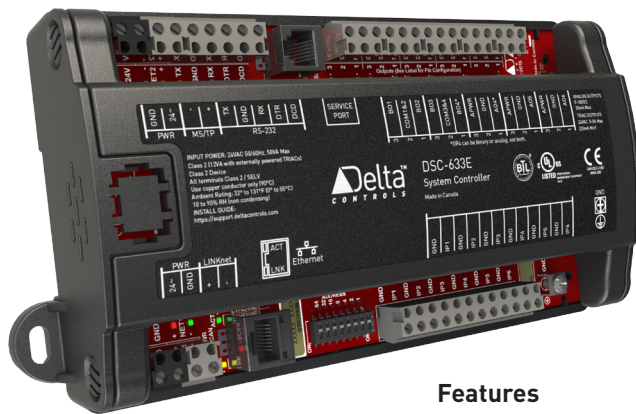# System Controllers

DSC-633E

Description

The DSC-633E 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-633E is designed for a wide-range of applications that have small local I/O requirements. It also supports BACstat® and other Delta LINKnet devices.

Application

The DSC-633E is suitable for controlling various packaged units and equipment with small I/O requirements such as fan coil units, unit ventilators, heat pumps, and small boilers or chillers.

The fully programmable DSC-633E can be tailored to specific applications by creating and modifying BACnet objects and GCL+ programs.

Features

▶ Fully programmable

▶ BACnet IP and BACnet over Ethernet communications

▶ Super capacitor for real-time clock and SRAM backup (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
6 Universal Inputs (10-bit), jumper configurable for:
    0-5 VDC
    0-10 VDC
    10 kΩ Thermistor
    Dry Contact (using 10 kΩ Thermistor jumper setting)
    4-20 mA

Outputs
3 Binary TRIAC Outputs
    Switching 24 VAC @ 0.5 A max per output
    160 mA leakage current per TRIAC, 25 mA min current

3 Analog Outputs
    0-10 VDC @ 20 mA max output
    Software configurable as binary or analog

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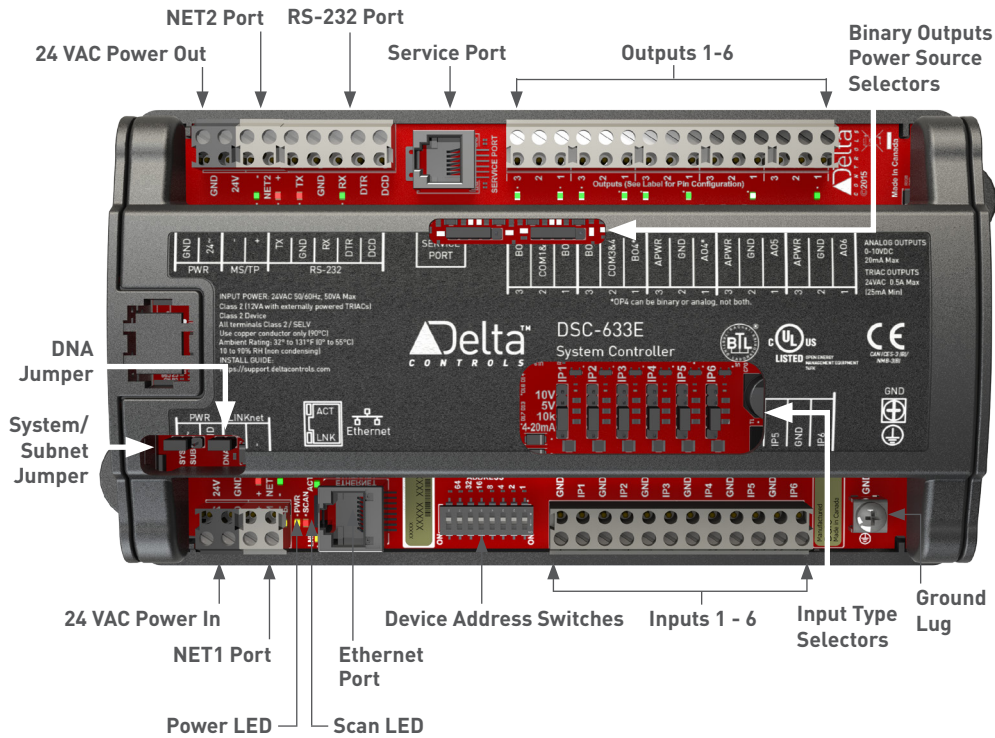Set via DIP switches and jumper, or software setup

Connectors
Removable screw-type terminal connectors

Wiring Class
Class 2 / SELV

System Controllers

DSC-633E: Board Layout Diagram

24 VAC Power Out
NET2 Port
RS-232 Port
Service Port
Outputs 1-6
Binary Outputs Power Source Selectors
DNA Jumper
System/ Subnet Jumper
24 VAC Power In
NET1 Port
Ethernet Port
Power LED
Scan LED
Device Address Switches
Inputs 1 – 6
Input Type Selectors
Ground Lug

Ordering

Order the DSC-633E according to the following product numbers:

DSC-633E	Delta System Controller 6 universal inputs, 3 analog outputs, 3 binary TRIAC 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

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Specifications (Continued)

Power
24 VAC @ 12 VA, 48 VA with binary TRIAC outputs fully-loaded

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)

Serial RS-232
BACnet PTP, up to 38400 bps

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

Dimensions
8½ x 4¼ x 1¹⁵/₁₆ in. (21.8 x 10.7 x 4.9 cm) with housing

Weight
0.80 lbs. (360 g) with housing

Compliance
CE
FCC

Listings
C-UL Listed
UL 916 Listed
BTL Listed

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Subject to change without notice.

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