

## Infinity

### ▲Eclipse UI-32-16, UI-16-16 Modular I/O Board

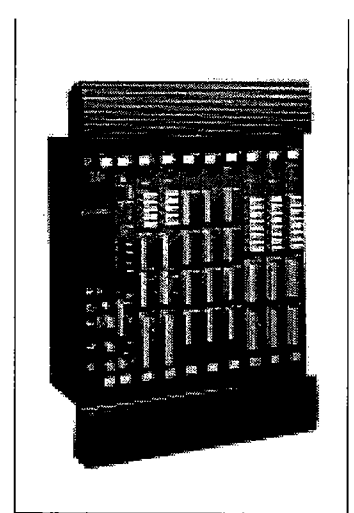
The UI-32-16 and the UI-16-16 are the high density, high-resolution input modules for the ▲Eclipse family of controllers. Both modules feature high-accuracy universal inputs for the most demanding building automation and process applications, with true 16 bit A/D conversion. The UI-32-16 provides 32 universal inputs, software configurable as either voltage, current, thermistor, 1000 ohm RTD, digital, and counter point types. Each point can also be configured as a supervised input for security monitoring, providing separate indication of alarm and trouble conditions. The UI-16-16 provides 16 universal inputs with identical point type selection.

Similar to all ▲Eclipse I/O modules, the UI-32-16 and the UI-16-16 modules are designed to plug into the compact 4-I/O-slot or 8-I/O-slot ▲Eclipse rack. The CX 9400 CPU board monitors and controls these I/O modules through the ▲Eclipse high-speed parallel backplane interface.

Both the UI-32-16 and the UI-16-16 modules accept 1000 ohm platinum RTDs directly, using one input for 2-wire RTDs or two inputs for 3-wire RTDs.

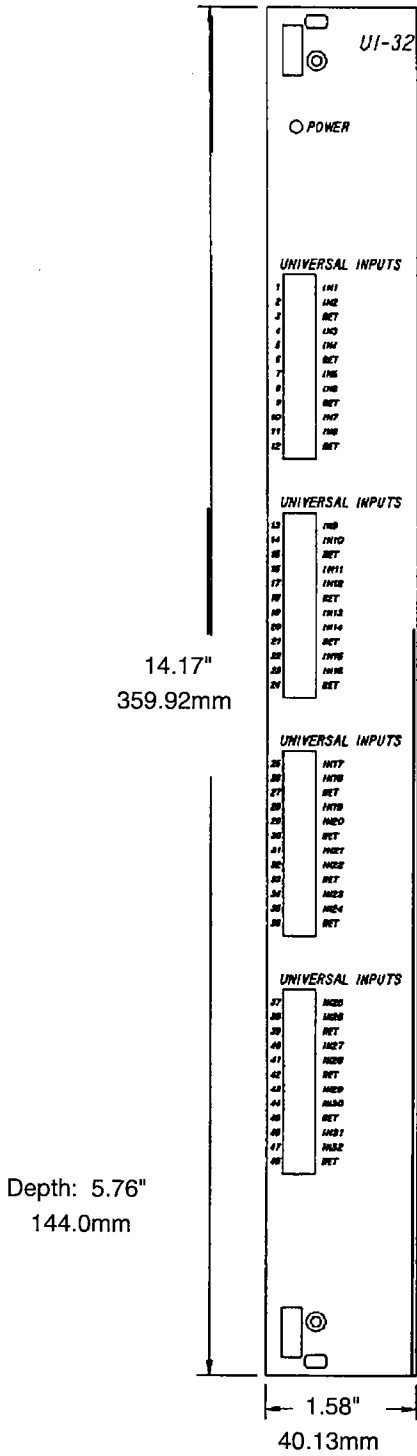
On-board 249 ohm current sense resistors save time by allowing you to *directly* wire a current device. Pull-up resistor DIP switches for each input on the UI-32-16 and UI-16-16 permit direct sensing of analog signals on an individual basis.

All input connectors are removable for easy field access and maintenance.



#### FEATURES

- **▲Eclipse Rack-Mounted High-Density Input Module**
- **Up to 32 High-Accuracy Universal Inputs for Flexible Control Configurations:**
  - Voltage**
  - Current**
  - Thermistor**
  - 1000 ohm RTD**
  - Digital**
  - Counter**
  - Supervised**
- **True 16-Bit Analog Resolution Provides High Accuracy Input Sensing**
- **On-board Current Sense Resistors for Direct Current Wiring**
- **DIP Switches for Each Input Allow Enabling of Pull-up Resistors and Current Sense Resistors Individually**
- **Removable Input Connectors Simplify Installation**



UI-32-16 Dimensional Diagram

## SPECIFICATIONS

### ELECTRICAL

<b>Power Consumption:</b>	3 watts max., provided through ¶Eclipse backplane. System's total power consumption not to exceed 100 watts.
<b>Overload Protection:</b>	2 amp pico fuse

### MECHANICAL

<b>Operating Environment:</b>	32 to 120°F, (0 to 49°C), 10 to 95% (non-condensing)
<b>Size:</b>	1.58" W x 14.17" H x 5.67" D (40.1 W x 359.9 H x 144.0 D)mm
<b>Weight:</b>	11oz. (.312kg)

### BATTERY

<b>Battery Backup:</b>	Through ¶Eclipse backplane
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### INPUTS

<b>Number of Inputs:</b>	UI-32 has 32 inputs. UI-16 has 16 inputs.
<b>Input Protection:</b>	30 VAC rms or $\pm 30$ VDC to any single input with the current sense resistor disabled.  $\pm 30$ mA with the current sense resistor enabled.  (40V TVS on each input)
<b>Input Impedance:</b>	>10M $\Omega$ for Voltage Inputs  30.1K $\Omega$ for RTD, Thermistor, Digital and Counter inputs  249 $\Omega$ for Current inputs
<b>Input Types:</b>	Voltage, Current, RTD, Thermistor, Digital, Counter and Supervised
<b>Voltage:</b>	
Range:	0 to 10V
Resolution:	160 $\mu$ V
Accuracy:	$\pm 1.2$ mV max. ( $\pm 0.012\%$ Full Scale Range)
Drift:	$\pm 10$ ppm/ $^{\circ}$ C max. ( $\pm 0.001\%$ Full Scale Range/ $^{\circ}$ C)

**SPECIFICATIONS (Cont'd)**

Non-Linearity:	0.01% Full Scale Range max.	
<b>Current:</b> (using on-board current sense resistor)		
Range:	0 to 20 mA	
Resolution:	0.32 $\mu$ A	
Accuracy:	$\pm 30 \mu$ A max. ( $\pm 0.15\%$ Full Scale Range)	
Drift:	$\pm 40$ ppm/ $^{\circ}$ C max. ( $\pm 0.004\%$ Full Scale Range/ $^{\circ}$ C)	
Non-Linearity:	0.01% Full Scale Range max.	
Impedance:	249 $\Omega$ , 0.1%, 0.25 W	
<b>RTD:</b> Note: 3 wire RTDs take up 2 input points		
Type:	1000 $\Omega$ platinum (Alpha=0.00385), 2 or 3 wire DIN 43760 Curve	
Lead Resistance:	100 $\Omega$ /lead max.	
RTD Current:	0.33 mA max.	
Range:	-328 to 1,562 $^{\circ}$ F (-200 to 850 $^{\circ}$ C)	
Resolution:	0.04 $^{\circ}$ F typical (0.02 $^{\circ}$ C typical)	
Accuracy:		
	-328 to 122 $^{\circ}$ F (-200 to 50 $^{\circ}$ C)	$\pm 0.45^{\circ}$ F max. ( $\pm 0.25^{\circ}$ C max. ( $\pm 0.03\%$ Full Scale Range))
	122 to 842 $^{\circ}$ F (50 to 450 $^{\circ}$ C)	$\pm 0.72^{\circ}$ F max. ( $\pm 0.40^{\circ}$ C max. ( $\pm 0.07\%$ Full Scale Range))
	842 to 1,562 $^{\circ}$ F (450 to 800 $^{\circ}$ C)	$\pm 1.08^{\circ}$ F max. ( $\pm 0.60^{\circ}$ C max. ( $\pm 0.12\%$ Full Scale Range))
Drift:		
	-328 to 122 $^{\circ}$ F (-200 to 50 $^{\circ}$ C)	$\pm 10$ ppm/ $^{\circ}$ C max
	122 to 842 $^{\circ}$ F (50 to 450 $^{\circ}$ C)	$\pm 25$ ppm/ $^{\circ}$ C max
	842 to 1,562 $^{\circ}$ F (450 to 850 $^{\circ}$ C)	$\pm 50$ ppm/ $^{\circ}$ C max

**SPECIFICATIONS (Cont'd)**

Non-Linearity:	0.01% Full Scale Range max.
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**Thermistor:**

Range:	-30 to 230°F (-34 to 110°C)
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Resolution:	-10 to 150°F (-23 to 66°C)	0.01°F typical (.006°C) typical
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Accuracy:	-10 to 100°F (-23 to 38°C)	±0.10°F max. (±.06°C)
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	100 to 150°F (38 to 66°C)	±0.15°F max. (±.08°C)
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Drift:	-10 to 150°F (-23 to 66°C)	±20 ppm/°C max.
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Non-Linearity:	0.01% Full Scale Range max.
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**Digital & Counter:**

Input Type:	Contact Closure
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Frequency:	5 Hz max.
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Pulse Width:	100 mS min.
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Current:	0.33 mA
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**Supervised:**

Input Type:	Single or Double Resistor Supervision, Parallel or Series Circuit
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**CONNECTIONS**

<b>Power:</b>	Powered through Eclipse backplane.
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<b>Inputs:</b>	Removable two-piece terminal block Eight inputs per 12-position connector
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**MEMORY**

<b>EEPROM:</b>	4K Bit
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**MODELS**

<b>UI-32-16</b>	32 Universal Inputs, 16-bit Analog Resolution
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<b>UI-16-16</b>	16 Universal Inputs, 16-bit Analog Resolution
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<b>AGENCY LISTINGS</b>	UL/CUL 916, 1092, FCC, CE
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