

8-Channel 50 KHz Counter or Turbine Flowmeter Input Module for 1746sc

Catalog No. 1746sc-CTR8

Product Profile



- Installs and operates exactly like an Allen-Bradley product
- Aimed at the general purpose counter and turbine flowmeter applications that require a large number of input channels
- Can be used in applications requiring 8 incremental, single-ended counters or by combining inputs into pairs for up/down and quadrature counters
- Turbine flowmeter inputs can include scaling K factor as well as the ability to be setup for meter proving requirements
- Four external counter enable lines for fast counter control

The 1746sc-CTR8 features 8 incremental counter or turbine flowmeter inputs. For counting applications, each input can count incremental inputs up to 50 KHz. When inputs are used in pairs, they can be configured for up/down and quadrature counting. The module also features typical turbine flowmeter setup parameters such as K (scaling) factor in addition to the capability of being used when meter proving is required.

Simplifies Installation

The 1746sc-CTR8 incorporates proprietary Allen-Bradley technology so it operates and performs like an Allen-Bradley product for easy installation. The module also allows you to use up to 8 inputs structured as four groups of two inputs. Each of the input groups can be configured as 5, 12 or 24 Vdc counters or as turbine flow (variable reluctance coil) ac inputs.

Outstanding Features

The 1746sc-CTR8 includes a variety of helpful features:

- Setup for incremental or up/down counting
- Scaling of input counts or input frequency to engineering units
- Simultaneous frequency/counter display
- Up/down flags can annunciate when a preset limit has been achieved
- Over-range flag when count or frequency exceeds a preset limit
- Start, stop, reset and preset control

1746sc-CTR8 Specifications

| | | | | | | | | | | | |
|-----------------------------------|---|------------------|-------------------|-------|-------------|--------|-------------|--------|--------------|----------|-----------------|
| Number of Inputs | 8 Channels of single-ended counter inputs 4 Channels of quadrature encoding 4 Input enable control lines | | | | | | | | | | |
| Input Modes | DC counter, AC flow meter | | | | | | | | | | |
| Input Voltage Range | <table border="0"> <tr> <td>Voltage Category</td> <td>Operating Voltage</td> </tr> <tr> <td>5 Vdc</td> <td>3 to 30 Vdc</td> </tr> <tr> <td>12 Vdc</td> <td>8 to 30 Vdc</td> </tr> <tr> <td>24 Vdc</td> <td>16 to 30 Vdc</td> </tr> <tr> <td>0-30 Vac</td> <td>0.050 to 30 Vac</td> </tr> </table> | Voltage Category | Operating Voltage | 5 Vdc | 3 to 30 Vdc | 12 Vdc | 8 to 30 Vdc | 24 Vdc | 16 to 30 Vdc | 0-30 Vac | 0.050 to 30 Vac |
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| 5 Vdc | 3 to 30 Vdc | | | | | | | | | | |
| 12 Vdc | 8 to 30 Vdc | | | | | | | | | | |
| 24 Vdc | 16 to 30 Vdc | | | | | | | | | | |
| 0-30 Vac | 0.050 to 30 Vac | | | | | | | | | | |
| Counter Speed | 0 to 50 KHz | | | | | | | | | | |
| Input Frequency | 1 to 50 KHz | | | | | | | | | | |
| Min Pulse Time | 10 μ s | | | | | | | | | | |
| DC mode | Enable and Disable setup time = 20 μ s | | | | | | | | | | |
| External Enable/Disable | | | | | | | | | | | |
| Accuracy | ± 1 Count | | | | | | | | | | |
| Counter mode | + - 1% @ 50KHz, .002% @ 1Hz | | | | | | | | | | |
| Frequency mode | | | | | | | | | | | |
| Count Value Range | Low Range ± 32 K, High Range ± 8 M | | | | | | | | | | |
| Nominal Input Impedance | 25 KOhms | | | | | | | | | | |
| Counter Voltage Input | Programmable 5, 12, 24 Vdc, 0-30 Vac | | | | | | | | | | |
| Channel Update Time | | | | | | | | | | | |
| Counter Mode | <4 ms per channel | | | | | | | | | | |
| Frequency Mode | <4ms per channel | | | | | | | | | | |
| Power Dissipation (maximum) | 1.75 Watts | | | | | | | | | | |
| Backplane Current Draw (max.) 5 V | 350 mA max | | | | | | | | | | |
| Isolation Voltage | 1000 Vdc field wiring-to-backplane | | | | | | | | | | |
| Environmental Conditions | | | | | | | | | | | |
| Operational Temperature | 0° to 60° C (32° to 140°F) | | | | | | | | | | |
| Storage Temperature | -40° to +85°C (-40° to 185°F) | | | | | | | | | | |
| Relative Humidity | 5 to 95% (non-condensing) | | | | | | | | | | |
| Certifications | UL/cUL (Class I, Div 2, Groups ABCD) CE per Council Directive 89/336/EEC for EMC | | | | | | | | | | |
| Conductors Wire Size | 14 gage stranded maximum 3/64 inch insulation maximum | | | | | | | | | | |

Category

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