

ISO 9001:2000  
REGISTERED

### 0-19 Watts, Switchmode, Single Output, Family (1.7"x3.3") Open Frame & PCB Mount, Universal Input, ITE, Class I & II

Part Number Ordering System (See Page 224)  
Output Plug/Cord Options (See Page 189)  
Medical Versions (See Page 36)



FOR CLASS I MODELS WITH 'PE' CONNECTED, THE OUTPUT IS NOT FLOATING. OPTIONAL MODELS WITH ISOLATED GROUND HAVE FLOATING OUTPUT.

#### ELECTRICAL SPECIFICATIONS:

##### INPUT VOLTAGE:

90 VAC TO 264 VAC

##### INPUT CURRENT:

&lt; 0.5 A RMS AT 90 VAC INPUT

##### INPUT FREQUENCY:

47 HZ - 63 HZ

##### OUTPUT CURRENT:

NO MINIMUM LOAD REQUIRED

##### OUTPUT POWER (RATED):

19 WATTS MAX

##### OUTPUT RIPPLE (PEAK TO PEAK):

1% OF OUTPUT VOLTAGE, PEAK TO PEAK, TYPICAL

##### OUTPUT REGULATION (LINE/LOAD):

± 5% MEASURED AT THE OUTPUT CONNECTOR

##### LINE REGULATION:

+/- 1% TYPICAL MEASURED AT FULL LOAD

##### REMOTE SENSING (OPTION):

PROVIDES REGULATION WITHIN + 1% OF NOMINAL VOLTAGE OF MAIN OUTPUT AT LOAD LEVEL. FOR 3.3V SINGLE OUTPUT, REMOTE IS REQUIRED.

##### TURN ON/ TURN OFF OVERSHOOT:

5% MAXIMUM, 1mS TYPICAL RECOVERY TIME FOR 25% STEP LOAD

##### TURN-ON DELAY:

1 SEC MAX

##### HOLD-UP TIME:

10mS TYPICAL AT NOMINAL INPUT VOLTAGE AND FULL LOAD

##### INRUSH CURRENT:

30A TYPICAL AT 115Vac INPUT AND 40A TYPICAL AT 230Vac INPUT

##### EFFICIENCY:

75 % TYPICAL

##### SWITCHING FREQUENCY:

100KHZ TYPICAL, VARIES WITH LINE AND LOAD

##### OVER-VOLTAGE PROTECTION:

OVER-VOLTAGE: VOLTAGE LIMITED TO LESS THAN 130%, CROWBAR METHOD

##### OVER-CURRENT / SHORT CIRCUIT:

CONSTANT CURRENT METHOD MOMENTARY SHORT CIRCUIT PROTECTED, OUTPUT WILL AUTORECOVER UPON REMOVAL OF SHORT.

##### OTHER PROTECTION:

INPUT FUSING; LINE FUSING

##### SAFETY APPROVALS:

UL 60950, CUL TO 22.2 NO.60950, TUV TO EN60950 AND cTUVus TO UL 60950 FOR CLASS I AND CLASS II; CE FOR EMC, CB TO IEC60950 (ALL NATIONAL DEVIATION)

##### DIELECTRIC WITHSTAND VOLTAGE:

5656VDC (4000 VAC) PRIMARY-SECONDARY;  
2121 VDC (1500 VAC) PRIMARY- GROUND

##### LEAKAGE CURRENT:

&lt; 300 µA AT 264 VAC INPUT VOLTAGE

##### LINE SURGE:

EN 61000-4-5 LEVEL 4

##### EMI:

COMPLIES WITH EN55022 CLASS B AND FCC PART 15 CLASS B WHEN TESTED WITH RESISTIVE LOAD, BOTH CONDUCTED AND RADIATED EMI

##### CE MARK:

TESTED TO COMPLY WITH EN61000-3-2 EN610003-3 AND EN50082-1 INCLUDING EN61000-4-2 (SYSTEM LEVEL), EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11 LEVEL 4..

##### MTBF:

GREATER THAN 50,000 HOURS AT 25° C AMBIENT TEMPERATURE

##### NOMINAL LINE AND FULL LOAD PER MIL-217 STANDARD

##### OPERATING TEMPERATURE:

0° C TO 40° C AMBIENT TEMPERATURE

##### STORAGE TEMPERATURE:

-40° C TO 80° C

##### HUMIDITY:

0% TO 90% RELATIVE HUMIDITY

##### MODEL NUMBER CODE:

GT-2: INTERNAL CODE;

-: ITE MODEL, UL 60950

1096: FAMILY DESIGNATION, 10-20W OPEN FRAME

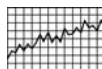
1003 TO 1948: OUTPUT POWER / OUTPUT VOLTAGE

F: OPEN FRAME OR B: PCB MOUNTED

-: UNITS ENDING WITH "W" ARE CLASS II UNITS, UNITS ENDING WITHOUT "W" ARE CLASS I UNITS.

##### NOTES:

1. EACH OUTPUT CURRENT MAY VARY WITHIN IT'S DESIGNATION RANGE, AS LONG AS OUTPUT POWER IS NOT EXCEEDED.
2. SINGLE OUTPUT ARE AVAILABLE FROM 3.3V-48V IN 0.1V INCREMENTS
3. (X.X) OPTIONAL FOR SPECIFYING OUTPUT VOLTAGE DEVIATION FROM STANDARD MODEL: SUBTRACTING X.X VOLTS FROM STANDARD OUTPUT VOLTAGE.



SEE APPENDIX "C" FOR ELECTRICAL PERFORMANCE CURVES

\*FROM 24.1 V TO 48 V, AVAILABLE ONLY WITH TUV AND CB APPROVALS.

#### OUTPUT VOLTAGE / CURRENT:

##### CLASS I MODELS, PROTECTIVE GROUND

MODEL NUMBER	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	RATED OUTPUT POWER (W)
GT-21096-1003-F(B)(W)	+3.3	0 - 2.6	0-9
GT-21096-1505-1.0-F(B)(W)	+4.0	0 - 2.6	0-10
GT-21096-1505-X.X-F(B)(W)	+5.0	0 - 2.6	0-13
GT-21096-1506-X.X-F(B)(W)	+6.0	0 - 2.5	0-15
GT-21096-1509-2.0-F(B)(W)	+7.0	0 - 2.0	0-15
GT-21096-1509-1.0-F(B)(W)	+8.0	0 - 1.8	0-15

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GT-21096 SERIES-19W

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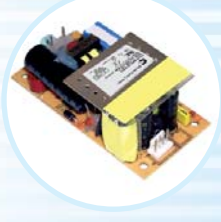


**OUTPUT VOLTAGE / CURRENT:  
CLASS I MODELS, PROTECTIVE GROUND**

MODEL NUMBER	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	RATED OUTPUT POWER (W)
GT-21096-1509-X.X-F(B)	+9.0	0 - 1.7	0-15
GT-21096-1512-2.0-F(B)	+10.0	0 - 1.5	0-15
GT-21096-1512-1.0-F(B)	+11.0	0 - 1.3	0-15
GT-21096-1512-X.X-F(B)	+12.0	0 - 1.25	0-15
GT-21096-1815-2.0--T3-F(B)	+13.0	0 - 1.15	0-15
GT-21096-1815-1.2-F(B)	+13.8	0 - 1.09	0-15
GT-21096-1815-1.0-F(B)	+14.0	0 - 1.07	0-15
GT-21096-1815-X.X-F(B))	+15.0	0 - 1.2	0-18
GT-21096-1818-2.0-F(B))	+16.0	0 - 1.2	0-18
GT-21096-1818-1.0-F(B)	+17.0	0 - 1.0	0-18
GT-21096-1818-X.X-F(B)	+18.0	0 - 1.0	0-18
GT-21096-1824-5.0-F(B)	+19.0	0 - 0.95	0-18
GT-21096-1824-4.0-F(B)	+20.0	0 - 0.90	0-18
GT-21096-1824-X.X-F(B)	+24.0	0 - .75	0-18
GT-21096-1948-20.4-F(B) (TUV/NRTL REPLACES UL/NRTL)	+27.6	0 - 0.65	0-18
GT-21096-1940-18.0-F(B) (TUV/NRTL REPLACES UL/NRTL)	+30.0	0 - 0.6	0-18
GT-21096-1948-12.0-F(B) (TUV/NRTL REPLACES UL/NRTL)	+36.0	0 - 0.5	0-19
GT-21096-1948-X.X-F(B) (TUV/NRTL REPLACES UL/NRTL)	+48.0	0 - 0.4	0-19

**OUTPUT VOLTAGE / CURRENT:  
CLASS II MODELS, DOUBLE INSULATED**

GT-21096-1003-F(B)(W)	+3.3	0 - 2.6	0-9
GT-21096-1505-1.0-F(B)W	+4.0	0 - 2.6	0-9
GT-21096-1505-X.X-F(B)W	+5.0	0 - 2.6	0-13
GT-21096-1506-X.X-F(B)W	+6.0	0 - 2.5	0-15
GT-21096-1509-2.0-F(B)W	+7.0	0 - 2.0	0-15
GT-21096-1509-1.0-F(B)W	+8.0	0 - 1.8	0-15
GT-21096-1509-X.X-F(B)W	+9.0	0 - 1.7	0-15
GT-21096-1512-2.0-F(B)W	+10.0	0 - 1.5	0-15
GT-21096-1512-1.0-F(B)W	+11.0	0 - 1.3	0-15
GT-21096-1512-X.X-F(B)W	+12.0	0 - 1.25	0-15
GT-21096-1815-2.0-T3-F(B)W	+13.0	0 - 1.15	0-15
GT-21096-1815-1.2-F(B)W	+13.8	0 - 1.09	0-15
GT-21096-1815-1.0-F(B)W	+14.0	0 - 1.07	0-15
GT-21096-1815-X.X-F(B)W	+15.0	0 - 1.2	0-18
GT-21096-1818-2.0-F(B)W	+16.0	0 - 1.2	0-18
GT-21096-1818-1.0-F(B)W	+17.0	0 - 1.0	0-18
GT-21096-1818-X.X-F(B)W	+18.0	0 - 1.0	0-18
GT-21096-1824-5.0-F(B)W	+19.0	0 - 0.95	0-18
GT-21096-1824-4.0-F(B)W	+20.0	0 - 0.90	0-18
GT-21096-1824-X.X-F(B)W	+24.0	0 - .75	0-18
GT-21096-1948-20.4-F(B)W (TUV/NRTL REPLACES UL/NRTL)	+27.6	0 - 0.65	0-18
GT-21096-1940-18.0-F(B)W (TUV/NRTL REPLACES UL/NRTL)	+30.0	0 - 0.6	0-18
GT-21096-1948-12.0-F(B)W (TUV/NRTL REPLACES UL/NRTL)	+36.0	0 - 0.5	0-19
GT-21096-1948-X.X-F(B)W (TUV/NRTL REPLACES UL/NRTL)	+48.0	0 - 0.4	0-19





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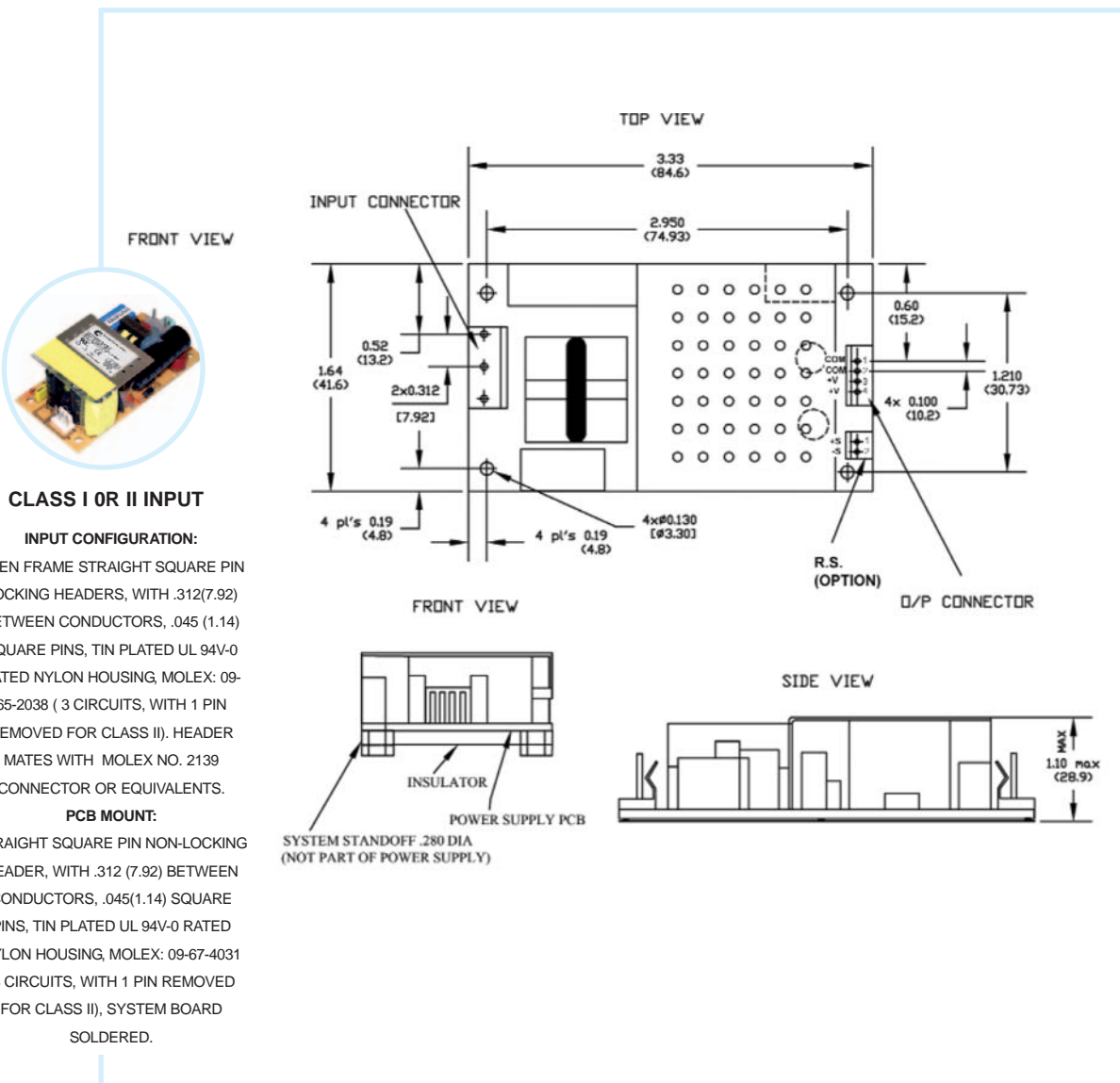
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**MECHANICAL CONFIGURATION**

OPEN FRAME SWITCHING POWER SUPPLY, WITH MOUNTING HOLES, POSITIONED AS SHOWN.  
OPTION: PCB MOUNT, WITH IN / OUT CONNECTORS HEADERS PINS ON PCB SOLDER SIDE.



**CLASS I OR II INPUT**

**INPUT CONFIGURATION:**

OPEN FRAME STRAIGHT SQUARE PIN LOCKING HEADERS, WITH .312(7.92) BETWEEN CONDUCTORS, .045 (1.14) SQUARE PINS, TIN PLATED UL 94V-0 RATED NYLON HOUSING, MOLEX: 09-65-2038 ( 3 CIRCUITS, WITH 1 PIN REMOVED FOR CLASS II), HEADER MATES WITH MOLEX NO. 2139 CONNECTOR OR EQUIVALENTS.

**PCB MOUNT:**

STRAIGHT SQUARE PIN NON-LOCKING HEADER, WITH .312 (7.92) BETWEEN CONDUCTORS, .045(1.14) SQUARE PINS, TIN PLATED UL 94V-0 RATED NYLON HOUSING, MOLEX: 09-67-4031 (3 CIRCUITS, WITH 1 PIN REMOVED FOR CLASS II), SYSTEM BOARD SOLDERED.

**OUTPUT CONNECTOR:**

OPEN FRAME: 4 PIN STRAIGHT SQUARE PIN FRICTION LOCK HEADER, MOLEX: 22-28-0040 UL 94V-0 RATED NYLON HOUSING; .100 (2.54) BETWEEN CONDUCTORS, .025(0.64) SQUARE PINS, TIN PLATED, HEADER MATCH WITH MOLEX # 2695 CONNECTORS OR EQUIVALENT.

PCB MOUNT: 4 PINS STRAIGHT SQUARE NON-LOCKING HEADER WITH .100(2.54) BETWEEN CONDUCTORS, .025(0.64) SQUARE PINS, TIN MATED UL 94V-0 RATED NYLON HOUSING, MOLEX 22-03-2041, SYSTEM BOARD SOLDERED.

REMOTE SENSE (OPTION): 2 PINS STRAIGHT HEADER WITH LOCKING RAMP, WITH UL 94V-0 RATED NYLON BASE, .100(2.54) PITCH BETWEEN CONDUCTORS, .025 (0.64) SQUARE PINS, TIN PLATED MOLEX: 22- 28-0020, HEADER MATES WITH MOLEX # 2695 CONNECTOR OR EQUIVALENT.

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