

Distech Controls Eclypse™ Series Comparison Chart

Distech Controls Eclypse Series controller models have very different options that are required for different applications. This comparison chart is intended to aid in determining which controller series is most suited to your application.

Hardware Comparison for the System and Equipment Control Solution

Model		ECY-APEX	ECY-S1000	ECY-600 Series	ECY-400 Series	ECY-300 Series	ECY-203 Series	ECY-103
Category	Feature							
Recommended Applications	Central Plant and Mechanical Equipment Control	■	■	■				
	Rooftop Units and AHUs			■	■	■	■	
	Terminal Units (Fan Coil Units, Unit Ventilators, Heat Pump Units, and Chilled Ceilings)						■	■
	Chiller/Boiler			■	■	■		
	Cooling Tower			■	■	■		
	Pumps					■		
	Multi-Zone Application			■	■			
Preloaded Software & Graphics	Eclipse Designer	■	■	■	■	■	■	■
	Preloaded Configurable Applications							
General Features	Webserver	HTML5 REST API	HTML5 REST API	HTML5 REST API	HTML5 REST API	HTML5 REST API	HTML5 REST API	HTML5 REST API
	DC Space	■	■	■	■	■	■	■
	Interactive Color Operator Interface			■	■	■	■	
				(ECY-650 model only)	(ECY-450 model only)	(ECY-350 model only)	(ECY-253 model only)	
I/Os	Maximum of Points	320	320	30 (62 with I/O modules)	24	16	14	8
	Maximum of I/O Modules	20	20	Point-based limit	N/A	N/A	N/A	N/A
Inputs	Universal Inputs (Software Configurable)			16	12	10	6	4
	Fast Pulse (100Hz) Support			UI1 to UI4	UI1 to UI4	UI1 to UI4		
	Allure™ Series Communicating Sensor Device Limit	12 ¹	12 ¹	12 ¹	12 ¹	12 ¹	12 ¹	12 ¹
	Analog/Digital Converter (Precision)		16-bits	16-bits	16-bits	16-bits	16-bits	16-bits
Outputs	Universal Outputs (Analog)			14	12	2	2	2
	Digital Outputs (Triac)						4	

Model		ECY-APEX	ECY-S1000	ECY-600 Series	ECY-400 Series	ECY-300 Series	ECY-203 Series	ECY-103
Category	Feature							
Power	Digital Universal Outputs (DUO)					6	2	2
	Analog/Digital Converter (Precision)		10-bits	10-bits	10-bits	10-bits	10-bits	10-bits
	24 VAC	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	Power over Ethernet (PoE)							
	Daisy-Chaining ²	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Communication	BACnet IP	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	Wi-Fi Access Point	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	Wi-Fi (Client, Hotspot, Bridge)	Up to 16 clients (using Eclipse Wi-Fi adapter)	Up to 16 clients (using Eclipse Wi-Fi adapter)	Up to 16 clients (using Eclipse Wi-Fi adapter)	Up to 16 clients (using Eclipse Wi-Fi adapter)	Up to 16 clients (using Eclipse Wi-Fi adapter)	Up to 16 clients (using Eclipse Wi-Fi adapter)	Up to 16 clients (using Eclipse Wi-Fi adapter)
Connectivity Packs (BACnet, Modbus, M-Bus)	Maximum Connectivity Pack (Device Loads)	C100	C50	C50	C50	C25	C25	C25
Advanced Security	HTTPS Server	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	WPA/WPA2 Enterprise Protection	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	Authorization and Access Level Control	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	Built-In Support of TLS/SSL	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	RADIUS Server Authentication	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	FIPS 140-2 Level 1 Compliant							
Third-Party Integration / Developer Tools	RESTful API	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	Azure IoT Hub	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	Azure IoT Edge (supports Docker Containers)	<div></div>						
Mechanical and Environmental	Dimensions (W x H x D)	5.5×8.5×2.3" (216×140×58 mm)	4.7×3.6×2.3" (120×91×58 mm) ³	ECY-600: 4.79×7.32×2.46" (121.60×186.00×62.58 mm) ECY-650: 4.79×7.32×2.91" (121.60×186.00×73.91 mm)	ECY-400: 4.79×7.32×2.46" (121.60×186.00×62.58 mm) ECY-450: 4.79×7.32×2.91" (121.60×186.00×73.91 mm)	ECY-300: 4.79×5.63×2.46" (121.60×143.00×62.6 mm) ECY-350: 4.79×5.63×2.91" (121.60×143.00×73.91 mm)	ECY-203: 4.79×5.63×2.46" (121.60×143.00×62.6 mm) ECY-253: 4.79×5.63×2.91" (121.60×143.00×73.91 mm)	4.79×5.63× 2.46" (121.60×143.00×62.6 mm)
	Weight	1.8 lbs (0.82 kg) ⁴	0.85 lbs (0.39 kg) ⁴ [0]	1.45lbs (0.66kg)	1.40lbs (0.64kg)	TBD	TBD	TBD
	Operating Temperature	32 to 122°F (0 to 50°C)	32 to 122°F (0 to 50°C)	ECY-600: -40 to 158°F (-40 to 70°C) ⁵ [0] ECY-650: -4 to 122°F (-20 to 50°C)	ECY-400: -40 to 158°F (-40 to 70°C) ⁵ [0] ECY-450: -4 to 122°F (-20 to 50°C)	ECY-300: -40 to 158°F (-40 to 70°C) ⁵ [0] ECY-350: -4 to 122°F (-20 to 50°C)	ECY-203: -40 to 158°F (-40 to 70°C) ⁵ ECY-253: -4 to 122°F (-20 to 50°C)	32 to 122°F (0 to 50°C)

Model		ECY-APEX	ECY-S1000	ECY-600 Series	ECY-400 Series	ECY-300 Series	ECY-203 Series	ECY-103
Category	Feature							
Standards and Regulations	BACnet BTL Listed (B-BC)	■	■	■	■	■	■	■

¹Limited to a maximum of 2 Allure Series Communicating Sensors equipped with CO₂.
²Refer to the controller's Installation Guide for details on individual daisy-chaining performance.
³ECY-S1000 Server only.
⁴Excluding PoE model or Terminal Covers.
⁵Some applications may be limited at high operating temperatures. See the controller's Spec Sheet for more information.

Eclipse APEX Controller



Model	ECY-APEX
Maximum of Points	320 ¹
Maximum of BACnet Devices (IP or MS/TP)	100 ²
Maximum of Modbus Devices (RTU or TCP)	96 ³
Embedded Eclipse Designer (Studio & Viewer)	■

Application Large size equipment such as large plant rooms and large data centers.

¹Supports a maximum of 320 points OR a maximum of 20 IO modules.
²Maximum of 50 BACnet MS/TP devices recommended on each RS-485 port.
³Maximum of 32 devices on each RS-485 port.

Eclipse Connected System Controller



Model		
Features	ECY-S1000-48	ECY-S1000
Maximum of Points	48	320 ¹
Maximum of BACnet Devices (IP or MS/TP)	50	50
Maximum of Modbus Devices (RTU or TCP)	10	96 ²
Embedded Eclipse Designer (Studio & Viewer)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Application	Medium size equipment such as an AHU or a small size plant room	Large size equipment such as large plant rooms and large data centers.

¹Supports a maximum of 320 points OR a maximum of 20 IO modules.

²Maximum of 32 devices on each RS-485 port.

Eclipse Equipment Series Controllers



Model	ECY-103	ECY-203	ECY-253	ECY-300	ECY-350	ECY-400	ECY-450	ECY-600	ECY-650
Maximum of Points	8	14	14	18	18	24	24	62	62
Maximum of BACnet Devices (IP or MS/TP)	25	25	25	25	25	50	50	50	50
Maximum of Modbus Devices (RTU or TCP) ¹	32	32	32	32	32	32	32	96	96
Embedded Eclipse Designer (Studio & Viewer)	■	■	■	■	■	■	■	■	■
Interactive Color Operator Interface			■		■		■		■
Application	Terminal units such as fan coil units, heat pump units, unit ventilators and chilled ceilings		Terminal units such as roof top units, fan coil units, unit ventilators, heat pump units, air handling units, and chilled ceilings		Air handling units, chillers, boilers, pump, and cooling towers		Medium-sized equipment controllers for air handling unit, multi-zone applications, chillers, boilers, pumps, cooling towers and roof top units		Large-sized equipment control applications including air handling units, chillers, boilers, pumps, cooling towers and central plants

¹Maximum of 32 devices on each RS-485 port.

Eclipse I/O Modules

Model	ECY-6UO	ECY-6UO-HOA	ECY-4UI4UO	ECY-4UI4UO-HOA	ECY-8UI	ECY-8DOR	ECY-8DOR-HOA	ECY-8UI6UO	ECY-8UI6UO-HOA	ECY-8UI6DOT	ECY-8UI6DOT-HOA	ECY-16DI
Feature												
Points	6	6	8	8	8	8	8	14	14	14	14	16
Universal Inputs			4	4	8			8	8	8	8	
Digital Inputs												16 (Counting Capabilities)
Universal Outputs	6	6	4	4				6	6			
Triac Outputs										6	6	
Relay Outputs						8 (Form-C Digital Relay)	8 (Form-C Digital Relay)					
HOA Switches		■		■			■		■		■	

Eclipse Power Supply Modules

Model	Description
ECY-PS24	24VAC / 24 VDC power supply module
ECY-PS100-240	100 to 240VAC power supply module

Eclipse Communication Modules

Add communication modules to the controller for multi-protocol support. See the [Eclipse Communications Modules Spec Sheet](#) for details.

Model	Description
ECY-RS485	Communication module with two RS-485 ports for Eclipse controllers.
ECY-MBUS	Communication module with one M-Bus port for Eclipse controllers controllers (up to 60 M-Bus meters).

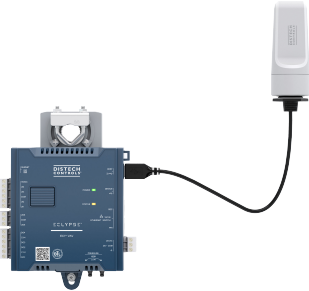
Hardware Comparison for the Room Control (DC Space)

Model		ECY-VAV		ECY-PTU/TU		ECY-STAT	
Category		Feature					
Recommended Applications	Rooftop Units and Small AHUs						
	Variable Air Volume (VAV)						
	Terminal Units (Fan Coils, Chilled Beams, Radiant and Reversible Ceilings, Heat Pumps)						
	Zone Control						
Preloaded Software & Graphics	Eclipse Designer		Optional	Optional		Optional	
	Eclipse Designer Viewer						
	Preloaded Configurable Applications						
General Features	Webserver		HTML5 REST API	HTML5 REST API		HTML5 REST API	
	DC Space						
	Maximum of Points		11	12 or 16		12	
	Maximum of I/O Modules		N/A	N/A		N/A	
Inputs	Universal Inputs (Software Configurable)		4	3		4	
	Allure Series Communicating Sensor device limit		4 ¹	4 ¹ [0]			
	Sensor Inputs			1			
	Analog/Digital Converter (Precision)		16-bits	16-bits		12-bits	
Outputs	Universal Outputs (Analog)		2	Up to 4			
	Digital Outputs (Triac)		4	2		Up to 5	
	Relay Outputs (Fan Application)			3			
	Relay Outputs (Electric Heater Application)			1			
	Field Configurable Outputs (Triac or Analog)			Up to 2 (Optional)		Up to 3	
	Analog/Digital Converter (Precision)		10-bits	10-bits		10-bits	
Power	24 VAC						
	120/240 VAC						
	Power over Ethernet (PoE)		Optional				
	Daisy-Chaining ²						
				(ECY-TU-203 only)			
Communication	BACnet IP						
	Wi-Fi Access Point						
	Wi- Fi (Client, Hotspot, Bridge)		Up to 16 clients (using Eclipse Wi-Fi adaptor)	Up to 16 clients (using Eclipse Wi-Fi adaptor)		Up to 3 clients	
	Bluetooth®					Use with <i>my</i> Personify	

Model		ECY-VAV	ECY-PTU/TU	ECY-STAT
Category	Feature			
Connectivity Packs (BACnet, Modbus, M-Bus)		C10	C10	C10
Advanced Security	Maximum Connectivity Pack (device loads)			
	HTTPS Server	■	■	■
	WPA/WPA2 Enterprise Protection	■	■	■
	Authorization and Access Level Control	■	■	■
	Built-In Support of TLS/SSL	■	■	■
	RADIUS Server Authentication	■	■	■
Third-Party Integration / Developer Tools	FIPS 140-2 Level 1 Compliant	■	■	
	RESTful API	■	■	■
	Azure IoT Hub	■	■	■
	my Personify			■
Mechanical and Environmental	Eclipse SKY Ecosystem SDK			■
	Dimensions (W x H x D)	7.9 × 5.5 × 3.7" (201×140×94mm)	5.6 × 5.7 × 2.2" (142×145×57mm)	5.2 × 3.4 × 1.1" (131×86×28mm)
	Weight	2.00 lbs (0.90 kg) ³	1.32 lbs (0.6 kg)	0.55lbs (0.26 kg)
	Operating Temperature	32 to 122°F (0 to 50°C)	41 to 104°F (5 to 40°C)	32 to 104°F (0 to 40°C)
	Sound Level (<35 dBA)	Yes	N/A	N/A
Standards and Regulations	BACnet BTL listed (B-BC)	■	■	■

¹Limited to a maximum of 2 Allure Series Communicating Sensors equipped with CO₂.
²Refer to the controller's Installation Guide for details on individual daisy-chaining performance.
³Excluding PoE model or Terminal Covers.

Eclipse Connected VAV Controller



Model	ECY-VAV	ECY-VAV-POE
Points	11	11

Model	ECY-VAV	ECY-VAV-POE
Power Supply	18 VDC	18 VDC
Power over Ethernet (PoE)		■
Universal Inputs	4	4
Universal Outputs	2	2
Digital (Triac) Outputs	4	4
Built-in Flow Sensor (±500Pa, ±2.0" w.c.)	■	■
Built-in Damper Actuator (45 in-lb, 5 Nm)	■	■
Preloaded Apps in SI Units (Metric)	CDIY-VAXXX-SI-00	CDIY-VAPOE-SI-00
Preloaded Apps in Imperial Units (US)	CDIY-VAXXX-IMP-00	CDIY-VAPOE-IMP-00
Preloaded Applications		
Cooling-only VAV Box	■	■
Cooling-with-Reheat VAV Box	■	■
Parallel-Fan VAV Box	■	■
Series-Fan VAV Box	■	■
Other Application		
Dual-Duct VAV System	■	■

Eclipse Connected Terminal Unit Controller



Model	ECY-TU-203	ECY-PTU-107	ECY-PTU-207	ECY-PTU-208
Power Supply	24 VAC	100-240 VAC	100-240 VAC	100-240 VAC
Points	16	12	16	16
Inputs (Universal/Sensor/Digital)	3UI / 1SI / 2DI	3UI / 1SI / 2DI	3UI / 1SI / 2DI	3UI / 1SI / 2DI
Triac Outputs	2 (24 VAC)	2 (100-240 VAC)	2 (100-240 VAC)	2 (24 VAC)
Relay Outputs: Fan Application	3	3 (100-240 VAC)	3 (100-240 VAC)	3 (100-240 VAC)

Model	ECY-TU-203	ECY-PTU-107	ECY-PTU-207	ECY-PTU-208
Relay Output: Electric Heater Application	1	1	1	1
Analog Output	2		4	4
Field Configurable Outputs (Triac or Analog)	2			
24 VAC Power Supply Output	■			■
Preloaded Apps in SI Units (Metric)	CDIY-PTU203SI-00	CDIY-PTU107SI-00	CDIY-PTU207SI-00	CDIY-PTU208SI-00
Preloaded Apps in Imperial Units (US)	CDIY-PTU203IMP-00	CDIY-PTU107IMP-00	CDIY-PTU207IMP-00	CDIY-PTU208IMP-00
Preloaded Applications				
Fan-Coil Unit (3 Speeds)	■	■	■	■
Fan-Coil Unit (Variable Speeds)	■		■	■
Chilled Beam	■		■	■
Ceiling System	■		■	■
Other Application				
Heat Pump Unit	■		■	■

Eclipse Connected Thermostat



Model	ECY-STAT-R	ECY-STAT-F	ECY-STAT-Z
Power Supply	24VAC / 24VDC	24VAC / 24VDC	24VAC / 24VDC
Points			
Universal Inputs (software configurable)	4	4	4
Digital Outputs (software configurable)	5 (24VAC / 24VDC)	5 (24VAC / 24VDC)	3 (24VAC / 24VDC)
Digital-Universal Outputs (software configurable)	3	3	2
Preloaded Applications			
Rooftop Unit	■		

Model	ECY-STAT-R	ECY-STAT-F	ECY-STAT-Z
Heat Pump Unit	<div></div>		
Fan Coil Unit		<div></div>	
Zone Control			<div></div>

Accessories

Model	Description
Eclipse Wi-Fi Adapter	Wi-Fi Adapter for Eclipse Connected Controllers.
Eclipse Open-To-Wireless™ Adapter	EnOcean communication protocol adapter for Eclipse Connected Controllers.
Eclipse HD15 Cable	6ft (1.8m) cable for multiple-row panel installations. An HD15 cable must always be followed by a power supply module. For more information, refer to the controller's Installation Guide.
ECx-Subnet-Adapter	Required for daisy-chaining the ECx-Display or the EC-Multi-Sensor with other subnet devices
RTC Battery Adapter	Adapter to add a size CR2032 coin cell battery (not included)