

SMART 3-R

Refridgerent Sensor



- Self-diagnostic procedures to control the hardware and sensor correct operation.
- Zero follower to maintain the detector zero point, from possible drifts caused by thermal or physical variations of the transducer.
- Digital filter, employed in the digital analysis of the analog values sampled, this filter corrects temporary phenomena from causing reading errors or false alarms.
- Hysteresis cycle: applied to the outputs associated to the alarm thresholds, it prevents continuous output switching when close to the threshold values.
- The SMART3-R detectors offer a fast and failsafe installation as well as an easy maintenance and calibration routine via the handheld keypad STS/CKD.
- The SMART3-R gas detectors run with a power supply at 24Vd or 220V and are available in IP54 rated enclosure and they have an integrated buzzer.

Applications

- Industrial
- Machinery
- Refrigerant

Overview

The SMART3-R (with LEDs indication) gas detectors are ideal for non-classified areas. They employ high quality catalytic, MOS sensors, electrochemical cells or infrared sensors, that grant an excellent linearity and accuracy, besides an estimated lifetime of four years for detectors with infrared or pellistors sensors and two years for electrochemical cell sensors.

The SMART3-R gas detectors provide a proportional 4-20mA output signal. By employing optional boards, they can either communicate on a serial bus RS 485 or provide relay outputs. In details, the available outputs are as follows:

- 4-20 mA. Proportional 4-20mA output current corresponding to the full range (LEL or ppm).
- Relay. By adding the STS3REL board, the unit is provided with 3 relays with voltage free changeover contacts.

One relay is dedicated to the Fault and Watch-dog, while the remaining two relays can be associated to two out of the three available alarm thresholds.

- Serial RS485. By adding the STS.IDI interface, the detector can communicate on RS485 bus with MULTISCAN++ gas control panels.

It is available also as 220V Standalone version with 3 relays card.

Technical Specifications				
Typical use	Detectors for use with Sensitron control panels to detect refrigerant gases. To be used in non-classified areas only.			
Power supply	12-24 Vdc (-20% +15%)			
Proportional output	4-20 mA			
Detectable gases	Halogenated refrigerant and mixtures	Ammonia (flammable LFL)	Ammonia (toxic ppm)	SF6
Sensing element employed	Infrared sensor or MOS	Catalytic sensor	Electroch. Cell or MOS	Infrared sensor
Range	0-2000 ppm 0-100% LFL (A2L) 0-100 ppm (F-gas)	0-100% LEL	0-100 ppm 0-200 ppm 0-1000 ppm	0-2000 ppm
Repeatability	5% FS			
Operating temperature	-40 / + 60 °C (-30 / + 50 °C for ammonia EC)			
Relative humidity	20-90 % non condensata / non condensing RH/40°C			
IP rating	IP54			
Compliances	EN 378-3 :2016 and F-Gas EC 517 :2014 EN 14624 :2012			

Common Specifications			
Gas to detect	P/N	Range	Sensor Type
NH3-R717	S3958AM	0-100% LEL	Catalytic
	S3964AM	0-100 ppm	Electrochem
	S3965AM	0-200 ppm	Electrochem
	S3966AM	0-1000 ppm	Electrochem
R32	S3974R32	0-2000 ppm	IR-MOS-Catalytic
R134a	S3975R134A	0-2000 ppm	IR-MOS
R125	S3977R125	0-2000 ppm	IR-MOS
R404A	S3980R404A	0-2000 ppm	IR-MOS
R407A	S3981R407A	0-2000 ppm	IR-MOS
R407F	S3982R407F	0-2000 ppm	IR-MOS
R507	S3984R507	0-2000 ppm	IR-MOS
R410A	S3985R410A	0-2000 ppm	IR-MOS
R449A	S3983R449A	0-2000 ppm	IR-MOS
R1234yf	S3978R1234YF	0-2000 ppm	IR-MOS-Catalytic
R1234ze	S3979R1234ZE	0-2000 ppm	IR-MOS-Catalytic
R417A	S3986R417A	0-2000 ppm	IR-MOS
SF6	S3976SF6	0-2000 ppm	IR

Other gases on request.