



### Overview

The EC-Net<sup>AX</sup> IO Modules are compact direct I/O modules for auxiliary monitoring and control with an EC-BOS-2<sup>AX</sup> or EC-BOS-6<sup>AX</sup> series controller or other EC-BOS<sup>AX</sup> devices.

The EC-Net<sup>AX</sup> IO-16 expands the EC-BOS<sup>AX</sup> by an additional 16 logic-controlled points. Included are eight universal inputs, four form "A" (SPST) relay outputs, and four analog (voltage only) outputs. The EC-Net<sup>AX</sup> IO-34 expands the EC-BOS<sup>AX</sup> by an additional 34 logic-controlled points. Included are 16 universal inputs, 10 form "A" (SPST) relay outputs, and 8 analog (voltage only) outputs. This greatly expands the EC-BOS<sup>AX</sup>'s monitoring and control capabilities with fast, reliable, direct inputs and outputs for monitoring power, temperature, humidity, and status. In addition, the EC-Net<sup>AX</sup> IO-34 provides power to the attached EC-BOS<sup>AX</sup>, using either an externally-supplied 24Vac transformer or 24Vdc power supply.

The universal inputs can be used to monitor digital states (fan status, switches, etc), analog values (temperature, humidity, pressure, etc.) and pulse inputs (push buttons, energy measurement, etc.).

The digital outputs can be used to control devices such fans, pumps, boilers while the analog outputs can be used to control dampers, valves, etc.

Up to four EC-Net<sup>AX</sup> IO-16 modules may be added to an EC-BOS<sup>AX</sup>-2/6, to provide a total of 32 UIs, 16 relays, and 16 analog output points. A maximum of one EC-Net<sup>AX</sup> IO-34 module may be used per EC-BOS<sup>AX</sup>. However, two additional IO-16 modules can also be used, to provide a total of 32 UIs, 18 relay outputs, and 16 analog output points.

### Applications

- Expansion of I/O for EC-BOS-2<sup>AX</sup> and EC-BOS-6<sup>AX</sup> series controllers.
- Extend the capability of the EC-BOS-2<sup>AX</sup> and EC-BOS-6<sup>AX</sup> series devices to control equipment such as: roof top units, multistage air handling units, chillers, boilers, lighting systems, refrigeration systems, etc.

### Features & Benefits

- With its 20-pin connector, the EC-Net<sup>AX</sup> I/O Module is easily connected to an EC-BOS-2<sup>AX</sup> or EC-BOS-6<sup>AX</sup>.
- Greatly expand the monitoring and control capabilities of the EC-BOS-2<sup>AX</sup> or EC-BOS-6<sup>AX</sup> with fast, reliable, direct inputs and outputs.
- Versatile I/O combination available to suit the needs of the integrator. Add up to four IO-16 modules or one IO-34 or one IO-34 and two IO-16 modules to an EC-BOS-2<sup>AX</sup> or EC-BOS-6<sup>AX</sup>.
- Universal inputs. Input types include: 10K Type 3 Thermistor, Resistive 0-100K, 0-10Vdc, 4-20mA, Binary (Digital and Pulse).
- Digital relay outputs to support inductive type loads such as heavy-duty relay coils.
- Din-rail mounting integrated into the fire retardant plastic enclosure.
- LED indicator on each digital relay output to easily see contact status.
- IO-34 is equipped with a 24V power supply witch allow to power the module, the EC-BOS<sup>AX</sup>-2/6 and any IO-16 modules.
- IO-16 module is powered through the 20-pin connection from the EC-BOS<sup>AX</sup>-2/6.

## Product Warranty & Total Quality Commitment

All Distech Controls product lines are built to meet rigorous quality standards and carry a two-year warranty. Distech Controls is an ISO 9001 registered company. Distech Controls' products provide both the contractor and the end user with the flexibility of using "best-of-breed" products in system design.

## Available Models



EC-Net<sup>AX</sup> IO-16

EC-Net<sup>AX</sup> IO-16

**16 I/O Module**

- 8 universal inputs
- 4 relay outputs
- 4 analog outputs



EC-Net<sup>AX</sup> IO-34

EC-Net<sup>AX</sup> IO-34

**34 I/O Module**

- 16 universal inputs
- 10 relay outputs
- 8 analog outputs

## Related Products



EC-BOS-2<sup>AX</sup>

Compact, embedded control/server device

EC-BOS-6<sup>AX</sup>

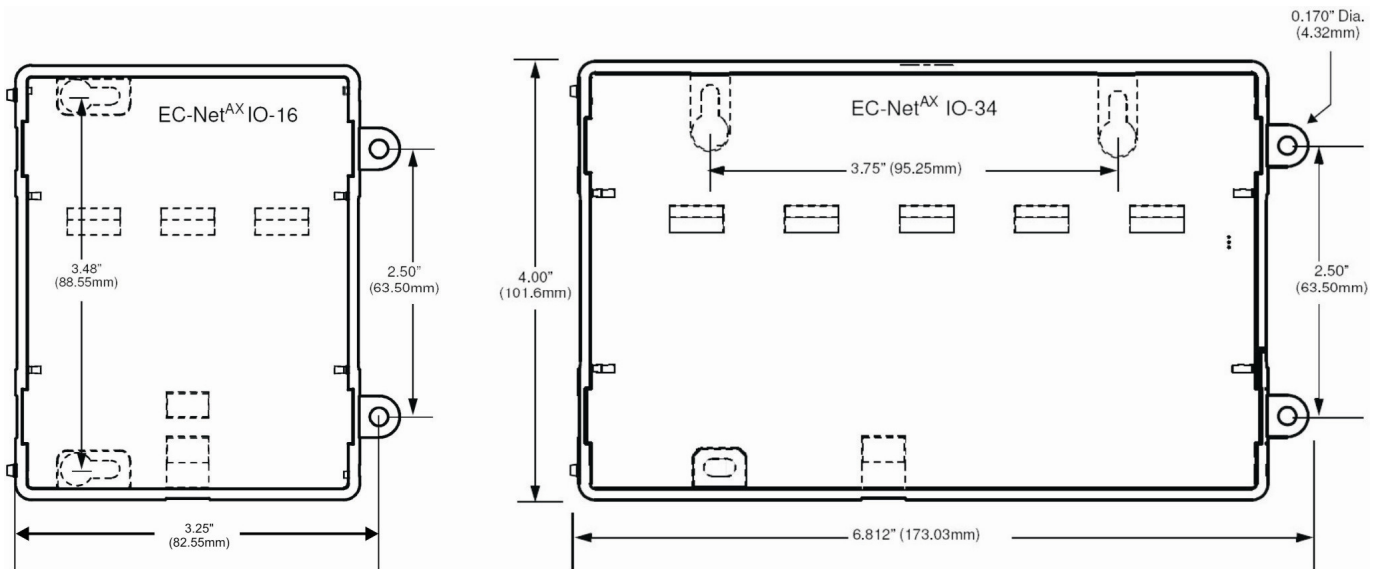
Compact, embedded control/server device

EC-BOS<sup>AX</sup> Plant Controller

EC-BOS-2<sup>AX</sup> with one EC-Net<sup>AX</sup> IO-34 included

For more information on these or other Distech Controls products please refer to our web site at [www.distech-controls.com](http://www.distech-controls.com) or contact [sales@distech-controls.com](mailto:sales@distech-controls.com).

## Product Specifications



### Power (IO-34 only)<sup>1</sup>

Voltage:	24Vac/dc
Protection:	Internally fused (not field replaceable)
Maximum Consumption:	20mA

### Environmental

Operating Temperature:	0°C to 50°C; 32°F to 122°F
Storage Temperature:	0°C to 60°C; 32°F to 140°F
Relative Humidity:	5 to 95% Non-condensing

### General

Status Indicator(s):	Green LEDs: Digital Outputs Orange LEDs: Power & Status
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### Enclosure

Material:	ABS
Dimensions overall:	
IO-16	81.3mm x 101.6mm (3.2" x 4.0")
IO-34	172.7mm x 101.6mm (6.8" x 4.0")
Shipping Weight:	
IO-16	0.2kg (0.5lbs)
IO-34	0.5kg (1.0lbs)
Installation:	Direct din-rail mounting or wall mounting through mounting holes (see figure above for hole positions)

### Agency Listings

UL:	UL916 C-UL listed to Canadian Standards Association (CSA) C22.2 No. 205-M1983 "Signal Equipment"
CE:	Refer to <i>EC-BOS-2<sup>AX</sup></i> or <i>EC-BOS-6<sup>AX</sup></i> <i>Mounting and Wiring Instructions</i> for more details
FCC:	Part 15 Class A



- The IO-34 is equipped with its own 24V power supply and can be used to power an EC-BOS<sup>AX</sup>-2/6 and up to two additional connected IO-16. If using the IO-34 power supply make sure that the EC-BOS<sup>AX</sup> power supply is not connected. The IO-16 is powered though it's 20-pin connector by either the EC-BOS<sup>AX</sup>-2/6 or IO-34.
- Though Type 3 thermistors are specified, the IO modules can also support Type 2 thermistors through the use of the Lookup table available in EC-Net<sup>AX</sup>. Please refer to the *EC-Net<sup>AX</sup> Ndio User Guide* for more information on the Lookup table.

### Inputs

Quantity:	
IO-16	8
IO-34	16
Input Types:	Universal
-Voltage	0-10Vdc
-Current	4-20mA with 499Ω external resistor (wired in parallel)
-Binary:	
Digital	Dry contact; Min. 500ms dwell time; Max. 1Hz change-of-state (COS) frequency
Pulse	Pulse contact; Min. 25ms dwell time; Max. 20Hz COS frequency with 50% duty cycle
-Resistor:	
Thermistor <sup>2</sup>	10KΩ Type 3 Range: -23.3°C to 57.2°C; -10°F to 135°F
Resistive	0-100KΩ Translation table configurable on several points

### Outputs

Quantity:	
IO-16	8 (4 relay and 4 analog)
IO-34	18 (10 relay and 8 analog)
-Relay	24Vac or Vdc @ 0.5A
-Analog	0-10Vdc @ max. 4mA

### Specifications subject to change without notice.

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