



QAS - 200

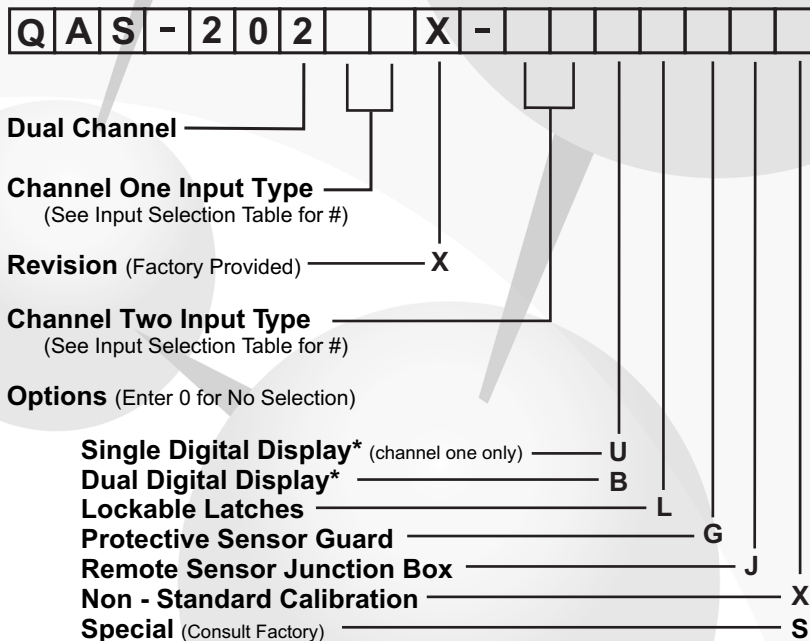
QAS - 200 SERIES DUAL CHANNEL CONTROLLERS

The QAS-200 Series Dual Channel Controller is a microprocessor based unit that monitors input signals and provides relay outputs for alarm and control. The units are switch selectable for either 4-20 mA DC input (standard) or broad spectrum solid state sensor inputs for hazardous gas detection. Solid state sensors can be either integrally or remote mounted to the 115 VAC powered electronics encased in a Nema 4X surface mount enclosure. Temperature compensation for solid state sensors is field selectable. Two DPDT relays are provided, which can be configured to operate in common to both channels or independently assigned. Relay time delays, both on and off, and fail safe operation are field configurable. LED status indicator lights provide alarm and sensor information for each channel. Optional digital LED display(s) provide indication of 4-20 mA DC inputs (only) in engineering units.



Optional Digital Displays shown

MODEL NUMBER ORDERING CODE



INPUT ONE AND TWO SELECTION TABLE

INPUT TYPE	#	STANDARD CALIBRATION	
		LOW ALARM	HI ALARM
4 to 20 mA DC ¹	01	7.2 mAmp (20%)	10.4 mAmp (40%)
Solid State Sensor ¹	02	No Calibration	
Carbon Monoxide ²	16	50 ppm in VE	100 ppm in VE
Combustibles ³	17	10% LEL	20% LEL
Ammonia	22	35 ppm	300 ppm
Freon R11	26	500 ppm	1000 ppm
Freon R12	27	500 ppm	1000 ppm
Freon R22	28	500 ppm	1000 ppm
Freon R134a	30	500 ppm	1000 ppm

- 1 - Sensor not included
- 2 - Measured in vehicle exhaust
- 3 - Calibrated for Propane

*NOTE: Digital Display(s) for 4 to 20 mA DC input only

PRINCIPLE OF OPERATION

The unit is configured using DIP switches. These switches configure channel input types, relay configurations, audible alarm and fail action. If the optional digital display(s) are ordered for 4-20 mA inputs, additional DIP switches are provided for configuring control action, adjusting the deadband and setpoints. Non-acceptable settings will be indicated by the LED fault indication light. Units are fully tested and calibrated as ordered when shipped from the factory. Input signal(s) are monitored by the microprocessor and compared to the relay actuation setpoints. If the setpoint is reached or exceeded then the appropriate relay is actuated. When the signal drops below the setpoint factory hysteresis of 12.5%, the relay is deactivated. If the signal drops below or rises above the preset limits then the built-in test will cause the audible alarm to sound (if selected), the relays to energize (if selected) and the visual fault LED to illuminate.

Calibration is recommended on an annual basis. If the channel input type is solid state gas sensor, apply calibration gas to sensor and wait for stable signal before toggling setpoint one and/or setpoint two as required. If the channel input type is 4-20 mA DC then calibration is performed by inserting test leads into meter jacks and adjusting the potentiometer to desired setpoint value. Once this is achieved, toggle setpoint one DIP switch to lock setting to the EEPROM. Repeat for setpoint two using setpoint two DIP switch.

SPECIFICATIONS

Input Power: 104 to 132 VAC, 47 to 63 Hz, 18 VA maximum
Fuse: 1A at 250 VAC, 5 x 20 mm (Buss GDP)
Enclosure Rating: NEMA / EEMAC Type 4, Type 4X, Type 12 and Type 13
Enclosure Materials: Moulded fibreglass polyester, grey colour

Dimensions: 165 mm x 165mm x 108 mm (6.5" x 6.5" x 4.30")
Temperature: -20° to 50° C (-4° to 122° F) operating
Humidity: 0 to 99% RH, non-condensing, operating and storage
Pressure: Atmospheric ± 10%
Input Types: 4 to 20 mA DC
 Solid State Semi-conductor Sensors for
 Carbon Monoxide, Combustibles, Ammonia and Freons
 R11, R12, R22 and R134a, (five to seven year life)

Response Time: Less than 30 seconds for 85% step change (solid state sensors)
Accuracy: ± 0.25% (4 to 20 mA DC input)
 (% of reading) ± 10% (solid state sensor)
Repeatability: ± 0.1% (4 to 20 mA DC input)
 ± 2.5% (solid state sensors)

LED Status Lights: Green - Channel Active (each input)
 Red - Fault (each input)
 Yellow - Warning Setpoint (each input)
 Red - Alarm Setpoint (each input)
 Green - Power On (common)

Approvals: CSA C22-2 - 205 NRTL/C UI464

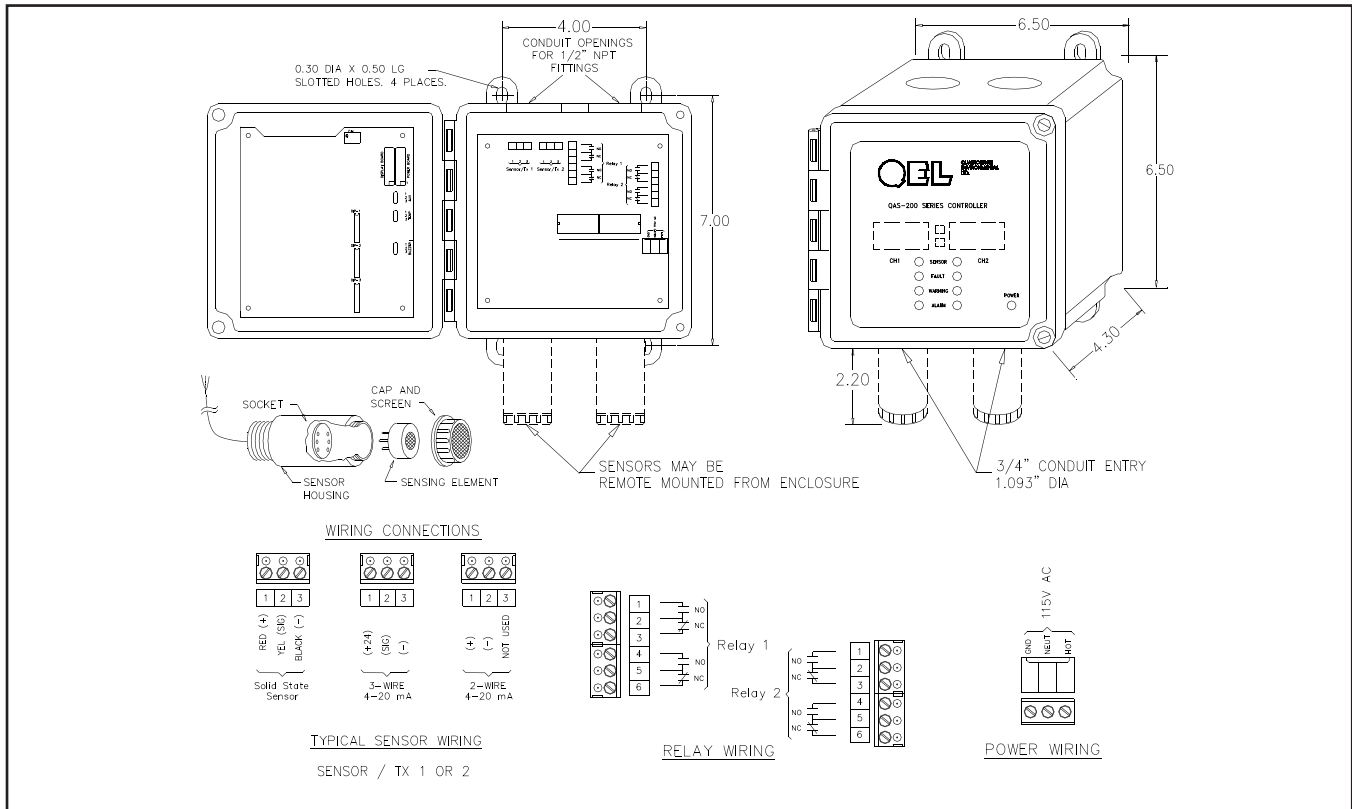
Audible Buzzer: 85 dB at 1 foot
Relay Outputs: Two DPDT rated 5A resistive at 250 VAC/30 VDC
Time Delays: 5/10/15 minutes delay on (make)
 10/15/25 minutes delay off (break)

LED Digital Displays: 4 digit red LED, field adjustable zero and span, -999 to 9999 (option)
 (4 to 20 mA DC inputs only)
Power Supply Output: 24 VDC (4 to 20 mA DC inputs)
 Constant current (solid state sensors)
Power Supply Rating: 300 mA maximum per channel

Field Configuration: Sensor input type
 Solid state sensor temp. compensation
 Common or independent relays
 Relay standard or fail-safe operation
 Relay time delays
 Relay fault operation
 Audible disable

Calibration: Digital to EEPROM through DIP switch operation
System Test: Through DIP switch selection tests microprocessor, lights, relays and audible buzzer

Built-In Test: Background process continuously tests sensor input including thermistor (if temperature compensation is enabled)



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Read and understand fully all instructions before using these products

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