

# SMART 3-R and SMART 3-R Lite

## Refrigerant Gas Detectors

Multicolour LED ring

Internal buzzer for audible warning

Ongoing system self-diagnosis

Standard 12-24 Vdc power supply



## Specification

	SMART3-R	SMART3-R Lite
Size	Box: H120 x W120 x D52 mm (4.72 x 4.72 x 2.1ins) Cover: H130 x W130 x D22 mm (5.12 x 5.12 x 0.87ins) Remote head box: H106 x W106 x D56 mm (4.17 x 4.17 x 2.2ins)	Box: H120 x W120 x D52 mm (4.72 x 4.72 x 2.1ins) Cover: H130 x W130 x D22 mm (5.12 x 5.12 x 0.87ins)
Weight	Detector: 0.45kg Remote head: 0.3kg	0.45kg
Enclosure material	Polycarbonate	
Ingress Protection	IP42	IP54
Connection	2 entries with M20 cable glands 6 optional entries for M16 cable glands	
Power	12-24 Vdc or 90-240Vac	
Electrical output	3 relays; RS485 serial output, 4-20 mA analogue output (only for 12-24 Vdc version)	2 relays; RS485 serial output (optional)
Operating temperature	-40 / +60°C (catalytic sensor) -40 / +50°C 230V version (catalytic sensor) -40 / +60°C (infrared sensor, -10 / +50°C ppm refrigerant gases) -40 / +50°C 230V version (infrared sensor, -10 / +50°C for ppm refrigerant gases) -30 / +50°C (electrochemical sensor)	-10 / +50°C
Humidity	0 / 95% RH non condensing (catalytic and infrared sensor) 15 / 90% RH non condensing (electrochemical sensor)	0 / 95% RH non condensing
Compliance	EMC EN 61000-6-3:2007 + A1:201; EN 50270:2015 Electrical safety (90-240 Vac version) EN 61010-1: 2010 / A1: 2019 Refrigeration Standards EN 378-3; EN 14624; EN 50676; IEC 60335-2-40 Annex LL; ISO 5149-3; F-Gas Regulation	

## Gases

Gas	Sensor type	Device
Carbon Dioxide (CO <sub>2</sub> )	Infrared sensor	SMART3-R and SMART3-R Lite
Methane (CH <sub>4</sub> )	Catalytic sensor / Infrared sensor	SMART3-R Only
LPG	Catalytic sensor	SMART3-R Only
Propane (C <sub>3</sub> H <sub>8</sub> )	Catalytic sensor / Infrared sensor	SMART3-R Only
Butane (C <sub>4</sub> H <sub>10</sub> )	Catalytic sensor / Infrared sensor	SMART3-R Only
Petrol Vapours	Catalytic sensor	SMART3-R Only
Oxygen (O <sub>2</sub> )	Electrochemical sensor	SMART3-R Only
Carbon Monoxide (CO)	Electrochemical sensor	SMART3-R Only
Ammonia (NH <sub>3</sub> )	Electrochemical sensor	SMART3-R Only
Hydrogen Sulphide (H <sub>2</sub> S)	Electrochemical sensor	SMART3-R Only
Nitrogen Dioxide (NO <sub>2</sub> )	Electrochemical sensor	SMART3-R Only
Sulphur Dioxide (SO <sub>2</sub> )	Electrochemical sensor	SMART3-R Only

## Refrigerants

Refrigerant	Sensor type	Device
R1233ZD	Infrared sensor	SMART3-R Only
R1234YF	Infrared sensor	SMART3-R and SMART3-R Lite
R1234ZE	Infrared sensor	SMART3-R and SMART3-R Lite
R125	Infrared sensor	SMART3-R Only
R134A	Infrared sensor	SMART3-R and SMART3-R Lite
R152	Infrared sensor	SMART3-R
R32	Infrared sensor	SMART3-R and SMART3-R Lite
R404A	Infrared sensor	SMART3-R and SMART3-R Lite
R407A	Infrared sensor	SMART3-R Only
R407C	Infrared sensor	SMART3-R and SMART3-R Lite
R407F	Infrared sensor	SMART3-R Only
R410A	Infrared sensor	SMART3-R and SMART3-R Lite
R417A	Infrared sensor	SMART3-R Only
R448	Infrared sensor	SMART3-R Only
R449A	Infrared sensor	SMART3-R Only
R452B	Infrared sensor	SMART3-R Lite Only
R454A	Infrared sensor	SMART3-R Lite Only
R454B	Infrared sensor	SMART3-R and SMART3-R Lite
R454C	Infrared sensor	SMART3-R Lite Only
R507A	Infrared sensor	SMART3-R Only
SF6	Infrared sensor	SMART3-R Only