ControlLogix[R]

1756sc-CTR8/1756sc-CTR8K
8-Channel Counter Input Module

The 1756sc-CTR8/1756sc-CTR8K Counter Input Modules provide high-density 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-CTR8K module is conformally coated. The 1756sc-CTR8 modules can replace lower-density counter input modules without compromising performance or price.

- Eight incremental, 24-bit, single-ended counters or up to four pairs for up/down or quadrature counters. Count direction flags; start, stop, reset, and preset control.
- 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 and rate measurements may be multicast to other processors at intervals as short as 10 ms.
- Easy to configure using Studio 5000 programming software, add-on profile (AOP) available.

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1756sc-CTR8(K)

Specifications

Channels Per Module	8, single-ended counter inputs, or 4 quadrature encoding 8 External Counter gate inputs			
Input Ranges:	AC 50 mVpp	AC 200 mVpp	5 VDC	12/24 VDC
VIL	-50 mV	-200 mV	1 V	3 V
VIH	+50 mV	+200 mV	3.5 V	9 V
Vmax (CE)	±50 VAC RMS	±50 VAC RMS	±50 VDC	±50 VDC
Resolution	16 to 21 bits (filter dependent)			
Accuracy	Frequency Mode	1 Hz Accuracy maximum typical	65 kHz Accuracy	Maximum
	Instant	±0.00 Hz	±354 Hz	±354 Hz
	Average	±0.5 Hz	±1 Hz	±2 Hz
Advanced Features				
Filtering	5 filter settings (individually selectable by channel)			
Input Overvoltage Protection	±50 VDC, 50 VAC			
Input Overcurrent Protection	4mA at 50 VDC			
Update Times (ms) *	14 msec / all 8 channels			
Electrical Isolation (continuous)	250 VAC field-wiring-to-backplane 250 VAC field-wiring-to-chassis-ground 12.5 VDC channel-to-channel isolation			
Input Impedance	Voltage-dependent >1 Mohm at 5 V, 24 k typical at 24 V.			
Backplane Current Required	75 mA at 24 VDC max 230 mA at 5 VDC max			
Thermal Dissipation	3.0 Watts, maximum			
Environmental Conditions				
Operational Temperature	0 °C -+60 °C (32 °F - +140 °F)			
Storage Temperature	-40 °C - +85 °C (-40 °F - +185 °F)			
Relative Humidity	5% - 95% (non-condensing)			
Conformal Coating	ANSI/ISA 71.04.2013 G3 Environment Standard			
Certifications	UL/cUL Listed ANSI ISA 12.12.01 (Class I, Div 2, Groups ABCD), CE, ATEX, CCC, UKCA, CMIM			

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