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Member of
BACnet
International

HPC8884BN Universal Controller, BACnet MS/TP
FW4.02

28 point, eight control loop, peer-to-peer DDC controller with high flexibility for user configuration to suit a wide variety of HVAC and universal applications in BACnet MS/TP networks or standalone.

The large I/O count, selection of multiple control loops, digital function blocks and analogue function blocks allow easy configuration for control of complex AHU's, multiple control loops, signal processing or conversion and – when networked – remote I/O expansion.
Predefined logic function blocks enable easy configuration of a variety of functions including Economy Changeover (temperature or enthalpy), VAV Volume, Occupancy, Hours Run monitoring, Minutes Run monitoring, Lead/Lag changeover, instantaneous Power calculation (kW, BTU) and a wide array of hysteresis & dead-band/live-band choices (Compare function).

Typical Applications
- Temperature, humidity, pressure, IAQ, etc
- Modulating, 3-point floating, on/off, PWM (Pulse Width Modulation), step control, DX
- Signal selection, signal conversion
- Pulse counting

Feature Summary
- 8 Digital Inputs (DI n/o or n/c, flip/flop, pulse-counting up to 10Hz)
- 8 Digital Outputs (DO) with power-up presetting & short-cycle timers
- 8 Universal Inputs (UI - user configurable analogue [AI] or digital [DI n/o or n/c], flip/flop, pulse-counting up to 10Hz)
- 4 Analogue Outputs (AO) with power up presetting
- 8 Virtual Digital Inputs (VDI)
- 8 Virtual UI's (VUI)
- 8 Digital Logic blocks (DL)
- 8 Analogue Logic blocks (AL)
- 8 PI Control Loop blocks (CL)
- 48 Network Interface Objects (NIO) for peer-to-peer connectivity
- RJ11 connected room sensor options (UI1 & UI2 via screw terminals or RJ11 socket)
- UI's user definable for non-standard sensors, active or passive from 1kΩ
- Connected sensors may be calibrated and filtered by way of the UI configuration
- Isolated, 256 node (1/8th load), RS485 network driver
- Communication speeds from 2400 baud up to 76800 baud
- System-wide unique device addressing
- BACnet application services; Single-Read, Multiple-Read, Single-Write, Who Is, I Am, Who Has, I Have
- BACnet priority array
- LED indication of the On/Off status of DI and DO points for fast visual status verification
- Dynamic LED indication of AO status
- Sequential flashing of DI LED's as 'Watchdog'
- Automatic communication resumption after a power loss
- PC configuration by text file download using FUNCPROG or by direct parameter settings entry
- Upload text file data for retrieving lost application settings, for re-use in other controllers

Connections

Dimensions

226.5mm
213.5mm
115mm
92mm
34.5mm
4mm Ø
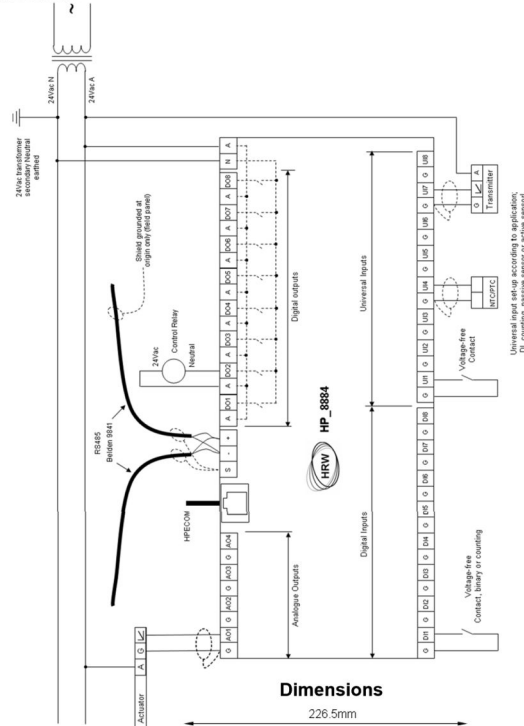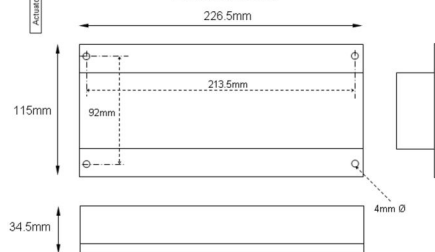
If using HDA0002 DIN rail adapter brackets the overall depth from the gear plate to the front surface of the device is 45.5mm

Technical Data

Inputs/Outputs

8 DI	- Voltage-free contact closure, 1mA
	- Binary DI or pulse counting up to 10Hz (pulse value saved hourly)
8 DO	- 24Vac, 3A in-rush, 300mA holding max., minimum load 10mA
8 UI	- DI with pulse counting up to 10 Hz (pulse value saved hourly)
	- NTC/PTC (min. 1kΩ)
	- 0-5Vdc, 0-10Vdc, 0-20Vdc, 0.01 Volt resolution
	- 0…20Ma, 4…20mA, 0.016mA resolution (requires external 18…28Vdc loop power supply)
4 AO	- 0-10Vdc, 0.04 Volt resolution, 1.5mA (min 6.6kΩ impedance)

Sensor/Transmitter Wiring	Shielded twisted pair (shield grounded)
Network Wiring	Belden 9841 low capacitance twisted pair for RS485 networks (braided + foil shield, shield continuous throughout the network and
Comms Speed	RS485 - 2400, 4800, 9600, 19200, 38400, 57600, 76800 baud
RS485 Driver	Isolated 1/8th load, 256 nodes over max. 1.2km without repeater
Power Supply	24Vac, 50/60 Hz, max. 5VA without DO load
	60VA MAX. if DO's are supplied via the device's 24Vac terminals and fully loaded @ max. 300mA / DO
Conformity & approvals	BTL Listing 23710
	UL 916
	CAN/CSA C22.2 #205-M1983
	FCC Part 15 Subpart B Class B
	CE/EMC EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3
Operating Temperature Range	0…50ºC (32…122ºF)
Storage Temperature Range	-5…75ºC (-40…167ºF)
Humidity Range	10…95%rH (non-condensing)
Dimensions	115mm H x 226.5mm L x 34.5mm D