



## FW-28

## 28-POINT IP CONTROLLER

### DESCRIPTION

The EasyIO FW-28 extends the FW series with all the proven technology of the range and increases the product reach with a larger I/O capability. The award winning FW series deliver high performance BMS functionality, with flexibility in design and installation with the Wi-Fi and dual Ethernet port capability. Dependent on your requirement, the FW product range can be used within a high performance EasyIO total system solution and utilises our best performance and overall solution cost approach. Or simply implemented in isolation in an IoT based demand, with the onboard MQTT capability. The FW series opens up the design process for our Partners and permits a far more flexible approach to delivering the modern demands of our buildings. The FW product range is often seen as a Fan Coil Unit controller, but it is far more diverse and flexible than that. It should be considered within an overall system design as an integral part of your total solution.

The FW-28 can be programmed and live commissioned via free CPT Tools and an integrated HTML5 dashboard. It has BACnet IP server/client, BACnet MSTP client (combination of BACnet MSTP client and BACnet IP client up to five devices total), newly introduced Modbus RTU support, to give us greater and increased functionality and two Ethernet ports for daisy chain connection wiring to the recommended standards. The FW series supports IT based standards and security protocols, and can be set up within a client's Wi-Fi network or set up as an isolated BMS Wi-Fi network as required. The FW-28 includes 12 UI (voltage and resistance), 4 AO (Voltage) and 8 DO with 24VAC Volt free contact relays. For floating control, the optional FR-02 module is available to add to the FW-28. The FW series products also feature Sox, TCom, P2P and BACnet communication protocols and MQTT.

### FEATURES

- BACnet, Modbus, MQTT, TCom & Sox protocol
- BACnet MSTP Client & BACnet IP Client up to 5 devices
- BACnet IP Server over WiFi or Ethernet
- Modbus RTU Master up to 5 devices
- EasyIO Peer to Peer Protocol, compatible with FS, FG+, FW & FT Series
- Built-in HTML5 web server and SSL certificate support
- RESTful API and other web services
- Built-in dashboard
- WiFi Access Point, Repeater or Client Mode
- 2 Ethernet ports act as a normal network switch and support Ethernet daisy chain
- Network Time Protocol (NTP) Client
- SMTP protocol (outgoing email) with SSL authentication
- SQL Lite up to 6,000 records

## TECHNICAL DATA

ITEM	DESCRIPTION
<b>Supply Voltage</b>	24Vac +/- 5% or 24Vdc +20% / -15%
<b>Power Consumption</b>	12VA
<b>Current Rating</b>	500mA at 24Vac / Vdc
<b>Storage temp</b>	-20°C to 85°C
<b>Operating temp. range</b>	0°C to 65°C
<b>Operating Humidity</b>	10% to 90% RH non-condensing
<b>Dimensions</b>	230 x 104 x 44 (mm)
<b>Material</b>	UL Approved
<b>Weight</b>	500g
<b>Main Processor</b>	Qualcomm 560 Mhz
<b>Processor</b>	ARM Cortex 48 Mhz
<b>Flash Memory</b>	32MB
<b>RAM</b>	128MB
<b>Ethernet</b>	2 x Ethernet Port, Non-bridged 10Base-T / 100Base-T interface, half or full duplex
<b>WLAN</b>	WiFi 802. 1 x b/g/n
<b>RS 485 Ports</b>	1 x RS485
<b>Real Time Clock (RTC)</b>	Real Time Clock with min. 5 days backup by superCAP
<b>Network Security Standard</b>	IPv6, DHCP Client, SSL, TLS 1.2, 802.1x, WPA Enterprise
<b>Database and API</b>	SQL database, MQTT and REST API
<b>Protocols Supported</b>	BACnet MSTP Client, BACnet IP Client / Server, Modbus RTU Master (Modbus mode will disable BACnet Client)
<b>Email Service</b>	SMTP Protocol ( outgoing email ) with SSL authentication
<b>Time Sync Protocol 2</b>	EINetwork Time Sync Protocol
<b>Modbus Baud Rate</b>	Speed : (9.6K, 19.2K, 38.4K, 57.6K) , Data Bits : 8 , Parity : Odd, Even, None
<b>BACnet Baud Rate</b>	Speed : 9.6K, 19.2K, 38.4K
<b>Universal Inputs</b>	16 x UI , 12-bit ADC with PGA 4 Modes Resistance mode : 500 – 500K Ohms (+/- 10 Ohms ) Voltage Mode : 0-10V ( +/- 0.05V ) Pulse count mode (max) : 20 Pulse per sec at 50% duty cycle ( 20Hz )
<b>Digital Mode</b>	Voltage Free Contact
<b>Digital Output</b>	8 x DO ( with LED Indicator ) Type : Relay Contacts , SPST NO , 48VA at 24v , 25 Ohm
<b>Analog Output</b>	4 x AO , 12-bit DAC Voltage mode : output range 0-10Vdc , Min Load Impedance 2,000 Ohm

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