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

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[1]	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[1]	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 @ 77ºF; 25ºC)
Platinum	Pt1000 (1KΩ @ 32ºF; 0ºC)
Nickel	RTD Ni1000 (1KΩ @ 32ºF; 0ºC) RTD Ni1000 (1KΩ @ 69.8ºF; 21ºC)

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 @ 140ºF; 60ºC

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

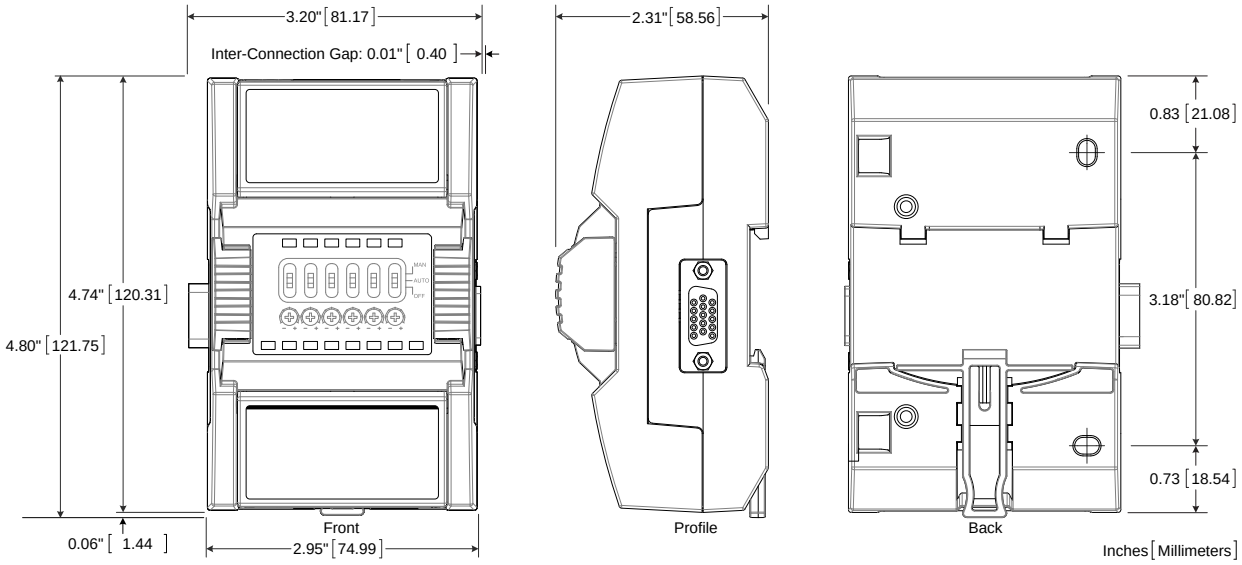


Figure 1: ECY-IO Module Dimensions

Product Specifications

ECY-8DOR & ECY-8DOR-HOA

Power Supply Input

Voltage	18VDC
Basic Power Consumption[1]	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 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[1]	Plastic housing, UL94-5VB flammability rating

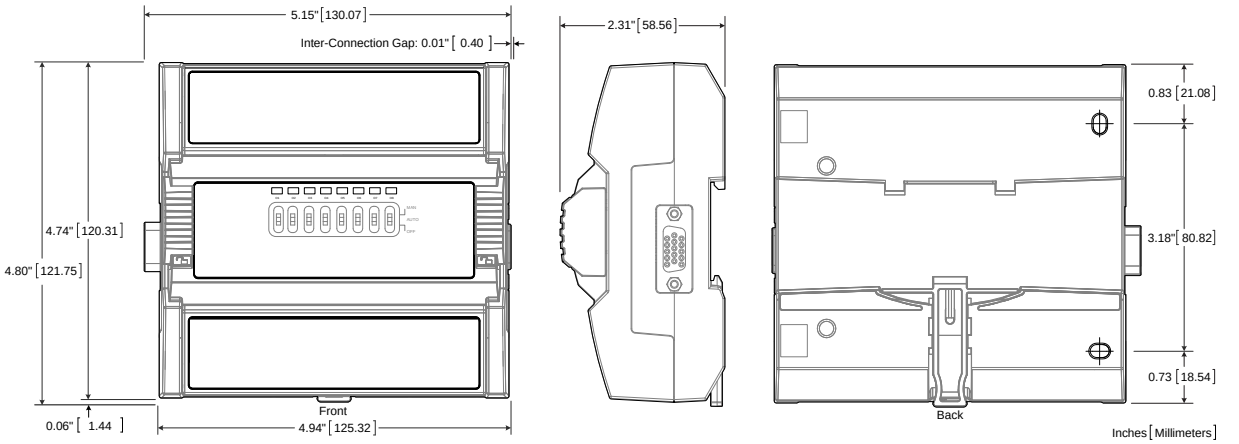
1. All materials and manufacturing processes comply with the RoHS directive and are marked according to the Waste Electrical and Electronic Equipment (WEEE) directive

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
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



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