

GAS DETECTION CONTROLLERS DATASHEET

FCS Flexible Control System



The FCS Flexible Control System is a sophisticated, high performance 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® RS-485 or 4-20 mA analog input. The FCS is available in two models: the FCS-M with Modbus® RS-485 output or the FCS-B with BACnet® MS/TP output for communicating with a Building Automation System (BAS).

Standard features include, 4 configurable SPDT dry contact relays with field configurable time delays and trigger levels, a full colour LCD resistive touch screen with LED panel indicating configurable channel alarm status, relay status and fault conditions, 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.

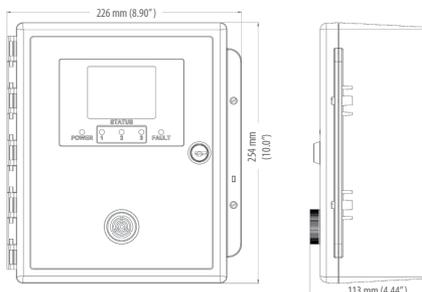
Optional value added features include, analog inputs and/or analog outputs, a top mounted strobe, a locking door and a water tight, door-mounted audible alarm. The FCS can be connected to several remote devices such as a remote strobe/horn combo, a Remote Display Module and several LNK Peripheral Devices.

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
- » Modbus® RS-485 LAN communications for controlling Peripherals
- » Modbus® RS-485 (FCS-M) or BACnet® MS/TP (FCS-B) WAN output for communicating with a BAS
- » Four SPDT dry contact relays
- » Configurable internal analog inputs and/or analog outputs (optional)
- » Graphic, full colour, resistive touch LCD display with LED indicators
- » Configurable to comply with California Title-24 Building Energy Efficiency Standards
- » USB port for firmware upgrades and data logging
- » RoHS compliant circuit boards
- » Standard water / dust tight, corrosion resistant enclosure (drip proof); with optional lockable door. IP54 rating with door mounted, water tight buzzer installed.

TECHNICAL DRAWING



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

APPLICATIONS

- » Large Parking Facilities
- » Indoor Recreation Facilities (ice arena, swimming pool)
- » Food Processing Plants
- » Cold Storage and Freezer Rooms
- » Chemical Storage Rooms
- » ... 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 inches

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® RS-485 WAN (model: FCS-M) - BACnet® MS/TP WAN (model: FCS-B) - 4-20 mA analog output (optional) - Modbus® RS-485 LAN - Two drive outputs for strobe/horn - e.g. RSH-24 (0.5 amp @ 24 V max)
Relay	Four internal SPDT dry contact relays rated 5 amps @ 240 VAC

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TECHNICAL SPECIFICATIONS CONT'

Audible Alarm	<ul style="list-style-type: none"> - 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

Power Requirement	90 - 240 VAC, 50 - 60 Hz, 75 W Line Voltage
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Power Distribution	Total power available to Remote & Peripheral Devices and Options 65 W @ 24 VDC
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Wiring	<ul style="list-style-type: none"> - VAC (line voltage) 3-conductor shielded - LAN Modbus® RS-485 4-conductor shielded - WAN (output to BAS only) 4-conductor shielded Modbus® RS-485 or optional BACnet® MS/TP module
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Fuses	Thermal, resetting
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ENVIRONMENTAL (sensor dependent)

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)



FCS shown with
Options DL and L



PRODUCT CODES

FCS-M	Modbus® WAN Output FCS Controller
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FCS-B	BACnet® WAN Output FCS Controller
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OPTIONS (Factory installed) Add at the end of the "Part Number" above.

AI	Four internal 4-20 mA Analog Inputs
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2AI	Eight internal 4-20 mA Analog Inputs
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AO	Four internal 4-20 mA Analog Outputs
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2AO	Eight internal Analog Outputs, 4-20 mA
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AIAO	Four internal Analog Inputs and four internal Analog Outputs, 4-20 mA
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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 24V, 7 cm dia x 12.7 cm H (2.75 in dia x 5 in H)
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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

FCS-RDM	Remote Display Module, 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
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RLY-8	Remote Relay Output, Modbus® RS-485 with eight relays, rated 5A @ 240 volts each
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RPS-24VDC	Remote Power Supply, provides power to extend the network of remote and peripheral devices
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RAA-90	Remote Audible Alarm, rated 90 dB at 30 cm (1 ft)
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RAA-90-W	Remote Audible Alarm water tight, rated 85 dB @ 60.96 cm (2 ft)
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RSH-24VDC	Remote Strobe and Horn Combo, red lense, mounted on enclosure, 24 VAC/VDC, rated 99 dB @ 3 m (10 ft) (VAC), 97 dB @ 3 m (10 ft) (VDC)
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RSH-24V-A	Remote Horn/Strobe Combo, red lense, mounted on enclosure, with built in timer and shut off switch, 24 VAC/VDC, rated 99 dB @ 3 m (10 ft) (VAC), 97 dB @ 3 m (10 ft) (VDC), choice of Amber, Blue or Red lense
RSH-24V-B	
RSH-24V-R	

RSH-TMR	Remote Horn/Strobe Combo, red lense, mounted on enclosure, with built in timer and shut off switch, 24 VAC/VDC, rated 99 dB @ 3 m (10 ft) (VAC), 97 dB @ 3 m (10 ft) (VDC)
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ACCESSORIES

SCS-8000-SPG	Metal protective guard, large, 16 gauge, galvanized metal guards for controller
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