



Remote CAN Bus I/O Module

Remote CAN Bus Input/Output Module for the 650 Family

Key Benefits

- Additional inputs and outputs for GE Vernova Multilin's 650 family of relays
 - Remote mounting from relay location (up to 1 km)
 - Operates connected to one F650, W650 and G650 family of relays
 - Each module includes up to 32 inputs and 16 outputs
 - One 650 type relay can handle up to 1 CIO (future releases will allow increased number of CIO units per relay)
 - Simplified wiring (2 fiber optic cables) for lower cost and increased reliability
 - Scalable solution (1 or 2 boards, different modules to fit the application)
 - 1 ms time tagging
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Applications

- Remote I/O units - Increased number of I/O capability
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Features

- Two modes of installation: front panel or back panel- High-speed Can Bus
- EnerVista enabled -Programmed through 650 relay acting as a master device - AC/DC universal power supply



Applications

The remote CIO module provides additional input and output capabilities for GE Vernova Multilin's 650 family of relays. The CIO I/O capability can be doubled using a single CIO module with two boards. One CIO module based on the ordering code can handle as much as 32 inputs and 16 outputs.

Monitoring

Each CIO module can include one or two input/output boards. The number of digital inputs and outputs included on each board will depend on the selected model.

All setpoint programming for the CIO module is accomplished via the 650 over the CAN Bus communications link. The CIO module is connected to a 650 relay over a fiber optic CAN Bus, with just 2 fiber optic cables (for transmission and reception), providing simplified wiring and commissioning.

Features

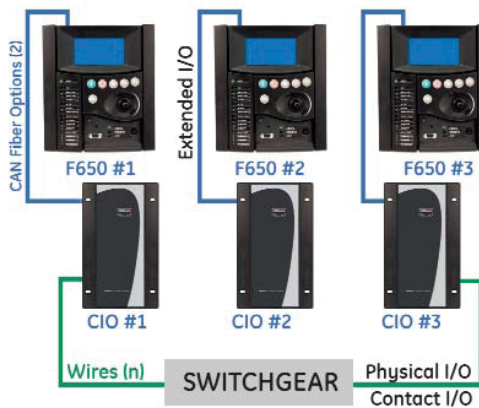
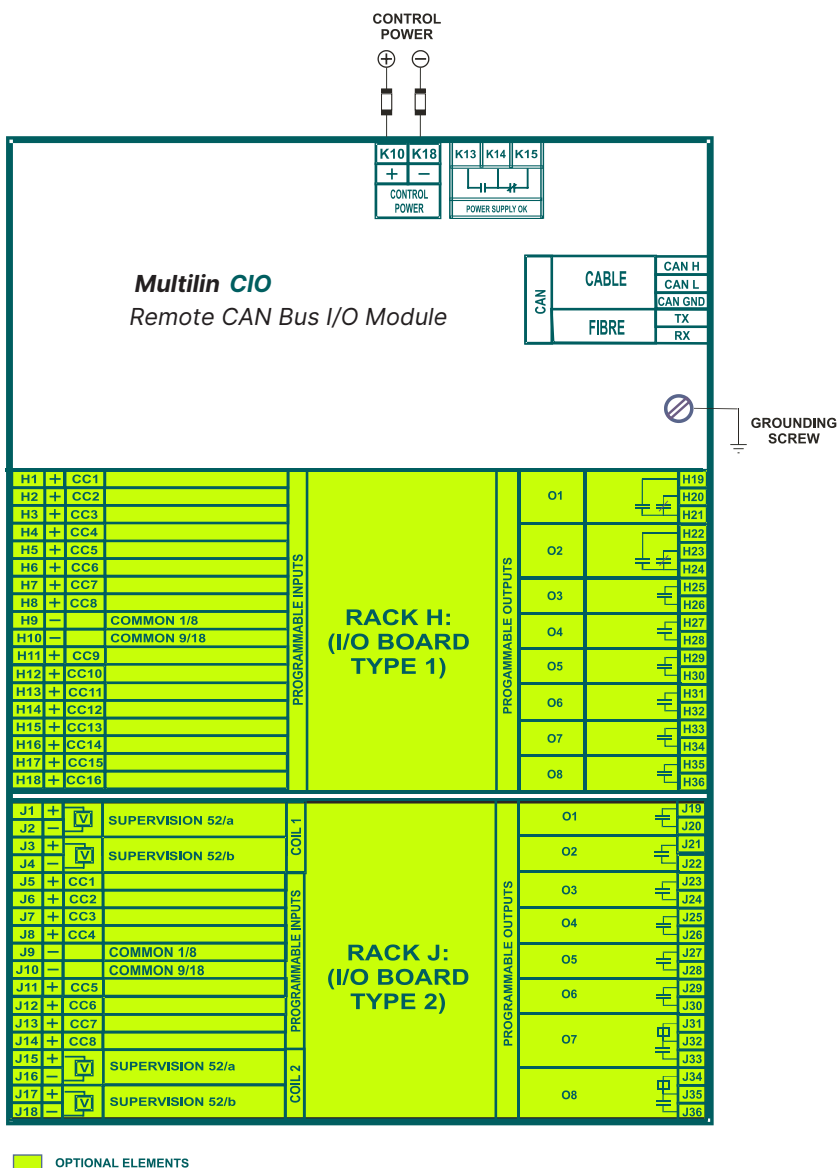
The CIO module has been designed to be mounted close to the input/output location to facilitate reduced length of I/O wiring. A 650 relay can then monitor the inputs and outputs from a remote location and use this information for protection and control purposes. Functionality and operation speed are the same as I/Os inside the relay, including self-monitoring capabilities.

Inputs/Outputs

- 1 ms tagging time
- Independent programmable threshold levels
- Separate user defined debounce and chatter time
- Each 650 unit can handle 1 CIO box up to 1 km far
- Inputs/outputs programmable through EnerVista software.

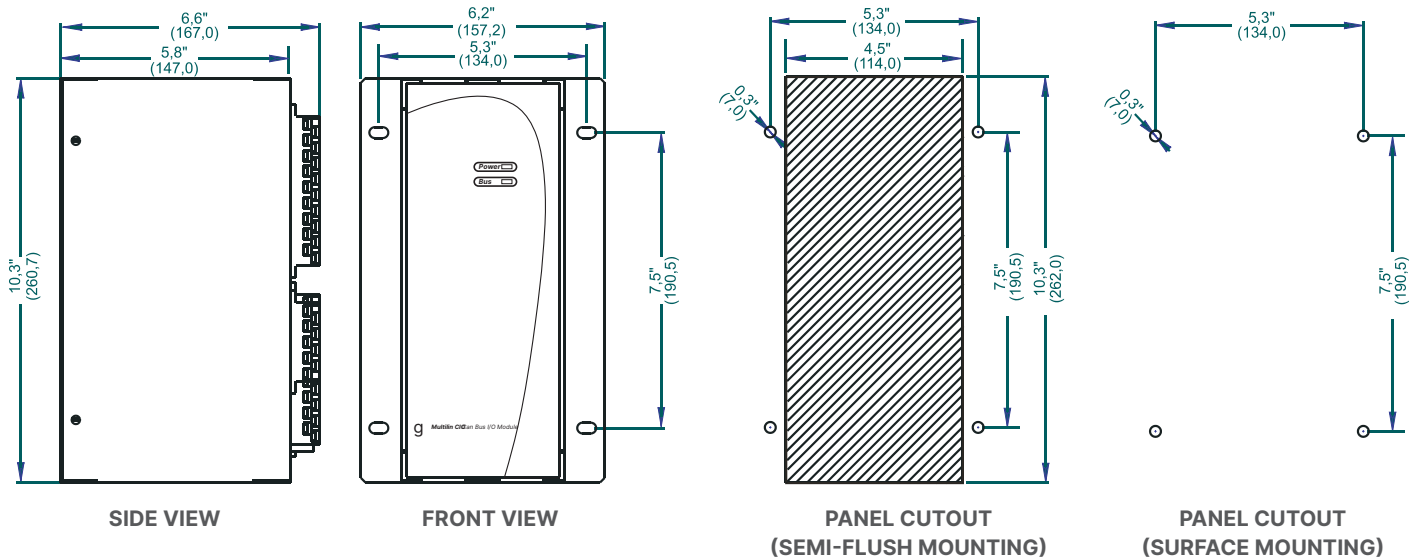


Typical Wiring



Example of connection for F650s with CIOs linked by an Ethernet lan

Dimensions



CIO Technical Specifications

INPUTS

CONTACT INPUTS

Wet contacts: 300 Vdc maximum
100 kOhm burden

OUTPUTS

TRIPPING CONTACTS

Contact Capacity:
Max. Operating Voltage: 400 Vac
Continuous Current: 16 A
Make and Carry: 30 A
Breaking: 0.3 A at 125 Vdc and
L/R = 40 ms

OUTPUT RELAYS

Contact Material: Silver alloy suited for inductive loads. Cadmium free
Operate Time: 8 ms

COMMUNICATIONS

Two LEDs, for COM and READY
2 fiber optic cables, TX and RX, glass ST type

POWER SUPPLY

Frequency: 50/60 Hz
Auxiliary Voltage: 24-48 VDC $\pm 20\%$
110-250 VDC,
120-230 VAC $\pm 20\%$
Burden: 5 W standby
0.25 W per each activated output

APPROVALS

UL: UL certification applied
CE: Conforms to EN/IEC 60255
ISO: Manufactured to an ISO9001 registered program

TYPE TESTS

Isolation Test Voltage: 2kV, 50/60 Hz, 1 min IEC 60255-5
Surge Test Voltage: 5 kV peak, 0.5 J IEC 60255-5
Interference: Class III according to IEC60255-22-1
Class IV according to IEC60255-22-2
Electrostatic Discharge: Class III according to IEC60255-22-3
Radio interference: Class IV according to IEC60255-22-4
Fast Transient: Class I according to IEC60255-21-1
Sinusoidal Vibration: Class I according to IEC60255-21-2
Shock: According to IEC41B (Sec 81) and EN55022 Class B
Radiofrequency Emission: ANSI/IEEE C 37.90.1
Oscillatory / Fast Risetime Transient: ANSI/IEEE C 37.90.2
Electromagnetic Interference Withstand Capability:

Ordering

CIO	H	*	J	*	*
CIO					
		1			16 inputs + 8 outputs
		2			8 inputs + 8 outputs, 2 trip coil supervision
		4			32 digital inputs
		5			16 digital inputs + 8 analog
			0		No module
			1		16 digital inputs + 8 outputs
			2		8 digital inputs + 8 outputs, 2 trip coil supervision
			4		32 digital inputs
			5		16 digital inputs + 8 analog
				HI	Source: 110-250 VDC (range: 88~300)
					Source: 120-230 VAC (range: 88~264)
				LO	Source: 24-48 VDC (range: 19.2~57.6)

Accessories

EnerVista Program Setup and monitoring software included.



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