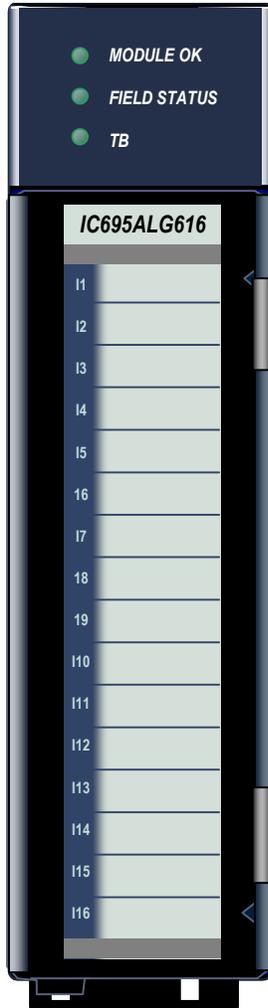


Analog Input Module, 8 / 4 Channel Voltage / Current: IC695ALG608
Analog Input Module, 16 / 8 Channel Voltage / Current: IC695ALG616



Non-Isolated Differential Analog Voltage/Current Input module IC695ALG608 provides 8 single-ended or 4 differential input channels. **Non-Isolated Differential Analog Voltage/Current Input** module IC695ALG616, shown at left, provides 16 single-ended or 8 differential input channels. Analog input channels can be configured for these ranges:

- Current: 0 to 20mA, 4 to 20mA, +/- 20mA
- Voltage: +/- 10V, 0 to 10V, +/- 5V, 0 to 5V, 1 to 5V.

This module can be used with a Box-style (IC694TBB032), Extended Box-style (IC694TBB132), Spring-style (IC694TBS032), or Extended Spring-style (IC694TBS132) terminal Block. Extended terminal blocks provide the extra shroud depth needed for shielded wiring. See chapter 15 for more information about Terminal Blocks. Terminal Blocks are ordered separately.

These modules must be located in an RX3i Universal Backplane. They require an RX3i CPU with firmware version 3.0 or later. Machine Edition Version 5.0 SP3 Logic Developer-PLC or later must be used for configuration.

Module Features

- Completely software-configurable, no module jumpers to set
- Full autocalibration
- On-board error-checking
- Open-circuit detection for all voltage and 4-20mA inputs
- Configurable scaling and offsets per channel
- High alarm, low alarm, high-high alarm, low-low alarm detection and reporting selectable per channel
- Module fault reporting
- Supports diagnostic point fault contacts in the logic program
- Flash memory for future upgrades
- Positive and negative Rate of Change Alarms
- Autocalibration at startup
- Configurable interrupts for channel alarms and faults
- Terminal Block insertion or removal detection

Specifications: IC695ALG608 and IC695ALG616

Input Ranges	Current: 0 to 20mA, 4 to 20mA, +/- 20mA Voltage: +/- 10V, 0 to 10V, +/- 5V, 0 to 5V, 1 to 5V				
Backplane Power Requirements	ALG608: 330 mA maximum @ 5.0V +5% / -2.5%, 600 mA maximum @ 3.3V +5% / -3%				
	ALG616: 450 mA maximum @ 5.0V +5% / - 2.5%, 600 mA maximum @ 3.3V +5% / - 3%				
CPU Version	PACSystems RX3i CPU firmware version 3.0 and later				
Programmer Version	Machine Edition version 5.0 SP3 and later				
Power Dissipation within Module	IC695ALG608: 4.83 watts maximum IC695ALG616: 6.48 watts maximum				
Thermal Derating	None				
Resolution	24 bit ADC converted to Floating Point or Integer				
Input Data Format	Configurable as floating point IEEE 32 bit or 16-bit integer in a 32-bit field				
Filter Options	8Hz, 12Hz, 16Hz, 40Hz, 200Hz, 500Hz				
Module Scan Time (in milliseconds)	The module scan can consist of up to four acquisition cycles. Each cycle includes a specific set of channels, as described in the section "Channel Scanning". Total Scan Time depends on the number of acquisition cycles in the scan, and the configured filter option.				
Configured Filter	Number of Acquisition Cycles in the Scan				
		1	2	3	4
	8 Hz filter	121	241	362	482
	12 Hz filter	81	161	242	322
	16 Hz filter	61	121	182	242
	40 Hz filter	21	41	62	82
	200 Hz filter	5	9	14	18
	500 Hz filter, filtering and rate detection disabled	3	5	7	9
	500 Hz filter, all options enabled	3	6	9	12
Input Impedance	>100 Kohm voltage inputs				
Current Input Resistance	249 ohms +/- 1%				
Open Circuit Detection time	1 second maximum				

Continued

Specifications: IC695ALG608 and IC695ALG616, continued

Overvoltage	+/-60 VDC continuous, maximum		
Overcurrent	+/-28mA continuous, maximum		
Normal Mode Noise Rejection in dB		<i>At 50Hz</i>	<i>At 60Hz</i>
	8 Hz filter	103	97
	12 Hz filter	94	89
	16 Hz filter	39	65
	40 Hz filter	4	7
	200 Hz filter	0.1	0.2
	500 Hz	0.0	0.0
Common Mode Noise Rejection	120dB minimum @ 50/60 Hz with 8 Hz filter 110dB minimum @ 50/60 Hz with 12 Hz filter		
Channel-Channel DC Crosstalk	-80 dB minimum (single ended mode) -80 dB minimum (differential mode, grounded common) -60 dB minimum (differential mode, floating common)		
Calibrated Accuracy* @ 13°C – 33°C with 8 Hz, 12 Hz and 16 Hz filter	+/- 5V, +/- 10V, +/- 20 mA: 0.05% of range. 0 to 10V, 0 to 5V, 1 to 5V, 0 to 20 mA: 0.1% of range. 4 to 20 mA: 0.125% of range		
Calibrated Accuracy* @ 0°C – 60°C with 8 Hz, 12 Hz and 16 Hz filter	0 to 10V, 0 to 5V, 1 to 5V, 0.2% of range. 0 to 20 mA: 0.25% of range. 4 to 20 mA: 0.3125% of range. +/- 5V, +/- 10V: 0.1% +/- 20 mA: 0.125% of range		
Calibration Interval	12 months typical to meet accuracy specifications over time. Offset can be applied as a periodic calibration adjustment.		
Isolation Voltage terminal block to backplane/chassis	Opto-isolated, transformer isolated 250 VAC continuous/1500 VAC for 1 minute		

* In the presence of severe RF interference (IC 801-3, 10V/M), accuracy may be degraded by +/- 1.5% of range.

Refer to Appendix A for product standards and general specifications.

LEDs

The **Module OK** LED indicates module status. The **Field Status** LED indicates the presence of a fault on at least one channel or a terminal block error. The **TB (Terminal Block)** LED indicates the presence or absence of the terminal block. LEDs are powered by the backplane power bus.

LED	Indicates
Module OK	ON Green: Module OK and configured. Slow Flashing Green or Amber: Module OK but not configured. Quick Flashing Green: Error. OFF: Module is defective or no backplane power present
Field Status	ON Green No faults on any enabled channel, and Terminal Block is present. ON Yellow: Fault on at least one channel. OFF: Terminal block not present or not fully seated.
TB	ON Red: Terminal block not present or not fully seated. ON Green: Terminal block is present. OFF: No backplane power to module.