SMART 3-R

Refrigerant Gas Detector

Versatile gas detector for safe areas detecting flammable, toxic, and refrigerant gases with visual/audible alerts and multiple output options.

The SMART 3-R is designed for non-classified and safe areas, providing reliable detection of flammable, toxic, and refrigerant gases. It features built-in visual and audible alerts, analog 4-20 mA, digital RS485, and relay outputs, along with a multi-color LED status indicator and an internal buzzer for enhanced monitoring and safety. A handheld communicator allows for easy testing and calibration, and remote sensor capabilities add flexibility to its operation.

FEATURES

Ideal for machine rooms & light industry
- Detects explosive, toxic and refrigerant gases in safe (unclassified) areas
- RS485 communication and a 3-relay board
- Multicolour LED ring and internal buzzer provide clear alarms, so you can act quickly to secure your site
- Controlled and calibrated via a keypad with STS/CKD+ display
- Simple sensor replacement
- Continuous self-diagnostics

Customisable
- Wide range of sensors and gas detection options to suit your needs
- Version with optional remote head
- Data logger exportable with STS/CKD-OLED or STS/CSW+
- On request 90-240 Vac but without 4-20 mA output
- Can be supplied in a version with an additional remote head and a 5m 6-pole cable included

Fully compliant
- SMART 3-R is fully compliant with the following standards and regulations:
- EN 378-3
- EN 14624
- EN 50676
- IEC 60335-2-40
- Annex II
- ISO 5149-3
- F-Gas Regulation

MPS™ (Molecular Property Spectrometer) sensor technology
- TrueLEL™ multi-gas accuracy
- Free from risk of sensor poisoning
- No calibration or scheduled maintenance is needed
- Hydrogen ready

APPLICATIONS

- Machine Rooms
- Laboratories
- Food & Beverage Refrigeration Systems
- Pharmaceutical Storage Systems
- Battery Energy Storage Systems (BESS)
- Lithium Battery Storage and Warehouses
- Electric Vehicle Parking and Charging

GASES & RANGES

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GAS	SENSOR	RANGE
Flammable Gases	MPS	0-100% LEL
Hydrogen (H_2)	MPS	0-100% LEL
Methane (CH_4)	Catalytic, Infrared, MPS	0-100% LEL
LPG	Catalytic	0-100% LEL
Propane (C_3H_8)	Catalytic Infrared	0-100% LEL
Butane (C_4H_{10})	Catalytic, Infrared	0-100% LEL
Petrol Vapour	Catalytic	0-100% LEL
Oxygen (O_2)	Electrochemical	0-25% Vol.
Carbon monoxide (CO)	Electrochemical	0-500 ppm
Ammonia (NH_3)	Electrochemical	0-100 ppm, 0-200 ppm, 0-1000 ppm
Chlorine (Cl_2)	Electrochemical	0-20 ppm
Hydrogen sulphide (H_2S)	Electrochemical	0-50 ppm
Sulphur Dioxide (SO_2)	Electrochemical	0-20 ppm
Nitrogen dioxide (NO	Electrochemical	0-20 ppm
Carbon dioxide ($CO^{2)}$	Electrochemical	0-2% Vol., 0-5% Vol., 0-30% Vol., 0-5000ppm
Sulphur Hexafluoride ($SF^{6)}$	Infrared	0-2000ppm
R152a	Infrared	0-100% LEL
R454b	Infrared	0-100% LEL
R32	Infrared	0-100% LEL, 0-5000ppm, 0-2000ppm
R1234yf	Infrared	0-100% LEL, 0-5000ppm, 0-2000ppm
R1234ze	Infrared	0-100% LEL, 0-5000ppm, 0-2000ppm
R134a	Infrared	0-5000ppm, 0-2000ppm
R404a	Infrared	0-5000ppm, 0-2000ppm
R407c	Infrared	0-5000ppm
R410a	Infrared	0-5000ppm, 0-2000ppm
R1233Zd	Infrared	0-5000ppm
R125	Infrared	0-2000ppm
R407a	Infrared	0-2000ppm
R407f	Infrared	0-2000ppm
R449a	Infrared	0-2000ppm
R507a	Infrared	0-2000ppm
R417a	Infrared	0-2000ppm
R448	Infrared	0-2000ppm

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DETECTING GAS. **SAVING LIVES.**

SPECIFICATIONS

DEVICE SPECIFICATIONS				
	CATALYTIC SENSOR	**INFRARED SENSOR**	**ELECTROCHEMICAL SENSOR**	**MPS**
SIZE	130 x 130 x 52 mm			
WEIGHT	450g			
ENCLOSURE MATERIAL	Polycarbonate			
INGRESS PROTECTION	IP42			
CABLE GLAND ENTRIES	2 x M20 Optional 6x M16			
OPERATING VOLTAGE	12-24 Vdc or 90-240Vac			
POWER	73 mA at 24V DC	110 mA at 24V DC	60 mA at 24V DC	80 mA at 24V DC
OUTPUT	3 relays RS-485 Modbus 4-20 mA Analog (DC version)			
INDICATORS	Sounder: 63dB at 1 meter Light: 4 Smart LED			
OPERATING TEMPERATURE	-40°C to +60°C (DC version) -40°C to +50°C (AC version)	-40°C to +60°C (DC version) -10°C to +50°C (DC ppm refrigerant version) -40°C to +50°C (AC version) -10°C to +50°C (AC ppm refrigerant version)	-30°C / +50°C	-40°C to +70°C(DC version) -40°C to +50°C (AC version)
HUMIDITY	0 / 95% RH non condensing		15 / 90% RH non condensing	0 / 95% RH non condensing
EMC COMPLIANCE	EN 61000-6-3:2007 + A1:201 EN 50270:2015			
ELECTRICAL SAFETY	EN 61010-1: 2010 / A1: 2019 (AC version)			
REFRIGERATION STANDARDS COMPLIANCE	EN 378-3 EN 14624 EN 50676 IEC 60335-2-40 Annex LL ISO 5149-3 F-Gas Regulation			
WARRANTY	2 years on electronics 1 year on sensor			

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