



ISO 9001:2008
REGISTERED

GTM91110P240 - FAMILY



**Open Frame Switcher, 240 Watt Maximum, Family, Single Output,
Universal AC or DC Input, Medical and ITE, Class I or Class II**



FOR INDOOR USE ONLY

ELECTRICAL SPECIFICATIONS:

INPUT RANGE:

90-264 VAC OR 130VDC TO 320 VDC(SEE NOTE 8 FOR DC INPUT)

INPUT LINE FREQUENCY:

47-63Hz, 380-420Hz

INPUT CURRENT:

4A RMS MAXIMUM @ 90VAC, 2.5A MAXIMUM FOR DC INPUT

INRUSH CURRENT:

60A MAXIMUM, COLD START @ 25°C, 115VAC INPUT, 120A AT 240VAC LOAD

EFFICIENCY:

85% TYPICAL AT FULL LOAD, 230Vac INPUT

POWER FACTOR:

0.99 TYPICAL AT FULL LOAD, 230Vac INPUT

TURN-ON DELAY:

5 SECONDS MAXIMUM @ 115VAC INPUT

INPUT LINE PROTECTION:

MOV TRANSIENT PROTECTED. INPUT LINE FUSE PROVIDED ON-BOARD

SOFT START:

STANDARD ON ALL MODELS

OUTPUT

MAXIMUM POWER:

240 WATTS MAXIMUM WITH 20 CFM AIRFLOW OPEN FRAME VERSION

150 WATTS MAXIMUM WITH CONVECTION COOLING OPEN FRAME VERSION

200 WATTS MAXIMUM WITH 20 CFM AIRFLOW WITH PERFORATED ENCLOSURE VERSION

80 WATTS MAXIMUM WITH CONVECTION COOLING WITH PERFORATED ENCLOSURE VERSION

LOAD REGULATION:

± 2% MEASURED AT THE CONNECTOR SIDE

LINE REGULATION:

± 0.5% MEASURED AT THE CONNECTOR SIDE

OUTPUT RIPPLE VOLTAGE:

+/-1% MAXIMUM OF NOMINAL OUTPUT VOLTAGE

(PEAK TO PEAK):

MEASURED AT 20 MHz BANDWIDTH WITH 0.1µF CERAMIC CAPACITOR IN PARALLEL WITH 10 µF ELECTROLYTIC CAPACITOR CONNECTED AT THE END OF THE OUTPUT CONNECTOR.

TURN ON/OFF OVERSHOOT:

5% MAXIMUM, 1mS RECOVERY TIME

HOLD-UP TIME:

8 mS @ 240W LOAD, 10mS@200W LOAD, 16mS@150W LOAD AT 115VAC INPUT

TRANSIENT RESPONSE:

2% MAXIMUM DEVIATION, RETURNS TO INITIAL CONDITION IN 3 ms MAX. FOR 25% STEP LOAD FROM 10% TO 100% OF RATED LOAD.

OVERLOAD PROTECTION:

PROTECTED BETWEEN 120-200% OF FULL LOAD RATING CONSTANT CURRENT PROTECTION TYPE, AUTORECOVER UPON REMOVAL OF OVERLOAD

SHORT CIRCUIT:

PROTECTED. UNIT WILL AUTORECOVER UPON REMOVAL OF SHORT

OVERVOLTAGE:

PROTECTED. 120- 180% OF NOMINAL OUTPUT, LATCHED TYPE. AC CYCLING REQUIRED TO RESTORE OUTPUT. AUTORECOVERY TYPE IS AN OPTION.

REMOTE SENSE(OPTIONAL):

COMPENSATE FOR UP TO 0.5V LEAD VOLTAGE DROP. POWER SUPPLY WILL OPERATE WITHOUT REMOTE SENSE CONNECTION.

INDICATOR:

GREEN LED FOR OUTPUT PRESENCE

FAN VOLTAGE:

12V, 200 mA MAXIMUM. OTHER VOLTAGES FROM 5V TO 48V AVAILABLE FOR MAXIMUM OF 2.4W

ENVIRONMENTAL

OPERATING TEMPERATURE:

0° TO 70°C . DERATE OUTPUT POWER ACCORDING TO CURVE BELOW.

COOLING FOR 240W AND 200W VERSIONS:

20 CFM AIRFLOW REQUIRED. AIRFLOW MUST BE IN THE DIRECTION FACING THE BULK CAPACITOR C1. NO SEMICONDUCTOR TO EXCEED 120°C IN CASE TEMPERATURE.

COOLING FOR 150W AND 80W VERSIONS:

CONVECTION COOLING. NO SEMICONDUCTOR TO EXCEED 130°C IN CASE TEMPERATURE

STORAGE TEMPERATURE:

-40° TO 85°C

RELATIVE HUMIDITY:

OPERATING; 0-90% NON-CONDENSING

ALTITUDE:

UP TO 2000 METERS

RANDOM VIBRATION/TRANSIENT DROP:

MIL-STD 810E

MTBF:

200,000 HOURS @ 25° AMBIENT TEMPERATURE, NOMINAL LINE, FULL LOAD. MIL-217 STD.

SAFETY

HI POT (PRI-SEC):

4242 VDC PRIMARY TO SECONDARY FOR ITE VERSION
5656 VDC PRIMARY TO SECONDARY FOR MEDICAL VERSION
2121 VDC SECONDARY TO EARTH GROUND FOR BOTH MEDICAL AND ITE VERSIONS

EARTH LEAKAGE:

< 250 uA @ 50Hz, 264 VAC INPUT
< 125 uA @ 60Hz, 132 VAC INPUT

APPROVALS (PENDING)

ITE VERSION:

UL60950-1 (3RD EDITION), CUL TO 22.2 NO. 60950-1, CB REPORT, DEMKO TO EN60950-1

MEDICAL VERSION:

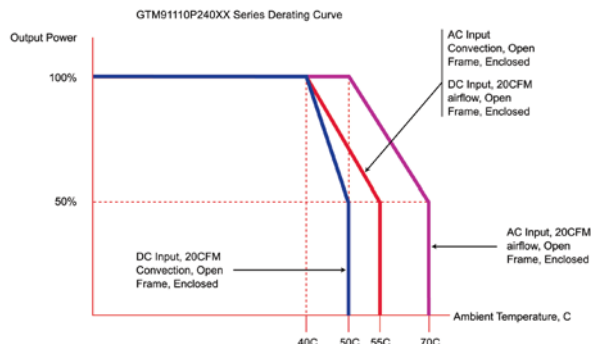
UL60601-1, CUL TO 22.2 NO. 60601-1, CB REPORT, DEMKO TO EN60601-1

EMI ('CE' MARK):

EN 55022, EN55024, EN60601-1-2, FCC PART 15B, EN61000-3-2, EN61000-3-3, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8, IEC61000-4-11. TESTED WITH RESISTIVE LOAD.

ROHS:

COMPLIES WITH EU 2002/95/EC AND CHINA SJ/T 11363-2006



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STANDARD MODEL NUMBER FOR OPEN FRAME VERSION	OUTPUT VOLTAGE*	MINIMUM LOAD**	MAXIMUM LOAD WITHOUT AIRFLOW	MAXIMUM LOAD WITH 20CFM AIRFLOW
GT(M)91110P24012-FA(W)-S or -HI0XX or -H0XXX or -HIXXX	12	0.2A	12.5A	20A
GT(M)91110P24015-XX-FA(W)-S or -HI0XX or -H0XXX or -HIXXX	15	0.2A	10.0A	16A
GT(M)91110P24018-XX-FA(W)-S or -HI0XX or -H0XXX or -HIXXX	18	0.2A	8.33A	13.3A
GT(M)91110P24024-XX-FA(W)-S or -HI0XX or -H0XXX or -HIXXX	24	0.1A	6.25A	10A
GT(M)91110P24036-XX-FA(W)-S or -HI0XX or -H0XXX or -HIXXX	36	0.1A	4.17A	6.7A
GT(M)91110P24048-XX-FA(W)-S or -HI0XX or -H0XXX or -HIXXX	48	0.1A	3.12A	5.0A
GT(M)91110P24055-XX-FA(W)-S or -HI0XX or -H0XXX or -HIXXX	55	0.1A	2.72A	4.36A

STANDARD MODEL NUMBER FOR PERFORATED ENCLOSURE VERSION	OUTPUT VOLTAGE*	MINIMUM LOAD**	MAXIMUM LOAD WITHOUT AIRFLOW	MAXIMUM LOAD WITH 20CFM AIRFLOW
GT(M)91110P24012-CA(W)-S or -HI0XX or -H0XXX or -HIXXX	12	0.2A	6.7A	16.67A
GT(M)91110P24015-XX-CA(W)-S or -HI0XX or -H0XXX or -HIXXX	15	0.2A	5.3A	13.38A
GT(M)91110P24018-XX-CA(W)-S or -HI0XX or -H0XXX or -HIXXX	18	0.2A	4.4A	11.11A
GT(M)91110P24024-XX-CA(W)-S or -HI0XX or -H0XXX or -HIXXX	24	0.1A	3.3A	8.33A
GT(M)91110P24036-XX-CA(W)-S or -HI0XX or -H0XXX or -HIXXX	36	0.1A	2.2A	5.5A
GT(M)91110P24048-XX-CA(W)-S or -HI0XX or -H0XXX or -HIXXX	48	0.1A	1.7A	4.17A
GT(M)91110P24055-XX-CA(W)-S or -HI0XX or -H0XXX or -HIXXX	55	0.1A	1.4A	3.64A

*OTHER OUTPUT VOLTAGES FROM 12V TO 55V IN 0.1V INCREMENT AVAILABLE UPON REQUEST.

** OUTPUT VOLTAGE IS WITHIN REGULATION RANGE EVEN AT NO LOAD, BUT MINIMAL LEVEL OF AUDIBLE NOISE MAY BE HEARD FROM THE SUPPLY.

MODEL DESCRIPTION:

GT(M)91110P24012-ZA(W)-S or -HI0XX or -H0XXX or -HIXXX

GTM: GLOBTEK SERIES

91110P: FAMILY DESIGNATOR

24012: 240W 12V OUTPUT POWER AND OUTPUT VOLTAGE

Z: Z = "F" FOR OPEN FRAME, Z = "C" FOR WITH PERFORATED ENCLOSURE

A(W): "A" FOR AIRFLOW FOR 240W LOAD AND OPTIONAL "W" FOR CLASS II UNITS. NO "W" FOR CLASS I UNITS.

X.X: OUTPUT VOLTAGE DEVIATION FROM STANDARD MODEL BY SUBTRACTING X.X VOLT FROM STANDARD OUTPUT

VOLTAGE, X.X NOT REQUIRED TO BE ADDED IN MODEL NUMBER FOR STANDARD OUTPUT VOLTAGE

-S: INPUT HEADER AND OUTPUT HEADER CONNECTOR ON BOARD.

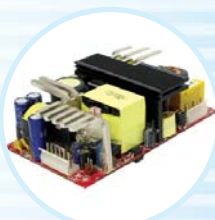
-HIOXXX: INPUT AND OUTPUT WIRE HARNESS. WHERE XXX CAN BE FROM 000 TO 500 TO INDICATE HARNESS LENGTH (MAXIMUM LENGTH FOR INPUT AND OUTPUT HARNESSES IS 500 mm).

-HOXXX: INPUT HEADER CONNECTOR ON BOARD AND OUTPUT WIRE HARNESS. WHERE XXX CAN BE FROM 000 TO 500 TO INDICATE HARNESS LENGTH (MAXIMUM HARNESS LENGTH FOR OUTPUT IS 500 mm).

-HIXXX: INPUT WIRE HARNESS. OUTPUT HEADER ON BOARD. WHERE XXX CAN BE FROM 000 TO 500 TO INDICATE HARNESS LENGTH (MAXIMUM HARNESS LENGTH FOR INPUT IS 500 mm).



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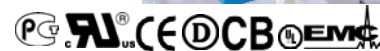
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MECHANICAL SPECIFICATION

FOR OPEN FRAME VERSION
SIZE: 127.0 x 76.2 x 43.0 mm

INPUT AND OUTPUT CONNECTORS

For -S Version CON 1 AC Input Molex friction lock header 3 Pins with Pin 2 removed for Class II. 5 Pins with Pins 2 and 4 removed for Class I. Molex PN: 26-60-

4050, mates with

09-50-3051 housing, 08-50-0105 pins for Class I. Molex PN: 26-60-4030, mates with 09-50-3031 housing, 08-50-0105

pins for Class II.

Class I Class II

Pin 1: Earth Ground

Pin 1: Neutral

Pin 3: Neutral

Pin 3: Line

Pin 5: Line

CON 2 DC Output

Molex 6 Pin friction lock header.

Molex PN: 26-60-4060, mates with 09-50-3061 housing, 08-05-0105 Pins 1,2,3: V+,

Pins 4,5,6: Common

CON 3 Fan Voltage

Fan output, 12Vdc, 200mA maximum load. Other output voltage available upon request. 2.4W

maximum. JST PN: B2B-PH-K-SLFSN, mates with PHR-2 housing, SPH-002T-P0.5S Pins Pin 1: 12VDC, Pin 2: Common

Optional Remote Sense Connection

No Connector required. Solder AWG 24 wire direct to PCB holes, marked SNS+ and SNS-. Holes located near fan and output connectors. Remote sense wire must be twisted to avoid noise pick-up. Maximum Remote Sense wire length is 500 mm.

For -HOXXX Version

CON 1 AC Input Molex friction lock header 3 Pins with Pin 2 removed for Class II. 5 Pins with Pins 2 and 4 removed for Class I. Molex PN: 26-60-4050, mates with 09-50-3051 housing, 08-50-0105 pins for Class I. Molex PN: 26-60-4030, mates with 09-50-3031 housing, 08-50-0105 pins for Class II.

Class I Class II

Pin 1: Earth Ground

Pin 1: Neutral

Pin 3: Neutral

Pin 3: Line

Pin 5: Line

CON 2 DC Output

Wire harness with Molex header, PN: 09-50-3061 with 6 AWG 18 stranded wires, Red for V+ and Black for common. Maximum harness length is 500mm. Header mates with Molex

PN: 26-60-4060.

CON 3 Fan Voltage

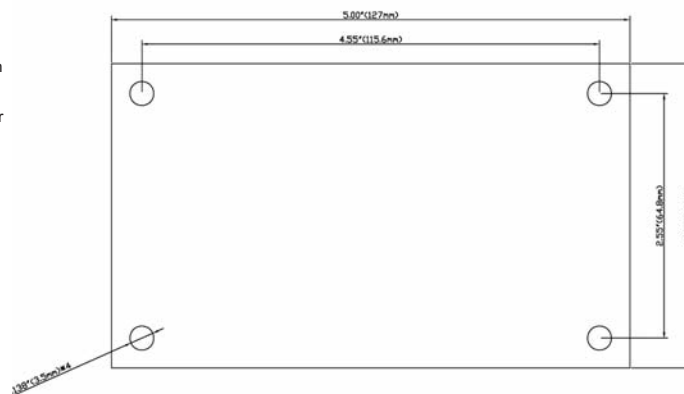
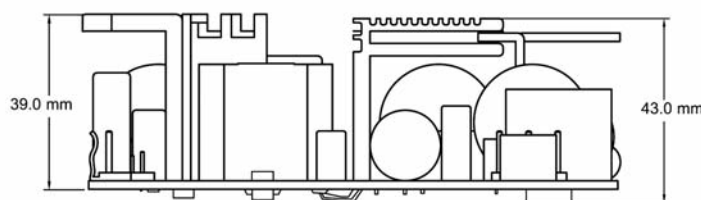
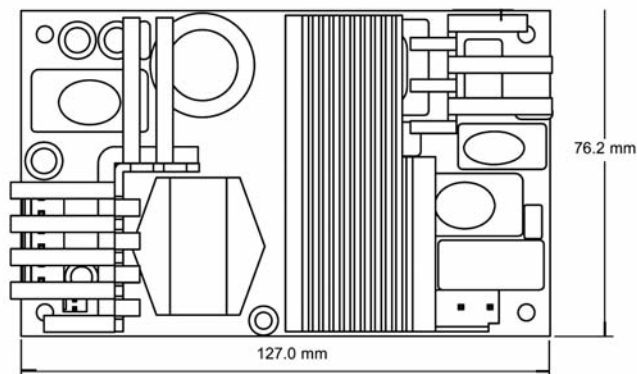
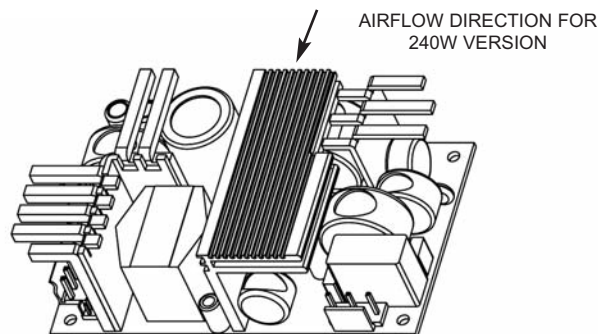
Fan output, 12Vdc, 200mA maximum load. Other output voltage available upon request. 2.4W maximum.

JST PN: B2B-PH-K-SLFSN, mates with PHR-2 housing, SPH-002T-P0.5S Pins Pin 1: 12VDC, Pin 2: Common

For -HIXXX Version

CON 1 AC Input for Class I version

Wire harness with Molex header PN: 09-50-3051 with



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MECHANICAL SPECIFICATION

FOR PERFORATED ENCLOSURE VERSION

SIZE: 140.0 x 87.6 x 51.9 mm

Pins 2 and 4 not used. 3 AWG18 stranded wires, Black or Brown for Line and White or Blue Neutral, Green with Yellow stripe for Ground. Maximum harness length is 500 mm.

Header mates with Molex

P/N: 26-60-4030. Line, Neutral and Ground wire must be twisted.

CON 1 AC Input for Class II version

Wire harness with Molex header,

PN: 09-50-3031 with Pin 2 not used, 2 AWG 18 stranded wires, Black or Brown for Line and White or Blue for Neutral. Maximum harness length is 500mm. Header mates with Molex

P/N: 26-60-4030. Neutral and Line wires must be twisted.

CON 2 DC Output

Molex 6 Pin friction lock header.

Molex PN: 26-60-4060, mates with 09-50-3061 housing, 08-05-0105 Pins Pins 1,2,3: V+,

Pins 4,5,6: Common

CON 3 Fan Voltage

Fan output, 12Vdc, 200mA maximum load.

Other output voltage available upon request. 2.4W maximum.

JST PN: B2B-PH-K-SLFSN, mates with PHR-2 housing, SPH-002T-P0.5S Pins

Pin 1: 12VDC, Pin 2: Common

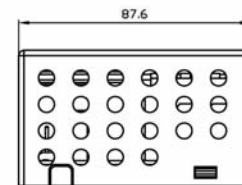
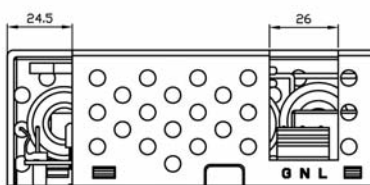
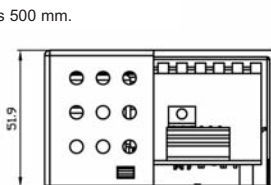
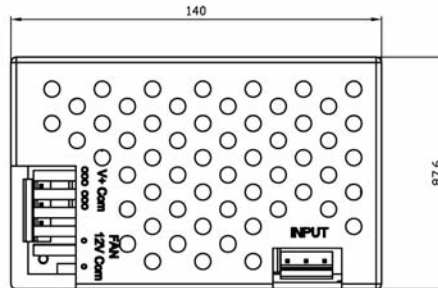
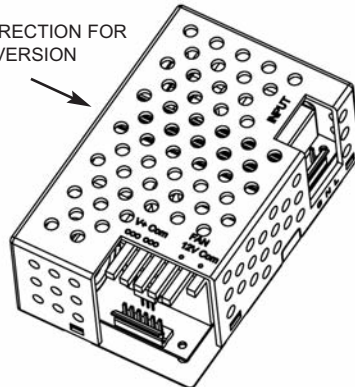
Optional Remote Sense Connection

No Connector required. Solder AWG 24 wire direct to PCB holes, marked SNS+ and SNS-.

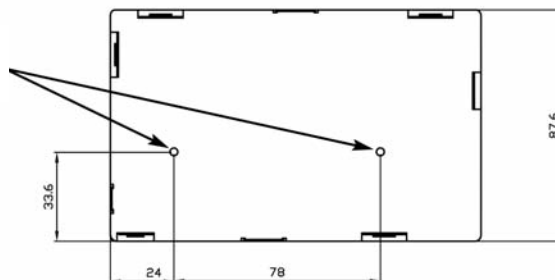
Holes located near fan and output connector. Remote sense wire must be twisted to avoid

noise pick-up. Maximum Remote Sense wire length is 500 mm.

AIRFLOW DIRECTION FOR
240W VERSION



System Mounting M3,
4 mm Max screw length



For -HIOXXX Version

CON 1 AC Input for Class I version

Wire harness with Molex header

PN: 09-50-3051 with Pins 2 and 4 not used. 3 AWG18 stranded wires, Black or Brown for Line and White or Blue Neutral, Green with Yellow stripe for Ground. Maximum harness length is 500 mm. Header mates with Molex

P/N: 26-60-4030. Line, Neutral and Ground wire must be twisted.

CON 1 AC Input for Class II version

Wire harness with Molex header,

PN: 09-50-3031 with Pin 2 not used, 2

AWG 18 stranded wires, Black or Brown

for Line and White or Blue for Neutral.

Maximum harness length is 500mm.

Header mates with Molex P/N: 26-60-

4030. Neutral and Line wires

must be twisted.

CON 2 DC Output

Wire harness with Molex header,

PN: 09-50-3061 with 6 AWG 18 stranded

wires, Red for V+ and Black for common.

Maximum harness length is 500mm.

Header mates with Molex

PN: 26-60-4060.

CON 3 Fan Voltage

Fan output, 12Vdc, 200mA maximum

load. Other output voltage available upon

request. 2.4W maximum.

JST PN: B2B-PH-K-SLFSN, mates with

PHR-2 housing, SPH-002T-P0.5S

Pins Pin 1: 12VDC, Pin 2:

Common Optional Remote Sense

Connection No Connector required.

Solder AWG 24 wire direct to PCB holes,

marked SNS+ and SNS-. Holes located

near fan and output connector. Remote

sense wire must be twisted to avoid

noise pick-up.





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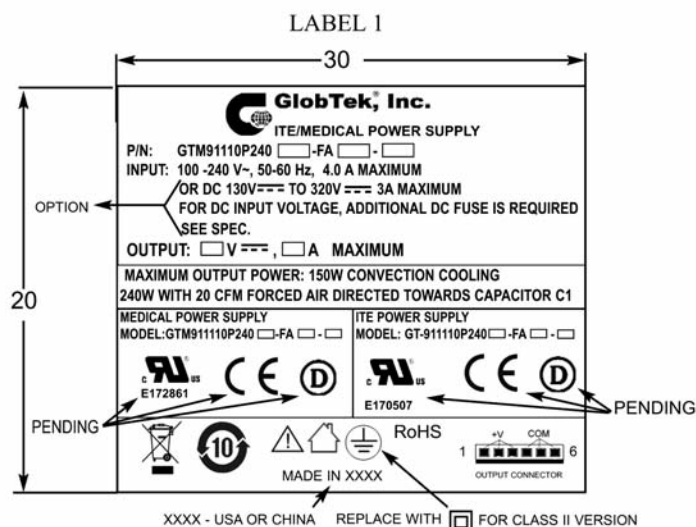
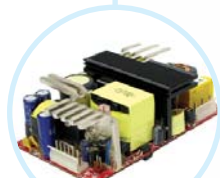


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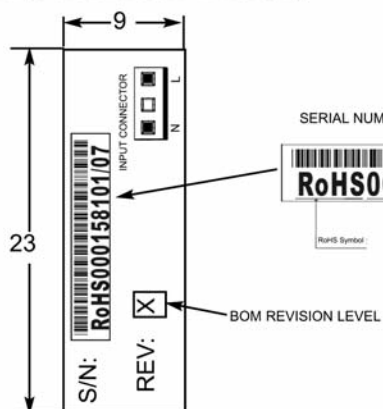
LABEL SPECIFICATION

FOR OPEN FRAME VERSION

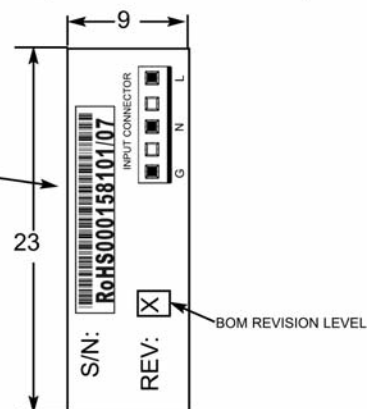


POSITION THIS LABEL ON THE VISIBLE SIDE OF CAPACITOR

LABEL 2 (FOR CLASS II VERSION)



LABEL 2 (FOR CLASS I VERSION)



POSITION THIS LABELS ON TOP OF CX1
FACING THE INPUT CONNECTOR

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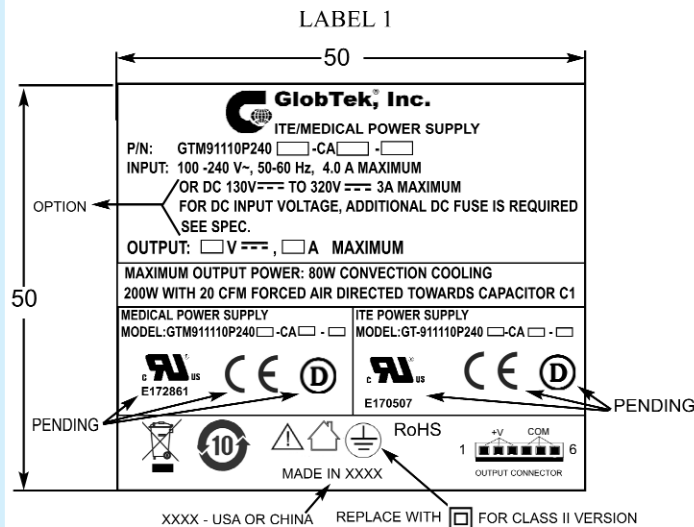


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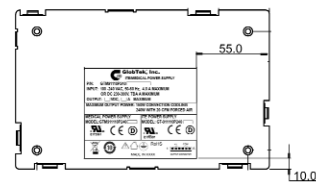


LABEL SPECIFICATION

FOR PERFORATED ENCLOSURE VERSION

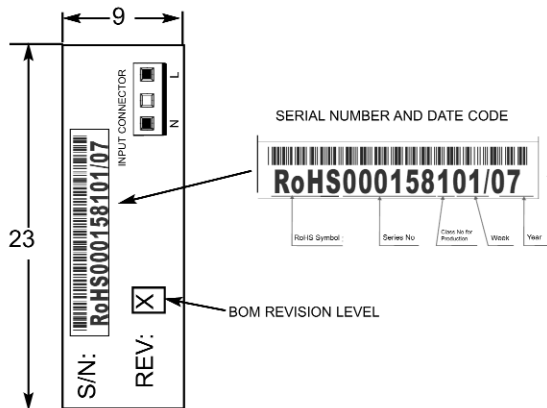


LOCATION OF LABEL 1

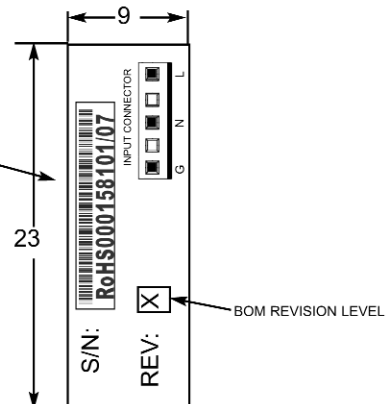


BOTTOM VIEW OF ENCLOSURE

LABEL 2 (FOR CLASS II VERSION)



LABEL 2 (FOR CLASS I VERSION)



POSITION THIS LABEL ON TOP OF CX1
FACING THE INPUT CONNECTOR

