Millivolt I/O Modules

The Millivolt Input Modules allow Millivolt level signals, such as bridged strain gages (load cells) to be directly connected to the PLC without external signal processing (transducers, transmitters, etc.) All analog and digital processing of the signal is performed on the module.

	IC695ALG600 Millivolt	IC695ALG306 Millivolt
Product Name	Universal Analog and configurable for Current, Voltage, RTD, Thermocouple and Resistive. High Density (8 Channel) Requires Cold Junction Compensation; are available for Thermocouple configurations (IC695ACC600 contains 2 CJCs)	Isolated Thermocouple Input module provides six isolated differential thermocouple input channels. Each channel can be individually configured for inputs from: Thermocouple types: J, K, T, E, R, S, B, N, or C and Voltage: ±150mV or ±50mV.
Lifecycle Status	Active	Active
Module Type	Millivolt Input	Strain Gage Input
Backplane Support	Universal Backplane Only. Uses PCI Bus.	Universal Backplane Only. Uses PCI Bus.
Number of Slots Module Occupies on Backplane	1	1
Range	±150mV or ±50mV	±150mV or ±50mV
Diagnostics	Open wire, Short Circuit, Positive/Negative Rate of Change, High, High-High, Low, Low-Low	Open wire, Short Circuit, Positive/Negative Rate of Change, High, High-High, Low, Low-Low
Channel-to-Channel Isolation	Two Groups of Four	250 VAC Continuous 1500 VAC 1 minute 2550 VDC 1 second
Number of Channels	8	6
Notch Filter	Yes	From 2.3 Hz to 28 Hz per channel
Resolution	32-bit IEEE floating point or 16-bit integer (in 32-bit field) input data format)	32-bit IEEE floating point or 16-bit integer (in 32-bit field) input data format)
Accuracy	Calibrated Accuracy at 25°C. Better than 0.1% of range. Accuracy depends on A/D filter, data format, input noise, and ambient temperature.	±0.1% of voltage span at 25°C. ±0.25% of span over temperature range.
Input Impedance	>1M ohm	Voltage: >=500k ohm
I/O Required	N/A	N/A
A/D Conversion Type	Sigma Delta	Sigma Delta
A/D Conversion Time	(Assumes 2 ADC's running in parallel, no CJC or lead resistance) 10ms per Channel 4 Channels = 40ms (1KHz filter) 127ms per Channel 4 Channels = 508ms (8Hz filter) Channels that are disabled are not scanned, shortening scan time.	15 msec @ 28 Hz to 120 msec @ 2.3 Hz
Strain Gages Supported	Yes	Yes
Maximum Normal Voltage Input	N/A	N/A
Maximum Voltage Input	±14.5 VDC continuous	N/A
Connector Type	IC694TBBx32, IC694TBSx32 or IC694TBC032. Sold Separately.	IC694TBBx32, IC694TBSx32 or IC694TBC032. Sold Separately.
Internal Power Used	400 mA @ 5 V; 350 mA @ 3.3 V	150 mA @ 5V; 400 mA @ 3.3V