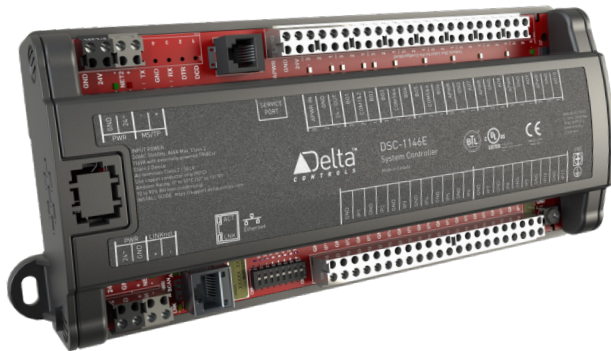# System Controllers

DSC-1146E

Description

The DSC-1146E is a fully programmable, Native BACnet® Building Controller that communicates on Twisted-Pair Ethernet 10-BaseT using BACnet IP and BACnet over Ethernet, or on an RS-485 LAN using the BACnet MS/TP protocol. The DSC-1146E is designed for a wide-range of applications that have medium local I/O requirements. It also supports BACstat® and other Delta LINKnet devices.

Application

The DSC-1146E is suitable for controlling various packaged units and equipment with medium I/O requirements such as small air handling units, boilers and chillers.

The fully programmable DSC-1146E can be tailored to specific applications by creating and modifying BACnet objects and GCL+ programs.

Features

▶ Fully programmable in GCL+

▶ Super capacitor for real-time clock and SRAM backup which requires no maintenance

▶ Supports 12 BACstat network sensors on LINKnet for room sensing and control or 2 Delta Field Modules on LINKnet for I/O expansion

▶ Actuator power terminal (24 VAC) for each analog output (can be powered internally or from an auxillary transformer)

▶ Firmware upgrade and database load/save over the network

▶ Optional field upgrade to Modbus® RTU with hardware key

▶ Service port

▶ Screw or DIN rail mountable

▶ LED indicator for output, power, CPU and SCAN status

Specifications

BACnet Device Profile
BACnet Building Controller (B-BC)

Inputs
11 Universal Inputs (10-bit) supporting:
- 0-5 VDC
- 0-10 VDC
- 10 kΩ Thermistor
- Dry Contact (using the 10 kΩ Thermistor jumper setting)
- 4-20 mA

Outputs
6 Binary TRIAC Outputs (jumper configured for internal or external power)

4 Analog Outputs (0-10 VDC)

Device Addressing
Set via DIP switches and jumper, or software setup

Connectors
Removable screw-type terminal connectors
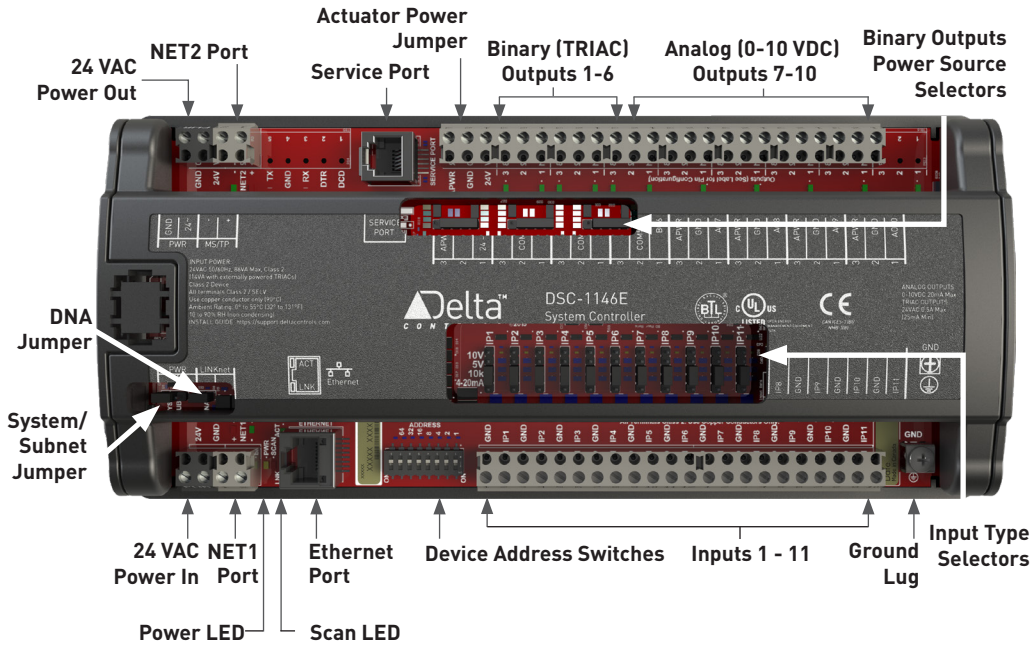
Wiring Class
Class 2 / SELV

BACstat is a registered trademark of Delta Controls Inc.
BACnet is a registered trademark of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).
Modbus is a registered trademark of Schneider Automation.

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System Controllers

DSC-1146E: Board Layout Diagram

Labels around board diagram:
- 24 VAC Power Out
- NET2 Port
- Actuator Power Jumper
- Service Port
- Binary (TRIAC) Outputs 1-6
- Analog (0-10 VDC) Outputs 7-10
- Binary Outputs Power Source Selectors
- DNA Jumper
- System/Subnet Jumper
- 24 VAC Power In
- NET1 Port
- Ethernet Port
- Device Address Switches
- Inputs 1 - 11
- Ground Lug
- Input Type Selectors
- Power LED
- Scan LED

Specifications (Continued)

Power
24 VAC @ 14 VA, 86 VA with fully-loaded Binary Outputs

Technology
16-bit processor
2 MB (16-megabit) flash memory
319 KB SRAM memory for database
Real-time clock
Super capacitor for 72-hr backup of real-time clock and SRAM

Communications Ports
Ethernet (10-BaseT)
BACnet IP, BACnet over Ethernet

2 RS-485 NET1, NET2 supporting:
   BACnet MS/TP up to 76800 bps, max 99 devices per port

   Delta LINKnet up to 76800 bps, max 12 devices on LINKnet with no more than 2 DFM devices (1 port only)

   Optional Modbus up to 68400 bps, max 5 devices (1 port only)

Ambient
0° to 55°C (32° to 131°F)
10 to 90% RH (non-condensing)

Dimensions
26.2 x 10.7 x 4.9 cm
(10⁵/₁₆ x 4¼ x 1¹⁵/₁₆ in.) with housing

Weight
435 g (0.959 lbs) with housing

Compliance
CE
FCC
EAC

Listings
C-UL Listed
UL 916 Listed
BTL Listed

Ordering
Order the DSC-1146E with the desired options according to the following product numbers:

DSC-1146E	Delta System Controller 11 inputs, 4 analog outputs, 6 binary outputs

Accessories

DZNR-768	Delta Network Repeater for BACnet MS/TP
TRM-768	Delta Network Terminator for BACnet MS/TP
CON-768BT	Bluetooth wireless service tool
DFF099-CDT	Additional 50 credit blocks for the Modbus flash key
DFF099-KEY	Modbus flash upgrade key with 50 credits pre-loaded

Subject to change without notice.

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