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REPORT
on

INFORMATION TECHNOLOGY EQUIPMENT, INCLUDING
ELECTRICAL BUSINESS EQUIPMENT

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DESCRIPTION

PRODUCT COVERED:

USL/CNL - Adapters, Class II Models: GT-21148-YYZZ-X.X-T2 Series,

where: YY - represents output power and can be 12, 20, 23, 24, 25, 27 or 30.

ZZ - represents output voltage and can be 05, 06, 09, 12, 15, 16, 18, 19, 20, or 24

X.X - optional and when used signifies voltage output deviation from standard Model (e.g. GT-21148-3024-0.5-T2, output is 23.5 Vdc).

ELECTRICAL RATING:

Adapters:

Model	Input		Hz	Output, dc		
	V ac	A		V	A	W+
GT-21148-3024-X.X-T2	100-240	1.0	50/60	24	1.25	30
GT-21148-3020-X.X-T2				20	1.5	30
GT-21148-3019-X.X-T2				19	1.6	30
GT-21148-3018-X.X-T2				18	1.7	30
GT-21148-3016-X.X-T2				16	1.9	30
GT-21148-3015-X.X-T2				15	2	30
GT-21148-3012-X.X-T2				12	2.5	30
GT-21148-2709-X.X-T2				9	3	27
GT-21148-2506-X.X-T2				6	4.17	25
GT-21148-2424-X.X-T2				24	1	24
GT-21148-2412-X.X-T2				12	2	24
GT-21148-2309-X.X-T2				9	2.5	23
GT-21148-2005-X.X-T2				5	4	20
GT-21148-1224-X.X-T2				24	0.5	12

Maximum continuous output power: 38.6 W for Model SYS1148-3024-T2
23.0 W for Model SYS1148-2005-T2

Each output current can vary up to its maximum rated current provided the rated output power is not exceeded.

+ Watts rating for informational purposes only. May or may not be provided on label.

Single output units are available with output voltages of 5 Vdc to 24 Vdc in 0.1 V increments.

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE'S USE):

Special Considerations - The following items are considerations that were used when evaluating this product.

USL/CNL indicates investigation to the US and Canadian (Bi-National) Standard for Safety of Information Technology Equipment, CAN/CSA C22.2 No. 60950, * UL 60950, Third Edition, including revisions through revision date December 1, 2000.

The equipment was submitted and tested for a maximum manufacturer's recommended ambient (Tmra) of 25°C.

The equipment is: movable, Class II (double insulated), pluggable Type A, intended for use on a TN-S power systems.

Disconnect Device - The following part is considered the equipment disconnect device: Appliance Coupler.

Limited Power Source: The following circuits have been evaluated as a limited power source:

<u>Location</u>	<u>Circuit (Schematic) Designation</u>
Outputs of Adapters	DC outputs

CONSTRUCTION DETAILS:

See Section General for additional details.

Interconnecting Cables - Not provided unless specifically described.

Internal Wiring - See Section General.

Printed Wiring Board - See Sec. Gen. for details. General appearance of trace layouts shall be as shown in ILL. 1.

Model Differences - All models are identical to each other except for model name, different secondary winding of transformers and some secondary components due to different outputs.

MODEL - GT-21148-3024

FIG. 1 (D01-00414)

FIG. 2 (D01-00415)

FIG. 3 (D01-00416)

General - Figure 1 and 2 show the overall external view of Model GT-21148-3024. Figure 3 shows the overall internal view of Model GT-21148-3024.

1. Enclosure (Mechanical / Electrical / Fire) (QMFZ2) - GE Plastics Type SE100. Rated 94V-1. Overall 103 by 49 by 32 mm, min 1.0 mm thick. No openings are provided. Base and Cover are secured together by four screws.
2. Fuse (F1) - (PRI) (JDYX2), Wickmann, Type SFP, Rated 1 A, 250 V. Wired in hot (non-identified) side of line. Pig-tail fuse leads secured and soldered to Printed Wiring Board.

Alternate - Same as above except: Walter, Type 19195

3. Thermistor (NTC1) - (PRI), (XGPU2), Thinking, Type SCK052, rated min 2.0 A, 240 V, 100 μ F, located in neutral phase. (Not relied upon for abnormal operation and fault condition tests).
4. Electrolytic capacitor (C9) - (PRI) Provided with integral pressure relief. Rated 400 V, 47 μ F, min 105°C.

Alternate - Same as above except rated 82 μ F.

5. Inductor (LF1) - (PRI), open Type construction. Core: Ferrite, overall 18 by 18 mm in diameter. Coil: Copper magnet wire wound on bobbin of (QMFZ2), Chang Chun, Type T373J, min 3.5 mm thick. Insulation: Primary to core is bobbin. Outerwrap is (OANZ2).
6. Rectifier (D3-D6) - (PRI), rated 1.5 A, 600 V min.
7. Transistor (U3) - (PRI), Fuji, Type K2465 and K2761, mounted on primary heat sink. Primary heat sink, U shaped, 2.0 mm thick, 20 mm high and 90.5 mm wide.
8. Appliance Inlet - (AUXT2), Rong Feng, Type RF-180. Secured to PWB by soldering.
9. Bridging Capacitor (CY1) - (FOWX2), TDK, Type CD, rated 250 V, max 472 pF. Marked with a "Y1" and Certified by VDE, FIMKO. (Casing relied upon for Basic and/or Operational Insulation.) (Evaluated for use at 250 V ac.) (Certified to IEC60384-14:93), UL 1414 Double Protection.

Alternate - Same as above except for Type CS.

Alternate - Same as above except for Netron Tech, Type AD.

10. Capacitor, (CX1) - (Line-to-Line). (FOWX2), Pilkor, Type PCX2335M, rated 250 V, Max 474 pF. Marked with a "X2" and Certified by VDE. (Casing relied upon for Basic Insulation.), (Evaluated for use at 250 V ac.), (Meets IEC60384-14), UL 1414 Double Protection.

Alternate - Same as above except for UTX, Type HQX.

11. Transformer (TR1) - (PRI /SELV), (OBJY2), HCL, Class B, Type HCL001. (Heng Chi Li (HCL), P/N EF-25) or Chu Yang, Class B, Type CY33589 with or without suffixes A thru F, (Chu Yang, P/N EF-25). Open Type construction. Core: Ferrite, overall 24.5 by 27 by 29 mm. Coil: Copper magnet wire wound on bobbin of (QMFZ2), Chang Chun Plastic, Type T373J, min 3.5 mm thick, rated min 94V-0.

Insulation:

Location # Layers/Total Thickness, mm/Material

Outerwrap	2/0.1/ Polyester tape
Pri/Sec	3/0.15/ Polyester tape
Pri/Pri	1/0.05/ Polyester tape
Pri/Core	Bobbin and 1/0.05/ Polyester tape

Margin Tape, (OANZ2), 3M Type 44, 4 mm wide, between windings and bobbin edge for model HCL and 2 mm and 5 mm for model Chu Yang.

Alternate - same as above except for Bondtec, Type 201-45.

Insulating Tape (OANZ2) and CN, Bondtec, Type 371F, rated 130°C.

Alternate - Four Pillars, Type 35660.

Alternate - 3M, Types 1350, 56 and 1298.

12. Optocoupler (U1) - (PRI/SEC) (FPQU2), Lite-On, Type LTV817, (located below transformer). (Rated isolation 5000 V ac), (Double protected device), (Meets reinforced insulation requirements).
13. Diode (D8) - (SELV), rated 3 A min, 200 V max mounted on secondary heat sink.