

C2 Quad Protector Alarm Controller

Four Channel Alarm & Display Controller for Critical Monitoring Applications

- * Accepts up to four 4-20mA, bridge-type or wireless devices
- * Large LCD display shows values, bar-graph and trend data
- * Built-in support for GASMAX wireless gas monitors
- * Two 5A SPDT common relays for Alarm 1, Alarm 2, Horn or FAULT
- * Optional relay board with 6x SPDT for per-channel contacts
- * Optional four channel 4-20mA board for current loop output
- * Operates on either +24VDC or 117/240VAC 50/60Hz
- * ACK button silences HORN without affecting alarm relays
- * Relay voting logic reduces need for external hardware
- * Touch and magnetic keys for non-intrusive operation in XP areas
- * Pushbutton zero and span calibration for directly connected sensors
- * NEMA 4x approved for Class 1 Div 2 area without purge
- * MODBUS® slave port for easy interface from master devices
- * CSA certified to C22.2 No 152 for combustible gas detection and approved for Class 1, Div 2 Groups A, B, C, D

The C2 *Quad Protector* Display & Alarm Controller provides signal conditioning, display and alarm functions for up to four critical input variables.

Versatile

Designed to provide low-cost monitoring for up to four gas sensors, flame detectors or similar critical alarm monitors, the C2 *Protector* controller offers a highly-integrated, complete solution for detection of hazardous conditions. Input options include four 4-20mA analog inputs, four bridge-type direct sensor inputs for combustible or infrared sensors, or four channels of wireless (GASMAX ECx or GASMAX IIx) remote sensor monitoring. Additional “plug-in” options include six 5A SPDT discrete relays, quad 4-20mA outputs, light stacks and audible annunciators.

One popular application for the C2 *Quad Protector* controller is as a four channel combustible gas detector with four remote catalytic bead or infrared sensors. Alternatively, two combustible locations may be monitored with one sensor local and another remote.

Real-Time Display

A large graphic LCD screen displays input data as calibrated engineering units, bar-graphs or 30-minute trends. Three adjustable alarm levels per channel, combined with programmable relays with voting logic allows flexible control of beacons, horns and other warning devices. Highly visible red and yellow LEDs visually indicate alarm status at all times. An internal real-time clock and event log maintain a record of calibration and alarm events.



Available in NEMA 4X non-metallic, painted or stainless steel and NEMA 7 explosion proof wall mount

Digitally Connected, Wireless Enabled

An optional RS-485 MODBUS® slave port allows multiple C2 controllers to be multi-dropped on a single data highway. Built-in support for GDS Corp GASMAX wireless gas monitors makes it easy to install and manage a wireless system. The C2 Protector controller is also 100% compatible with the *Protector*HMI Visualization and Historian software that displays and records data from up to ten C1 *Protector* or C2 *Quad Protector* controllers.

Wireless Simplicity

The C2 *Quad Protector* can support up to four wireless gas monitors such as the GASMAX ECx battery powered toxic gas monitor. The C2 *Quad* offers an ideal solution for small, portable systems where wireless communications, low power consumption and ease of use are critical.

Reliability

The C2 *Protector* controller is CSA certified to CSA C22.2 No. 152 for combustibles and Class I, Division 2, Groups A, B, C, D for use in hazardous areas. An optional NEMA 7 enclosure allows use in Class I Div 1 areas. Up to 12 watts of 24 VDC power is available for auxiliary devices or transmitters.



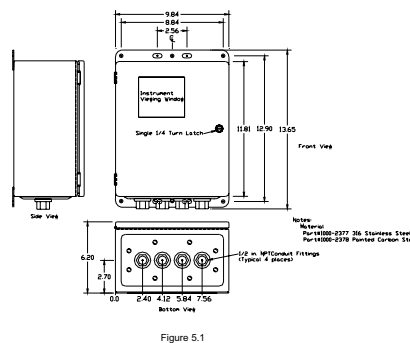
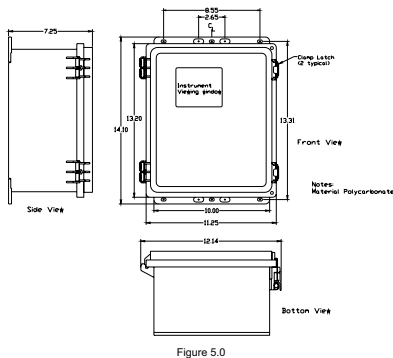
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C2 Quad Protector SPECIFICATIONS

Power Input	24VDC (12 Watt MAX) 85-240 VAC power supply included; up to 12W available for powering remote or local sensors
Display	Backlit 128x64 pixel LCD shows trend, bargraph and engineering units; flashing alarm LEDs indicate alarm status
Input	Wireless, four channel analog 4-20mA or four channel bridge-type direct sensor input ¹
MODBUS I/O	Optional slave mode RS-232 or RS-485 MODBUS half or full duplex port ²
Wireless I/O	900Mhz or 2.4Ghz wireless modem. Supports GDS Corp GAS-MAX ECx OR GASMAX Iix wireless sensors or dedicated wireless MODBUS interface to remote master
Relay Output	Two common output relays (SPDT 5A @ 30VDC / 240VAC resistive load) configurable for A1, A2, FAIL & HORN; Optional 6x (SPDT 5A @ 30VDC / 240VAC resistive load) relay board
Analog Output	Optional four channel 4-20mA current loop. Max loop R is 800 ohms with nominal 24VDC
Audible Output	Optional 100db alarm (NEMA 4X only)
Temp	-25°C to +50°C operating
Housing	NEMA 4X / IP66 wall-mount approved for Class 1 Div 2 Groups A, B, C, D NEMA 7 wall-mount approved for Class 1 Div 1 Grp B, C, D
Dimensions	NEMA 4X Non-metallic: 11.25" x 13.31" x 7.25" (w-h-d) NEMA 4X Painted or stainless: 9.84" x 13.65" x 6.2" NEMA 7: Width 13" x 14.25" x 6.25"
Approvals	CSA C22.2 No. 1010.1 & 152 for combustibles & ISA S82.02; UL 1604 / C22.2 No 213 (NEMA 4X = Div 2 Groups A, B, C, D; NEMA 7 = Div 1 Groups B, C, D) EN55011 & EN61000 (CE Mark)
Warranty	2 years from date of purchase on electronics

C2 Quad Protector Order Guide

C2 Quad / XX / G - H - I - J - K / L	
“XX”	INPUT TYPE 00 = No input (wireless only) 10 = Four 4-20mA analog input board ⁴ 20 = Four bridge-type direct sensor input board ¹ 22 = Two Bridge / two Analog
“G”	DISCRETE RELAY ³ 0 = Standard 2x 5A SPDT relays 1 = Add discrete relay board with six additional SPDT 5A relays
“H”	ANALOG OUTPUT 0 = None 1 = 4x 4-20mA analog output
“I”	MODBUS / WIRELESS ² 1 = RS-485 / RS-232 MODBUS serial slave interface 2 = 900MHz wireless radio (specify local or remote antenna) 3 = 2.4GHz wireless radio (specify local or remote antenna)
“J”	AUDIBLE ALARM 0 = None 1 = Add 100db piezo alarm 2 = Add 110db audible alarm
“K”	VISUAL ALARM 0 = Standard front panel LEDs 1 = Add Class I Division 2 red strobe (NEMA 4x only) 2 = Add non-rated strobe (specify color) (NEMA 4x only)
“L”	ENCLOSURE OPTIONS 1 = NEMA 4X Non-metallic 2 = NEMA 4X Painted Steel 3 = NEMA 4X Stainless Steel 4 = NEMA 7 XP



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NOTES

Note 1: Bridge-type direct sensor input board can be configured for 2x bridge and 2x 4-20mA

Note 2: Wireless interface replaces MODBUS slave port. MODBUS slave port and wireless radio modem cannot be used simultaneously

Note 3: Relay functions are software programmable for enhanced flexibility

Note 4: Analog input board can be converted to accept 0 - 2VDC in place of 4-20mA