

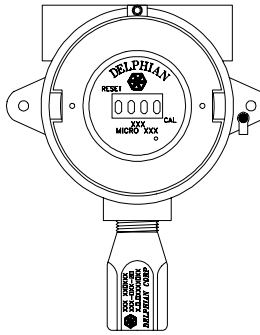
SafeCAL/SLAM/SafePRO

StandAlone System Combustible & Toxic Gases

Reference:

Quotation No:

Date:



Specification

Dimensions: 152mm x 203mm x 114mm (6"x8.3"x4.5")
Input Power: 24VDC +/-5% @ 330mA Max RFI & surge protected
Cable length: 5,000 feet, 12 AWG (1,525 metres)
Enclosure: 4" instrument, cast aluminium, glass window
Indicators: 4 digit alphanumeric LED display
%LEL/ppm alarms
E000 Incorrect configuration
E111 Zero calibration failure
E222 Span calibration failure
E333 Span < Zero
E444 Internal diagnostic
E555 Service warning

Controls: Magnetized calibrator which excites an integral hall effect sensor for calibration activation or system reset.

Inputs: Accepts any DELPHIAN sensor/transmitter

Outputs: StandAlone	4-20mA
calibration	1.7mA
fail	<1.0mA
Controller Based	1-5mA
Calibration	.46 mA
fail	<0.1mA

Load Impedence <300ohms

Protected against shorts to supply or ground

Cable requirements: Connects directly to Delphian transmitter

Electronics: Water & dust tight epoxy encapsulated for indoor and outdoor use

MTBF:	14.5 years	-40°C
	15 years	0°C
	7.3 years	60°C
	4.4 years	85°C

SLAM: Local Alarm Drivers
4 relays (FAIL, LO, HI, HIHI) (LOLO for O2 only)
Contacts form C (SPDT)
Contact rating 2 amps @ 24VDC
Wiring size 14 AWG maximum

Environmental: -40°C to +85°C (-40°F to 185°F)

Hazardous location rating: Depending on gas & sensor type
Class 1, Group A, B, C, D environments by FMRC.
Class 1, Groups B, C, D environments by CSA.

SafePRO: Software, MS-DOS 3.3 & higher compatible
Configure & interrogate SafeCAL memory

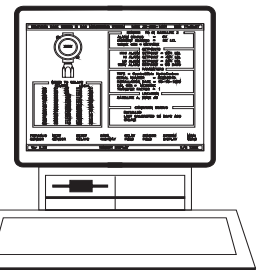
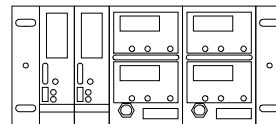
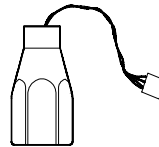
Warranty: 2 years

Assembly Design

- Microcontroller based stand-alone gas detection system using digital technology to monitor sensor operation, store calibration parameters, calibrate and generate alarm information.
- C.A.T. (Computer Aided Testing) quality controlled.
- Modular component design concept.
- Digital Hall effect sensors provide operator control of calibration and system reset sequences. (DELPHIAN patent 4,476,706).
- The microcontroller is encapsulated and contains the system memory, watchdog timer and analog circuitry.
- The sensor is connected to an epoxy encapsulated electronic transmitter with its constant temperature circuit.
- The optional encapsulated SLAM fits between the transmitter and SafeCAL modules. Provides LO, HI, HIHI or LOLO and FAIL relays.
- Encapsulation guarantees reliability without concern for moisture and dirt.
- SafeCAL is designed for 3 wire connections (+, - and signal).
- RFI and surge protection circuits are built in.
- SafePRO configuration kit can be installed on any IBM PC or compatible using MS-DOS version 3.3 or higher.
- SafePRO enables configuration changes of a SafeCAL. Changes can be implemented for the sensor type, scale, transfer factor, calibration gas/concentration, output, alarm setpoints, relay functions

Construction

- Stand-alone. Modular construction for SafeCAL, SLAM and transmitter components.
- The SLAM module can be mounted separately in its own conduit box.
- The sensor housing is of either aluminium or stainless steel design with a flame arrestor, both conforming to Class I, Division 1 Groups A, B, C, D.
- Sensor and electronic components are assembled via gold-plated "quick" connectors.
- Electronics are shock and water proof and a lightning arrestor is available for use in applications where high-energy transient suppression is necessary.
- The sensor and electronics are available in explosion-proof housings which are FMRC and CSA rated.
- The sensor can be mounted externally on a duct using a reclamation adaptor or at a remote location using a ported adaptor.
- Calibration is performed by attaching a gas bottle with regulator to either the ported adaptor for remotely installed sensors or to the calibration adaptor for sensors installed within easy access to the operator.
- Dust cover and/or a foam splash/wind guard is available for severe environmental and operational conditions.



Delphian's SafeCAL system connects with all Delphian combustible & toxic gas sensor/transmitters, Flexiracks, SAGE systems and PLC/DCS systems



DELPHIAN CORPORATION

220 Pegasus Avenue, Northvale, NJ 07647 U.S.A.
Tel: 201-767-7300 Fax: 201-767-1741

NOTICE: The information in this document is subject to change without notice. It is provided in good faith but without warranty of any kind. It could include technical inaccuracies or typographical errors.