

# SMART TRANSMITTER/INFRARED GAS DETECTOR

Gas Detection for Life

SD-805 Series



## Features

- Explosion proof housing
- IP65 ingress class
- Small, rugged, dust and weather proof construction
- Non-Dispersive Infrared Ray Absorption (NDIR) method applied
- Remote detector connection capability
- Direct digital readout
- Back-light LCD display
- 4-20 mA linear outputs
- Dual alarm contacts
- Self-diagnosis by microprocessor
- Automatic zero correction function
- Simple adjustment with magnetic control key

## Certification

- IECEx BAS 06.0062X
- Baseefa / ATEX approved II2G Ex dII BT6
- Baseefa 06 ATEX 0268X
- MED approved Wheel Marking

The Model SD-805 series smart transmitter/detector heads are state of the art instruments housed in a flameproof enclosure. A simple magnetic control key is placed over clear marked positions on the surface plate to test and adjust the instrument without opening the transmitter/detector head. Two different detection principles are provided with SD-805 series which enable you to select the most suitable principle according to the detection gas, range and application for use. Especially, the Model SD-805RI can detect combustible gases (CH<sub>4</sub> and i-C<sub>4</sub>H<sub>10</sub>) with 0 - 100 vol% F.S. in inert gas base.

## Detection Gas

SD-805RI / SD-805SC-RI

Detection Gas		Lower Explosive Limit (LEL)	Detection range	Resolution (digit)
Methane	CH <sub>4</sub>	5.0 vol%	0 - 100% LEL	0.5% LEL
Ethylene	C <sub>2</sub> H <sub>4</sub>	2.7 vol%	0 - 100 vol%	0.5 vol%
Ethane	C <sub>2</sub> H <sub>6</sub>	3.0 vol%	0 - 100% LEL	0.5% LEL
Propane	C <sub>3</sub> H <sub>8</sub>	2.0 vol%	0 - 100% LEL	0.5% LEL
Iso-Butane	i-C <sub>4</sub> H <sub>10</sub>	1.8 vol%	0 - 100% LEL	0.5% LEL
			0 - 100 vol%	0.5 vol%
N-Hexane	N-C <sub>6</sub> H <sub>14</sub>	1.2 vol%	0 - 100% LEL	0.5% LEL
IPA	C <sub>3</sub> H <sub>8</sub> O	2.0 vol%	0 - 100% LEL	0.5% LEL
Toluene	C <sub>7</sub> H <sub>8</sub>	1.2 vol%	0 - 100% LEL	0.5% LEL
MEK	C <sub>4</sub> H <sub>8</sub> O	1.8 vol%	0 - 100% LEL	0.5% LEL
Ethyl alcohol	C <sub>2</sub> H <sub>5</sub> OH	3.3 vol%	0 - 100% LEL	0.5% LEL

MODEL	
SD-805RI	Diffusion type for combustible gases
SD-805RID	Sample drawing type for combustible gases
SD-805RID-AS	Air aspirating sampling type for combustible gases
SD-805SC-RI	Remote type
SD-805EC	Diffusion type for toxic gases H <sub>2</sub> S and CO



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MODEL		SD-805RI	SD-805SC-RI with GD-A45RI	SD-805RID	SD-805EC	
Sampling method		Diffusion sampling		Sample drawing	Diffusion sampling	
Detection gas		Refer to detection gas list			Carbon Monoxide (CO) in air	Hydrogen Sulfide (H <sub>2</sub> S) in air
Detection principle		Non-Dispersive Infrared Ray Absorption (NDIR)			Electrochemical cell	
Detection range		Refer to detection gas list 0 - 100% LEL, 0 - 100 vol%			0 - 150 ppm	0 - 30 ppm
Display		Digital LCD with backlight			Digital LCD with backlight	
Operating conditions		-10 °C ~ +40 °C, below 95% R.H. (non-condensing)			-10 °C ~ +40 °C, below 95% R.H. (non-condensing)	
External output	Alarm contact	Gas alarm Normally open or normally close for 1st and 2nd alarm Trouble alarm Normally open or normally close <i>Remarks: Specify either alarm contact when ordering</i>			Gas alarm Normally open or normally close for 1st and 2nd alarm Trouble alarm Normally open or normally close <i>Remarks: Specify either alarm contact when ordering</i>	
	Signal transmission	Gas concentration 4-20 mA (linear, resistance load, below 300Ω) Malfunction 0.5mA Maintenance mode 2.5 mA (note: max 22 mA & initial clear time: with limiter)			Gas concentration: 4-20 mA (linear, resistance load, below 300Ω) Malfunction: 0.5mA Maintenance mode 2.5 mA (note: max 22 mA & initial clear time: with limiter)	
Power requirement		24 VDC + 10% (Max 4W)			24 VDC + 10% (Max 4W)	
Structure		Flame proof Exd II BT6 approved by Baseefa			Flame proof Exd II BT4X approved by authority of Japan	
Ingress class		IP65			Pending	
Applicable cable		CVVS, 3 core			CVVS, 3 core	
Signal transmission distance		Max 1.25km with CVVS 1.25sq cable Max 2.0km with CVVS 2.0 sq cable			Max 1.25km with CVVS 1.25sq cable Max 2.0km with CVVS 2.0 sq cable	
Dimensions & weight (approx)		124 (w) x 233 (h) x 115 (d) mm, 3.5 kg SD-805RID approx 4 kg			124 (w) x 233 (h) x 115 (d) mm, 3.5 kg	

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