EasyIO – FS Series

The controllers in the FS series are powerful network controllers with a 1.2 GHz Quad Core processor, 512 MB RAM, 8 GB Flash Memory, HTML5 graphics, a suite of applications, kits and multi-functional adapter widgets.

The FS-32 supports current IT network and security standards. The integrated VPN permits secure remote activation and is at the same time a unique property of the controller.

Communications standard protocols such as BACnet, Modbus, MQTT, Sox and TCOM are supported. The FS series includes an SQL database and RESTful API for additional data integration and multi-system interoperability. The on-board Flash RAM provides a way of storing recorded data.

Specifications

	EASYIO-FS-32	EASYIO-FS-20
Power supply	24V AC +/- 5% or 24V DC +20% / - 15%	
Power	18VA	
Power consumption	750 mA at 24VAC/VDC	500mA at 24VAC/VDC
Storage temperature	-20 to 85 °C (-4 to 185 °F)	
Operating temperature	0 to 65 °C (32 to 150 °F)	
Operating humidity	10% to 90% relative humidity (non-condensing)	
Dimensions	234 x 104 x 44 (mm)	198 x 104 x 44 (mm)
Material	Plastic in acc. with UL	
Weight	436g	
Main processor	1.2 GHz Quad Core ARM A7	
Processor	ARM Cortex A0 48 MHz	
Flash Memory	8 GB	
RAM	512 MB	
SD card holder	Yes, for data backup	
Ethernet	1 x Ethernet Port 10Mb/100Mb 10Base-T/ 100Base-T interface, half or full duplex	
RS 485 interfaces	2 x RS485 (connection 1 is BACnet, connection 2 is Modbus)	
Real-Time Clock (RTC)	Real-Time Clock with at least 5 days of backup using SuperCAP	
Power failure protection	SuperCap Apps Safety Backup	
Network security standard	IPv6, IPv4, DHCP Client, SSL, TLS 1.3, 802.1x VPN Client and Server	
Database and API	MQTT, SQL database and RESTful API	
Supported protocols	BACnet MS/TP Client/Server, BACnet IP Client/Server, Modbus RTU M/S, Modbus TCP M/S, MQTT, TCOM, SOX	
E-mail Service	SMTP protocol (outgoing e-mail) with SSL encryption	

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Time synchronization	Network Time Sync Protocol	
Modbus Baud Rate	Speed: (9.6K, 19.2k, 38.4K, 57.6K), Data Bits: 8, Parity: Odd, Even, None	
BACnet Baud Rate	Speed: 9.6K, 19.2k, 38.4K, 76.8K	
Approvals	CE, BTL, UL, FCC, RoHS, UKCA	
Engineering Tool	CPT	
Annual Maintenance	Included	

Inputs/Outputs	EASYIO-FS-32	EASYIO-FS-20
Universal inputs	16 x UI, 12-bit ADC with PGA Resistance: 500 - 500K Ohm (+/- 10 Ohm) Voltage: 0-10V (+/- 0.05V) Current: 0-20 mA DC (+/- 0.01 mA) Impedance <25 Ohm Pulse counter (max): 20 pulses per sec at 50% duty cycle (20 Hz) Digital: Voltage-free contact	12 x UI, 12-bit ADC with PGA Resistance: 500 - 500K Ohm (+/- 10 Ohm) voltage: 0-10V (+/- 0.05V) Current: 0-20 mA DC (+/- 0.01 mA) Impedance <25 Ohm Pulse counter (max): 20 pulses per sec at 50% duty cycle (20 Hz) Digital: Voltage-free contact
Digital outputs	8 x DO (with LED display)	2 x DO (with LED display)
	Type: Relay contacts, SPST NO, 48VA/2A at 24V	
Universal outputs	8 x UO, 12-bit DAC Voltage: Output range 0-10V DC, Minimum impedance 2000 Ohm. Maximum 5 mA power consumption Current: 0-20 mA, maximum impedance 800 Ohm. Digital: Maximum current 200 mA (for relays)	6 x UO, 12-bit DAC Voltage: Output range 0-10V DC Minimum impedance 2000 Ohm Maximum 5 mA power consumption Current: 0-20 mA, maximum impedance 800 Ohm digital: Maximum current 200 mA (for relays)
	The FS-32 has 16 universal inputs, 8 universal outputs and 8 digital relay outputs. All licenses for protocols, programming tools and software/firmware upgrades are included in the costs for the controller.	The FS-20 has 12 universal inputs, 6 universal outputs and 2 digital relay outputs. All licenses for protocols, programming tools and software/firmware upgrades are included in the costs for the controller.

Order number	I/O	UI	DI	DO	UO
EASYIO-FS-32	32	16		8	8
EASYIO-FS-20	20	12		2	6