

# DDC-V8044-D

## DDC HVAC Controller



### Review

DDC-V8044-D is a general-purpose IP controller with a LCD screen. It has 16 base points (8UI, 4DO, 4AO), 8 universal inputs (AI/DI), 4 digital outputs, 4 analog outputs, and supports web page function configuration. This controller is dedicated to new fan unit and temperature humidity control system, such as fan, pump, heat exchanger, humidifier, boiler, valve and so on. Combining with different extension modules, such as IO-V0800 (8DI) or IO-V6002 (6UI, 2DO), to come out with a well-designed proposal. It can also be applied as a Modbus Master, Modbus Bridge, BACnet Router gateway. When used as Modbus Master, it's able to connect up to 4 devices (Only DDC-8446, IO-0008-485, IO-0800-485 and IO-6020-485 are supported).

### Features

#### • Standard Open Protocol

Provided with two open communication protocols, BACnet MSTP/IP and Modbus RTU/TCP IP, which is able to easily monitor devices in real-time and communicate to upper layer software.

#### • High Precision Analog Channel Conversion

12-bits analog-to-digital converter (ADC) and programmable gain amplifier (PGA) provide high resolution, high precision analog input readings.

12-bits digital-to-analog converter (DAC) provide more accurate analog output readings.

#### • Plug - In Extensible Module

DDC-V8044-D is able to be plugged with different extension modules into the right-sided slot to extend its functionality. Available extension modules are IO-V0800, IO-V6002 till this moment.

#### • High Precision Analog Channel Conversion

Stability and reliability of operating system are improved with the software/hardware monitor (watchdog).

Come with built-in high precision real-time clock (back up lithium battery).

#### • Online Firmware Upgradable/Configurable

Functional modules are dedicated to energy and device management.

- ESP32 Processor
- Built-in Real-time Clock
- Alarm Handling
- RS485 X 1
- Flexible Functional Module Combination
- LCD Screen
- Mathematical and Logical Calculation
- Timer Program
- Login Password Protection
- Fully Programmable
- Flexible IO Points Combination
- Self Operational

#### Certifications

- CE • FCC • BTL

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## Device Specifications

Exterior	Dimensions	151x116x40mm
	Casing Material	UL 94 ABS
	Weight	500g
Electrical Ratings	Power Supply	24VAC +20%/-15% or 24VDC +/-5%
	Consumption	<10W
	Rate Current	1A at 24VAC/VDC
	Operating Temp	32 to 131 ° F (0 to 55 ° C)
	Storage Temp	-4 to 185 ° F (-20 to 85 ° C)
	Operating Humidity	0% to 95% relative humidity, without condensation
	Battery	Panasonic CR1220 Lithium Battery
Inputs & Outputs	8 Channels, 12-bits with PGA	
	Voltage	0 - 10V (±0.01V), 0 - 5V (± 0.01V)
	Current	4 - 20mA (±0.01mA) , 0 - 20mA (±0.01mA)
	Resistance	0 - 30K, 0 - 10K, 0 - 1.5K
	Thermistor Sensor	NTC: 10K TYPE 2/3, 3K, 20K (±0.1° C)
	True DI supported with jumper selection	
	4 Channels	
	Digital Output(DO)	Type Relay, SPST NO, 24VAC/DC, 1A
	4 Channels, 12-bits	
	Analog Output (AO)	Current 0 - 20mA, 4 - 20mA (Max load resistance, 800Ω)
	Voltage 0 - 10V	
Communication 1	RS485	1 Channels, EIA-485 Standard Two Wire, Half Duplex, 1 Load
	Baud Rate	9.6K, 19.2K, 38.4K, 76.8K, 115.2K bit/s
	Data Bits	8 bits/7 bits/6 bits/5 bits
	Parity	None, Even, Odd
	Supported Protocols	Modbus RTU, BACnet MSTP
Communication 2	Ethernet	10/100 Base-T
	Basic agreement	IP, TCP, UDP, ICMP, IGMP, FTP, HTTP
	Application Protocol	BACnet IP, ModbusTCP

## Optional extended IO module parameters

IO-V6002 Module		
Dimensions	120x80x40mm	
Casing Material	UL 94 ABS	
Weight	150g	
Power Supply	Internal Of The Controller	
Communication	Internal Of The Controller Protocol	
Universal Input	6 Channels, 12-bits with PGA	
	Voltage	0 - 10V (±0.01V), 0 - 5V (± 0.01V)
	Current	4 - 20mA (±0.1mA) ,0 - 20mA (±0.1mA)
	Resistance	0 - 30K ,0 - 10K ,0 - 1.5K
	Thermistor Sensor	NTC: 10K TYPE 2/3, 3K, 20K (±0.1°C)
True DI supported with jumper selection		
Digital Output	2 Channels	
	Type	Relay, SPST NO, 24VAC/DC, 1A
IO-V0800 Module		
Dimensions	120x80x40mm	
Casing Material	UL 94 ABS	
Weight	150g	
Power Supply	Internal Of The Controller	
Communication	Internal Of The Controller Protocol	
Digital Input	8 Channels	
	Type	Dry Contact, Isolated 3.7KV
	Limit	ON state < 2000Ω, OFF state > 20000Ω



IO-V6002 Module



IO-V0800 Module

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