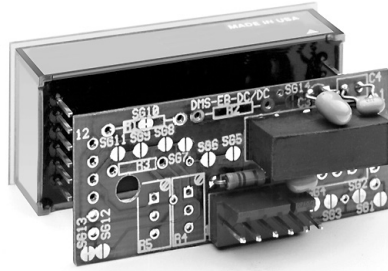


## DC/DC Converter and Isolation Board for DMS-30PC/LCD Meters



### FEATURES

- Provide isolated +5V power for DMS-30 Series meters
- 750V minimum isolation
- Ideal for high-side dc ammeters shunts
- Provisions for +12V operation
- Includes all the features of the standard DMS-EB board
- Use with all DMS-30PC and DMS-30LCD (5V models only)
- -25 to +60°C operating temperature range

### Functional Specifications

$T_A = 25^\circ\text{C}$ ,  $V_{CC} = +5\text{V}$

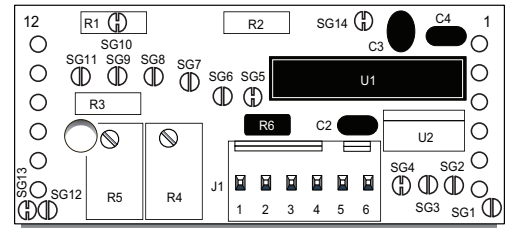
<b>Input Voltage</b>	<b>+5V (<math>\pm 5\%</math>)</b>
<b>Input Current:</b>	
<b>Typical</b>	<b>+150mA</b>
<b>Maximum</b>	<b>+250mA</b>
<b>Regulator Input Voltage Range (LM7805CT):</b>	
<b>DMS-30PC-X-XS</b>	<b>+7.5 to +9.5Vdc</b>
<b>DMS-30PC-X-RL</b>	<b>+7.5 to +18Vdc</b>
<b>DMS-30LCD-X-5(B)</b>	<b>+7.5 to +18Vdc</b>
<b>Output Voltage</b>	<b>+5V (<math>\pm 5\%</math>)</b>
<b>Isolation</b>	<b>750V, minimum</b>
<b>Operating Temperature</b>	<b>0 to +60°C</b>
<b>Storage Temperature</b>	<b>-20 to +75°C</b>
<b>Dimensions:</b>	<b>2.02" (51.31mm)L</b> <b>0.83" (21.08mm)W</b>
<b>Humidity (Non-condensing)</b>	<b>0 to 95%</b>

**Description:** The DMS-EB-DC/DC Application Board provides isolated +5V power for Murata Power Solutions' DMS-30PC/LCD Series, 3½ Digit, LED/LCD Display, Digital Panel Voltmeters. This add-on board is ideal for applications requiring isolation (up to 750V) between the input signal and the meter's +5V supply.

**Features:** The DMS-EB-DC/DC is an excellent choice for dc ammeter applications. These ammeters typically have the current shunt located on the positive side of the power supply — a condition which usually exceeds the meter's common mode voltage limit. Input-to-output isolation is required if the power source being measured also powers the DMS-30. See dc ammeters application note DMS-AN6 at <http://www.murata-ps.com/data/meters/dms-an6.pdf>.

**Applications:** The DMS-EB-DC/DC incorporates all standard features of the DMS-EB board; the only exception being the smaller allowable range of power supply voltage when using the LM7805 3-terminal regulator. Use the DMS-EB-DC/DC with any DMS-30PC meter or DMS-30LCD meter (5V-powered models only).

+7.5-18V Operation (Optional): Open SG4 and install U2 (LM7805CT) with its metal tab adjacent to U1. Applications requiring a lower dropout voltage should consider the LM2931T-5. Exceeding the allowable regulator input voltage ranges (see Functional Specifications) will cause device overheating! As is the case when specifying any electronic power component, be sure to consult all applicable manufacturer's data sheets.



### Ordering Information

<b>DMS-EB-DC/DC-C</b>	<b>DC/DC converter board (with mating connector)</b>
<b>DMS-BZL1-C</b>	<b>Bezel assembly</b>
<b>DMS-BZL2-C</b>	<b>Bezel assembly with sealing gasket</b>



For full details go to [www.murata-ps.com/rohs](http://www.murata-ps.com/rohs)

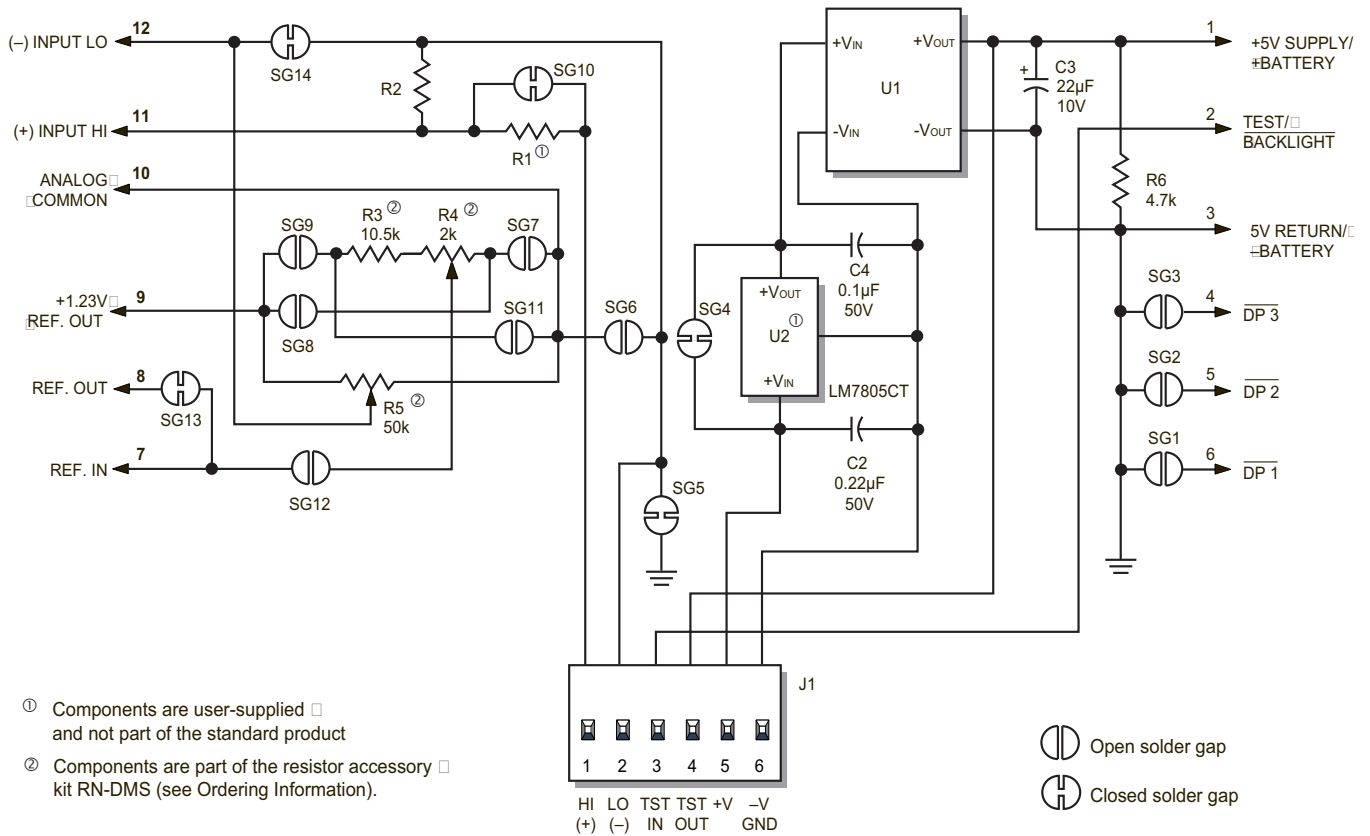


Figure 1. DMS-EB-DC/DC Schematic Diagram

