ASHE CONTROLS PVT LTD
an ISO 9001:2015 certified company

INTERNATIONAL SALES
Sparktech AUTOMATION

CO-SAFE

Safe-Series Gas Monitoring Unit



RoHS Compliant

MAKE IN INDIA

2 YEAR WARRANTY

Overview

The CO-SAFE is a field mounted instrument used to monitor the level of Carbon Monoxide in the atmosphere in it's vicinity in a plant. The microcontroller based standalone system can be operated independently, or can also be interfaced to a PLC or DCS through a RS485 communication port on Modbus RTU protocol.

The instrument uses a precision two/three-wire Honeywell Senso Point CO Gas Sensor which monitors the levels of Carbon Monoxide continuously and displays the gas level on a large digital read-out while providing audio/visual alarms when the set values are exceeded. A Key-lock switch on the front panel allows the operator to retain exclusive operation or settings rights to the holder of the key for operation of the instrument.

The CO-SAFE has a large, central 4-digit bright red seven-segment LED Display which indicates the CO Gas level in PPM units. This Display is also used to configure the instrument, set the measured range of CO Gas, set the required Alarm Levels, Hysteresis levels, Alarm Types and Alarm Delays, besides additional functions like Calibration, Retransmission, Relay enabling or disabling, setting the Password, performing self-diagnostics, etc.

The instrument offers four Relay controls for the CO Gas level with three Alarm levels and one Fault output to monitor Sensor Fault/Inhibit output. Besides, the CO-SAFE provides analog signal retransmission for the Gas level proportional to the input signal. Data information of the Gas level is also available on a RS485 communication port on Modbus RTU protocol.

The instrument has an internal Real-Time Clock which enables Data Logging of the gas levels over an extended period and allows the operator to store the gas values monitored during that time. This data can be transmitted over Modbus RTU to a PC or a PLC system, or else it may be downloaded through a SD Card provided for this purpose.

A bright and flashing red Beacon and an electronic hooter provide the operator with instant audio-visual feedback of an alarm condition. The instrument offers complete annunciation features which allow the operator to first acknowledge an alarm and then reset the Beacon and Hooter when the gas level returns to within acceptable levels.

The CO-SAFE has a five-key tactile Keyboard interface on the front panel, which allows the user to set and monitor the various Gas parameters, Acknowledge and Reset Alarms, etc. The configured system menu is stored in a NVRAM which protects the data against power fluctuations and outages.

Specifications

Model	ASHE CO-SAFE
Type	Micro-controller based, CO Gas Level Indicator and Monitor with data logging and communication.
Input Sensor	Honeywell SensePoint ® Two/three wire CO gas sensor
Digital Indication	Large four-digit seven-segment red LED display.
LED Indications	For Alarm status.
Operator interface	Five-key Tactile keyboard
Security	Key lock switch on front panel.
Control outputs	Four control relay outputs – three for alarms and one for fault/inhibit.
Contact Rating	10 Ampere @ 230 VAC for non-inductive loads.
Alarm Annunciation	Acknowledge Key on front panel.
Analog Output	4 to 20 mA DC retransmission signal.
Load Capacity	600 ohms
Settings	Settings for Zero, Span, Decimal-point, Real-time Clock, Alarm levels (0000-9999), On-time delay of relays/alarms, Hysteresis, Enable/ Disable of individual alarms/relays, Rise/ Fall of individual alarms/relays, Individual relay mode selection, 4-20mA retransmission count settings and RS-485 Slave ID selection.
Comm Port	RS485 on Modbus RTU protocol (Optional).
Features	Relay rise/fall, Relay disable/ enable, Latching/ non latching, Acknowledgeable/ Non-Acknowledgeable alarms.
Power Supply	90 to 270 VAC, 50/60 Hz.
Data Port	SD Card
Enclosure Material	MS fabricated.
Dimensions	300 x 250 x 155 mm (H x W x D).
LED Beacon	ABS Housing, Red colour
Audio Hooter	Electronic
Amb Temperature	0 to 55 Deg C.
Rel. Humidity	Up to 90% Non-condensing.

Sensor

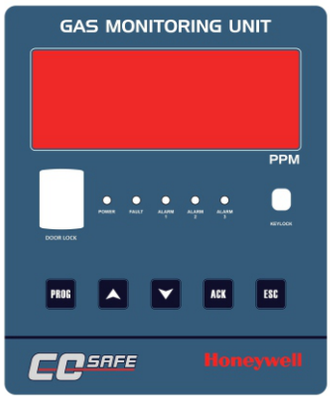
Honeywell Sensor	BAS98ATEX2157X
Certification	Ex II 2 G D EExd ia IIC T4 T135 Deg C T_{amb} = 55°C to +65°C

Features

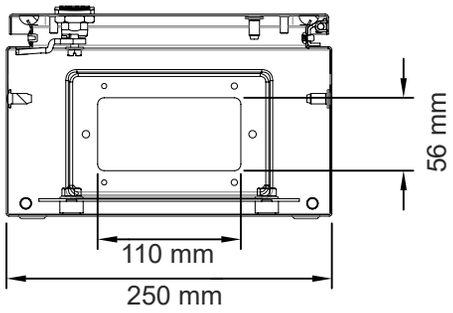
- Microcontroller based design
- Precision Honeywell Sense Point Gas Sensor
- Large and bright four-digit LED seven-segment display
- Four Relay control outputs : three alarm levels and one Sensor fault
- LED indications for Battery power, Alarms and Sensor Fault/Inhibit
- Loud audio Hooter alarm and bright LED Beacon flasher
- Analog 4 to 20 mA retransmission output
- Data Logging on SD Card
- High accuracy and linearity to Sensor signal
- Configurable range for various units (Percentage or PPM)
- Universal AC power supply 90 to 270 VAC, 50/60 Hz
- Field-mounting installation in certified IP65 execution
- Rugged, industrial grade enclosure
- RS485 communication on Modbus RTU protocol
- Key lock switch for accessing main menu by authorized users
- User-Password for Gas alarm settings

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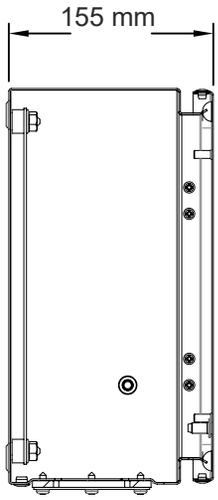
Dimensional Diagram



FRONT VIEW



BOTTOM VIEW



SIDE VIEW

How To Order

	GAS MONITORING UNIT	**CO-SAFE**	
	CONFIGURATION AND ADD-ON OPTIONS		
1	**CONTROL RELAY OUTPUTS**		
▸	Two Relay	2	
▸	Three Relay	3	
▸	Four Relays	4	
2	**RETRANSMISSION / COMMUNICATION**		
▸	Retransmission of 4 to 20 mA DC		R
▸	RS 485 on Modbus RTU Protocol		M
▸	No Retransmission required		X

Our Other Products


FLOW TOTALIZER


SIGNAL ISOLATORS & TRANSDUCERS


TEMPERATURE SCANNER


FLAMEPROOF INSTRUMENTS


STATIC POWER SWITCHES

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INTERNATIONAL SALES
Sparktech AUTOMATION

Designed and Manufactured by :

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