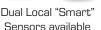# RC SYSTEMS

Solutions for Hazardous Gas Detection
ST-44 SenseNet Gas Monitor
QVGA Color Display; Standard Ethernet & Analog

FEATURES:

- ST-44 is a "universal" monitor accepting interchangeable catalytic, infrared, electrochemical and PID sensors into the same sensor head

- "Gen2" Smart sensor technology stores all parameters such as gas type, calibration, range, alarms and "born on date" in each sensor module

- All sensor signal conditioning is performed on the sensor module

- Dual Sensors allow detection of 2 toxics or toxic/LEL in same location

- QVGA color TFT display shows engineering units and monitored data graphically as a bar graph and 30-minute trend

- Display changes color to indicate alarm status and Cal In Progress

- Standard Ethernet RJ45=embedded webpage for configuration and HMI and Modbus TCP master/slave

- Web Server offers remote and offsite viewing capabilities

- 3 alarm levels, gas range and other parameters are stored in each ST-44's Smart Sensor module and may be edited by the user

- Alarm conditions indicated by background color and communication status by 2 front panel LEDs

- Explosion-Proof model certified for CL 1 Div 1 locations

- Available either in rugged cast aluminum or economical UL-94 poly enclosures

- Magnetic keypad allows "one man" sensor calibration in hazardous areas without area declassification

- Password protected security levels prevent unauthorized configuration

Dual Local "Smart" Sensors available

Non-metallic Poly "PY model with Splash Guard and Cal Port

Diffusion "Smart" Sensor available with Splash Guard and Cal Port

The state-of-the art ST-44 SenseNet fixed gas detector has standard features including, a bright QVGA color display, Ethernet (embedded web pages and Modbus TCP), along with dual sensor capability and intuitive user interface. Web pages for configuration and other HMI are served up through the standard Ethernet connection. This makes possible the transmission of data over existing Ethernet wiring to computers, tablets, smart phones and even our ST-72 64 channel controller. An RS-485/Relays option board provides alarm relays and dual Modbus ports configurable for master/slave operation. The ports may communicate to remotely mounted sensors or provide redundant serial interface to a Modbus master.

Operator interface is via the magnetic keypad so it is never necessary to open the enclosure to calibrate or configure an ST-44. ST-44's support single or dual gas configurations and offer an optional 15 feet sensor separation kit to make it easier to detect lighter and heavier than air gases.

The Dual Sensor capability allows monitoring of 2 different toxic gases or 1 toxic and 1 combustible gas with each ST-44.

On screen status messaging indicate system conditions in vivid color. No potentiometer or jumper settings are required. A "CAL MODE" provides on-screen prompts when to apply Zero/Span gases during calibrations. A "Sensor Life" bar-graph updates after each SPAN calibration indicating when to install a new sensor. The 30-minute trend screen displays rate of change of calibrations and gas exposures. Modular design affords efficient installation and plug in sensors allow changing target gases even after installation.

ST-44 SenseNet is a user friendly and easy to install complete GAS DETECTION SOLUTION.

SPECIFICATIONS

ANALOG OUTPUTS
ST-44 monitors have 3-wire 4-20mA current source output with nominal 24VDC power supply

10-0388 Relays / RS-485 Modbus® (Optional)
Relays are Form C 5AMP @ 30VDC and 240VAC RESISTIVE
RS-485 is 2-wire Modbus® RTU

NRTL CSA APPROVALS (File # 219995)
ST-44 with 10-0247 is Division 1 and 2 Group A,B,C,D. Suitable for explosion proof installations

DISPLAY
320 x 240 pixel QVGA color LCD displays 30-minute trend, bar-graph and large engineering units, Backlight

ACCURACY
±1% of full scale

AMBIENT TEMPERATURE RANGE
-40 – 60 degrees C

TEMPERATURE DRIFT
Less than .1% per degree C over ambient temperature range

POWER SUPPLY
10 - 30 VDC at 10 Watts max

HOUSING
Instrument enclosure suitable for Class 1, Division 1 and 2, Group A,B,C,D

ORDERING INFORMATION

ST-44 3 Wire Order Guide

ST44-A-B -C- D

"A"	*Enclosure Type
	AL1= Aluminum Explosion Proof
	AL2= Aluminum Explosion Proof w/Splash Guard
	AL3= Aluminum Explosion Proof w/Dual Local Sensors
	AL4= Aluminum Explosion Proof w/Dual Local Sensors and Splash Guards
	AL5= Aluminum Ordinary Location
	AL6= Aluminum Ordinary Location w/Splash Guard
	AL7= Aluminum Ordinary Location w/Dual Local Sensors
	AL8= Aluminum Ordinary Location w/Dual Local Sensors and Splash Guards
	SS1= Stainless Steel Explosion Proof
	SS2= Stainless Steel Explosion Proof w/Splash Guard
	SS3= Stainless Steel Explosion Proof w/Dual Local Sensors
	SS4= Stainless Steel Explosion Proof w/Dual Local Sensors and Splash Guards
	SS5= Stainless Steel Ordinary Location
	SS6= Stainless Steel Ordinary Location w/Splash Guard
	SS7= Stainless Steel Ordinary Location w/Dual Local Sensors
	SS8= Stainless Steel Ordinary Location w/Dual Local Sensors and Splash Guards
	PY1= Polycarbonate with Splash Guard
"B"	Channel 1 Sensor Pick from full List 00= None
"C"	Channel 2 Sensor Pick from EC list and 4-20mA 00= None
"D"	Output Options 0= None 1= 10-0234 Modbus RTU + 4 Relays

*Reactive gases compatible with AL5, AL6, AL7, AL8, SS5, SS6, SS7, SS8 and PY1

Available Sensor Types

Electrochemical		PID	
AM	*Ammonia	PI1	Benzene (10.0eV)
AR	Arsine	PI2	Specify Gas/Range (10.6eV)
CX	Carbon Monoxide		
CH	*Chlorine	**Catalytic Bead**	
CD	*Chlorine Dioxide	CB1	Methane LEL
EO	Ethylene Oxide	CB2	Propane LEL
FL	*Flourine	CB3	Hydrogen LEL
HY	Hydrogen	CB4	LEL Specify Gas
HC	*Hydrogen Chloride	**Smart IR (Series 4)**	
HN	*Hydrogen Cyanide	IR3	Carbon Dioxide 0-5%
HF	*Hydrogen Fluoride	IR1	Methane LEL
HS	Hydrogen Sulfide	IR2	Propane LEL
NO	Nitric Oxide	**Analog Input**	
ND	Nitrogen Dioxide	MA	4-20mA Input
OX	Oxygen		
OZ	*Ozone		
SD	Sulfur Dioxide		

*Reactive gases require use of sensor head without stainless steel flame arrestor

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