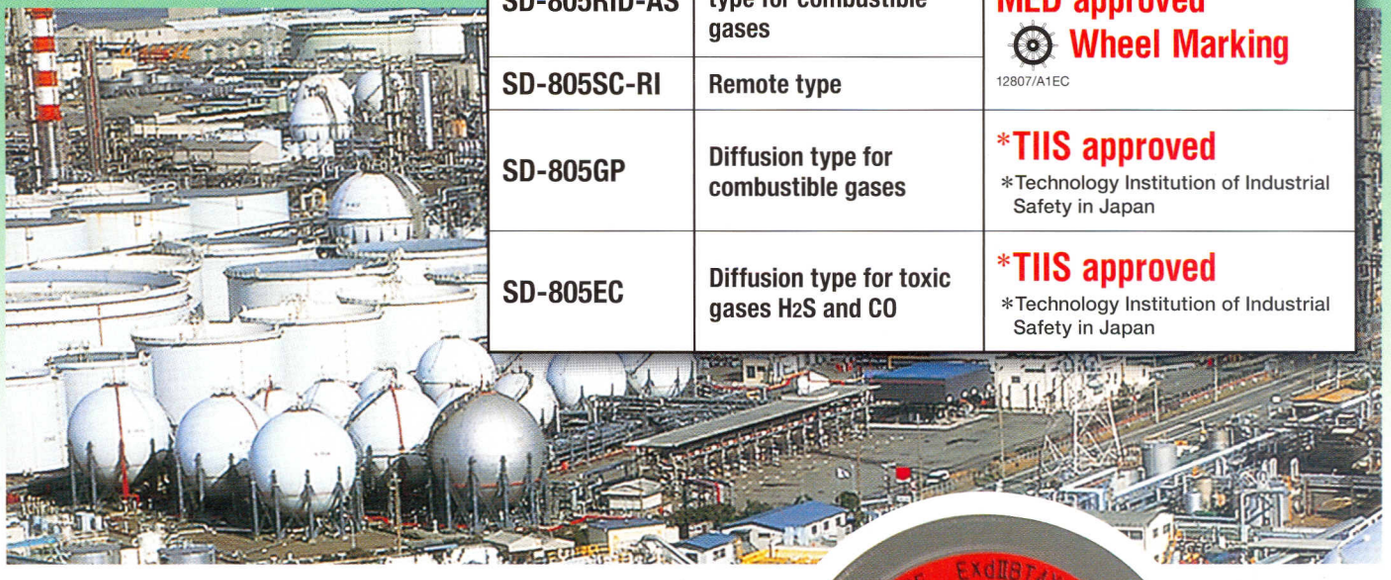
RIKEN

For combustible and toxic gases

SMART TRANSMITTER / GAS DETECTOR

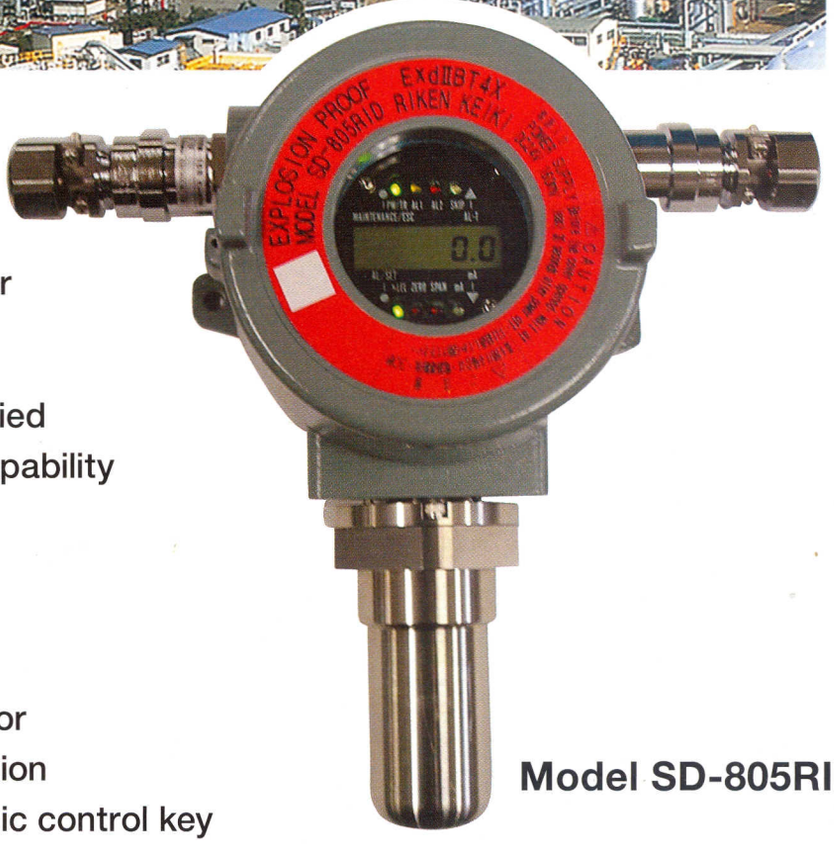
SD-805 series

MODEL		
SD-805RI	Diffusion type for combustible gases	Baseefa/ATEX approved Ⓔx II2G Ex dII BT6 Baseefa 06 ATEX 0268X MED approved Wheel Marking 12807/A1EC
SD-805RID	Sample drawing type for combustible gases	
SD-805RID-AS	Air aspirating sampling type for combustible gases	
SD-805SC-RI	Remote type	
SD-805GP	Diffusion type for combustible gases	*TIIS approved *Technology Institution of Industrial Safety in Japan
SD-805EC	Diffusion type for toxic gases H_2S and CO	*TIIS approved *Technology Institution of Industrial Safety in Japan



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
- 4-20mA linear outputs
- Dual alarm contacts
- Self-diagnosis by microprocessor
- Automatic zero correction function
- Simple adjustment with magnetic control key



Model SD-805RID

JAB EMS Accreditation REG01 ISO 9001 KHK ISO 9000 95QR·007
TOKYO PLANT · OKEGAWA FACTORY
RIKEN KEIKI ESAN SEISAKUSHO CO.,LTD

JAB EMS Accreditation REG01 ISO 14001 KHK ISO 14000 97ER·005
TOKYO PLANT · OKEGAWA FACTORY

RIKEN KEIKI

SMART TRANSMITTER/GAS DETECTOR

SD-805 series

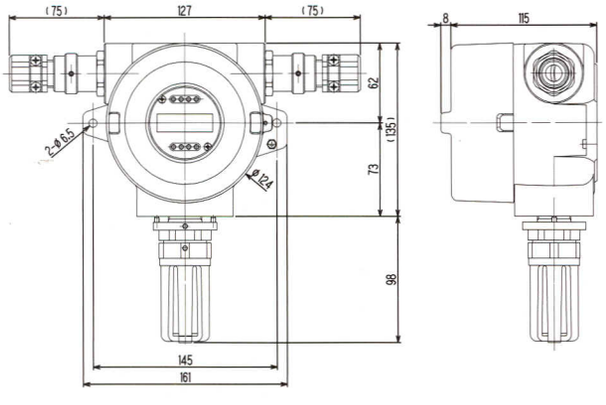
SUMMARY

The Model SD-805 series smart transmitter/detector heads are state of the art instruments housed in a flame proof 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_4 and i-C_4H_{10}) with 0～100vol% F.S. in inert gas base.

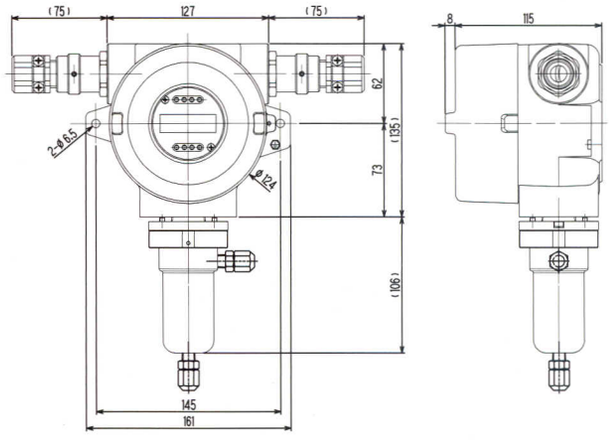
FEATURES

- Small, light weight, explosion proof, IP65 ingress class
- Simple adjustment with magnetic control key
- Simple one man calibration
- Microprocessor controlled
- Self-diagnostics and auto-zero function
- Remote detector available (SD-805SC series)
- Operational status display
- 4～20mA linear output
- 2 gas alarm contacts (1st & 2nd) provided
- Trouble alarm contact provided

SD-805RI (Diffusion type)



SD-805RID (Sample drawing type)



SPCIFICATIONS

MODEL		SD-805RI	SD-805SC-RI with GD-A45RI	SD-805RID
Sampling method		Diffusion sampling		Sampling drawing
Detection principle		Non-Dispersive Infrared Ray Absolution (NDIR)		
Detection gas		Refer to detection gas list		
Detection range		Refer to detection gas list 0～100%LEL, 0～100vol%		
Display		Digital LCD with backlight		
Operating conditions		−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 alarms Trouble alarm ····· Normally open or normally close Remarks : Specify either alarm contact when ordering		
	Signal transmission	Gas concentration ····4～20mA (Linear, Resistance load, below 300Ω) Malfunction ···· 0.5mA Maintenance mode and initial clear time ····2.5mA (Note : Max. 22mA with limiter)		
Power requirement		24VDC±10% (Max 4W)		
Structure		Flame proof Exd Ⅱ BT6 approved by ATEX Baseefa 06 ATEX 0268X		
Ingress class		IP65		
Applicable cable		CVVS, 3-Core		
Signal transmission distance		Max 1.25km with CVVS 1.25sq cable Max 2.0km with CVVS 2.0sq cable		
Dimensions and weight (Approx.)		124(W)×233(H)×115(D)mm, 3.5kg SD-805RID Approx : 4.0kg		

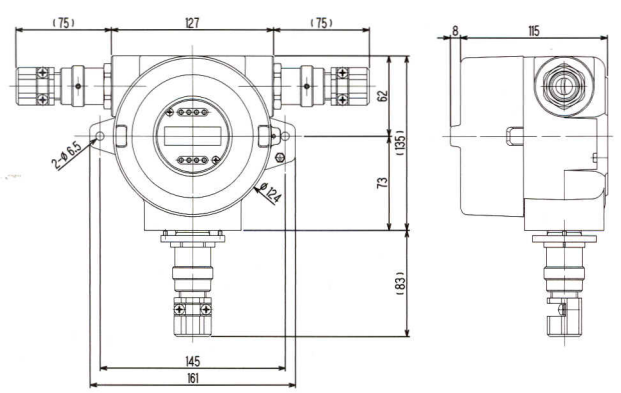
Standard accessories

❶ Sun shade cover ·····1pce
❷ Fuse (1A) ·····1pce
❸ Magnetic control key ··1pce/order

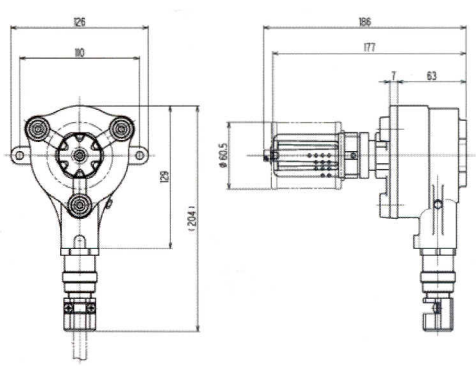
Optional accessories

- Box type drip proof cover
- Pole stand
- U-bolt for pole stand mounting
- Calibration kit
- Round type splash guard cap with bump gas check function

SD-805SC-RI (Remote type)



GD-A45RI (Remote detector head)

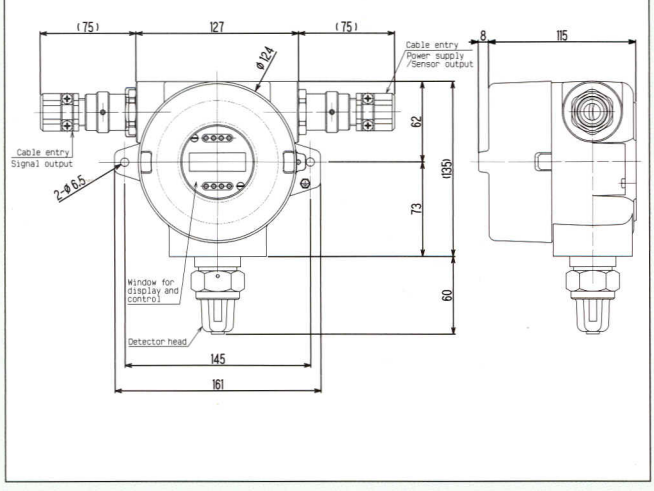


SD-805GP	SD-805EC	
Diffusion sampling	Diffusion sampling	
Calalytic combustion	Electrochemical cell	
Combustible gases (CH_4 and HC) in air	Carbon Monoxide(CO)in air	Hydrogen Sulfide(H_2S)in air
Refer to detection gas list 0～100%LEL	0～150ppm	0～30ppm
Digital LCD with backlight	Digital LCD with backlight	
−10°C～+40°C, below 95%R.H. (Non-condensing)	−10°C～+40°C, below 95%R.H. (Non-condensing)	
Gas alarm ····· Normally open or normally close for 1st and 2nd alarms Trouble alarm ····· Normally open or normally close Remarks : Specify either alarm contact when ordering	Gas alarm ····· Normally open or normally close for 1st and 2nd alarms Trouble alarm ····· Normally open or normally close Remarks : Specify either alarm contact when ordering	
Gas concentration ····4～20mA (Linear, Resistance load, below 300Ω) Malfunction ···· 0.5mA Maintenance mode and initial clear time ····2.5mA (Note : Max. 22mA with limiter)	Gas concentration ····4～20mA (Linear, Resistance load, below 300Ω) Malfunction ···· 0.5mA Maintenance mode and initial clear time ····2.5mA (Note : Max. 22mA with limiter)	
24VDC±10% (Max 5.8W)	24VDC±10% (Max 2.5W)	
Flame proof Exd Ⅱ BT4 approved by TIIS*	Flame proof Exd Ⅱ BT4 approved by TIIS*	
Pending	Pending	
CVVS, 3-Core	CVVS, 3-Core	
Max 1.25km with CVVS 1.25sq cable Max 2.0km with CVVS 2.0sq cable	Max 1.25km with CVVS 1.25sq cable Max 2.0km with CVVS 2.0sq cable	
124(W)×233(H)×115(D)mm, 3.5kg	124(W)×233(H)×115(D)mm, 3.5kg	

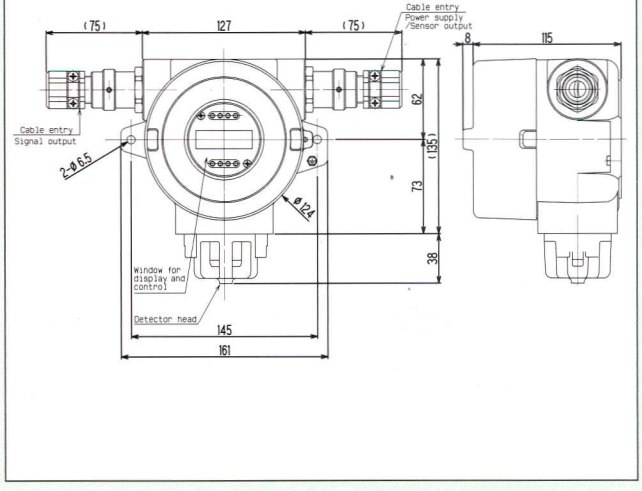
•Specifications subject to change without notice.

*TIIS=Technology Institution of Industrial Safety in Japan

SD-805GP (Diffusion type)

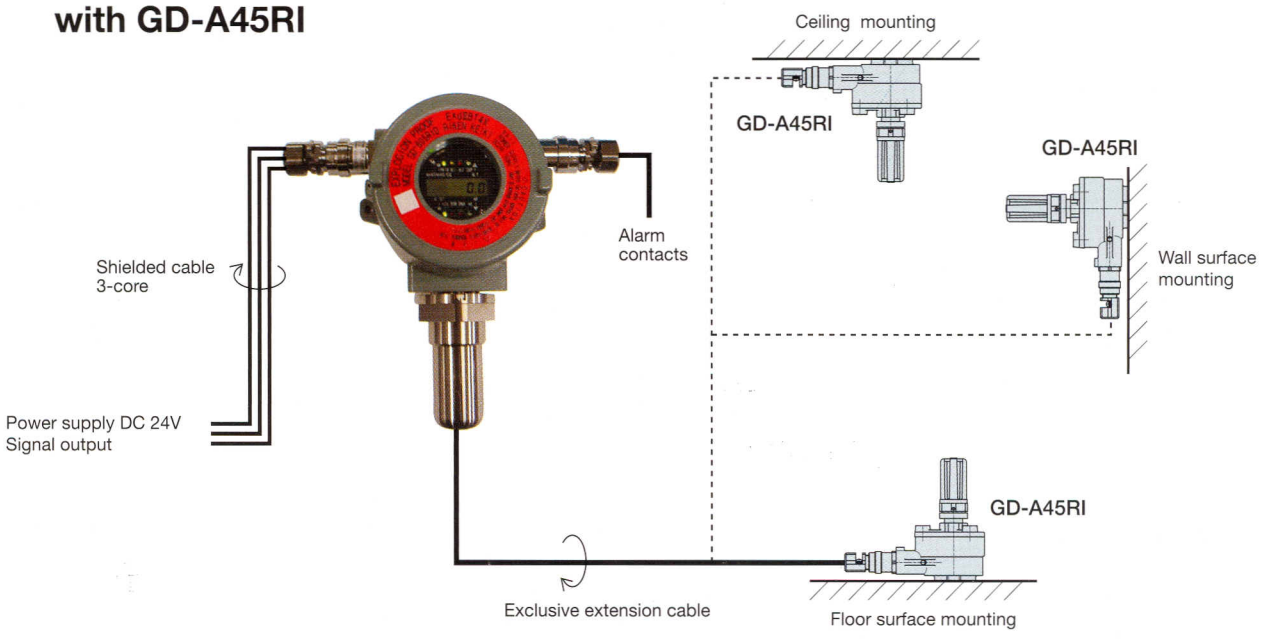


SD-805EC (Diffusion type)



APPLICATION FOR REMOTE DETECTOR HEAD

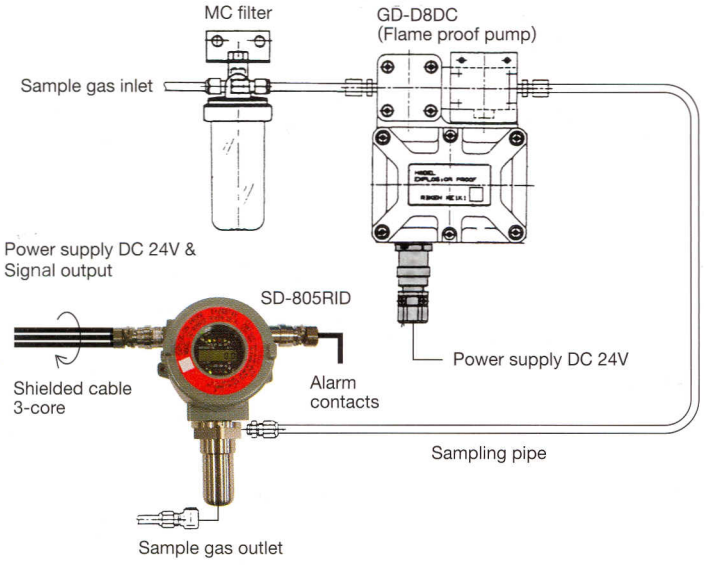
■ SD-805SC-RI
with GD-A45RI



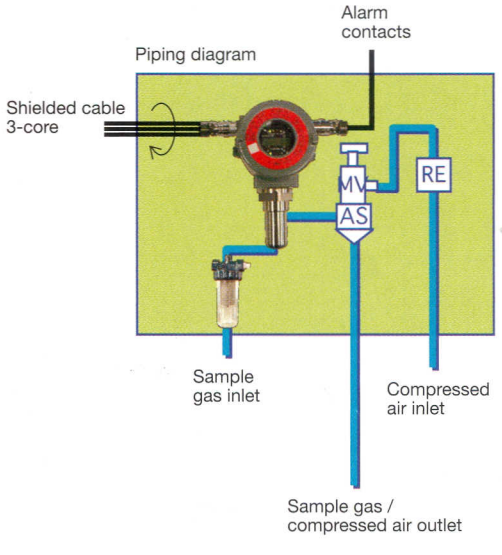
* Please specify the location depending the condition. (detection point, gas gravity characteristic etc.)
* One set of detector head only is connectable with remote type SD-805SC-RI

SAMPLE DRAWING APPLICATION

■ SD-805RID
with remote sample drawing pump



■ SD-805RID-AS
(Air aspiration type)



GASES DETECTABLE BY MODEL SD-805 SERIES

MODEL SD-805RI, SD-805RID, SD-805SC-RI with GD-A45RI

Gas/Vapor	Chemical Formula	Flammable (Explosive) range (vol%)	Detection range
Methane	CH_4	5.0～15.0	0～100%LEL 0～100vol%
Ethane	C_2H_6	3.0～12.5	0～100%LEL
Propane	C_3H_8	2.0～ 9.5	0～100%LEL
iso-Butane	i-C_4H_{10}	1.8～ 8.4	0～100%LEL 0～100vol%
n-Hexane	n-C_6H_{14}	1.2～ 7.5	0～100%LEL
IPA	C_3H_8O	2.0～12.7	0～100%LEL
Toluene	C_7H_8	1.2～ 7.1	0～100%LEL
MEK	C_4H_8O	1.8～11.4	0～100%LEL
Ethyl alcohol	C_2H_5OH	3.3～19.0	0～100%LEL
Methyl alcohol	CH_3OH	5.5～36.0	0～100%LEL
n-Butane	n-C_4H_{10}	1.5～ 8.5	0～100%LEL
MMA (Methyl methacrylate)	$C_5H_8O_2$	1.7～ 8.2	0～100%LEL

Please contact us about other gases.

MODEL SD-805GP

Gas/Vapor	Chemical Formula	Flammable (Explosive) range (vol%)	Detection range
Hydrogen	H_2	4.0～ 75.0	0～100%LEL
Methane	CH_4	5.0～ 15.0	0～100%LEL
Propane	C_3H_8	2.0～ 9.5	0～100%LEL
iso-Butane	i-C_4H_{10}	1.8～ 8.4	0～100%LEL
Ethylene	C_2H_4	2.7～ 36.0	0～100%LEL
Propylene	C_3H_6	2.0～ 11.1	0～100%LEL
Toluene	$C_6H_5CH_3$	1.2～ 7.1	0～100%LEL
Methanol	CH_3OH	5.5～ 36.0	0～100%LEL
Ethanol	C_2H_5OH	3.3～ 19.0	0～100%LEL
Triethylamine	$C_6H_{15}N$	1.2～ 11.6	0～100%LEL
Benzene	C_6H_6	1.2～ 7.1	0～100%LEL
Styrene monomer	C_8H_8	1.1～ 6.1	0～100%LEL
Butadiene	C_4H_6	1.1～ 12.0	0～100%LEL
EO	C_2H_4O	3.0～100.0	0～100%LEL
Acetic acid	$C_2H_4O_2$	4.0～ 19.9	0～100%LEL
VCM	C_2H_3CL	3.8～ 23.0	0～100%LEL
MMA (Methyl methacrylate)	$C_5H_8O_2$	1.7～ 8.2	0～100%LEL
n-Heptane	n-C_7H_{16}	1.1～ 6.7	0～100%LEL
Methyl acrylate	$C_4H_6O_2$	2.4～ 25.0	0～100%LEL
Tetrafluoroethylene	C_2F_4	10.0～ 50.0	0～100%LEL
Dimethyl ether	C_2H_6O	3.0～ 27.0	0～100%LEL

Please contact us about other gases.

MODEL SD-805EC

Gas/Vapor	Chemical Formula	ACGIH TLV-TWA	Detection range
Cabron monoxide	CO	25ppm	0～150ppm
Hydrogen sulfide	H_2S	10ppm	0～ 30ppm

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