

# ECLYPSE I/O Modules

The I/O extension modules work with the ECLYPSE connected controllers

## ECLYPSE™



## Overview

A range of I/O modules are available that have universal inputs and outputs, digital inputs with fast pulse support for use with energy meters and counters, 24VAC triac outputs for use with smaller load applications (up to 1 amp) such as electric fans and motors/actuators and relay outputs for larger load/high power applications such as electric heat and high power actuators.

## Features & Benefits

- Universal inputs and outputs
- Digital inputs with fast pulse support for use with energy meters and counters
- 24VAC triac outputs for use with smaller load applications (up to 1 amp) such as electric fans and motors/actuators and relay outputs
- Override control outputs with optional Hand/Off/Auto (HOA) for commissioning and maintenance
- The I/O modules are hot-swappable for replacement without interrupting power and communications to other modules
- Status LEDs allow the user to confirm the status of the inputs/outputs, facilitating commissioning and troubleshooting
- The ECY-16DI module supports pulsed signals up to 120Hz for equipment status monitoring and alarm point monitoring
- Protection against miswiring and faults to prevent damage caused by incorrect wiring or other mishaps
- Plug & play devices equipped with HD-15 connectors that transmits power and communications to the next module for fast and easy assembly

# Model Selection

Example: ECY-4UI4UO-HOA

Series	Model	Hand-Off Auto Switch <sup>1</sup>
ECY-	<b>8UI</b> : 8 Universal Inputs	[blank]: Without Hand-Off Auto Switch <b>-HOA</b> : With Hand-Off Auto Switch
	<b>16DI</b> : 16 Digital Inputs	
	<b>6UO</b> : 6 Universal Outputs	
	<b>8DOR</b> : Digital Outputs (Relay)	
	<b>4UI4UO</b> : 4 Universal Inputs and 4 Universal Outputs	
	<b>8UI6UO</b> : 8 Universal Inputs and 6 Universal Outputs	
	<b>8UI6DOT</b> : 8 Universal Inputs and 6 Digital Outputs (Triac)	

1. HOA is only available for models with at least 1 output.

## Product Specifications

ECY-8UI, ECY-16DI, ECY-6UO, ECY-6UO-HOA, ECY-4UI4UO, ECY-4UI4UO-HOA, ECY-8UI6UO, ECY-8UI6UO-HOA, ECY-8UI6DOT, & ECY-8UI6DOT-HOA

### Power Supply Input

Voltage 18VDC

Basic Power Consumption<sup>1</sup> 0.94 W

1. External loads excluded. To calculate the number of Input/Output Extension Modules that can operate with a power supply, see the Product Selection Tool in Builder: <https://builder.distech-controls.com>.

### Hardware

Status Indicator Green LEDs: inputs and outputs

### Mechanical

Dimensions (H × W × D) 4.74 × 3.20 × 2.31" (120.31 × 81.17 × 58.56mm)

Shipping weight 0.85lbs (0.39kg)

Mounting DIN rail or screw mounting

Hot-swappable Yes

Enclosure Material FR/ABS

Enclosure Rating<sup>1</sup> Plastic housing, UL94-V0 flammability rating

1. All materials and manufacturing processes comply with the RoHS directive and are marked according to the Waste Electrical and Electronic Equipment (WEEE) directive

### Environmental

Operating Temperature 32 to 122°F (0 to 50°C)

Storage Temperature -22 to 158°F (-30 to 70°C)

Relative Humidity 0 to 90% non-condensing

Ingress Protection Rating IP20 in accordance with IEC 60537

Nema Rating 1

### Standards and Regulations

CE Emission EN61000-6-3: 2007; A1:2011

CE Immunity EN61000-6-1: 2007

FCC Compliance with FCC rules part 15, subpart B, class B

UL Listed (CDN & US) UL916 Energy management equipment



### Universal Inputs (UI)

#### General

Input Type Universal; software configurable

Current Input Option Selection DIP switch

Input Resolution 16-bit analog to digital converter

Power Supply Output 18VDC; 20mA maximum per 0 to 20 mA input

#### Contact

Type Dry contact

#### Counter

Type Dry contact

Maximum Frequency 1Hz maximum

Minimum Duty Cycle 500milliseconds On / 500milliseconds Off

#### 0 to 10VDC

Range 0 to 10VDC (40kΩ input impedance)

#### 0 to 5VDC

Range 0 to 5VDC (high input impedance)

#### 0 to 20mA

Range 0 to 20mA, 249Ω DIP-switch configurable internal resistor

#### Resistance/Thermistor

Range 0 to 350 KΩ

Supported Thermistor Types Any that operate in this range

#### Pre-configured Temperature Sensor Types:

Thermistor 10KΩ Type 2, 3 (10KΩ @ 77°F; 25°C)

Platinum Pt1000 (1KΩ @ 32°F; 0°C)

Nickel RTD Ni1000 (1KΩ @ 32°F; 0°C)  
RTD Ni1000 (1KΩ @ 69.8°F; 21°C)

## Digital Inputs (DI)

### General

Input Type	Dry contact or Open-Collector
Low Threshold	< 2.5V
High Threshold	> 3.0V

### Pulse/Counter

Pulse Input	S0 output compatible
Maximum Frequency	120Hz
Minimum Duty Cycle	4.167milliseconds On / 4.167milliseconds Off

## Universal Outputs (UO)

### General

Output Type	Universal; software configurable
Output Resolution Converter	10-bit digital to analog Converter
Output Protection,	Built-in snubbing diode to protect against back-EMF, for example when used with a 12VDC relay
Load Resistance	Minimum 200Ω for 0 to 10VDC and 0 to 12VDC outputs Maximum 500Ω for 0 to 20mA output
Auto-reset Fuse	60mA @ 140°F; 60°C

### 0 or 12VDC (On/Off)

Range 0 or 12VDC

### PWM

Range Adjustable period from 2 to 65 seconds

### Floating

Minimum Pulse On/Off Time	500 milliseconds
Drive Time Period	Adjustable

### 0 to 10VDC

Range 0 to 10VDC linear

### 0 to 20mA

Range 0 to 20mA  
Current Source 20mA maximum per 0 to 20 mA output

Ports UO1, UO2, and UO3 only DIP switch

### HOA

Hand-Off-Auto switch	When equipped Supervision allows control logic to read the current HOA switch and potentiometer settings
Threshold	Configurable
Potentiometer Voltage Range	0 to 12VDC

## Digital Output (DOT)

### General

Output Type	24VAC Triac; software configurable
Maximum Current	0.5A continuous 1A @ 15% duty cycle for a 10 minute period
Power Source,	External power supply

### 0 or 24VAC (On/Off)

Range 0 or 24VAC

### PWM

Range Adjustable period from 2 to 65 seconds

### Floating

Minimum Pulse On/Off Time	500 milliseconds
Drive Time Period	Adjustable

### HOA

Hand-Off-Auto switch	When equipped Supervision allows control logic to read the current HOA switch setting
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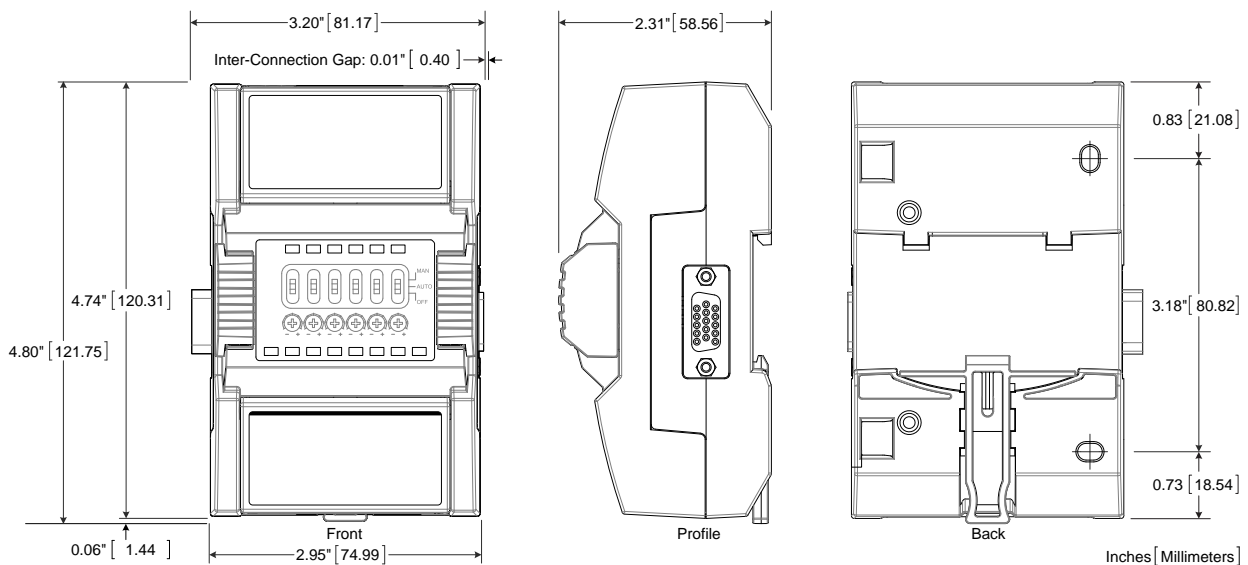


Figure 1: ECY-IO Module Dimensions

# Product Specifications

## ECY-8DOR & ECY-8DOR-HOA

### Power Supply Input

Voltage 18VDC

Basic Power Consumption<sup>1</sup> 0.94 W

- External loads excluded. To calculate the number of Input/Output Extension Modules that can operate with a power supply, see the Product Selection Tool available in Builder: <https://builder.distech-controls.com>.

### Hardware

Status Indicator Green LEDs: inputs and outputs

### Digital Output (DOR)

#### General

Output Type	Relay contact
Relay Type	Form C
Power Source	Dry contact (external power supply)
Operating Voltage	0 to 277VAC or 0-30VDC ±10%, see HIG for mounting specifications
Resistive Load	Max 10A
Inductive Load	Max 6A
Motor Load	Max 3A
Current Protection	Outputs must be protected with max 10 A external circuit breaker

#### Digital

Range On/Off

#### HOA

Hand-Off-Auto switch When equipped  
Supervision allows control logic to read the current HOA switch setting

### Mechanical

Dimensions (H × W × D) 4.74 × 5.15 × 2.31" (120.31 × 130.07 × 58.56mm)

Shipping weight 0.75lbs (0.34kg)

Mounting DIN rail or screw mounting

Hot-swappable Yes (once high voltages have been removed)

Enclosure Material FR/ABS

Enclosure Rating<sup>1</sup> Plastic housing, UL94-5VB flammability rating

- All materials and manufacturing processes comply with the RoHS directive and are marked according to the Waste Electrical and Electronic Equipment (WEEE) directive

### Environmental

Operating Temperature 32 to 122°F (0 to 50°C)

Storage Temperature -22 to 158°F (-30 to 70°C)

Relative Humidity 0 to 90% non-condensing

Altitude <6562ft (2000m)

Pollution Degree 2

Ingress Protection Rating IP20

(must be mounted in a protective enclosure to conform with electrical installation standards)

Overvoltage Category II - 2.5 kV

### Standards and Regulations

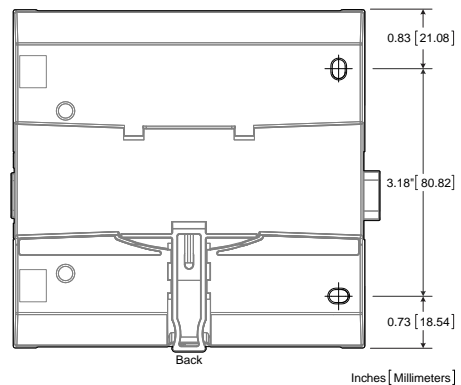
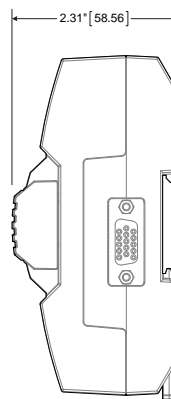
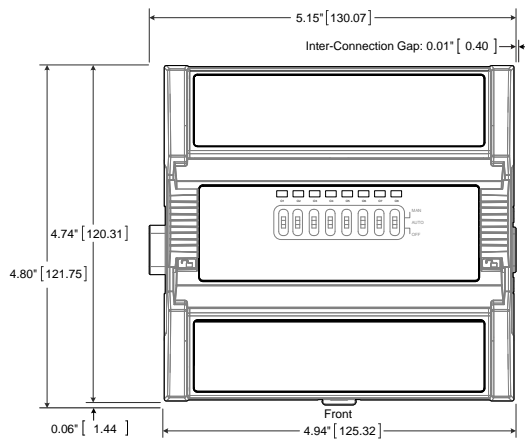
CE Electrical Safety EN 60730-1 : 2011

CE Emission EN61000-6-3: 2007; A1:2011

CE Immunity EN61000-6-1: 2007

FCC This device complies with FCC rules part 15, subpart B, class B

UL Listed (CDN & US) UL 61010-1



Specifications subject to change without notice.

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