



**Features and Benefits**

- ▶ Freely Programmable Controller
- ▶ Connectivity through BACnet/IP
- ▶ 16 PID Controllers
- ▶ Flexible I/O Points: 32 UI, 12 AO, 12 DO
- ▶ Diagnostic LEDs
- ▶ HOA Override Switches for DO/AO

**Technical Information**

<b>Operating Voltage</b>	24V AC/DC ( $\pm 20\%$ ), 50/60 Hz
<b>Operating Environment</b>	-30°C ... 70°C, 0-80% Rh (Non-Condensing)
<b>Max. Power Consumption</b>	6W @24V DC (all outputs on)
<b>Communication Interface</b>	Main Node/Master : BACnet MS/TP, Modbus Sub Node/Slave : Modbus RTU
<b>Memory</b>	512KB Flash / 512KB RAM, Expandable with SD Card
<b>Universal Inputs</b>	AI: 10k NTC, 4-20mA, 0-5V, 0-10V DI: Potential Free Contact
<b>Digital Outputs</b>	Relay Outputs, 30V AC/DC, 5A
<b>Analog Outputs</b>	0-10 V Max. 100 mA
<b>Dimensions</b>	107 x 134 x 50 mm
<b>Enclosure</b>	UL listed ABS enclosure

**Product Description**

**For Multiple Applications**

The NETIX NCCBC22 Controller is a modular controller for basic HVAC controls and is equipped with real time clock and internal schedules to maximise energy savings of the buildings. The Controller supports multiple communication protocols.

**Wide Selection of I/O**

The NCCBC22 Controller allows for flexible use of I/O with universal inputs & multitude of outputs. The Controller comes with 8 on-board Universal Inputs, 8 Digital Outputs and 6 Analogue Outputs. The Universal Input allows connecting a thermistor, 0-5V, 0-10V and 0-20mA signals. The mechanical relay of the digital output allows 2A, 24VAC or DC signals. The Controller also supports pulse inputs. The I/O count can be easily extended with I/O Expansion Units (NCCBX22, NCCBX22IN).

**Multiple Communication Protocols**

Communication is based on the international ISO 16484-5 BACnet® standard. In addition, the Controller has two on-board RS-485 channels for BACnet MS/TP or Modbus communication. The main RS-485 port can operate with a baud rate of 1200-921600. The sub-port supports baud rates of 9600 or 19200.

**Diagnostic LEDs and HOQ Override**

The Controller comes with colour LEDs for all inputs and outputs. The Controller is also equipped with additional diagnostic LEDs (red LE for TX and green LED for RX) for RS-485, Ethernet and communication bus. The Controller indicates the green diagnostic LED for power indication and red LED for fuse state indication. The Controller comes with Hand, Off, Auto override switches for all outputs.

**Expandable architecture**

The I/O points of the Controller can be further extended by utilising the I/O Expansion Units. Any combination of I/O Expansion Units totalling up to 64 points of each I/O type can be added. The IO expansion units communicate to the main controller over ModBus over RS-485 protocol.

The following I/O Expansion Units are available:

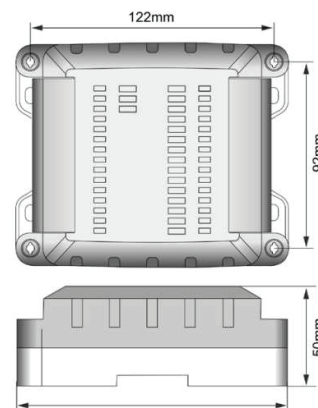
- NCCBX22 with 8UI, 6DO, 8AO
- NCCBX22IN with 22UI

The memory of the Controller can be expanded with micro SD cards. Trend and Alarm data can be stored in the micro SD card.

**Mounting & Wiring**

The Controller can be mounted inside cabinet, snapped on to DIN rail or fastened to inside wall via screw holes provided in the housing. The Controller can also be mounted within the wiring cabinets. The Controller can be wired with screw terminal blocks attached directly at the housing.

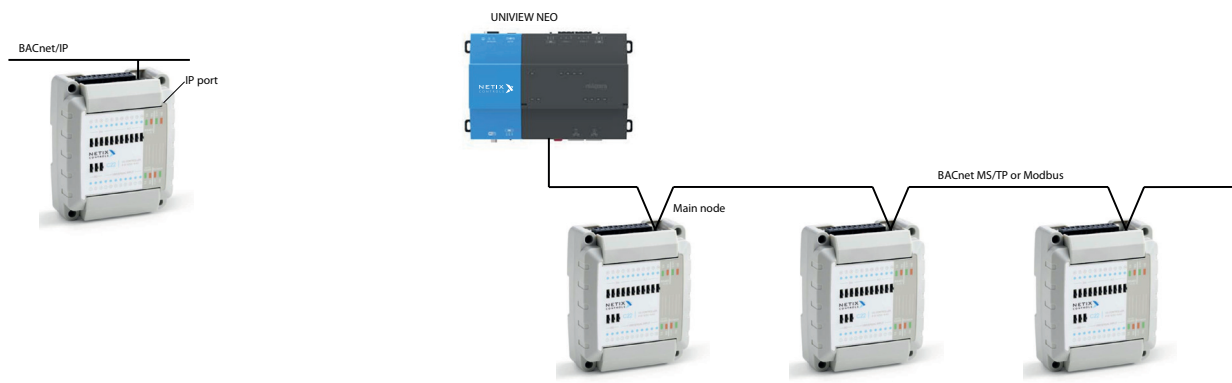
**Dimensions**



Pinout Drawings

52	51	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
GND	+	50	GND	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
POWER	RS-485 / MAIN	UI8	UI7	UI6	UI5	UI4	UI3	UI2	UI1	DO3	DO2	DO1													
NETIX NCCBC22																									
RS-485 / SUB		ETH		AO6	AO5	AO4	AO3	AO2	AO1	DO8	DO7	DO6	DO5	DO4											
1	2	3		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
-	+	GND		+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-

Expandable Architecture



Ordering Codes

NCCBC22                      BACnet controller with 22 I/O: 8 UI, 6 DO, 8 AO