



The FCS Flexible Control System is a sophisticated, high performance system controller that offers up to 128 gas channel configurations for monitoring toxic, combustible or refrigerant gases with versatile control functionality for non-hazardous, non-explosion rated, commercial and light industrial applications. The FCS is designed to accept inputs from digital and/or analog transmitters and/or Peripheral Devices (in various combinations), using Modbus® RTU RS-485 or 4-20 mA analog input.

The FCS Flexible Control system is available in two models: the FCS-M with Modbus® RTU RS-485 output or the FCS-B with BACnet® MS/TP RS-485 output for communicating with a Building Automation System (BAS).

Standard features include, 4 internal SPDT dry contact relays, a full colour LCD resistive touch screen with an LED panel indicating channel alarm status, relay status and fault conditions, an extensive menu system with password protection, enhanced logic control, priorities / zoning capabilities, a USB port for firmware upgrades, data logging and a door-mounted audible alarm.

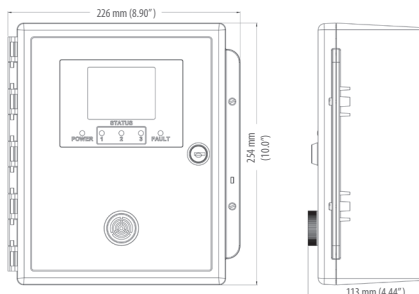
Optional value added features include, analog inputs and/or analog outputs, a top mounted strobe, a locking door, manual shut off switch, and a water tight audible alarm.

The FCS can be configured to comply with California Title-24 Building Energy Efficiency Standards. Specification details need to be given at time of order and additional settings can be implemented in the field as required.

KEY FEATURES

- » Up to 128 channels of gas readings
- » Graphic, full colour, resistive touch LCD display with LED indicators
- » Data logging
- » Four internal SPDT dry contact relays
- » 2 horn/strobe output drives
- » Up to 8 configurable internal analog inputs (optional) and/or analog outputs (optional)
- » Modbus® RTU RS-485 LAN protocol for communicating with transmitters and Peripheral Devices
- » Modbus® RTU RS-485 (FCS-M) or BACnet® MS/TP RS-485 (FCS-B) WAN output for communicating with a BAS or DDC
- » Supports 4-20 mA and Modbus® driven VFDs
- » Enhanced logic control, zoning and priorities capabilities
- » USB port for firmware upgrades
- » Configurable compliance with California Title-24 Building Energy Efficiency Standards
- » Standard water / dust tight, corrosion resistant enclosure (drip proof); with optional lockable door. IP54 rating with door mounted, water tight buzzer installed.
- » RoHS compliant circuit boards

TECHNICAL DRAWING



Note: Drawings above are shown with the optional door lock.

APPLICATIONS

- » Enclosed Parking Facilities
- » Distribution Warehouses
- » Indoor Recreation Facilities
- » Cold Storage / Freezer Rooms / Food Processing Plants
- » Chemical Storage Rooms
- » Greenhouse Production Facilities
- » ... and many more

TECHNICAL SPECIFICATIONS

MECHANICAL

Enclosure

ABS / Polycarbonate, IP54 rating with door mounted, water tight buzzer installed, copper coated interior to reduce RF interference

Weight

1.8 kg / 4 lbs

Size

254 x 226 x 113 mm
10.0 x 8.9 x 4.44 in

USER INTERFACE

Display

8.1 cm (3.2\") graphic, 1/4 VGA full colour resistive touch LCD screen with LED indicators for \"POWER\", \"STATUS 1, 2 and 3\" and \"FAULT\"

INPUT / OUTPUT

Input

- Modbus® RS-485 input
- 4-20 mA analog input (optional)

Output

- Modbus® RTU RS-485 WAN (model: FCS-M)
- BACnet® MS/TP WAN (model: FCS-B)
- Modbus® RTU RS-485 LAN
- Two drive outputs for strobe/horn e.g. RSH-24-R (0.5 A @ 24 VDC max)
- Field configurable Analog Output 4-20 mA or 0-10 volts (optional)

Relays

Four internal SPDT dry contact relays rated 5 A @ 240 VAC

Audible Alarm

- Standard loud, door mounted buzzer, rated 90 dB @ 30 cm (1 ft)
- Optional door mounted, water tight buzzer, rated 85 dB @ 60.96 cm (2 ft)

FCS System Controller – 128 Channels

TECHNICAL SPECIFICATIONS CONT

ELECTRICAL

Power Requirement	Line Voltage 90 - 240 VAC 50 - 60 Hz, 75 W
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Power Distribution	Total power available to Options, Remote and Peripheral Devices 65 W @ 24 VDC
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Wiring	- Line Voltage: VAC 3-conductor (Line, Neutral, Ground) shielded, stranded 16 - 18 AWG within conduit - LAN Modbus® RTU RS-485 4-conductor, 18 - 22 AWG twisted, shielded, stranded within conduit network wiring (daisy-chain) - WAN (output to BAS) Modbus® RTU (version 1.1b3) RS-485 or BACnet® MS/TP (version 1 rev 14) RS-485 4-conductor, 18 - 22 AWG twisted, shielded, stranded
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Fuses	Thermal, resetting
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ENVIRONMENTAL

Operating Temperature	-20°C to 40°C (-4°F to 104°F), lower temperature option available
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Humidity	15 - 90% RH non-condensing
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CERTIFICATION

Conforms to: CSA-C22.2 No. 205-12, UL508 (Edition 17) 2007

Conforms to: EMC Directive 2004/108/EC
EN 50270:2006, Type 1, EN61010

Conforms to: FCC. This device complies with Part 15 of the FCC Rules.

FCS-B, FCS-B-X models are Listed by BTL
(where X represents one or more factory installed Options)

PRODUCT CODES

FCS-M	128 channel Controller with Modbus® WAN output to BAS
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FCS-B	128 channel Controller with BACnet® WAN output to BAS
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OPTIONS (Factory installed) Add at the end of the "Part Number"

AI	4 internal 4-20 mA Analog Inputs
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2AI	8 internal 4-20 mA Analog Inputs
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AO	4 internal 4-20 mA Analog Outputs (field configurable 4-20 mA or 0-10 volts)
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2AO	8 internal Analog Outputs (field configurable 4-20 mA or 0-10 volts)
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AIAO	4 internal Analog Inputs and 4 internal Analog Outputs (field configurable 4-20 mA or 0-10 volts)
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DL	Enclosure door lock and keys
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IH	Internal heater for cold environment applications down to -40°C / -40°F
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L	Top mounted strobe, red lens, IP65 rated 6.1 cm dia x 13 cm H / 2.4 in dia x 5.2 in H)
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PRODUCT CODES

SW	Manual shutoff switch (meets B52 Code for refrigeration applications)
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WA	Door mounted, water tight audible alarm, rated 85 dB @ 60.96 cm (2 ft)
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REMOTE & PERIPHERAL DEVICES

CET-RDM	Remote Display Module, Modbus® RS-485
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CET-RDM-L2	Remote Display Module with side mounted strobe, Modbus® RS-485
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LNK-AI	Analog Input Peripheral Device, Modbus® RS-485 with four 4-20 mA inputs
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LNK-AO	Analog Output Peripheral Device, Modbus® RS-485 with four 4-20 mA outputs
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LNK-XT	Peripheral Device Network BUS Extender that extends the Modbus® RS-485 wire length
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RLY-4	Remote Relay Output, Modbus® RS-485 with four relays, rated 5A @ 240 volts each plus 2 horn/strobe output drives 5A @ 24 VDC max
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RLY-8	Remote Relay Output, Modbus® RS-485 with eight relays, rated 5A @ 240 volts each plus 2 horn/strobe output drives 5A @ 24 VDC max
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RPS-24VDC	Remote Power Supply, provides power to extend the network of remote and peripheral devices
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RSA-24V	Remote LED strobe light with audible, red lens, 8.9 cm / 3.5", comes with mounting bracket
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RSH-24V-A RSH-24V-B RSH-24V-R	Remote Horn/Strobe Combo, unmounted, 24 VAC/VDC, rated 99 dB @ 3 m (10 ft) (VAC), 97 dB @ 3 m (10 ft) (VDC) Choice of Amber, Blue or Red lens
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HORN 120V	Surface mount Industrial Horn, rated 78 to 103 dB @ 3 m (10 ft), includes mounting bracket, indoor use only
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HORN 120V-W	Conduit or surface mount Industrial Horn, rated 78 to 103 dB @ 3 m (10 ft), includes mounting bracket, NEMA 4X, indoor or outdoor use
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Maximums	60 analog inputs 60 analog outputs 20 remote display modules 6 network extenders
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ACCESSORIES

SCS-8000-SPG	Metal protective guard, large, 16 gauge, galvanized metal guards for controller
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NOTE: The maximum number of relays (internal + remote) the FCS can accommodate is 64. The 4 internal relays plus 2 strobe/horn drives plus 1 internal buzzer equals 7 relay connections if all are in use (default). The RLY-4 offers an additional 4 remote relays plus 2 strobe/horn drives and the RLY-8 offers 8 remote relays plus 4 strobe/horn drives. Depending on how many relays are being used and how many strobe/horns are connected will determine the maximum number of RLY-4 or RLY-8 remote relay devices you can connect.



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