

**SAFETY ORGANIZATIONS**

THIS FILTER HAS BEEN FORMALLY RECOGNIZED, CERTIFIED OR APPROVED BY THE LISTED AGENCY. THEREFORE, ALL TEST/REQUIREMENTS SPECIFIED IN THE LATEST REVISION OF THE FOLLOWING AGENCY STANDARDS HAVE BEEN MET:

UL RECOGNIZED: UL 1283  
 CSA CERTIFIED: CSA C22.2 No. 8  
 VDE APPROVED: EN 60939-2

**OPERATING SPECIFICATIONS**

LINE CURRENT/VOLTAGE: 20 AMP/40°C 120/250 VAC, 50-60Hz  
 20 AMP/40°C, 250 VAC, 50-60Hz  
 20 AMP/40°C, 250 VDC

MAXIMUM LEAKAGE CURRENT, EACH LINE TO GROUND:  
 0.75mA @ 120V 60Hz  
 1.25mA @ 250V 50Hz

OPERATING AMBIENT TEMP. RANGE: -10°C TO +40°C @ RATED CURRENT, I<sub>r</sub>.

IN AN AMBIENT, T<sub>a</sub>, HIGHER THAN 40°C, THE MAXIMUM OPERATING CURRENT, I<sub>o</sub>, IS AS FOLLOWS:

$$I_o = I_r \sqrt{\frac{85 - T_a}{45}}$$

**RELIABILITY SPECIFICATIONS:**

STORAGE TEMPERATURE: -40°C TO +85°C  
 HUMIDITY: 21 DAYS @ 40°C 95% RH.  
 CURRENT OVERLOAD TEST: 6 TIMES I<sub>r</sub> FOR 8 SECONDS

**TEST SPECIFICATIONS:**

INDUCTANCE: 0.9 mH NOMINAL  
 CAPACITANCE: (MEASURED @ 1KHz, 0.250VAC MAX., 25°C±1°C)  
 LINE TO GROUND: 0.0199 μF±20%  
 LINE TO LINE: 1.005 μF±20%  
 DISCHARGE RESISTOR: 330K Ω  
 L/G AND L/L I.R.  
 NO DISCHARGE RESISTOR: 6000MΩ (MIN.) @ 100VDC, 20°C AND 50% RH

**RECOMMENDED RECEIVING INSPECTION HIPOT:**

LINE TO GROUND: 1500 VAC FOR 1 MINUTE  
 LINE TO LINE: 1450 VDC FOR 1 MINUTE

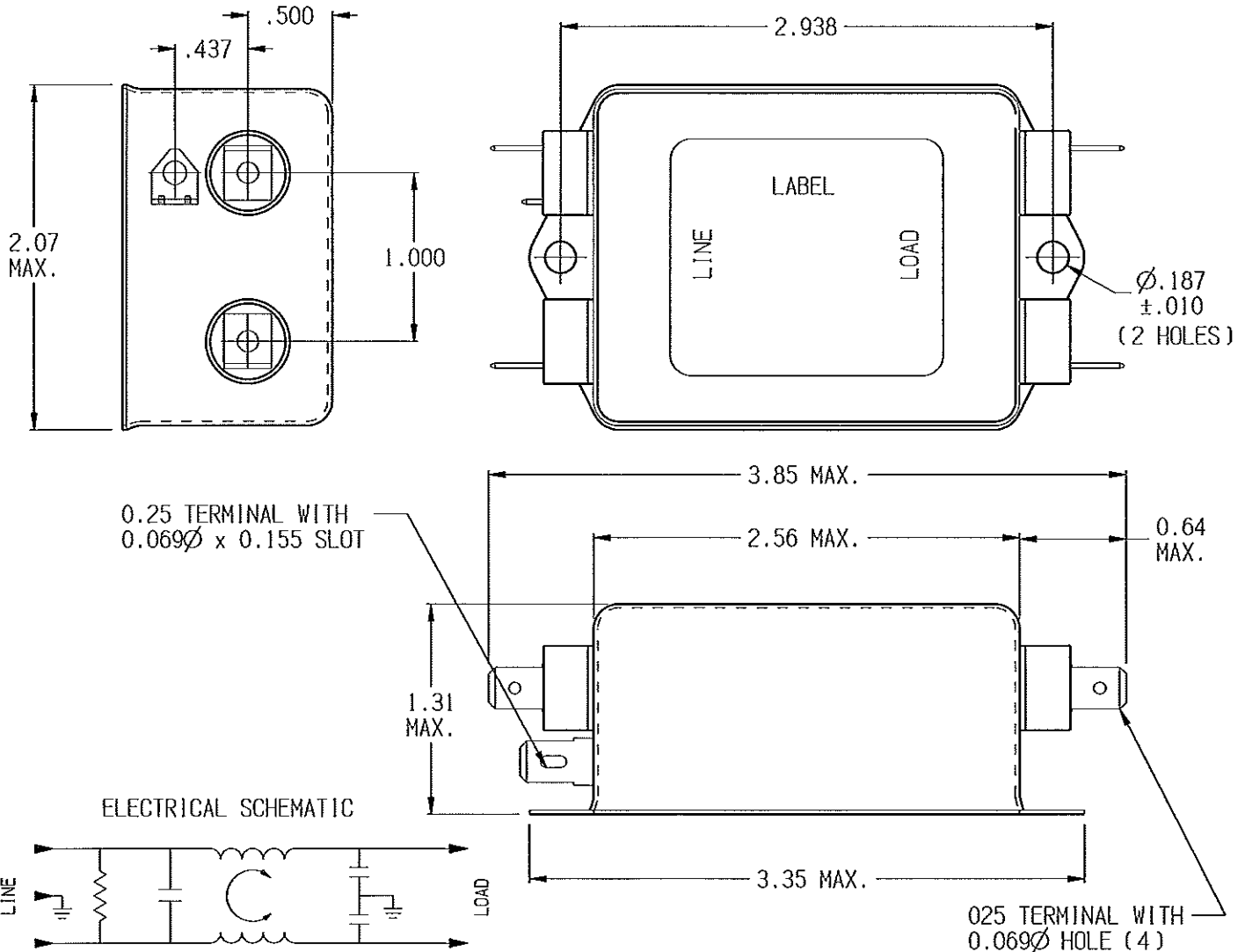
**FILTER APPROVAL:**

THE BEST WAY TO SELECT AND QUALIFY A FILTER IS FOR YOUR ENGINEERING TO TEST THE UNIT IN YOUR EQUIPMENT.

**CUSTOMER DRAWING**

CATALOG # 20VSB1

|           |        |         |
|-----------|--------|---------|
| ECN#      | APPRVD | DATE    |
| 10-006843 | PJO    | 07APR10 |



**50 Ω - 50 Ω (MINIMUM) INSERTION LOSS**

|               |     |     |     |    |     |    |     |     |     |      |      |      |
|---------------|-----|-----|-----|----|-----|----|-----|-----|-----|------|------|------|
| FREQUENCY kHz | .01 | .03 | .05 | .1 | .15 | .5 | 1.0 | 2.0 | 5.0 | 10.0 | 20.0 | 30.0 |
| COMMON dB     | -   | 3   | 7   | 14 | 19  | 37 | 45  | 47  | 50  | 60   | 48   | 40   |
| DIFF. dB      | 5   | 15  | 20  | 26 | 29  | 40 | 42  | 60  | 68  | 70   | 70   | 67   |

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PARTS SHALL COMPLY WITH TYCO ELECTRONICS 138-702 SPECIFICATION FOR HAZARDOUS SUBSTANCES UNLESS OTHERWISE SPECIFIED TOLERANCE TO BE ±0.025 MATERIAL & FINISH: AS SUPPLIED

**Tyco Electronics**  
 CONCOH PRODUCTS, 620 S. BUTTERFIELD RD. MADEIRA IL 60050

**POWER LINE FILTER**

TYCO ELECTRONICS PART NO. 1-1609034-9

SCALE: 1:1 DATE: 23NOV09 DRAWING NUMBER: 20VSB1 REV. A  
 DRW. BY: LJD ORG: PJO

20VSB1-A.cxd