



The FCS-8 is a sophisticated, high performance system controller that offers up to 8 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-8 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-8 is available in two models: the FCS-8-M with Modbus® RTU RS-485 output or the FCS-8-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, 2 dedicated horn/strobe drives, 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.

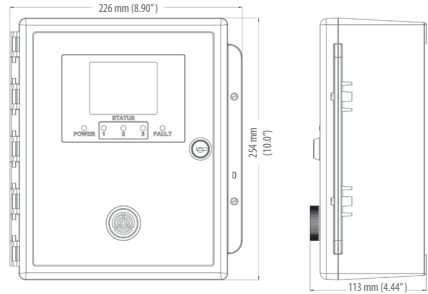
Optional value added features include, internal analog inputs and/or analog outputs, a top mounted strobe, a locking door, manual shut off switch, and a water tight audible alarm.

The FCS-8 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 8 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) or analog outputs (optional)
- » Modbus® RTU RS-485 LAN protocol for communicating with transmitters and Peripheral Devices
- » Modbus® RTU RS-485 (FCS-8-M) or BACnet® MS/TP RS-485 (FCS-8-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

- » Cold Storage / Freezer Rooms
- » Chiller Rooms
- » Indoor Recreation Facilities
- » Food Processing Plants
- » Wastewater Treatment Plants
- » Chemical Storage Rooms
- » Wineries, Distilleries and Breweries
- » Vehicle Maintenance Shops / Bus Barns
- » ... 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"
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#### 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



# GAS DETECTION CONTROLLERS DATASHEET

## FCS System Controller – 8 Channels

**FIXED SYSTEMS**

### TECHNICAL SPECIFICATIONS CON'T

<b>Audible Alarm</b>	- 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)
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### ELECTRICAL

<b>Power Requirement</b>	Line Voltage 90 - 240 VAC 50 - 60 Hz, 75 W
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<b>Power Distribution</b>	Total power available to Options, Remote and Peripheral Devices 65 W @ 24 VDC
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<b>Wiring</b>	- VAC (line voltage) 3-conductor shielded - LAN Modbus® RTU RS-485 4-conductor shielded - WAN (output to BAS only): 4-conductor, 16 AWG, stranded shielded Modbus RTU (version 1.1b3) RS-485 or BACnet MS/TP (version 1 rev 14) RS-485
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<b>Fuses</b>	Thermal, resetting
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### ENVIRONMENTAL

<b>Operating Temperature</b>	-20°C to 40°C (-4°F to 104°F), lower temperature option available
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<b>Humidity</b>	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

<b>FCS-8-M</b>	8 channel Controller with Modbus® WAN output to BAS
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<b>FCS-8-B</b>	8 channel Controller with BACnet® WAN output to BAS
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### OPTIONS (Factory installed) Add at the end of the "Part Number".

<b>AI</b>	4 internal 4-20 mA Analog Inputs
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<b>2AI</b>	8 internal 4-20 mA Analog Inputs
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<b>AO</b>	4 internal 4-20 mA Analog Outputs (field configurable 4-20 mA or 0-10 volts)
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<b>2AO</b>	8 internal Analog Outputs (field configurable 4-20 mA or 0-10 volts)
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<b>AIAO</b>	4 internal Analog Inputs and 4 internal Analog Outputs (field configurable 4-20 mA or 0-10 volts)
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<b>DL</b>	Enclosure door lock and keys
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### PRODUCT CODES

<b>IH</b>	Internal heater for cold environment applications down to -40°C / -40°F
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<b>L</b>	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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<b>SW</b>	Manual shutoff switch (meets B52 Code for refrigeration applications)
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<b>WA</b>	Door mounted, water tight audible alarm, rated 85 dB @ 60.96 cm (2 ft)
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### REMOTE & PERIPHERAL DEVICES

<b>CET-RDM</b>	Remote Display Module, Modbus® RS-485
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<b>CET-RDM-L2</b>	Remote Display Module with side mounted strobe, Modbus® RS-485
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<b>LNK-AO</b>	Analog Output Peripheral Device, Modbus® RS-485 with four 4-20 mA outputs
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<b>RLY-4</b>	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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<b>RLY-8</b>	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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<b>RSA-24V</b>	Remote LED strobe light with audible, red lens, 8.9 cm / 3.5", comes with mounting bracket
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<b>RSH-24V-A</b>	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
<b>RSH-24V-B</b>	
<b>RSH-24V-R</b>	

<b>HORN 120V</b>	Surface mount Industrial Horn, rated 78 to 103 dB @ 3 m (10 ft), includes mounting bracket, indoor use only
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<b>HORN 120V-W</b>	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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<b>Maximums</b>	8 analog inputs 8 analog outputs 12 relays (maximum 8 remote) 6 horn/strobe drives 4 remote display modules
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### ACCESSORIES

<b>SCS-8000-SPG</b>	Metal protective guard, large, 16 gauge, galvanized metal guards for controller
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<b>CET-SS</b>	Wall mounted adjustable outdoor sun shade, cover protects from sun, glare and inclement weather
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