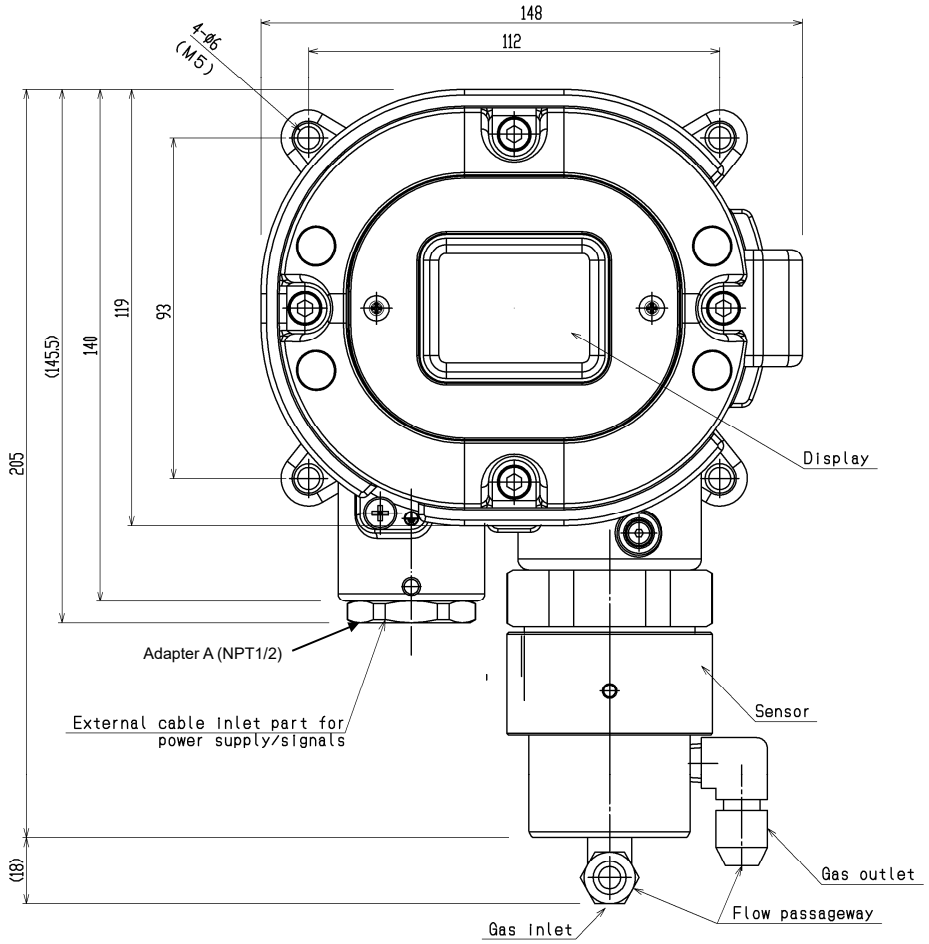
# GAS DETECTOR WITH SIGNAL CONVERTER
# SD-1DOX(ATEX・IECEx/Anoxia alarm) SPECIFICATION

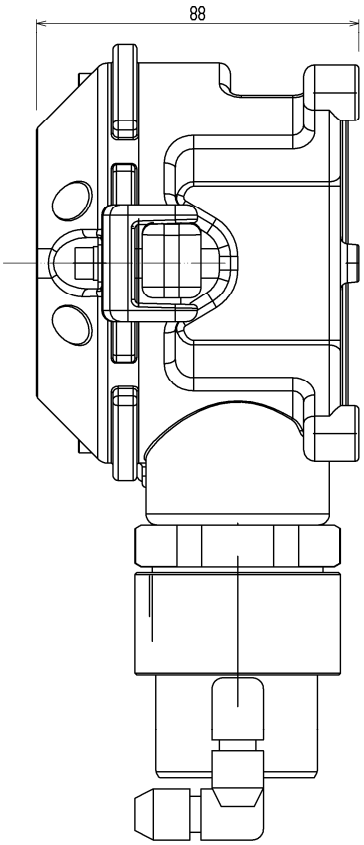
| | |
|---|---|
| Model | SD-1DOX |
| Detection principle | Galvanic cell method |
| Detectable gas | O2 |
| Gas concentration display | LED(4digits・7segments) |
| Measuring range | 0～25vol% |
| Detection method | Suction method(pour into by external unit) |
| Suction flow | 1.5±0.5L/min |
| Alarm preset point*1 | 18vol%(L)【Standard】 |
| Power indication | POWER lamp lighting(green) |
| Output*1 | Gas concentration signal<br>Alarm contact(Gas alarm or Trouble alarm or Gas・Trouble common alarm) |
| Indicate accuracy*2<br>(under an identical condition) | Within ±0.7vol% |
| Accuracy of Alarm setpoint*2 | Difference between Alarm setpoint and indicated value of warning alarm are zero. |
| Response time*2<br>(under an identical condition) | Within 30sec(T90)(without piping delay time) |
| Alarm accuracy*2<br>(under an identical condition) | Within ±1vol% to the alarm setpoint value |
| Alarm-delay time*2<br>(under an identical condition) | By anoxia alarm(Alarm setpoint value：18vol%),Within 5sec(when introducing 10～11vol% gas)(without piping delay time) |
| Gas alarm type | Single alarm(L) |
| Gas alarm indication | ALM lamp lighting(red) |
| Gas alarm action | Auto-recover |
| Trouble alarm・Self diagnosis | System failure/Sensor failure |
| Trouble alarm indication | FAULT lamp lighting(yellow)/content display |
| Trouble alarm action | Auto-recover |
| Alarm contact*1 | No-voltage contact 1a・Non-exciting at normal(exciting at alarm) or exciting at normal(non-exciting at alarm) |
| Contact capacity | AC250V・0.5A/DC30V・0.5A(resistive load) |
| Transmission scheme | Three-wire analog transmission<br>(in common with power supply<power supply, signal, common>) |
| Specification of transmission | DC4～20mA<br>(linear・load resistance less than 300Ω) |
| Transmission cable | CVVS worth of shield cable(1.25mm$^2$ or 2.0mm$^2$)・3-core<br>(by not using alarm contact)<br>CVVS worth of shield cable(1.25mm$^2$ or 2.0mm$^2$)・5-core<br>(by using alarm contact) |
| Transmission distance | Less than 1.25km |
| Power supply | DC24V±10% |
| Power consumption | MAX.1.1W |
| Cabling port*1 | Pressure proof packing gland<G3/4><br>(Compatible cables φ9.6～10.5mm in outer diameter and rubber seals φ11mm in inner diameter<mounted>)<br>(Compatible cables φ11.5～12.5mm in outer diameter and rubber seals φ13mm in inner diameter<accessory)<br>or Adapter A<NPT1/2> , Adapter B<NPT3/4> |
| Piping port | Rc1/8(with PP elbow union for O.Dφ6-1t・PTFE pipe) |
| Initial clear | Approx.25sec |
| Operating temperature | -10～+40℃(non-rapidly-vary) |
| Operating humidity | Less than 95%RH(non-condensing) |
| Structure | Wall mounting type |
| Explosion-proof structure | Flame proof structure |
| Explosion-proof grade | Ⅱ 2G Ex db ⅡC T6 Gb(ATEX) / Ex db ⅡC T6 Gb(IECEx) |
| Outer dimension | Approx.148(W)×205(H)×88(D)mm(projection excluding) |
| Weight | Approx.2.9kg |
| Color | Munsell 7.5BG5/2 |

*1 Please specify your request when ordering.

*2 In conformity to JIS T8201 2010(Oxygen deficiency indicator).

## Outline Drawings




## Terminal Drawings

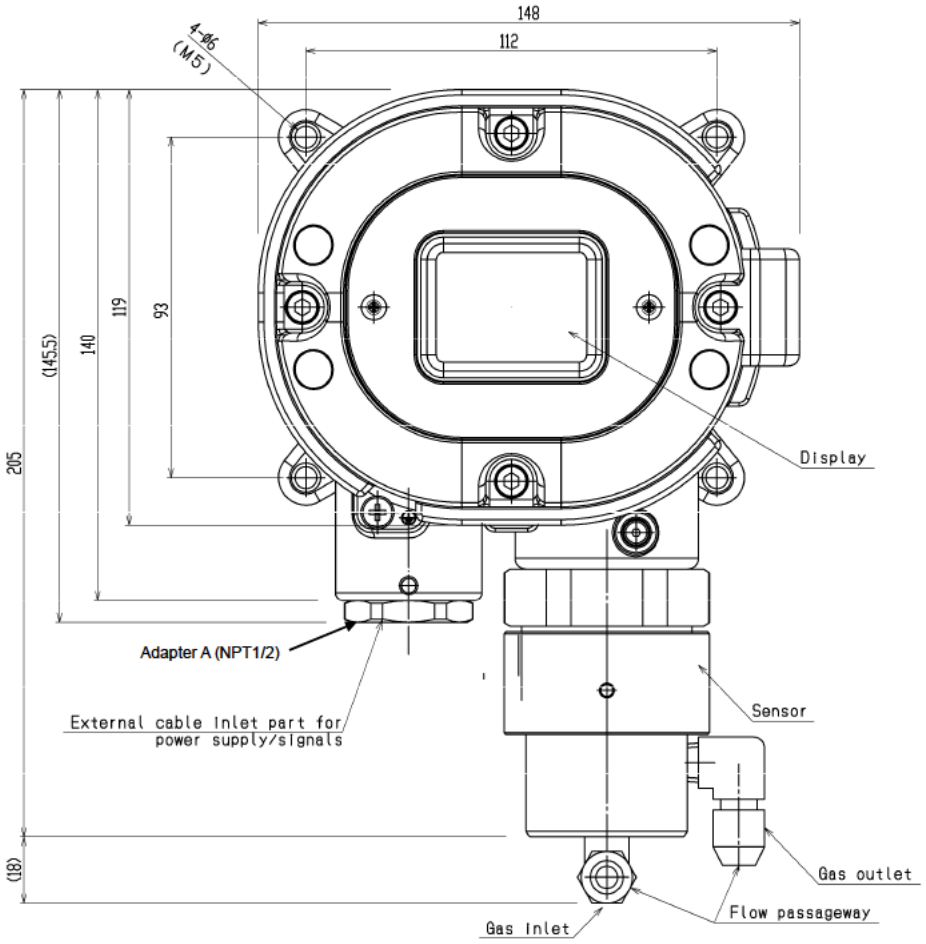
| | | |
|---|---|---|
| DC24V | DC+ | 1 |
| 4-20mA | −(common) | 2 |
| | Sig+ | 3 |
| | Alarm contact | 4 |
| | Alarm contact | 5 |

# GAS DETECTOR WITH SIGNAL CONVERTER
# SD-1DOX(ATEX・IECEx/Leak alarm) SPECIFICATION

| | |
|---|---|
| Model | SD-1DOX |
| Detection principle | Galvanic cell method |
| Detectable gas | O2 |
| Gas concentration display | LED(4digits・7segments) |
| Measuring range | 0～50vol% |
| Detection method | Suction method(pour into by external unit) |
| Suction flow | 1.5±0.5L/min |
| Alarm preset point*1 | 25vol%(H)【Standard】 |
| Power indication | POWER lamp lighting(green) |
| Output*1 | Gas concentration signal<br>Alarm contact(Gas alarm or Trouble alarm or Gas・Trouble common alarm) |
| Alarm accuracy<br>(under an identical condition) | Within ±5vol% to leak alarm(Alarm setpoint value : 25vol%) |
| Alarm-delay time<br>(under an identical condition) | By leak alarm(Alarm setpoint value : 25vol%),Within 30sec after providing the gas 1.6 times(without piping delay time) |
| Gas alarm type | Single alarm(H) |
| Gas alarm indication | ALM lamp lighting(red) |
| Gas alarm action | Auto-recover |
| Trouble alarm・Self diagnosis | System failure/Sensor failure |
| Trouble alarm indication | FAULT lamp lighting(yellow)/content display |
| Trouble alarm action | Auto-recover |
| Alarm contact*1 | No-voltage contact 1a・Non-exciting at normal(exciting at alarm) or exciting at normal(non-exciting at alarm) |
| Contact capacity | AC250V・0.5A/DC30V・0.5A(resistive load) |
| Transmission scheme | Three-wire analog transmission<br>(in common with power supply<power supply, signal, common>) |
| Specification of transmission | DC4～20mA<br>(linear・load resistance less than 300Ω) |
| Transmission cable | CVVS worth of shield cable(1.25mm$^2$ or 2.0mm$^2$)・3-core<br>(by not using alarm contact)<br>CVVS worth of shield cable(1.25mm$^2$ or 2.0mm$^2$)・5-core<br>(by using alarm contact) |
| Transmission distance | Less than 1.25km |
| Power supply | DC24V±10% |
| Power consumption | MAX.1.1W |
| Cabling port*1 | Pressure proof packing gland<G3/4><br>(Compatible cables φ9.6～10.5mm in outer diameter and rubber seals φ11mm in inner diameter<mounted>)<br>(Compatible cables φ11.5～12.5mm in outer diameter and rubber seals φ13mm in inner diameter<accessory)<br>or Adapter A<NPT1/2> , Adapter B<NPT3/4> |
| Piping port | Rc1/8(with PP elbow union for O.Dφ6-1t・PTFE pipe) |
| Initial clear | Approx.25sec |
| Operating temperature | -10～+40℃(non-rapidly-vary) |
| Operating humidity | Less than 95%RH(non-condensing) |
| Structure | Wall mounting type |
| Explosion-proof structure | Flame proof structure |
| Explosion-proof grade | Ⅱ 2G Ex db ⅡC T6 Gb(ATEX) / Ex db ⅡC T6 Gb(IECEx) |
| Outer dimension | Approx.148(W)×205(H)×88(D)mm(projection excluding) |
| Weight | Approx.2.9kg |
| Color | Munsell 7.5BG5/2 |

*1 Please specify your request when ordering.

## Outline Drawings




## Terminal Drawings

| | | |
|---|---|---|
| DC24V | DC+ | 1 |
| | −(common) | 2 |
| 4-20mA | Sig+ | 3 |
| | Alarm contact | 4 |
| | Alarm contact | 5 |

# GAS DETECTOR WITH SIGNAL CONVERTER
# SD-1DOX(ATEX・IECEx/Gas monitoring) SPECIFICATION

| | |
|---|---|
| Model | SD-1DOX |
| Detection principle | Galvanic cell method |
| Detectable gas | O2 |
| Gas concentration display | LED(4digits・7segments) |
| Measuring range | 0～5vol%/0～10vol%/0～25vol%/0～50vol%/0～100vol% |
| Detection method | Suction method(pour into by external unit) |
| Suction flow | 1.5±0.5L/min |
| Alarm preset point*1 | Depend on measuring range |
| Power indication | POWER lamp lighting(green) |
| Output*1 | Gas concentration signal<br>Alarm contact(Gas alarm or Trouble alarm or Gas・Trouble common alarm) |
| Indicate accuracy<br>(under an identical condition) | Within ±0.7vol%(below 25vol% range)<br>Within ±3vol%(above 25vol% range) |
| Response time<br>(under an identical condition) | Within 30sec(T90)(without piping delay time) |
| Gas alarm type*1 | Single alarm(H or L) |
| Gas alarm indication | ALM lamp lighting(red) |
| Gas alarm action | Auto-recover |
| Trouble alarm・Self diagnosis | System failure/Sensor failure |
| Trouble alarm indication | FAULT lamp lighting(yellow)/content display |
| Trouble alarm action | Auto-recover |
| Alarm contact*1 | No-voltage contact 1a・Non-exciting at normal(exciting at alarm) or exciting at normal(non-exciting at alarm) |
| Contact capacity | AC250V・0.5A/DC30V・0.5A(resistive load) |
| Transmission scheme | Three-wire analog transmission<br>(in common with power supply<power supply, signal, common>) |
| Specification of transmission | DC4～20mA(linear・load resistance less than 300Ω) |
| Transmission cable | CVVS worth of shield cable(1.25mm$^2$ or 2.0mm$^2$)・3-core<br>(by not using alarm contact)<br>CVVS worth of shield cable(1.25mm$^2$ or 2.0mm$^2$)・5-core<br>(by using alarm contact) |
| Transmission distance | Less than 1.25km |
| Power supply | DC24V±10% |
| Power consumption | MAX.1.1W |
| Cabling port*1 | Flame proof packing method<br>(Cable gland<G3/4> or Adapter A<NPT1/2> or Adapter B<NPT3/4>) |
| Piping port | Rc1/8(with PP elbow union for O.Dφ6-1t・PTFE pipe) |
| Initial clear | Approx.25sec |
| Operating temperature | -10～+40℃(non-rapidly-vary) |
| Operating humidity | Less than 95%RH(non-condensing) |
| Structure | Wall mounting type |
| Explosion-proof structure | Flame proof structure |
| Explosion-proof grade | Ⅱ 2G Ex db ⅡC T6 Gb(ATEX) / Ex db ⅡC T6 Gb(IECEx) |
| Outer dimension | Approx.148(W)×205(H)×88(D)mm(projection excluding) |
| Weight | Approx.2.9kg |
| Color | Munsell 7.5BG5/2 |

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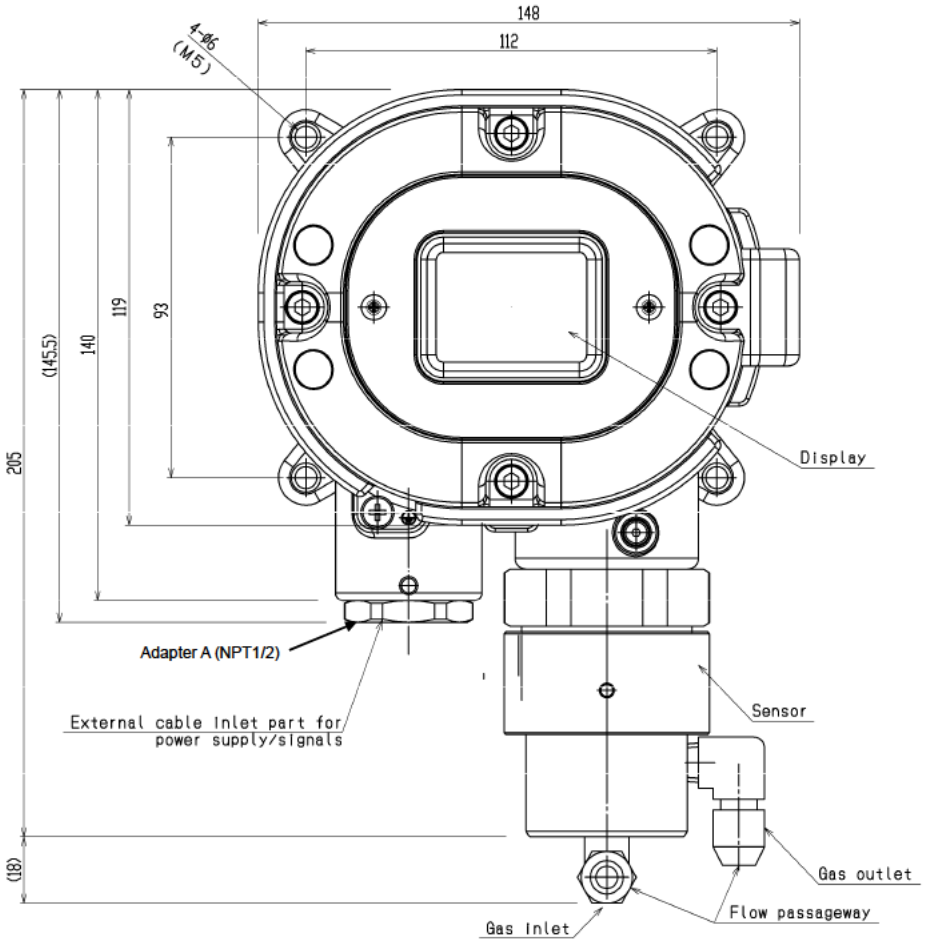
## Outline Drawings




## Terminal Drawings

| | | |
|---|---|---|
| DC24V | DC+ | 1 |
| | −(common) | 2 |
| 4-20mA | Sig+ | 3 |
| | Alarm contact | 4 |
| | Alarm contact | 5 |