FC-20

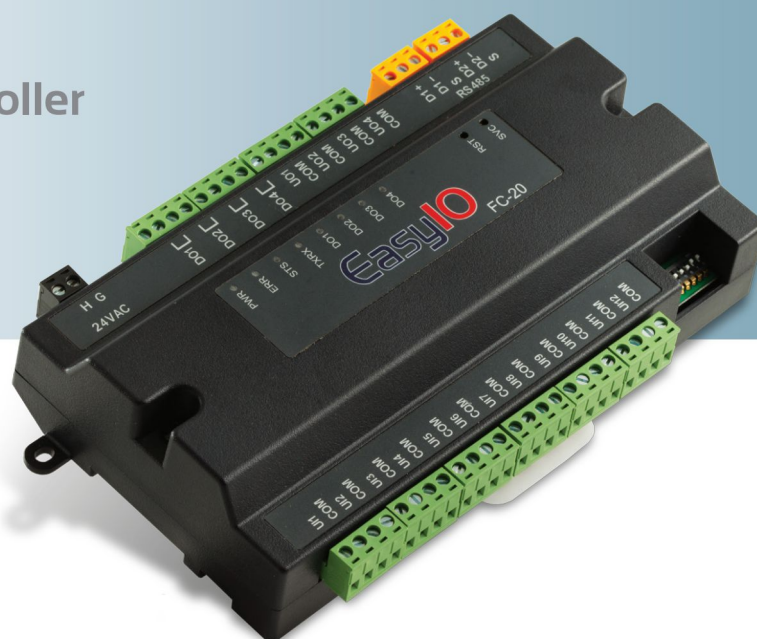## The EasyIO FC Series
FC 20 Standalone Controller

The EasyIO FC series is aimed at affordable 'canned' solutions for standalone applications, such as Roof Top Units, Fan Coils, AHU's, package units etc.

The FC20 is the first product in the FC range, designed to complement the 30P and FG series of awarding wining excellence. All of the FC series products are equipped with two RS485 ports and no Ethernet port, for Ethernet applications you can upscale to the 30P or FG series. All FC products are BACnet and Modbus Selectable and can be programmed via the CPT Tool from Online Tools Inc.

The FC 20 has 20 points of I/O and priced to meet most high volume applications and price points. The new FC-20 is a microprocessor based controller consisting of 20 inputs/outputs (I/O) to accommodate general and specific applications featuring BACnet MSTP and Modbus RTU communication protocols. 20 IOs include, 12 Universal Inputs (UI) supporting current, voltage and resistance based sensor, 4 electrically isolated Digital Outputs (DO) and 4 Analog Inputs supporting current and voltage outputs.

The FC-20 comes with one standard RS485 driver to support either BACnet MSTP or Modbus RTU communication (selection via hardware dip-switch). This communication port is also used as configuration/ setting and firmware upgrade.

The concept behind the FC series is that the FC-20 is configured can be used as an input/output controller only, or an Application Specific Application Controller. There is also a Real-time clock and a second RS485 (reserved for communicating with other Modbus devices such as Power Meters) are provided for such application.

Specifications

Model	EasyIO-FC-20
CPU	ARM Cortex-M3, 24MHz
Name	FC 20

Device Specifications

Mechanical	Dimensions	215 mm (L) x 125 mm (W) x 45 mm (H)	
	Weight	410gram	
Electrical	Power Supply	24VAC 50/60Hz ±5%, or 20VDC~34VDC	
	Consumption	<11VA	
	Current Rating	500mA at 24VAC/VDC	
	Operating Temp	0°C to 65°C (32° to 149°F)	
	Storage Temp	-20°C to 85°C (-4° to 185°F)	
	Operating Humidity	10% to 95% Relative Humidity, Non-condensing	
Input/Output	Universal Input	12 Channels, 12-Bit ADC (with PGA)	
		Voltage	0~10V (±0.01V)
		Current	4~20V (±0.01mA)
		Resistance	0~30K (±50 Ohm), 0~10K (±5 Ohm) 0~1K (±1 Ohm)
		Thermistor Sensor	NTC 10K Type 2/3, 3K, 20K (±0.1°C) RTD: 1K Balco, 1K Platinum (±0.2°C)
	Digital Output	4 Channels	
		Type	Relay, SPST NO, 24Vac/Vdc, 2A
	Analog Output	4 Channels, 12-bit DAC	
		Voltage	0~10V
		Current	4~20mA

Communication

Physical Interface 1 (Port 1)	EIA-485 Two Wire, Half Duplex	
	Modbus Baud Rate	Speed: 9.6K, 19.2K, 38.4K, 57.6K, 115.2K bit/s Data Bit: 8 bits, Parity: None, Even, Odd
	Bacnet Baud Rate	Speed: 9.6K, 19.2K, 38.4K, 57.6K, 76.8K bit/s Data Bit: 8 bits, Parity: None
	Protocol	Modbus RTU, BACnet MSTP
Physical Interface 2 (Port 2)	EIA-485 Two Wire, Half Duplex	
	Modbus Baud Rate	Speed: 9.6K, 19.2K, 38.4K, 57.6K, 115.2K bit/s Data Bit: 8 bits, Parity: None, Even, Odd
	Protocol	Modbus RTU (for Application Specific Application only)

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