

Features

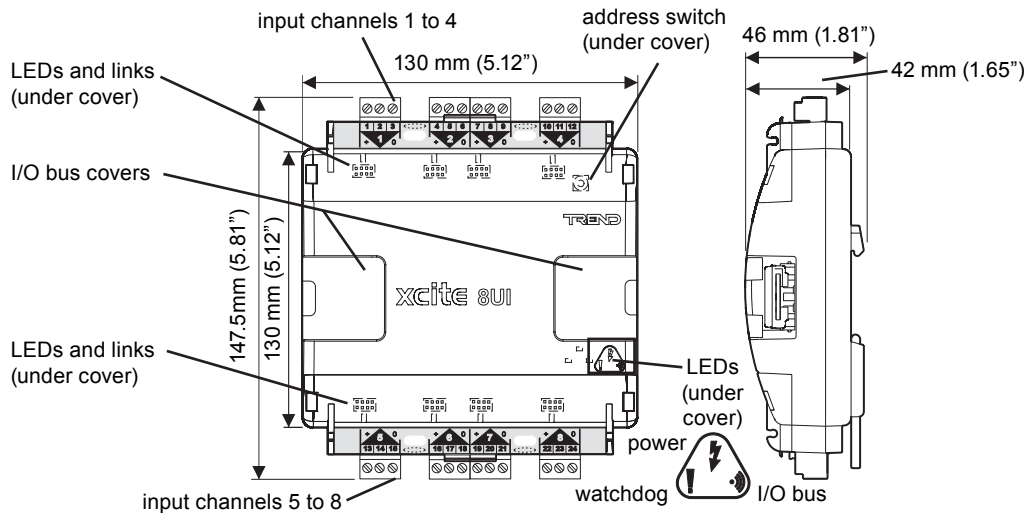
- Small footprint with DIN rail mounting
- Separate placement of I/O modules via I/O bus.
- Available in different options to suite user requirements



XCITE/IO modules provide the facility to expand the I/O capabilities of the IQ3XCITE/96/.. and IQ3XCITE/128/..). They are available in the following different I/O combinations to provide a flexible approach to the controller's I/O configuration: 8 Universal Inputs, 4 Universal Inputs, 4 Universal Inputs and 4 Analogue Voltage Outputs, 2 Universal Inputs and 2 Analogue Voltage Outputs, 8 Relay Outputs, 4 Relay Outputs, 8 Analogue Outputs, 4 Analogue Outputs, 16 Digital Inputs, 8 Digital Inputs, 8 Digital Inputs and 8 Thermistor Inputs, 8 Relay outputs with Hand/Off/Auto and 4 Relay outputs with Hand/Off/Auto.

All variants are DIN rail mounting, and can be placed remote to the controller on its I/O bus. A maximum of 15 I/O modules can be connected to a single controller with a maximum of 96 or 128 points on the controller (16 points on the controller and 80 or 112 added using XCITE/IO modules)

Dimensions



Field Maintenance

The XCITE/IO modules require virtually no routine maintenance.

The unit should be cleaned with a cloth moistened with water in order to avoid buildup of dust or other contaminants. Disconnect power before carrying out any cleaning.

DISPOSAL

COSHH (Control of Substances Hazardous to Health - UK Government Regulations 2002) ASSESSMENT FOR DISPOSAL OF XCITE/IO modules.

RECYCLING 

All plastic and metal parts are recyclable. The printed circuit board may be sent to any PCB recovery contractor to recover some of the components for any metals such as gold and silver.

**WEEE Directive:**

At the end of their useful life the packaging, and product should be disposed of by a suitable recycling centre.

Do not dispose of with normal household waste.
Do not burn.

Order Codes

XCITE/IO/8UI	:8 channel universal input I/O module. Supplied with rigid interconnector.
XCITE/IO/4UI	:4 channel universal input I/O module. Supplied with rigid interconnector.
XCITE/IO/4UI/4AO	:4 channel universal input and 4 channel analogue voltage output I/O module. Supplied with rigid interconnector.
XCITE/IO/2UI/2AO	:2 channel universal input and 2 channel analogue voltage output I/O module. Supplied with rigid interconnector.
XCITE/IO/8DO	:8 channel relay output I/O module. Supplied with rigid interconnector.
XCITE/IO/4DO	:4 channel relay output I/O module. Supplied with rigid interconnector.
XCITE/IO/8AO	:8 channel analogue voltage output I/O module. Supplied with rigid interconnector.
XCITE/IO/4AO	:4 channel analogue voltage output I/O module. Supplied with rigid interconnector.
XCITE/IO/16DI	:16 channel digital input I/O module. Supplied with rigid interconnector.
XCITE/IO/8DI	:8 channel digital input output I/O module. Supplied with rigid interconnector.
XCITE/IO/8DI/8TI	:8 channel digital input and 8 channel thermistor input I/O module. Supplied with rigid interconnector.
XCITE/IO/8DO/HOA	:8 channel relay output with Hand/Off/Auto switch I/O module. Supplied with rigid interconnector.
XCITE/IO/4DO/HOA	:4 channel relay output with Hand/Off/Auto switch I/O module. Supplied with rigid interconnector.

The USA versions of I/O modules are identified by placing /USA/UL/ before the I/O module type code in the order codes e.g:

XCITE/IO/USA/UL/8UI: 8 channel universal input I/O module. Supplied with rigid interconnector. UL rated.

Specifications

Electrical	Universal input	
CPU		:Linkable for analogue voltage (V), analogue current (I), thermistor (T) or digital (D).
Input power supply voltage	Analogue voltage (V)	:12 bit resolution. Minimum 60 dB series mode rejection at input power supply frequency. 0 to 10 V, input resistance 200 k Ω , accuracy 50 mV equivalent to $\pm 0.5\%$ of span.
	Analogue current (I)	:12 bit resolution (4096 steps - effective). Minimum 60 dB series mode rejection at input power supply frequency. 0 to 20 mA, input resistance 240 Ω , accuracy 0.5% of span (i.e. 100 μ A). Loop powered input supply is 20 to 36 Vdc.
Maximum input power supply consumption:	Thermistor (T)	:12 bit resolution. Minimum 60 dB series mode rejection at input power supply frequency. Thermistor bridge resistor 10 k Ω 0.1%, accuracy 0.5% of span. Bridge supply 5 V.
8DO	Digital (D)	:volt free contact, open collector (or drain), or logic input. Count rate 30 Hz (minimum pulse width of 16.6 ms). 5 V supply. Status LED per channel. Volt free contact input: Wetting current = 3 mA nominal. (ON = closed contact.) Open collector (or drain) input: Must be able to sink 3 mA. Must be earthed (grounded) to same earth (ground) as IQ3. Polarity dependent. (ON = transistor/FET conducts.) Logic input: Logic high level 5 to 50 V. Logic low level must be able to sink 3 mA (ON = logic low.)
4DO		
8UI		
4UI		
16DI		
8DI		
8DI/8TI		
4UI/4AO		
2UI/2AO		
8AO		
4AO		
8DO/HOA		
4DO/HOA		
Auxiliary output supply		
Fusing		
I/O bus		
Inputs/outputs		
Selectable from range of 8UI, 4UI, 4UI/4VO, 2UI/2VO, 8DO, 4DO, 16DI, 8DI, 8DI/8TI, 8AO, 4AO, 8DO/HOA, or 4DO/HOA.		

Specifications (continued)

Inputs/outputs (continued)		Mechanical	
Analogue voltage outputs	:10 bit resolution. 0 to 10 V with 20 mA current limit, accuracy ±0.5% of span.	Dimensions	:130 mm (5.12") x 150 mm (5.91") max. x 46 mm (1.8")
Relay output	:Relay outputs with LED (yellow) status indication (on = energised) per channel. Single pole changeover relays. Outputs rated at 5 A maximum for 240 Vac single phase only (use same phase throughout) inductive, (cosφ>=0.4), or resistive load, 30 Vdc (resistive load). Reduce to 2 A for 24 Vdc (inductive load, T<=30 ms). For /USA only, UL rating applies up to 240 Vac (120 VA) maximum. Arc suppression recommended, (see Relay Output Arc Suppression Installation Instructions (TG200208)).	Material	:Polycarbonate
Relay output with Hand/Off/Auto	:As for relay output above plus single 3 way switch per channel to select either manual override ON (Hand), manual override off (Off) or automatic control (Auto) and additional LED (red) per channel to indicate manual override condition.	Protection	:IP20, NEMA1
Thermistor input	:12 bit resolution. Minimum 60 dB series mode rejection at input power supply frequency. Thermistor bridge resistor 10 kΩ 0.1%, accuracy 0.5% of span. Bridge supply 5 V.	Weight	:332 gm, 0.73 lb (approx.)
Digital input	:volt free contact, 24 Vac , open collector (or drain) or logic input. Count rate 30 Hz (minimum pulse width of 16.6 ms). 5 V supply. Status LED per channel. Volt free contact input: Wetting current = 3 mA nominal. (ON = closed contact.) 24 Vac input: 24 Vac ±20%. Must be floating or earthed (grounded) to same earth (ground) as IQ3, polarity dependent. (ON = load powered.) Open collector (or Drain) input: Must be able to sink 3 mA. Must be earthed (grounded) to same earth (ground) as IQ3, Polarity dependent. (ON = transistor/FET conducts.) Logic input: Logic high level 5 to 50 V. Logic low level must be able to sink 3 mA. (ON = logic low.)	Connectors	
		Power in	:2 part connector with 3 rising cage clamp screw terminals for 0.5 to 2.5 mm2 cross section area (14 to 20 AWG) cable.
		I/O	:2 part connectors with rising cage clamp screw terminals for 0.14 to 2.5 mm2 cross section area, 24 to 14 AWG (for USA/UL use 22 to 14 AWG) cable. Use copper cable only.
		Screens	:Single part connectors with rising cage clamp screw terminals for 0.14 to 2.5 mm2 cross section area, 24 to 14 AWG (for USA/UL use 22 to 14 AWG) cable.
		I/O bus	:5 wide connector. Connect with special rigid interconnector (XCITE/IC supplied with I/O Module) to adjacent module or controller, or use connector with screw terminals (XCITE/CC/10 - pack of 10) and wire in Belden 3084A or equivalent. Last connection requires termination (XCITE/TERM supplied with controller). The maximum current that can be passed through the I/O module through the 24 Vdc and 0 V terminals from one module to the next is 1.6 A. Also see main controller for details of special cables.
Indicators		Environmental	
Inputs	:(yellow) Indicates status, only for digital inputs (ON= contact closed or equivalent)	EMC	:EN61326 -1: 2006
Analogue Outputs	:(yellow) Light intensity increases with output voltage.	Immunity	:Table 2 For equipment used in industrial locations
Relay Outputs	:(yellow). Indicates relay status (ON = relay energised)	Emissions	:Class B
Manual override	:(red). Indicates the relay output channel is manually overridden. /8DO/ HOA, /4DO/HOA only.	Safety	
Input Polarity Error	:(red) Indicates 24 Vac input grounding error (ON=error). /16DI, /8DI only.	EU	:EN61010-1:2001 (Measurement Category III - fixed installations)
⚡(power)	:(green) ON when supply is connected	USA/Canada	:UL rated as 'UL 916 listed accessory to open energy management equipment'.
🐕 (watchdog)	:(red) ON if software fault	Canada	:CSA22.2 No. 205-M1983 - Signal Equipment
🔊 (I/O bus)	:(red) On if there is an I/O bus fault. Flashes at 1 second intervals if the I/O module has not been in receipt of any valid comms for 30 s (outputs will be switched off). Flashes faster if an address clash on I/O bus, or the address has been set to zero (I/O module disabled).	Protection	:IP20, NEMA1
		Ambient limits	
		Storage	:-10 °C (14 °F) to +50 °C (122 °F)
		Operating	:0 °C (32 °F) to 45 °C (113 °F)
		Humidity	:0 to 90 %RH non-condensing
		Altitude	:<2000 m (6562')

Further Information

- IQ3 Web Enabled Controllers Data Sheet (TA200505)
- XCITE/IC I/O Bus Interconnector Installation Instructions (TG200644)

For information about the IQ controllers see the IQ3 Controller Product Information Sheet (TL201320).

These documents can be downloaded from <https://techpubs.trendcontrols.com/Pages/default.aspx>

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