

SPRKM-2R

Car park gas sensor



SPRKM-R are multifunctional sensors that detect air quality parameters (VOC and NOx) and exhaust gases (CO and LPG). They feature 24 VDC supply and Modbus RTU communication.

Key features

- Suitable for harsh environments
- Selectable VOC, NOx, CO and LPG ranges via Modbus RTU
- Selectable VOC, NOx, CO and LPG alert levels via Modbus RTU
- Bootloader for updating the firmware via Modbus RTU communication
- Day / night detection via ambient light sensor with adjustable 'active' and 'standby' level
- RGB LED with adjustable brightness via Modbus register
- Modbus RTU (RS485)
- Replaceable CO and LPG sensor element
- Long-term stability and accuracy

Technical specifications

Supply voltage	24 VDC	
Imax	81 mA	
CO / LPG sensor element warm-up time	5 minutes	
Typical range of use	Temperature	-10—50 °C
	Relative humidity	0—95 % rH (non-condensing)
	CO	0—1.000 ppm
	LPG	300—10.000 ppm
	NOx	1—500 index
Accuracy	VOC	1—500 index
	CO	± 5% (range 0—1.000 ppm)
Protection standard	IP54 (EN 60529)	

Article codes

	Supply	Connection
SPRKM-2R	24 VDC	Terminal block

Area of use

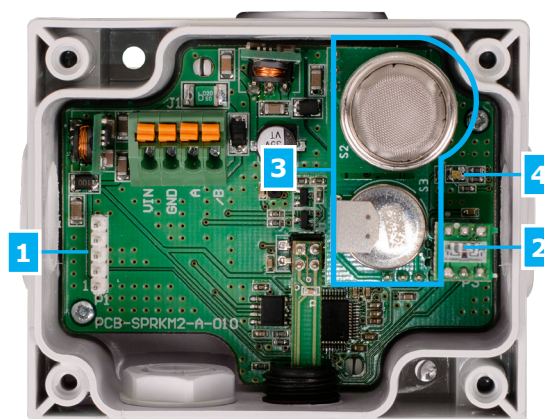
- Monitoring gas concentration in underground and multi-storey parking garages and loading docks
- Ventilation control based on VOC and NOx and vehicle exhaust fumes - CO and LPG
- Suitable for indoor use (e.g. garages, car parking, kitchens, and warehouses)

Wiring and connections

VIN	Supply voltage 24 VDC
GND	Ground
A	Modbus RTU communication, signal A
/B	Modbus RTU communication, signal /B
Connection	Spring contact terminal blocks, cable cross section: 1,5 mm²



Settings



1 - PROG header, P1		Put a jumper onto pins 1 and 2 and wait for at least 5 seconds to reset the Modbus communication parameters
		Put a jumper onto pins 3 and 4 and restart the supply to enter bootloader mode
2 - Ambient light sensor	Low light intensity / Active / Moderate	
3 - CO / LPG sensor element	Replaceable in case of faulty operation	
4 - RGB LED indicator	Indicates device status and alerts	

LED indications

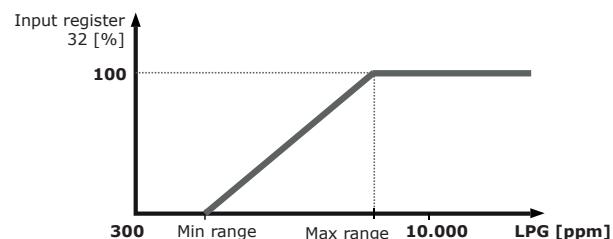
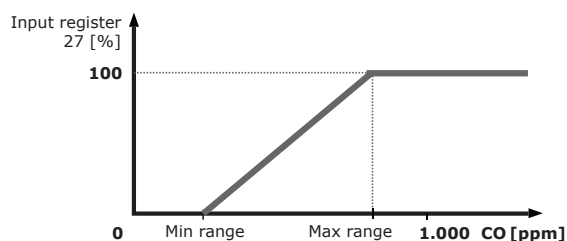
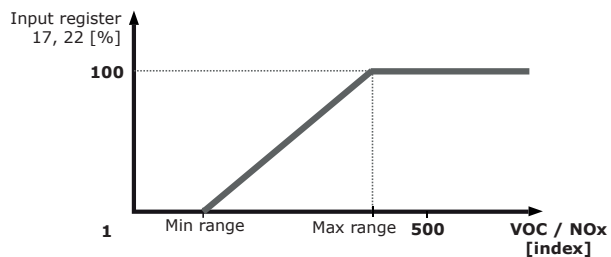
solid on	SPRKM-2R starting up
blinking	Sensor fault
blinking	CO / LPG sensor warming up
solid on	measured value within range
solid on	measured value higher than alert 1
solid on	measured value higher than alert 2



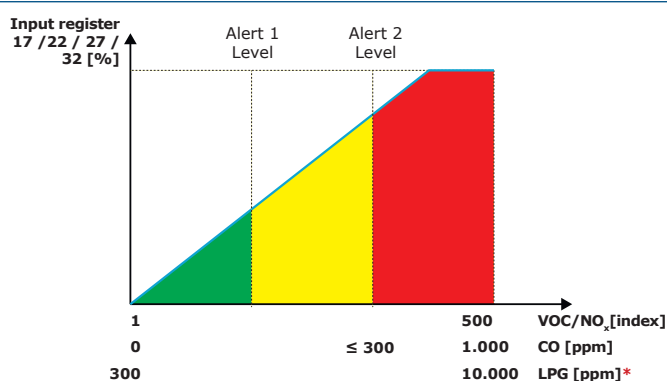
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Operational diagrams



* CO / LPG measurements will return 0 ppm during warm-up time.

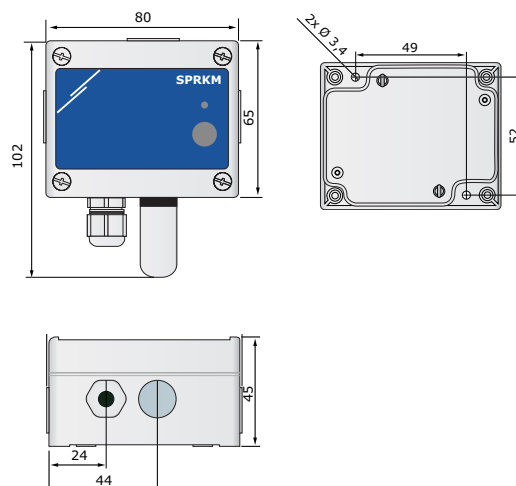


* LED indications - VOC/NO_x, CO (default) or LPG

Global trade item numbers (GTIN)

Packaging	SPRKM-2R
Unit	05401003018835
Box	05401003504352
Pallet	05401003701454

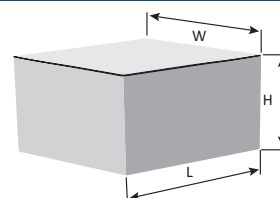
Fixing and dimensions



Standards

- Low Voltage Directive 2014/35/EC:
 - EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
 - EN 60529:1991 Degrees of protection provided by enclosures (IP Code) Amendment AC:1993 to EN 60529
- EMC Directive 2014/30/EC:
 - EN 61000-6-1:2007 Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light industrial environments
 - EN 61000-6-3:2007 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments Amendments A1:2011 and AC:2012 to EN 61000-6-3
 - EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
 - EN 61326-2-3:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria
- RoHS Directive 2011/65/EC
- WEEE 2012/19/EC

Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
SPRKM-2R	Unit (1 pc.)	120	95	55	0,20 kg	0,235 kg
	Box (24 pcs.)	590	380	280	4,80 kg	5,64 kg