Safeguard C16 Alarm Controller

SAFETY SHOES

SAFEGUARD C16 Alarm Controller

16 Channel Modbus® Master Display and Alarm Monitor / Controller

SafeGuard ALARM CONTROLLER

- Analog, or Modbus® Master allows input data via RS-485 data highway reduces install costs

- 8 channel display mode and boards allows for economical configuration for smaller systems

- Dual Modbus RS-485 serial ports for simultaneous master / slave operation. Optional phone modem

- 3 independent alarm levels per channel. *Relay Acknowledge* feature allows silencing of external audible devices during alarm

- Graphic LCD readout displays monitored data as trends, bar graphs and engineering units

- Standard A SPDT common alarm relays for HORN, HIGH, WARN & FAULT. Optional discretechannel alarm relays also available

- Alarm event printer interface, direct sensor inputs, 4-20mA outputs, discrete alarm relays and others supported via an I2C expansion bus

- *Cal Mode* offers pushbutton zero /span calibration for direct sensor interface applications. *Authorization Mode* allows locking of critical configuration variables

- Magnetic keypad available for nonintrusive operation in potentially hazardous locations

- NEMA 4X, Explosion-Proof, surface mount, panel and rack mount options available

SafeGuard C16 Alarm Controller is designed to provide simultaneous display and alarm functions for up to 16 input variables. A clear graphic LCD displays monitored data as trends, bar graphs and engineering units and nonvolatile memory retains all configuration data indefinitely. Three adjustable alarm levels are provided per channel and relay outputs allow control of beacons horns and other alarm events.

The SafeGuard is easy to configure and user friendly. Measurement ranges in engineering units, adjustable alarm set-points, dual serial interfaces and many other features combine to allow the SafeGuard satisfies the needs of many demanding applications. It is widely used for centralizing the display and alarm processing functions in critical multipoint monitoring applications. These include monitoring of ambient gas detection, rotating machinery, tank levels, flow, temperature and others.

Analog inputs may be accepted and conditioned via sensor specific analog input cards. An RS-485 Modbus slave port allows up to 128 SafeGuard 's to be multidropped onto a single data highway for interrogation by another Modbus master. SafeGuard's may also be cascaded by connecting one unit's master port to another's slave port. SafeGuard options such as discrete alarm relays per channel, 4-20mA I/O, direct sensor input conditioning and others are added by connecting appropriate 8 channel boards (2 required for more than 8 channels) to the economical I^2C expansion bus. Familiar "telephone style" cables and connectors interface to this bus. This method allows versatile system configuration of options satisfying the most unusual user applications.

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SPECIFICATIONS

ANALOG INPUTS (OPTIONAL)
12 bit 4-20mA into 100 ohms input impedance; includes +power supply terminals for each channel for routing power to 2 or 3 wire transmitters.

SERIAL PORTS
Master & Slave RS-485 half or full duplex ports equipped with Tx / Rx LED's. Protocol = Modbus® RTU.

DISCRETE ALARM RELAYS (OPTIONAL)
5 amp 30VDC or 250VAC resistive Form C

ANALOG OUTPUTS (OPTIONAL)
10 bit 4-20mA output. Max load 800 ohms with nominal 24VDC power supply

DISPLAY
128 x 240 pixel graphic LCD with backlight displays bar graphs, trends and engineering units. 52 discrete LED's indicate alarm status for 3 alarms per 16 channels and common relays

AMBIENT TEMPERATURE RANGE
-25 - 60 degrees C.

POWER SUPPLY
10 - 30VDC (24VDC nominal) 12 watts max

COMMON ALARM RELAYS
5 amp 30VDC or 250VAC resistive Form C

APPROVALS
CSA C22.2 No 1010.1 & 152 for combustibles & ISA S82.02
UL 1604 / C22.2 No 213 (Div 2 Groups A,B,C,D)
EN55011 & EN61000 (CE Mark)

HOUSING OPTIONS
NEMA 4X fiberglass wallmount (shown below)
1/2 length 19 inch rack / panel mount (shown below)
NEMA 7 explosion-proof wall mount (see instruction manual)

ORDERING INFORMATION

Part Number | *Description*
SGX-SM | *Surface mount (against flat surface)*
SGX-PM | *Panel mount rack (includes bezel/rack hardware)*
SGX-N4 | *Surface mount in NEMA 4X enclosure, Div. 2 (Fiberglass)*
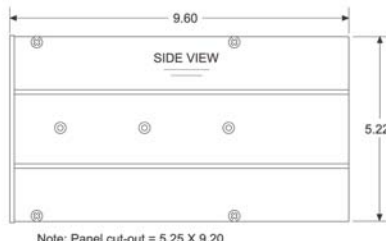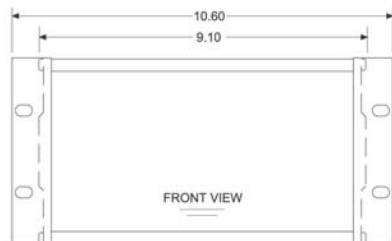
WALL MOUNT GAS & FIRE DETECTION OPTIONS
⬛ Safeguard Controller come standard from the factory with CSA approvals and Optional configurations, as denoted by the option chart below, are available.

Part Number | *Description*
SG10-0158 | *8 channel analog (4-20mA) input board c/w terminals*
SG10-0167 | *8 channel analog (4-20mA) output board*
SG10-0195 | *8 channel discrete relay (5A form C) output board*
SG10-0189 | *NEMA 4X expansion plate (adds up to 4 option positions)*
SG10-0172 | *85-240VAC universal input 150W 24VDC power supply*
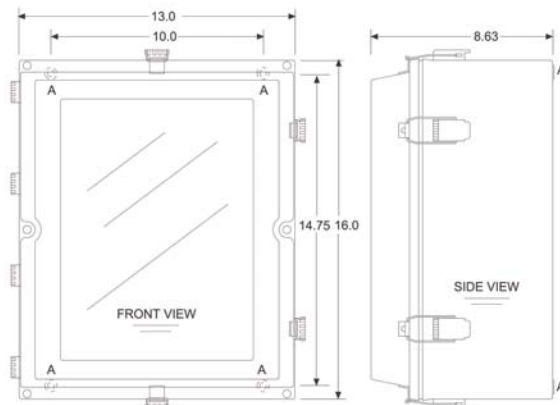SG10-0208 | *19" rack (supports 1 or 2 SGX-SM controllers)*

WALL MOUNT GAS & FIRE DETECTION OPTIONS
* dimension in inches

FRONT VIEW — 13.0 / 10.0 / 14.75 16.0
SIDE VIEW — 8.63

Note: 4 'A' mounting holes are .31 dia.

RACK / MOUNT PANEL
* 19" Rack spreader plates and panel mount bezal not shown

FRONT VIEW — 10.60 / 9.10
SIDE VIEW — 9.60 / 5.22

Note: Panel cut-out = 5.25 X 9.20