Gas Detector with Signal Converter SD-3EC(oxygen) Series SPECIFICATION

M. J. I		SD-3EC	OD ODEO	
Model			SD-3DEC	
Detection principle		Electrochemical type		
Detection gas*1		Oxygen		
Display		7-segment LED (5 digits), 3-color lamp (red,	green, yellow)	
Detection range*1		Depends on sensor specifications		
Alarm set points*1		Depends on sensor specifications		
Sampling method	d	Diffusion type	Suction type (pour into by external unit)	
Setting flow ra	ate	_	0.4 - 1.5 L/min	
Power supply in	ndication	Power lamp lit (green)		
Coo	Alarm type	Two-step alarm (L-LL, L-H, or H-HH)		
Gas	Indication	Alarm lamp lit (red)		
alarm	Reset type*1	Auto reset or self-latching		
	Self-diagnosis	System abnormality (E-9), sensor abnormality (E-1)		
Facility all annual	Indication	Fault lamp lit (yellow), error code display		
Fault alarm		System abnormality: Self-latching		
	Reset type	Sensor abnormality: Auto reset (self-latching if sensor is disconnected)		
	Self-diagnosis		nosis, communication diagnosis, sensor warning	
Warnings	Display	Blinking display alternating between gas cond		
	Operation	Same as normal operation		
Functions		Alarm delay, suppression, HART communication	(HART7)	
External outpu	†* ¹	Gas concentration signal (4-20 mA DC with HAR		
Extornar outpu	Transmission	3-wire analog transmission (common power supp		
	Method	2-wire analog transmission (common power supplication)	ory sponer suppry, signal, common/) or	
	Motifod	9		
_	Transmission	4-20 mA DC (non-insulated linear output)		
Gas	Specifications	Maximum load resistance 600 Ω (with derating		
concentration	•	Resolution: max. 250 divisions (depending on specifications)		
signal	Transmission	Shielded cable 1.25 sq (1.308 mm ² /AWG16) or		
	cable*2	2.0 sq (2.08 mm²/AWG14) (same as power supply cable)		
	Transmission	For 1.25 sq (1.308 mm ² /AWG16): Not exceeding	1. 25 km	
	Distance*7	For 2.0 sq (2.08 mm²/AWG14): Not exceeding 2 km (with derating depending on supply voltage)		
		SPDT (× 3): 2 alarms, 1 fault output, non-exciting at normal (exciting at alarm) or exciting		
Alarm contact	(Optional)*1	at normal(non-exciting at alarm), 250 V AC, 2 A; 30 V DC, 1 A(resistance load), Minimum load		
		5V DC, 0.1A		
	Input voltage range*3	24 V DC (18 V - 30 V DC)		
		Shielded cable 1.25 sq (1.308 mm ² /AWG16) or		
Power supply	Power supply cable*2*7	2. 0 sq (2. 08 mm²/AWG14) (same as transmission cable)		
	Power consumption	Max. 2.8 W		
	Material	Stainless steel: SCS14 (equivalent to SUS316)		
	mater rar	ATEX/IECEx: M25 \times 1.5, conversion adapter (optional): NPT3/4, NPT1/2, M20 \times 1.5		
	Cable connectors*1	Japan Ex: Flame proof packing method $\langle M20 \times 1.5 \rangle$ (Compatible cables $\phi 6.0 \sim 12.0$ mm), $\langle M25 \times 1.5 \rangle$		
	Capte Collifectors			
	Tube connecting port	1.5>(Compatible cables <i>φ</i> 12.0∼16.0mm)	NPT1/4 (with SUS elbow union for 0.D ϕ 8-1t)	
Housing	Degrees of protection	Equivalent to IP66/67	NF11/4 (WILL 303 elbow ullfoll for 0. μφ8-IL)	
	Installation type*1	•	stional)	
	Installation type"	Wall mounting (standard)/2B pole mounting (op Approx. 171(W) × 277(H) × 127(D) mm		
	External dimensions*5		Approx. $171 \text{ (W)} \times 289 \text{ (H)} \times 127 \text{ (D)} \text{ mm}$	
		(excluding projections)	(excluding projections)	
	Weight* ⁵	Approx. 6.7 kg	Approx. 7.0 kg	
Operating temperature range*4		ATEX/IECEx: -40 °C - +70 °C (no sudden change		
		Japan Ex : -20 °C - +70 °C (no sudden changes)		
Operating humidity range*4		0 %RH - 95 %RH (no condensation)		
Operation method		Dedicated magnet control key		
Type of protection		Flameproof construction	1.11	
	ATEX	II 2 G Ex db II C T4 Gb, -50°C≦Ta≦+70°C (whe		
Explosion-		installed), -40°C≦Ta≦+70°C (when lightning		
proof	IECEx	Ex db II C T4 Gb, -50°C≦Ta≦+70°C (when light		
approvals		-40°C≦Ta≦+70°C (when lightning arrester is installed)		
	Japan Ex	Ex db II C T4 Gb, -20°C≦Ta≦+70°C		
	ety(IEC61508:2010)*6*8	SIL2 capable (HFT=0), SIL3 capable (HFT=1) wi	th redundancy	
Certification		CE Marking		
*1 Please specify	your request when ordering			

^{*1} Please specify your request when ordering.

^{*2} To ensure explosion protection, use a cable designed for use in temperatures at least 5 °C above the maximum anticipated ambient temperature.

^{*3} Use a power supply capable of minimum temporary output of 2.5 A to ensure that fuses blow normally in the event of a product abnormality.

^{*4} In accordance with sensor specifications if restrictions apply due to sensor specifications.

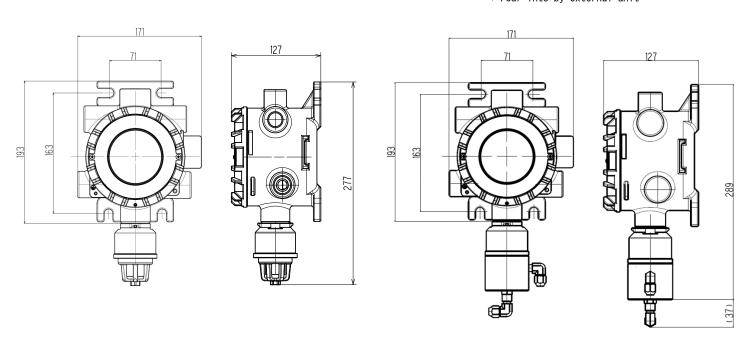
^{*5} External dimensions and weight exclude cable gland.

 $^{*6 \ \ \}text{External units used in combination with SD-3DEC should be selected from SIL certified products}.$

^{*7} Depends on the type of cable.

^{*8} For specifications related to functional safety (IEC61508), please refer to the Safety Manual (PT2E-306).

<Suction type> * Pour into by external unit



Terminal Block Diagram

<Using 3-core cable>

Terminal No.	Power/signal cable connec	tion
1	Power supply (+)	24 V DC
2	Common (Power supply (-), signal (-))	4-20 mA
3	Signal (+)	with HART
4	Not used	

<Using 4-core cable>

Terminal No.	Power/signal cable connection	
1	Power supply (+)	04 V D0
2	Power supply (-)	24 V DC
3	Signal (+)	4-20 mA with
4	Signal (-)	HART

<Contact output (Optional) >

Relay1 (ALARM1)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

N.O.: Normal Open N.C.: Normal Close

Relay2 (ALARM2)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

Relay3 (FAULT)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

Gas Detector with Signal Converter SD-3EC(toxic gas) Series SPECIFICATION

Madal		CD 250	CD CDEC	
Model		SD-3EC	SD-3DEC	
Detection principle		Electrochemical type		
Detection gas*1		Toxic gas		
Display		7-segment LED (5 digits), 3-color lamp (red,	green, yellow)	
Detection range*1		Depends on sensor specifications		
Alarm set points*1		Depends on sensor specifications		
Sampling metho	d	Diffusion type	Suction type (pour into by external unit)	
Setting flow ra	ate	_	0.4 - 1.5 L/min	
Power supply in	ndication	Power lamp lit (green)		
0	Alarm type	Two-step alarm (H-HH)		
Gas	Indication	Alarm lamp lit (red)		
alarm	Reset type*1	Auto reset or self-latching		
	Self-diagnosis	System abnormality (E-9), sensor abnormality	(E-1)	
F 11 1	Indication	Fault lamp lit (yellow), error code display		
Fault alarm		System abnormality: Self-latching		
	Reset type	Sensor abnormality: Auto reset (self-latching if sensor is disconnected)		
	Self-diagnosis	Sensor life assessment, clock abnormality diag		
Warnings	Display	Blinking display alternating between gas cond		
	Operation	Same as normal operation		
Functions	opor action	Alarm delay, suppression, zero follower, sens	tivity correction HART communication (HART7)	
External outpu	<u>+*1</u>	Gas concentration signal (4-20 mA DC with HAF		
Excernar outpu	Transmission	3-wire analog transmission (common power supp		
	Method		ory \power suppry, signar, common/) or	
	motifuu	2-wire analog transmission (current source)		
	Transmission	4-20 mA DC (non-insulated linear output)		
Gas	Specifications	Maximum load resistance 600 Ω (with derating		
concentration		Resolution: max. 200 divisions (depending on specifications)		
signal	Transmission	Shielded cable 1.25 sq (1.308 mm ² /AWG16) or		
	cable*2	2.0 sq (2.08 mm ² /AWG14) (same as power supply cable)		
	Transmission	For 1.25 sq (1.308 mm ² /AWG16): Not exceeding 1.25 km		
	Distance*7	For 2.0 sq (2.08 mm ² /AWG14): Not exceeding 2 km (with derating depending on supply voltage)		
		SPDT (× 3): 2 alarms, 1 fault output, non-exciting at normal (exciting at alarm) or exciting		
Alarm contact	(Optional)*1	at normal (non-exciting at alarm), 250 V AC, 2 A; 30 V DC, 1 A(resistance load), Minimum load		
	•	5V DC, 0.1A		
	Input voltage range*3	24 V DC (18 V - 30 V DC)		
		Shielded cable 1.25 sq (1.308 mm ² /AWG16) or		
Power supply	Power supply cable*2*7	2.0 sq (2.08 mm²/AWG14) (same as transmission cable)		
	Power consumption	Max. 2.8 W		
	Material	Max. 2.8 W Stainless steel: SCS14 (equivalent to SUS316)		
	Material			
	Cable connectors*1	ATEX/IECEx: M25 × 1.5, conversion adapter (optional): NPT3/4, NPT1/2, M20 × 1.5		
	oable connectors"	Japan Ex: Flame proof packing method $\langle M20 \times 1.5 \rangle$ (Compatible cables ϕ 6.0~12.0mm), $\langle M$		
	Tube competition of	1.5>(Compatible cables ϕ 12.0~16.0mm)	NDT1/A (with OHC albam fam O.D./O.41)	
Housing	Tube connecting port	- IDCC/C7	NPT1/4 (with SUS elbow union for 0.D ϕ 8-1t)	
,	Degrees of protection	Equivalent to IP66/67		
	Installation type*1	Wall mounting (standard)/2B pole mounting (op		
	External dimensions*5	Approx. 171 (W) × 277 (H) × 127 (D) mm	Approx. 171 (W) × 289 (H) × 127 (D) mm	
		(excluding projections)	(excluding projections)	
	Weight* ⁵	Approx. 6.7 kg	Approx. 7.0 kg	
Operating temp	erature range*4	ATEX/IECEx : -40 °C - +70 °C (no sudden change		
Operating temperature range*4		Japan Ex : -20 °C - +70 °C (no sudden changes)		
Operating humidity range*4		0 %RH - 95 %RH (no condensation)		
Operation method		Dedicated magnet control key		
Type of protection		Flameproof construction		
	ATEX	II 2 G Ex db II C T4 Gb, −50°C≦Ta≦+70°C (whe		
Explosion-		installed), -40°C≦Ta≦+70°C (when lightning		
proof	IECEx	Ex db IC T4 Gb, -50°C≦Ta≦+70°C (when light	ning arrester is not installed),	
approvals	ILULA	-40°C≦Ta≦+70°C (when lightning arrester is installed)		
	Japan Ex	Ex db II C T4 Gb, -20°C≦Ta≦+70°C		
·		SIL2 capable (HFT=0), SIL3 capable (HFT=1) wi	th redundancy	
Certification		CE Marking		
I Please specify your request when ordering.				

^{*1} Please specify your request when ordering.

^{*2} To ensure explosion protection, use a cable designed for use in temperatures at least 5 °C above the maximum anticipated ambient temperature.

^{*3} Use a power supply capable of minimum temporary output of 2.5 A to ensure that fuses blow normally in the event of a product abnormality.

^{*4} In accordance with sensor specifications if restrictions apply due to sensor specifications.

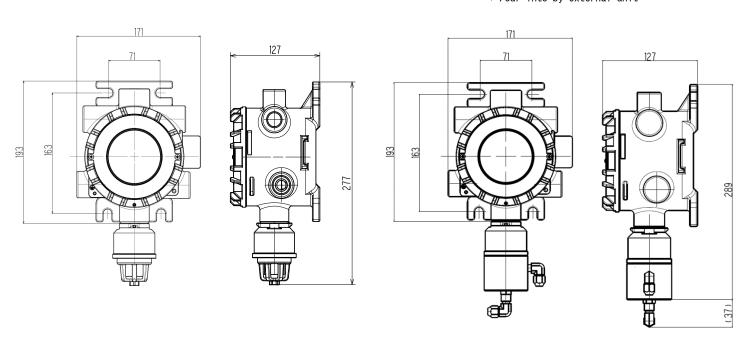
^{*5} External dimensions and weight exclude cable gland.

 $^{*6 \ \ \}text{External units used in combination with SD-3DEC should be selected from SIL certified products}.$

^{*7} Depends on the type of cable.

^{*8} For specifications related to functional safety (IEC61508), please refer to the Safety Manual (PT2E-306).

<Suction type> * Pour into by external unit



Terminal Block Diagram

<Using 3-core cable>

Terminal No.	Power/signal cable connec	tion
1	Power supply (+)	24 V DC
2	Common (Power supply (-), signal (-))	4-20 mA
3	Signal (+)	with HART
4	Not used	

<Using 4-core cable>

Terminal No.	Power/signal cable c	onnection
1	Power supply (+)	04 1/ 00
2	Power supply (-)	24 V DC
3	Signal (+)	4-20 mA with
4	Signal (-)	HART

<Contact output (Optional) >

Relay1 (ALARM1)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

N.O.: Normal Open N.C.: Normal Close

Relay2 (ALARM2)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

Relay3 (FAULT)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

Gas Detector with Signal Converter SD-3ECS Series SPECIFICATION

Model		SD-3ECS	SD-3DECS	
			OD 0DE00	
Detection principle		Electrochemical type		
Detection gas*1		Hydrogen sulfide		
Display		7-segment LED (5 digits), 3-color lamp (red,	green, yellow)	
Detection range*1		Depends on sensor specifications		
Alarm set point		Depends on sensor specifications		
Sampling method		Diffusion type	Suction type (pour into by external unit)	
Setting flow ra		_	0.4 - 1.5 L/min	
Power supply in	ndication	Power lamp lit (green)		
Gan	Alarm type	Two-step alarm (H-HH)		
Gas	Indication	Alarm lamp lit (red)		
alarm	Reset type*1	Auto reset or self-latching		
	Self-diagnosis	System abnormality (E-9), sensor abnormality	(E-1)	
Fourth at a	Indication	Fault lamp lit (yellow), error code display		
Fault alarm	_	System abnormality: Self-latching		
	Reset type	Sensor abnormality: Auto reset (self-latching	(if sensor is disconnected)	
	Self-diagnosis	Sensor life assessment, clock abnormality diagr		
Warnings	Display	Blinking display alternating between gas cond		
3-	Operation	Same as normal operation		
Functions	,	Alarm delay, suppression, zero follower, sensi	tivity correction HART communication (HART7)	
External output	├ *¹	Gas concentration signal (4-20 mA DC with HAR		
utrai outpu	Transmission	3-wire analog transmission (common power supp		
	Method	2-wire analog transmission (common power supp	ory sponor ouppry, orginal, comminon/) of	
	mo ci lou			
	Transmission	4-20 mA DC (non-insulated linear output)	Assessed to the second	
Gas	Specifications	Maximum load resistance 600 Ω (with derating		
concentration		Resolution: max. 200 divisions (depending on	specifications)	
signal	Transmission	Shielded cable 1.25 sq (1.308 mm²/AWG16) or		
	cable*2	$2.0 \text{ sq} (2.08 \text{ mm}^2/\text{AWG14})$ (same as power supply	cable)	
	Transmission	For 1.25 sq (1.308 mm²/AWG16): Not exceeding 1.25 km		
	Distance*7	For 2.0 sq (2.08 mm²/AWG14): Not exceeding 2 km (with derating depending on supply voltage)		
	<u>'</u>	SPDT (\times 3): 2 alarms, 1 fault output, non-exc		
Alarm contact(Optional)*1	at normal (non-exciting at alarm), 250 V AC, 2 A; 30 V DC, 1 A(resistance load), Minimum load		
3311E40E (I		5V DC, 0.1A		
	Input voltage range*3	24 V DC (18 V - 30 V DC)		
		Shielded cable 1.25 sq (1.308 mm ² /AWG16) or		
Power supply	Power supply cable*2*7			
	Power consumption	2.0 sq (2.08 mm²/AWG14) (same as transmission cable) Max. 2.8 W		
	·			
ļ	Material	Stainless steel: SCS14 (equivalent to SUS316)		
ļ	Coble server ! "	ATEX/IECEx: M25 \times 1.5, conversion adapter (optional): NPT3/4, NPT1/2, M20 \times 1.5 Japan Ex: Flame proof packing method \langle M20 \times 1.5 \rangle (Compatible cables ϕ 6.0 \sim 12.0mm), \langle M25 \times		
ļ	Cable connectors*1		o/tompatible cables ϕ 6.0 \sim 12.0mm), $<$ M25 \times	
ļ	T. I.	1.5>(Compatible cables ϕ 12.0~16.0mm)	NDT1 /4 / LUI QUO II	
Housing	Tube connecting port		NPT1/4 (with SUS elbow union for 0.D ϕ 8-1t)	
	Degrees of protection	Equivalent to IP66/67		
ļ	Installation type*1	Wall mounting (standard)/2B pole mounting (op		
ļ	External dimensions*5	Approx. $171 \text{ (W)} \times 277 \text{ (H)} \times 127 \text{ (D)} \text{ mm}$	Approx. 171 (W) × 289 (H) × 127 (D) mm	
ļ		(excluding projections)	(excluding projections)	
	Weight*5	Approx. 6.7 kg	Approx. 7.0 kg	
Operation to	aratura rango*4	ATEX/IECEx: -40 °C - +70 °C (no sudden change	es)	
Operating temperature range*4		Japan Ex : -20 °C - +70 °C (no sudden changes)		
Operating humidity range*4		0 %RH - 95 %RH (no condensation)		
Operation method		Dedicated magnet control key		
Type of protection		Flameproof construction		
<u> </u>		II 2 G Ex db II C T4 Gb, -50°C≤Ta≤+70°C (whe	en lightning arrester is not	
Explosion-	ATEX		installed), -40°C≤Ta≤+70°C (when lightning arrester is installed)	
proof Fx dh π C T4 Gh -50° C \leq Ta \leq +70 $^{\circ}$ C (when lightning arrester is not installed				
approvals	IECEx	-40°C≤Ta≤+70°C (when lightning arrester is		
	Japan Ex	Ex db II C T4 Gb, -20°C≤Ta≤+70°C		
Japan Ex Functional safety(IEC61508:2010)*6*8		SIL2 capable (HFT=0), SIL3 capable (HFT=1) wi	th redundancy	
Certification	003 (1E001000 · Z010)	CE Marking		
Vertification *1 Please specify your request when ordering				

st1 Please specify your request when ordering.

^{*2} To ensure explosion protection, use a cable designed for use in temperatures at least 5 °C above the maximum anticipated ambient temperature.

^{*3} Use a power supply capable of minimum temporary output of 2.5 A to ensure that fuses blow normally in the event of a product abnormality.

^{*4} In accordance with sensor specifications if restrictions apply due to sensor specifications.

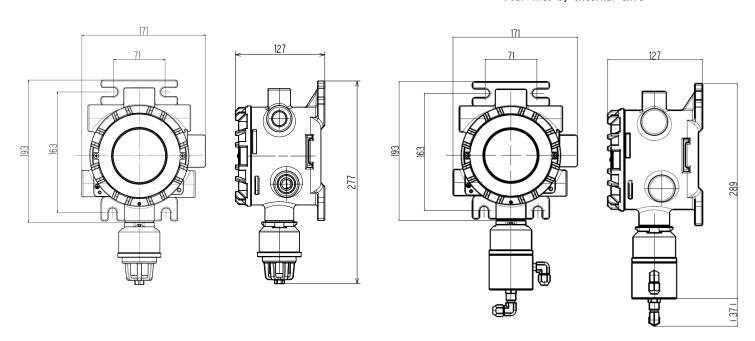
^{*5} External dimensions and weight exclude cable gland.

 $^{*6 \ \ \}text{External units used in combination with SD-3DNC should be selected from SIL certified products}.$

^{*7} Depends on the type of cable.

^{*8} For specifications related to functional safety (IEC61508), please refer to the Safety Manual (PT2E-306).

<Suction type> * Pour into by external unit



Terminal Block Diagram

<Using 3-core cable>

Terminal No.	Power/signal cable connec	tion
1	Power supply (+)	24 V DC
2	Common (Power supply (-), signal (-))	4-20 mA
3	Signal(+)	with HART
4	Not used	

<Using 4-core cable>

Terminal No.	Power/signal cable c	onnection
1	Power supply (+)	04 1/ 00
2	Power supply (-)	24 V DC
3	Signal (+)	4-20 mA with
4	Signal (-)	HART

<Contact output (optional)>

Relay1 (ALARM1)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

N.O.: Normal Open N.C.: Normal Close

Relay2 (ALARM2)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

Relay3 (FAULT)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

<u>Gas Detector with Signal Converter</u> SD-3ECB Series SPECIFICATION

			T	
Model		SD-3ECB	SD-3DECB	
Detection principle		Electrochemical type		
Detection gas*1		Toxic gas		
Display		7-segment LED (5 digits), 3-color lamp (red, green, yellow)		
Detection range*1		Depends on sensor specifications		
Alarm set points*1		Depends on sensor specifications		
Sampling metho	d	Diffusion type	Suction type (pour into by external unit)	
Setting flow ra	ate	_	0.4 - 1.5 L/min	
Power supply in		Power lamp lit (green)		
	Alarm type	Two-step alarm (H-HH)		
Gas	Indication	Alarm lamp lit (red)		
alarm	Reset type*1	Auto reset or self-latching		
	Self-diagnosis	System abnormality (E-9), sensor abnormality	(E-1)	
	Indication	Fault lamp lit (yellow), error code display		
Fault alarm	_	System abnormality: Self-latching		
	Reset type	Sensor abnormality: Auto reset (self-latching	g if sensor is disconnected)	
	Self-diagnosis		nosis, communication diagnosis, sensor warning	
Warnings	Display	Blinking display alternating between gas cond		
ildi iii ilgo	Operation	Same as normal operation	Solici de l'oli dilla oli oli obac	
Functions	-por a croff	Alarm delay, suppression, zero follower, sens	sitivity correction HART communication	
External output	<u>+*1</u>	Gas concentration signal (4-20 mA DC with HAF		
Excernar outpu	Transmission	3-wire analog transmission (common power supp		
	Method	2-wire analog transmission (common power supplication and source)	ory \power suppry, signar, common/) or	
	MELITOU			
	Transmission	4-20 mA DC (non-insulated linear output)		
Gas	Specifications	Maximum load resistance 600 Ω (with derating depending on power supply voltage)		
concentration		Resolution: max. 200 divisions (depending on	specifications)	
signal	Transmission	Shielded cable 1.25 sq (1.308 mm ² /AWG16) or		
	cable*2	2.0 sq (2.08 mm ² /AWG14) (same as power supply cable)		
	Transmission	For 1.25 sq (1.308 mm ² /AWG16): Not exceeding 1.25 km		
	Distance*7	For 2.0 sq (2.08 mm ² /AWG14): Not exceeding 2 km (with derating depending on supply voltage)		
		SPDT (× 3): 2 alarms, 1 fault output, non-exciting at normal (exciting at alarm) or exciting		
Alarm contact(Optional)*1	at normal(non-exciting at alarm), 250 V AC, 2 A; 30 V DC, 1 A(resistance load), Minimum load		
	•	5V DC. 0.1A		
	Input voltage range*3	24 V DC (18 V - 30 V DC)		
		Shielded cable 1.25 sq (1.308 mm ² /AWG16) or		
Power supply	Power supply cable*2*7	2.0 sq (2.08 mm²/AWG14) (same as transmission cable)		
	Power consumption	Max. 3.1 W		
	Material	Stainless steel: SCS14 (equivalent to SUS316)		
	material	ATEX/IECEx: M25 \times 1.5, conversion adapter (optional): NPT3/4, NPT1/2, M20 \times 1.5		
	Cable connectors*1	Japan Ex: Flame proof packing method $\langle M20 \times 1.$		
	Capte Connectors	1.5>(Compatible cables ϕ 12.0~16.0mm)	$3 \times (00000000000000000000000000000000000$	
	Tube connecting port	- 1. σ. (σοπράττυτο σάντος ψτζ. σ~ 10. σππ)	NPT1/4 (with SUS elbow union for 0.D ϕ 8-1t)	
Housing	Degrees of protection	Equivalent to IP66/67	MITT/ T (WITH SOS CIDOW UNION 101 U. DΨ0-IL)	
	Installation type*1	Wall mounting (standard)/2B pole mounting (optional)		
	motarration type	Approx. $171 \text{ (W)} \times 322 \text{ (H)} \times 127 \text{ (D)} \text{ mm}$	Approx. 171 (W) \times 334 (H) \times 127 (D) mm	
	External dimensions*5	(excluding projections)	(excluding projections)	
	Weight*5	Approx. 7.3 kg	Approx. 7.6 kg	
	Height			
Operating temperature range*4		ATEX/IECEx: -40 °C - +70 °C (no sudden changes)		
Operating humidity range*4		Japan Ex: -20 °C - +70 °C (no sudden changes) 0 %RH - 95 %RH (no condensation)		
Operation method		Dedicated magnet control key		
Type of protection		Flameproof construction + intrinsically safe explosion-proof construction		
Explosion- ATEX II 2 G Ex db ia II C T4 Gb, -40°C ≤ Ta ≤ +70°C proof IECEx Ex db ia II C T4 Gb, -40°C ≤ Ta ≤ +70°C				
approvals		•		
	Japan Ex	Ex db ia II C T4 Gb, -20°C≦Ta≦+70°C		
Functional safety(IEC61508:2010)*6*8		SIL2 capable (HFT=0), SIL3 capable (HFT=1) with redundancy		
Certification		CE Marking		
HART communication		HART7		
*1 Please specify your request when ordering				

^{*1} Please specify your request when ordering.

^{*2} To ensure explosion protection, use a cable designed for use in temperatures at least 5 $^{\circ}$ C above the maximum anticipated ambient temperature.

^{*3} Use a power supply capable of minimum temporary output of 2.5 A to ensure that fuses blow normally in the event of a product abnormality.

 $[\]star 4$ In accordance with sensor specifications if restrictions apply due to sensor specifications.

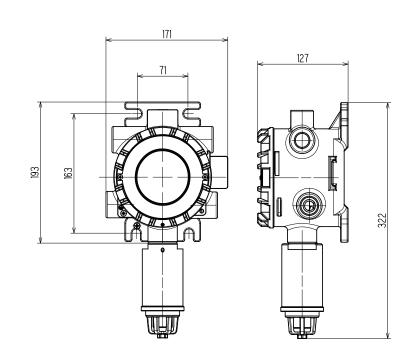
^{*5} External dimensions and weight exclude cable gland.

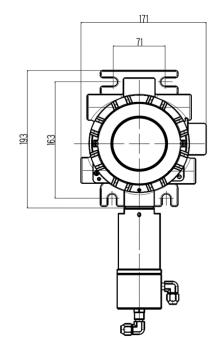
^{*6} External units used in combination with SD-3DRI should be selected from SIL certified products.

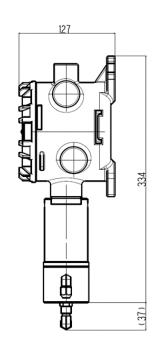
^{*7} Depends on the type of cable.

^{*8} For specifications related to functional safety (IEC61508), please refer to the Safety Manual (PT2E-306).

<Suction type> * Pour into by external unit







Terminal Block Diagram

<Using 3-core cable>

Terminal No.	Power/signal cable connec	tion
1	Power supply (+)	24 V DC
2	Common (Power supply (-), signal (-))	4-20 mA
3	Signal (+)	with HART
4	Not used	

<Using 4-core cable>

Terminal No.	Power/signal cable c	onnection
1	Power supply (+)	04 V D0
2	Power supply (-)	24 V DC
3	Signal (+)	4-20 mA with
4	Signal (-)	HART

<Contact output (optional) >

Relay1 (ALARM1)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

N.O.: Normal Open N.C.: Normal Close

Relay2 (ALARM2)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.

Relay3 (FAULT)

Terminal No.	Cable connection
1	N. O.
2	Common
3	N. C.