UR
Connector / CN1 for models EML30USXX-T (Alternate)	Weli Sheng Terminal Industral Co.,Ltd	MX-I25002,PX-I25002	250V, 3A min., 85°C	ECBT2 (E149293)	UR
Connector / CN1 for models EML30USXX-T	Long Chu Electronics Co,.Ltd	P221	250V, 3A min., 85°C	ECBT2 (E94662)	UR

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
(Alternate)					
Terminal block (for model EML30USXX-S or EML30USXX-SD)	DINKLE ENTERPRISE CO LTD	ELK508(@33)	13.5A, 300Vac, 105°C	XCFR2, XCFR8 (E102914)	UR, CUR
Terminal block (for model EML30USXX-S or EML30USXX-SD) (Alternate)	DINKLE ENTERPRISE	ELK508V-…	13.5A, 300V, 105 °C	XCFR2, XCFR8 (E102914)	UR, CUR
Terminal block (for model EML30USXX-S or EML30USXX-SD) (Alternate)	EXCEL CELL ELECTRONIC CO LTD	ETB33(@25)(@41)	10A, 300Vac, 110°C	XCFR2 (E133988)	UR
Terminal block (for model EML30USXX-S or EML30USXX-SD) (Alternate)	EXCEL CELL ELECTRONICS	ETB13 series	10A, 250V, 110 °C	XCFR2 (E133988)	UR
Fuses (F1,F2)	Wickmann-Werke (Littelfuse)	392 Series	Rated 2.0 A, 250 V, 105°C, soldered to PWB	JDYX2, JDYX8 (E67006)	UR, CUR
Fuses (F1,F2) - Alternate	Bel Fuse	RST Series	Rated 2.0 A, 250 V, 105°C, soldered to PWB	JDYX2, JDYX8 (E20624)	UR, CUR
Fuses (F1,F2) - Alternate	Conquer	MST Series	Rated 2.0 A, 250 V, 105°C, soldered to PWB	JDYX2, JDYX8 (E82636)	UR, CUR
Fuses (F1,F2) - Alternate	Walter (Ever Island)	2010	Rated 2.0 A, 250 V, 105°C, soldered to PWB	JDYX2, JDYX8 (E220181)	UR, CUR
Fuses (F1,F2) - Alternate	Save-Fusetech	SS-5	Rated 2.0 A, 250 V, 105°C, soldered to PWB	JDYX2, JDYX8 (E306920)	UR, CUR
Thermistor (RT1) - Alternate	Interchangeable	SL10 SERIES	NTC. Rated 240 V, 150°C, 10 ohm, Iss min. 2.0 A (Not relied upon for safety).	-	-
Thermistor (RT1) - Alternate	Interchangeable	Interchangeable	NTC. Rated 240 V, 150°C, 10 ohm, Iss min. 2.0 A (Not relied upon for safety).		
Diode Bridge (BR1)	Interchangeable	Interchangeable	Rated rev. voltage (rms) 600 V, 1.0 A min., 150°C	-	-

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
X-Capacitors (CX1)	Vishay BC Components BV	MKP 338 2 Series	Rated max. 0.22 uF, min. 250 V, marked “X1” or "X2".	FOWX2, FOWX8 (E112471)	UR, CUR
X-Capacitors (CX1) - Alternate	Carli	MPX	Rated max. 0.22 uF, min. 250 V, marked “X1” or "X2".	FOWX2, (E120045)	UR, CSA
X-Capacitors (CX1) - Alternate	Cheng Tung	CTX	Rated max. 0.22 uF, min. 250 V, marked “X1” or "X2".	FOWX2, (E193049)	UR, CSA
X-Capacitors (CX1) - Alternate	Chiefcon	CKX	Rated max. 0.22 uF, min. 250 V, marked “X1” or "X2".	FOWX2, FOWX8 (E209251)	UR, CUR
X-Capacitors (CX1) - Alternate	Jenn Fu	MPX	Rated max. 0.22 uF, min. 250 V, marked “X1” or "X2".	FOWX2, FOWX8 (E184650)	UR, CUR
X-Capacitors (CX1) - Alternate	Kemet (Evox Rifa)	PHE 830M	Rated max. 0.22 uF, min. 250 V min., marked “X1” or "X2".	FOWX2, FOWX8 (E73869)	UR, CUR
X-Capacitors (CX1) - Alternate	Kemet (Evox Rifa)	PHE 840M	Rated max. 0.22 uF, min. 250 V min., marked “X1” or "X2".	FOWX2, FOWX8 (E73869)	UR, CUR
X-Capacitors (CX1) - Alternate	Iskra	KNB1560	Rated max. 0.22 uF, min. 250 V, marked “X1” or "X2".	FOWX2, FOWX8 (E145156)	UR, CUR
X-Capacitors (CX1) - Alternate	Matsushita Electric Industrial Co Ltd Panasonic Corp Of North America	ECQUG	Rated max. 0.22 uF, min. 250 V, marked “X1” or "X2".	FOWX2 (E62674)	UR, CSA
Electrolytic Capacitor (C1)	Interchangeable	Interchangeable	Rated 56 uF, min. 400 V, 105°C. Provided with integral pressure relief.	-	-
Bridging Capacitor (CY1, CY2) optional	Panasonic Corp Of North America	NS-A	Rated max. 1500 pF, min. 250 V, min. 85°C, marked "Y1".	FOWX2 (E62674)	UR
Bridging Capacitor (CY1, CY2) Optional - Alternate	Murata Mfg Co Ltd	KX	Rated max. 1500 pF, min. 250 V, min. 85°C, marked "Y1".	FOWX2 (E37921)	UR
Bridging Capacitor (CY1, CY2) Optional - Alternate	Success Electronics Co Ltd	SE	Rated max. 1500 pF, min. 250 V, min. 85°C, marked "Y1".	FOWX2 (E114280)	UR
Bridging Capacitor (CY1, CY2) Optional - Alternate	Jya-Nay Co Ltd	JN	Rated max. 1500 pF, min. 250 V, min. 85°C, marked "Y1".	FOWX2 (E201384)	UR

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Bridging Capacitor (CY1, CY2) Optional - Alternate	TDK-EPC Corp	CD, CS	Rated max. 1500 pF, min. 250 V, min. 85°C, marked "Y1".	FOWX2 (E37861)	UR
Bridging Capacitor (CY1, CY2) Optional - Alternate	Welson Industrial Co Ltd	WD	Rated max. 1500 pF, min. 250 V, min. 85°C, marked "Y1".	FOWX2 (E104572)	UR
Bridging Capacitor (CY1, CY2) Optional - Alternate	Walsin Technology Corp (Pan Overseas Electronics)	AH	Rated max. 1500 pF, min. 250 V, min. 85°C, marked "Y1".	FOWX2 (E146544)	UR
Mosfet (Q1) (PRI)	TOSHIBA	TK10A60DR	Rated 600 V min., 10A min, 150°C. Soldered to printed wiring board	-	Evaluated as part of this investigation.
Mosfet (Q1) (PRI) - Alternate	Interchangeable	Interchangeable	Rated 600 V min., 10 A min, 150°C. Soldered to printed wiring board	-	Evaluated as part of this investigation.
Inductor (L1)	Send Power Electronics Co., Ltd.	Toroid type, overall approx outer dia 18*17*12 mm 10mH min.	Rated 130°C min.	-	Evaluated as part of this investigation.
Inductor (L1) - Alternate	Dongguan Zhangmutou Hong Chan	Three-flange type, overall approx outer dia 18*17*12 mm 10mH min.	Rated 130°C min.	-	Evaluated as part of this investigation.
Inductor (L1) - Alternate	Rong Chyuan	Toroid type, overall approx outer dia 18*17*12 mm	Rated 130°C min.	-	Evaluated as part of this investigation.

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
		10mH min.			
Inductor (L1) - Alternate	Cincon	Toroid type, overall approx outer dia 18*17*12 mm 10mH min.	Rated 130°C min.	-	Evaluated as part of this investigation.
Inductor (L1) - Alternate	Ain Hsin	Toroid type, overall approx outer dia 18*17*12 mm 10mH min.	Rated 130°C min.	-	Evaluated as part of this investigation.
Inductor (L1) - Alternate	Interchangeable	Interchangeable	MW75,Rated 130°C min.	-	Evaluated as part of this investigation.
Inductor - Insulating Tape	3M	Type 1350F-1 or 1350F-2	Rated 130°C. Provided on Inductors L1,	OANZ2 (E17385)	UR
Inductor - Insulating Tape (Alternate)	Permacel	Type P256	Rated 130°C. Provided on Inductors L1,	OANZ2 (E20392)	UR
Optical Isolators (IC4) - Alternate	Fairchild	H11A817A, H11A817B, H11A817C	Double protection, isolation voltage min. 5000 V	FPQU2 (E90700)	UR
Optical Isolators (IC4) - Alternate	LITEON	LTV817	Double protection, isolation voltage min. 5000 V	FPQU2 (E113898)	UR
Optical Isolators (IC4) - Alternate	Toshiba	TLP621, TLP621-2, TLP621-3, TLP621-4, TLP421 TLP785	Double protection, isolation voltage min. 5000 V	FPQU2 (E67349)	UR
Optical Isolators (IC4) - Alternate	Vishay	TCET1100, TCET1101, TCET1102,	Double protection, isolation voltage min. 5000 V	FPQU2 (E52744)	UR

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
		TCET1103, TCET1104, TCET1105			
Optical Isolators (IC4) - Alternate	Sharp	PC120, PC121, PC123,	Double protection, isolation voltage min. 5000 V	FPQU2 (E64380)	UR
Optical Isolators (IC4) - Alternate	Cosmo	KPC817 K1010 ,	double protection type, providing 5000 V ac isolation	FPQU2 (E169586)	UR
Transformer (T1) -	Dong Guan Cincon	EML30USxx, where xx can be 03 to 48	Class B	-	Evaluated as part of this investigation.
Transformer (T1) - Alternate	Dongguan Zhangmutou Hong Chan	EML30USxx, where xx can be 03 to 48	Class B	-	Evaluated as part of this investigation.
Transformer (T1) – Cover	Sumitomo Bakelite Co., Ltd.	PM9820(SW-RM8-6 or EQU)	Dimensions approximately . 0.75mm thick, with overall dimensions 25.5mm by 21mm by 14mm.	QMFZ2 (E41429)	UR
Transformer (T1) – Core	Interchangeable	Interchangeable	Ferrite with overall dimensions 11mm by 23mm on top and bottom and 15 mm by 15mm along the sides	-	-
Transformer (T1) - Bobbin	Sumitomo Bakelite Co., Ltd.	PM9820(SW-RM8-6 or EQU)	Two-flanged, 0.75mm thick, rated V-0, min. 1 mm thick 150°C.	QMFZ2 (E41429)	UR
Transformer (T1) - Triple Insulating Wire	Furukawa Electric Co. Ltd	TEX-E	Reinforced Insulation. Rated 130°C min.	OBJT2 (E206440)	UR
Transformer (T1) - Triple Insulating Wire - Alternate	Totoku	TIW-2x or TIW-3x	Reinforced Insulation. Rated 130°C min.	OBJT2 (E166483)	UR
Transformer (T1) - Triple Insulating Wire - Alternate	RUBADUE WIRE CO INC	TEFZEL WIRE T-AA-X-XX-T-XXX-L	Reinforced Insulation. Rated 155°C min.	OBJT2 (E206198)	UR
Transformer (T1) - Primary magnet wiring	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN)CO.,LTD.	UEWN/U MW80-C	155°C min	OBMW2 (E201757)	UR
Transformer (T1) - Primary magnet wiring - Alternate	Interchangeable	Interchangeable	130°C min	OBMW2	UR

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Transformer (T1) Insulating Tape	3M	Type 1350F-1 or -2	130 °C minimum, Polyester Film Tape, 0.05 mm thickness. Two layers wrapped around the bottom of the transformer and up the secondary side	OANZ2 (E17385)	UR
Insulating Tubing/Sleeving	Great Holding Industrial Co. Ltd.	TFL	200 °C, TEFLON.	YDPU2 (E156256)	UR
Varnish	Elantas Electrical Insulation, Elantas PDG Inc.	V1630FS or V1380FC	130 °C	OBOR2 (E75225)	-
PWB	Interchangeable	Interchangeable	Overall 5.1 by 10.2 cm. Rated min. V-0, 130°C, rated for direct support of live parts.	ZMPV2	UR
Label System	Guang Zhou City Hai Zhu District Jin Wang Printing Factory	Compliance for applying on DAP (Diallyl Phthalate) material of Enclosure or PET material on Capacitor (C1) body.	Diallyl Phthalate material of Enclosure or PET material	PGDQ2 (MH29366)	UR
Label System	Interchangeable	Interchangeable	Min 80 ºC, for application to Plastic	PGDQ2	UR

Enclosures

Type	Supplement Id	Description
Photographs	3-01 (Fig. 1)	External Top View
Photographs	3-02 (Fig. 2)	External Bottom View
Photographs	3-03 (Fig. 3)	Internal Top View
Photographs	3-04 (Fig. 4)	Internal Bottom View
Diagrams	4-01 (Ill. 1)	EML30 E Series Construction Drawing
Diagrams	4-02 (Ill. 2)	EML30 S Series Construction Drawing
Diagrams	4-03 (Ill. 3)	EML30 P Series Construction Drawing
Diagrams	4-04 (Ill. 4)	EML30 T Series Construction Drawing
Diagrams	4-05 (Ill. 5)	EML30 SD Series Construction Drawing
Diagrams	4-06 (Ill. 6)	3 V output Transformer (T1) Specifications
Diagrams	4-07 (Ill. 7)	5 V output Transformer (T1) Specifications
Diagrams	4-08 (Ill. 8)	9 V output Transformer (T1) Specifications
Diagrams	4-09 (Ill. 9)	12V output Transformer (T1) Specifications
Diagrams	4-10 (Ill. 10)	15 V output Transformer (T1) Specifications
Diagrams	4-11 (Ill. 11)	24 V output Transformer (T1) Specifications
Diagrams	4-12 (Ill. 12)	36 V output Transformer (T1) Specifications
Diagrams	4-13 (Ill. 13)	48 V output Transformer (T1) Specifications
Diagrams	4-14 (Ill. 14)	Line Filter (L1) Specifications
Schematics + PWB	5-01 (Ill. 15)	EML30 PCB Trace Layout
Schematics + PWB	5-02 (Ill. 16)	EML30 PCB Component Layout
Miscellaneous	7-01 (Ill. 17)	Models and Ratings
Miscellaneous	7-02 (Ill. 18)	Marking Plate (representative of all models)