ControlLogix™
1756sc-CTR8
8-Channel Counter Input Modules

The 1756sc-CTR8 Module provides counter input capability for general purpose counter and turbine flowmeter applications that need a large number of input channels in one I/O module. The 1756sc-CTR8 module can replace counter input modules without compromising performance or price.

Reduce System Costs

- Eight incremental, 24-bit, single-ended counters or up to four pairs for up/down or quadrature counters.
- Configure each input group as 5, 12, or 24 VDC, or 50, 200 mVpp counters, or as turbine flow (variable reluctance coil) AC inputs; input signal range is from 0 to 65 kHz.
- Provides scaling K factor for turbine flowmeters; can be setup for flowmeter proving requirements.
- For counting applications, can count incremental inputs up to 65 kHz.
- Four external counter enable lines for faster counter control.
- Provides scaling of input counts or input frequency to engineering units.
- Simultaneous frequency/counter display; Limit and zero flags to detect rollover, roll-under.
- Count direction flags; start, stop, reset, and preset control.
- Count and rate measurements may be multicast to other processors at intervals as short as 10 ms.

www.spectrumcontrols.com
# 1756sc-CTR8 Specifications

<table>
<thead>
<tr>
<th>Input Types</th>
<th>8, single-ended counter inputs, or 4 quadrature encoding 8 enable control line inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Ranges</td>
<td>AC 50 mVpp AC 200 mVpp 5 VDC 12/24 VDC</td>
</tr>
<tr>
<td>VIL</td>
<td>-50 mV -200 mV 1 V 6 V</td>
</tr>
<tr>
<td>VIH</td>
<td>+50 mV +200 mV 3.5 V 10.5 V</td>
</tr>
<tr>
<td>Vmax (CE)</td>
<td>±50 VAC RMS ±50 VAC RMS ±50 VDC ±50 VDC</td>
</tr>
<tr>
<td>Counter Speed (AC/DC inputs)</td>
<td>0 Hz to 65 kHz</td>
</tr>
<tr>
<td>Input Frequency (AC/DC inputs)</td>
<td>1 Hz to 65 kHz</td>
</tr>
<tr>
<td>Minimum Pulse Time</td>
<td>5.4 us</td>
</tr>
<tr>
<td>Isolation Voltage</td>
<td>2550 VDC field wiring to backplane for 1 second</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>24 kOhms at 24 V, typical (voltage dependent); &gt;1 Mohm at 3 V</td>
</tr>
<tr>
<td>Counter Voltage Input</td>
<td>Programmable 5 VDC, 12/24 VDC; 5 mVAC, 200 mVAC</td>
</tr>
<tr>
<td>Channel Update Time</td>
<td>&lt;13 ms for all channels</td>
</tr>
<tr>
<td>Count Value Range</td>
<td>0 to 16,777,215</td>
</tr>
<tr>
<td>Low Range</td>
<td>±34 K</td>
</tr>
<tr>
<td>High Range</td>
<td>±8 M</td>
</tr>
<tr>
<td>Backplane Current Maximum</td>
<td>5 V 230 mA</td>
</tr>
<tr>
<td></td>
<td>24 V 75 mA</td>
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<tr>
<td>Environmental Conditions</td>
<td></td>
</tr>
<tr>
<td>Operational Temperature:</td>
<td>-0 °C to 60 °C (32 °F to 140 °F)</td>
</tr>
<tr>
<td>Storage Temperature:</td>
<td>-40 °C to 85 °C (-40 °F to 185 °F)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>5% - 95% (non-condensing)</td>
</tr>
<tr>
<td>Power Dissipation</td>
<td>4.8 Watts, maximum</td>
</tr>
<tr>
<td>Certifications</td>
<td>UL/cUL Listed ANSI ISA 12.12.01 (Class I, Div 2, Groups ABCD), CE</td>
</tr>
<tr>
<td>Weight</td>
<td>490 g (17.3 ozs)</td>
</tr>
<tr>
<td>Recommended Cable</td>
<td>14 AWG stranded maximum; 3/64 insulation maximum</td>
</tr>
</tbody>
</table>