ECY-S1000 Series

Control, Automation, and
Connectivity Servers

Overview

The ECY-CSC is sized to cost-effectively meet the requirements of any HVAC application from small to medium to large systems. The most capable Connected System Controller model can be expanded to support up to 20 input/output (I/O) modules (up to 320 I/Os) while being able to adapt to new requirements as the need arises.

A connecting cable is used to connect successive rows of modules within a controls' cabinet to provide power and communication.

Features & Benefits

• Support for a range of communication protocols such as BACnet MS/TP, Modbus RTU, Modbus TCP, and M-Bus

• With the RESTful API, data can be accessed from different applications, such as energy dashboards, analytics tools, and mobile applications

• Expandable as needs increase to support up to 20 input/output (I/O) modules (up to 320 I/Os)

• Integrates up to three RS-485 ports

• Lighting and shade/sunblind expansion modules to control lights and shades/sunblinds

• Compatible with Distech Controls line of *Bluetooth*® low energy technology enabled devices and mobile application providing state-of-the-art occupant management

• Multi-sensor compatibility combines motion and luminosity (Lux) sensors

• Available remote access to program, configure, or maintain the installation, reducing costs associated with on-site visits

• Terminal blocks are uniquely identified and color-coded for clarity and to prevent wiring mistakes

• Embedded alarms, trend log and schedule support allows for fully distributed data and logic

• Automatic email notifications for system status and alarms to ensure faster system servicing and response time

DISTECH CONTROLS™

Connecting People with
Intelligent Building Solutions

Model Selection

Example: ECY-S1000*E-28-MS*

Series[a]	WebServer	License Points Limit	BACnet MS/TP Routing
ECY-S1000	[blank] : No Embedded Graphics *E* : With Embedded Graphics	*-28* : 28 Points HW (3 Modbus) *-48* : 48 Points HW (10 Modbus) [blank] : No Limits (320 typ., 96 Modbus)	[blank] : No BACnet MS/TP Routing Option *-MS* : With BACnet MS/TP Routing[b]

[a]SEP models (single Ethernet port) have secondary Ethernet port factory disabled

[b]Option already included in no limits license, please specify [blank]

Accessories

Eclypse Wi-Fi Adapter	Wi-Fi Adapter for Eclypse Connected Controllers.
Eclypse Open-To-Wireless™ Adapter	EnOcean communication protocol adapter for Eclypse Connected Controllers.
Eclypse 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 Hardware Installation Guide.
ECx-Subnet-Adapter	Required for daisy-chaining the ECx-Display or the EC-Multi-Sensor with other subnet devices

Product Specifications

Power Supply Input

Voltage	18VDC
Power Consumption	8.9W; external loads excluded

Communications

Ethernet Connection Speed	10/100 Mbps
Cable Type	Cat 5e, 8 conductor twisted pair (unshielded)
Addressing	IPv4 or Hostname
BACnet Profile	BACnet Building Controller (B-BC)
BACnet Listing	BTL (B-BC)
BACnet Interconnectivity	BBMD forwarding capabilities BACnet MS/TP to BACnet/IP and BACnet/SC routing
BACnet Transport Layer	IP, BACnet/SC (Node) & MS/TP (optional)
Web Server Protocol	HTML5
Web Server Application Interface	REST API
BACnet MS/TP or Modbus RTU	1 × RS-485 serial communications ports
RS-485 Wiring	1-pair + Common/shield
RS-485 EOL Resistor	Built-in
RS-485 Baud Rates	9600, 19 200, 38 400, or 76 800 bps
RS-485 Addressing	Controller's Web Configuration Interface
Modbus TCP	Devices must be on the same subnet

Wireless Adapter	Optional, USB Port Connection
	Refer to the Eclypse Wi-Fi Adapter Spec Sheet
Wi-Fi Frequency	2.4 GHz / 5 GHz

Subnetwork

Communication	RS-485
Cable Type	Cat 5e, 8 conductor twisted pair
Connector	RJ-45
Connection Topology	Daisy-chain
Maximum number of standard room devices supported per controller combined[a]	12
Allure EC-Smart-Vue Series[b]	12
Allure EC-Smart-Comfort Series	6
Allure EC-Smart-Air Series[b]	6
EC-Multi Sensor	4
ECx-Light-4 / ECx-Light-4D / ECx-Light-4DALI	2
ECx-Blind-4 / ECx-Blind-4LV / ECx-Blind-4SMI / ECx-Blind-4SMI-LoVo	2
Maximum number of Bluetooth low energy room devices per controller combined [c]	6
Allure Unitouch™	2
EC-Multi-Sensor-BLE	4

[a]For more details about supported quantities, see the Product Selection Tool available in Builder: https://builder.distech-controls.com.

[b]A controller can support a maximum of 2 Allure sensor models equipped with a CO_2 sensor. Any remaining connected sensors must be without a CO_2 sensor.

[c]A mixed architecture with standard room devices and Bluetooth low energy enabled devices is not recommended.

Hardware

Processor	Sitara ARM processor
CPU Speed	1GHz
Memory	4GB Non-volatile Flash (applications & storage) 512MB RAM
Real Time Clock (RTC)	Real Time Clock with rechargeable battery Supports SNTP network time synchronization
RTC Battery	20 hours charge time, 20 days discharge time Up to 500 charge / discharge cycles
Cryptographic Module	FIPS 140-2 Level 1 Compliant
Ethernet	2 switched RJ-45 Ethernet ports (Supported Protocols: BACnet/IP, Modbus TCP, NTP, and REST)
USB Connections	2 × USB 2.0 Ports 1 × Micro-USB 2.0 Ports
RS-485 Serial Communications	Screw terminals (Supported Protocols: BACnet MS/TP or Modbus RTU)
Subnet	RJ-45
Green LED	Power status, Subnet TX, RS-485 TX, and Ethernet Traffic
Orange LED	Controller status, Subnet RX, RS-485 RX, and Ethernet Speed

Open-to-Wireless Adapter

Communication Protocol	EnOcean wireless standard[a]
Connector Type	USB
Number of Wireless Inputs	Unlimited[b]

[a]Available when an optional external Eclypse Open-to-Wireless Adapter is connected to the controller. Refer to the Open-to-Wireless Application Guide for a list of supported EnOcean wireless modules.

[b]Wireless inputs will only be limited by physical distance between the EnOcean devices and the Eclypse Open-to-Wireless Adapter.

Mechanical

Dimensions (H × W × D)	4.74 × 3.57 × 2.31" (120.31 × 90.67 × 58.56mm)
Shipping weight	0.85lbs (0.39kg)
Mounting	DIN rail or screw mounting
Enclosure Material	FR/ABS
Enclosure Rating[a]	Plastic housing, UL94-V0 flammability rating

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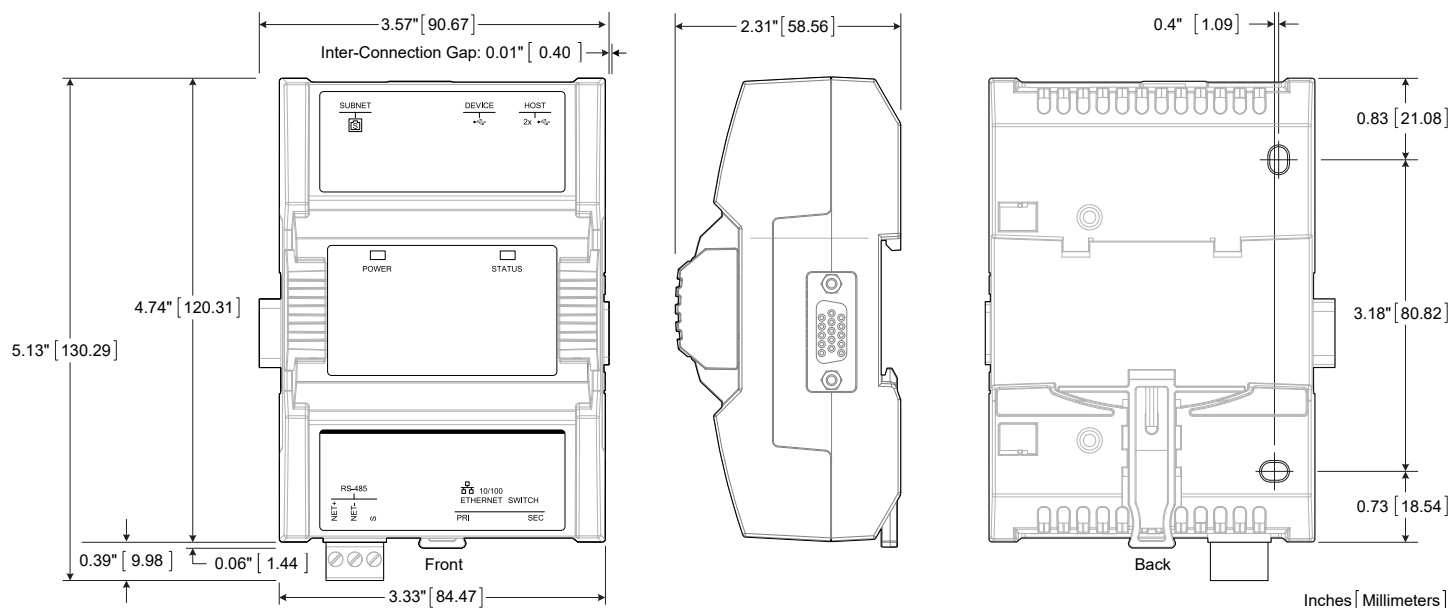
Environmental

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
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

Dimensions

ECY-S1000 Dimensions

ECY-S1000_SP_18_EN