DDC-6270-BNET

24-Channel BACnet/IP DDC Controller

Features

- Built-in DDC Editor SoftLogic
- VB-Like Programming Language
- MRAM is a Non-volatile Memory that can Store Data and Prevent Data Loss while the Power is Shut-off or Interrupted
- Built-in Watchdog Timer (WDT) to increase System Stability
- Dual 10/100M Ethernet Port
- Support BACnet/IP Server and MB/RTU Slave for HMI or SCADA
- COM0 (RS-485) for Additional I/O (M-7000)
- PID Control Function
- Independent (Standalone) Direct Digital Controller
- Wide Operating Temperature Range: -25°C to +75°C

Introduction

The DDC-6270-BNET is a BACnet Application Specific Controller (B-ASC) and standalone programmable DDC controller with 24-channel onboard I/O that is especially designed for building automation applications, enabling efficient and versatile temperature control. The controller provides software selectable universal input and output, Digital Input and Digital Output, and includes flexible options that satisfy the majority of application requirements. Its compact size makes it an ideal solution to meet the installation needs of a building automation environment. The DDC-6270-BNET can apply M-7000 Digital I/O modules directly which can be used to provide additional I/O channels, ensuring that the system is a fully scalable solution. The DDC-6270-BNET also features a VB-Like programming tool which provides a plenty of functions for building automation applications, such as a HVAC calculation, sequential control and PID function. The DDC-6270-BNET enables a quick and easy way to develop or deploy BACnet/IP applications, mainly used in building control and plant monitoring, focused on areas such as monitoring of air conditioning, lighting, and power control systems, restaurants, and hotels, etc.
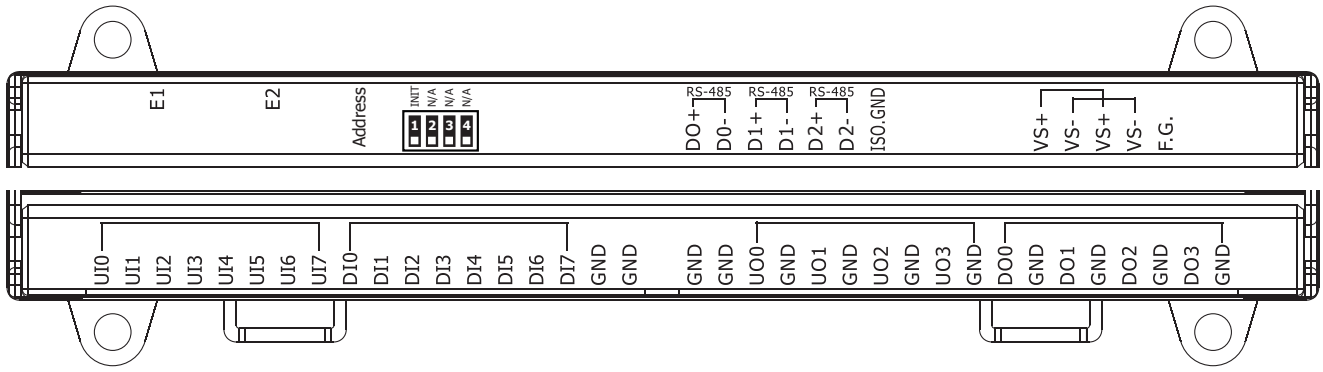
System Specifications

CPU	
CPU	ARM Cortex-A8 720 MHz
Memory	256 MB Flash, 512 MB DDR3, 512 KB MRAM and 16 KB EEPROM
Ethernet	
Interface	2 x RJ-45, 10/100 Base-TX, Switch Ports
Security	ID, Password and IP Filter
Protocol	BACnet/IP
RS-485	
Interface	RS-485 x 3
Format	N, 8, 1
Baud Rate	1200 to 115200 bps
Protocol	COM0: MB/RTU Master for Additional I/O (M-7000) COM1: MB/RTU Slave for HMI or SCADA COM2: Reserved
Dual Watchdog	Yes, Module (2.3 seconds), Communication (Programmable)
Isolation	
Ethernet	1500 V$_{DC}$
RS-485	2500 V$_{DC}$
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
	±8 kV Air for Random Point
EFT (IEC 61000-4-4)	±4 kV for Power Line
	±1 kV for RS-485
Power Requirements	
Reverse Polarity Protection	Yes
Power from Terminal Block	Yes, 24 V$_{AC}$ or 24 V$_{DC}$
Fuse Protection	Yes, 1 A
Power Consumption	6 W Max.
Mechanical	
Dimensions (W x L x H)	240 mm x 135 mm x 65 mm
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-25 to +75°C
Humidity	10 to 95% RH, Non-condensing

I/O Specifications

Universal Input	
Channels	8
Type	+4 to +20 mA / 0 to +20 mA / +2 to +10 V$_{DC}$ / 0 to +10 V$_{DC}$ / Digital Input, by Software Selectable
Resolution	16-bit
Accuracy	±0.1% of FSR
Over Voltage Protection	120 V$_{DC}$
Universal Output	
Channels	4
Type	+4 to +20 mA / 0 to +20 mA / +2 to +10 V$_{DC}$ / 0 to +10 V$_{DC}$ / Digital Output, by Software Selectable
Resolution	10-bit
Accuracy	±0.1% of FSR
Digital Input		
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Channels		8
Type		Dry Contact
Sink/Source		Source
Dry Contact	On Voltage Level	Close to GND
	Off Voltage Level	Open
Digital Output		
Channels		4
Type		Open Source
Sink/Source		Source
Max. Load Current		250 mA/channel
Overload Protection		Yes
Load Voltage		+24 V$_{DC}$
Overvoltage Protection		47 V$_{DC}$
Short Circuit Protection		Yes

Pin Assignments

Wire Connections

Voltage Input	Voltage Output
UIx / GND — V mV/V	UOx / GND — +V/- Load
Current Input	**Current Output**
UIx / GND — mA	UOx / GND — I Load
Digital Input	**Digital Output**
UIx/DIx / GND	UOx/DOx / GND — Load

Dimensions (Units: mm)

Left View   Front View   Right View   Rear View   Top View   Bottom View
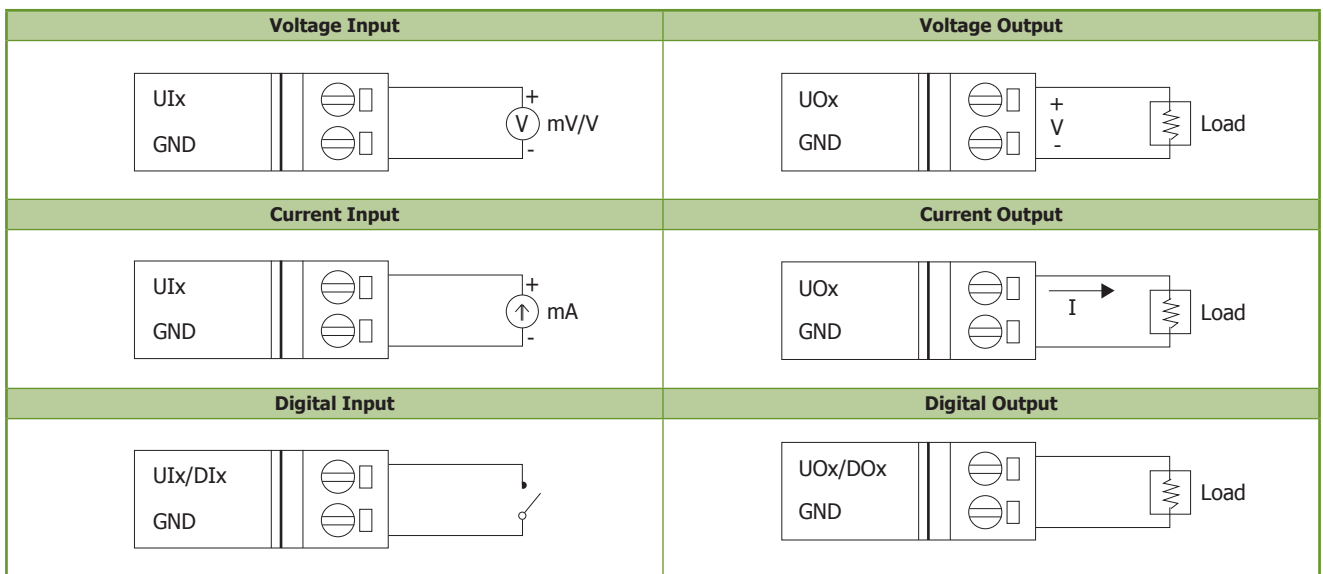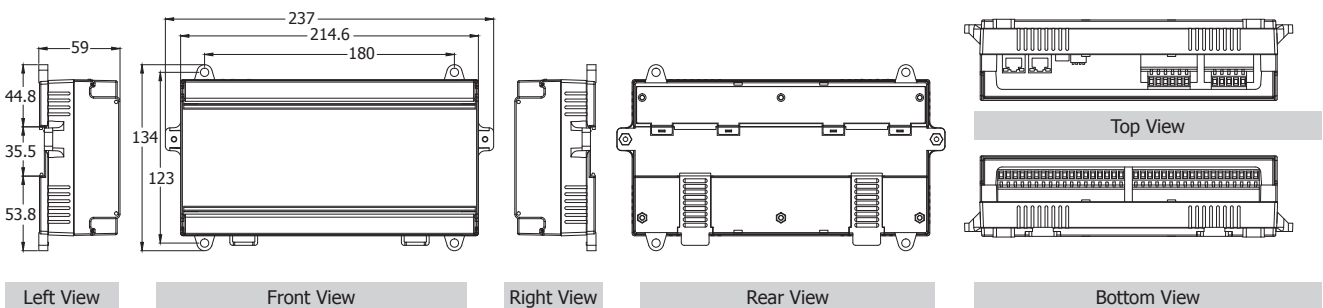
Ordering Information

DDC-6270-BENT	24-channel BACnet/IP DDC Controller (Includes 8-channel Universal Input, 4-channel Universal Output, 8-channel Digital Input and 4-channel Digital Output) (RoHS)