

## Gas Detector with Signal Converter

### SD-3EC Series SPECIFICATION

|                               |   |   |   |
|-------------------------------|---|---|---|
| Model                         |   | SD-3EC  | 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               |   | Diffusion type  | Suction type (pour into by external unit)   |
| Setting flow rate             |   | —   | 0.4 - 1.5 L/min                             |
| Power supply indication       |   | Power lamp lit (green)  |   |
| Gas alarm                     | Alarm type                                  | Two-step alarm (L-LL, L-H, or H-HH)   |   |
|                               | Indication                                  | Alarm lamp lit (red)  |   |
|                               | Reset type*1                                | Auto reset or self-latching   |   |
| Fault alarm                   | Self-diagnosis                              | System abnormality (E-9), sensor abnormality (E-1)  |   |
|                               | Indication                                  | Fault lamp lit (yellow), error code display   |   |
|                               | Reset type                                  | System abnormality: Self-latching<br>Sensor abnormality: Auto reset (self-latching if sensor is disconnected)   |   |
| Warnings                      | Self-diagnosis                              | Sensor life assessment, clock abnormality diagnosis, communication diagnosis, sensor warning  |   |
|                               | Display                                     | Blinking display alternating between gas concentration and error code   |   |
|                               | Operation                                   | Same as normal operation  |   |
| Functions                     |   | Alarm delay, suppression, zero follower, sensitivity correction, communication  |   |
| External output*1             |   | Gas concentration signal (4-20 mA DC + HART output), contact output (optional)  |   |
| Gas concentration signal      | Transmission Method                         | 3-wire analog transmission (common power supply <power supply, signal, common>) or 2-wire analog transmission (current source)  |   |
|                               | Transmission Specifications                 | 4-20 mA DC (non-insulated linear output)<br>Maximum load resistance 600 Ω (with derating depending on power supply voltage)<br>Resolution: max. 250 divisions (depending on specifications)             |   |
|                               | Transmission cable*2                        | Shielded cable 1.25 sq (1.38 mm <sup>2</sup> /AWG16) or 2.0 sq (2.08 mm <sup>2</sup> /AWG14) (same as power supply cable)   |   |
|                               | Transmission Distance                       | For 1.25 sq (1.38 mm <sup>2</sup> /AWG16): Not exceeding 1.25 km<br>For 2.0 sq (2.08 mm <sup>2</sup> /AWG14): Not exceeding 2 km (with derating depending on supply voltage)                            |   |
| Alarm contact (Optional)*1    |   | SPDT (× 3): 2 alarms, 1 fault output, non-exciting at normal (exciting at alarm) or exciting at normal (non-exciting at alarm), 250 V AC, 2 A; 30 V DC, 1 A (resistance load), Minimum load 5V DC, 0.1A |   |
| Power supply                  | Input voltage range*3                       | 24 V DC (18 V - 30 V DC)  |   |
|                               | Power supply cable*2                        | Shielded cable 1.25 sq (1.38 mm <sup>2</sup> /AWG16) or 2.0 sq (2.08 mm <sup>2</sup> /AWG14) (same as transmission cable)   |   |
|                               | Power consumption                           | Max. 2.8 W  |   |
| Housing                       | Material                                    | Stainless steel: SCS14 (equivalent to SUS316)   |   |
|                               | Cable connectors*1                          | M25 × 1.5, conversion adapter (optional): NPT3/4, NPT1/2, M20 × 1.5   |   |
|                               | Tube connecting port                        | —   | NPT1/4 (with SUS elbow union for 0. Dφ8-1t) |
|                               | Degrees of protection                       | Equivalent to IP66/67   |   |
|                               | Installation type*1                         | Wall mounting (standard)/2B pole mounting (optional)  |   |
|                               | External dimensions (excluding projections) | Approx. 171(W) × 277(H) × 127(D) mm   | Approx. 171(W) × 289(H) × 127(D) mm         |
|                               | Weight                                      | Approx. 6.7 kg  | Approx. 7.0 kg                              |
| Operating temperature range*4 |   | -40 °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 enclosures   |   |
| Explosion-proof approvals     | ATEX  | II 2G Ex db IIC T4 Gb, -50°C ≤ Ta ≤ +70°C (when lightning arrester is not installed), -40°C ≤ Ta ≤ +70°C (when lightning arrester is installed)   |   |
|                               | IECEx                                       | Ex db IIC T4 Gb, -50°C ≤ Ta ≤ +70°C (when lightning arrester is not installed), -40°C ≤ Ta ≤ +70°C (when lightning arrester is installed)   |   |
| CE marking                    |   | ATEX directive, EMC directive, RoHS directive   |   |
| HART communication            |   | HART7   |   |

\*1 Please specify your request when ordering.

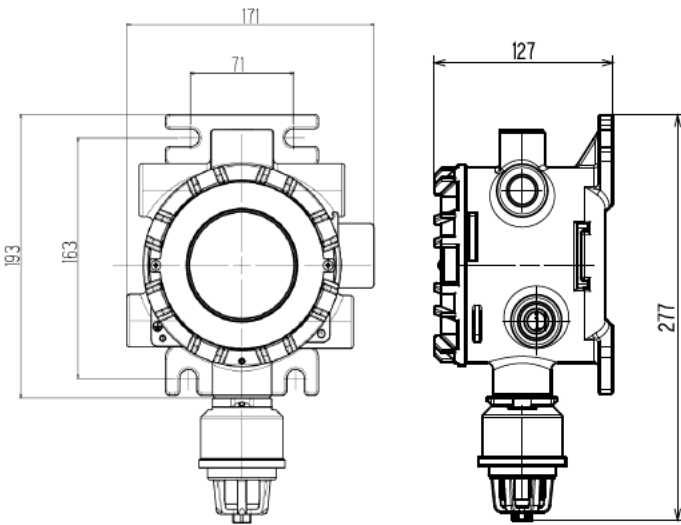
\*2 To ensure explosion protection, use a cable designed for use in temperatures at least 5 °C above the maximum anticipated ambient temperature.

\*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.

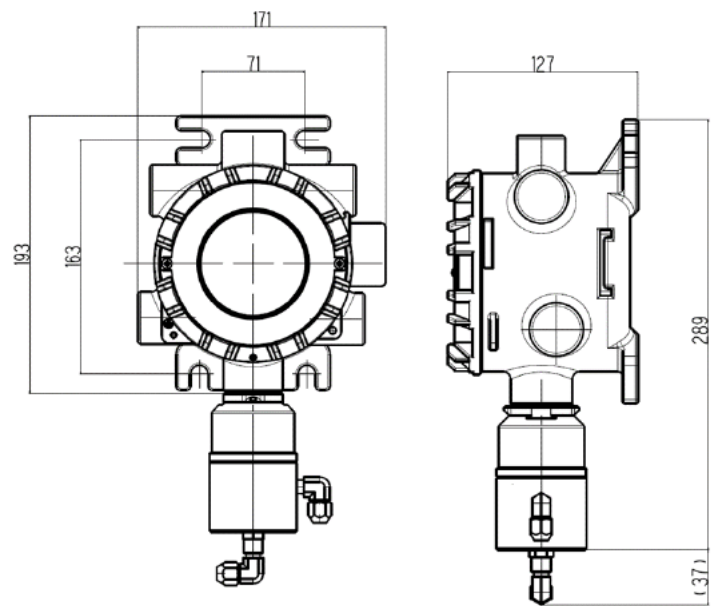
Dimensional drawings

## &lt;Diffusion type&gt;



## &lt;Suction type&gt;

\* Pour into by external unit

Terminal Block Diagram

## &lt;Using 3-core cable&gt;

| Terminal No. | Power/signal cable connection            |                      |
|--------------|--|----------------------|
| 1            | Power supply (+)                         | 24 V DC              |
| 2            | Common<br>(Power supply (-), signal (-)) |                      |
| 3            | Signal (+)                               | 4-20 mA<br>+<br>HART |
| 4            | Not used                                 |                      |

## &lt;Using 4-core cable&gt;

| Terminal No. | Power/signal cable connection |                      |
|--------------|-------------------------------|----------------------|
| 1            | Power supply (+)              | 24 V DC              |
| 2            | Power supply (-)              |                      |
| 3            | Signal (+)                    | 4-20 mA<br>+<br>HART |
| 4            | Signal (-)                    |                      |

## &lt;Contact output (optional)&gt;

## Relay1 (ALARM1)

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

## 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.            |

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

## Gas Detector with Signal Converter

### SD-3EC Series SPECIFICATION

|                               |   |   |   |
|-------------------------------|---|---|---|
| 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 method               |   | Diffusion type  | Suction type (pour into by external unit)   |
| Setting flow rate             |   | —   | 0.4 - 1.5 L/min                             |
| Power supply indication       |   | Power lamp lit (green)  |   |
| Gas alarm                     | Alarm type                                  | Two-step alarm (H-HH)   |   |
|                               | Indication                                  | Alarm lamp lit (red)  |   |
|                               | Reset type*1                                | Auto reset or self-latching   |   |
| Fault alarm                   | Self-diagnosis                              | System abnormality (E-9), sensor abnormality (E-1)  |   |
|                               | Indication                                  | Fault lamp lit (yellow), error code display   |   |
|                               | Reset type                                  | System abnormality: Self-latching<br>Sensor abnormality: Auto reset (self-latching if sensor is disconnected)   |   |
| Warnings                      | Self-diagnosis                              | Sensor life assessment, clock abnormality diagnosis, communication diagnosis, sensor warning  |   |
|                               | Display                                     | Blinking display alternating between gas concentration and error code   |   |
|                               | Operation                                   | Same as normal operation  |   |
| Functions                     |   | Alarm delay, suppression, zero follower, sensitivity correction, HART communication   |   |
| External output*1             |   | Gas concentration signal (4-20 mA DC + HART output), contact output (optional)  |   |
| Gas concentration signal      | Transmission Method                         | 3-wire analog transmission (common power supply <power supply, signal, common>) or 2-wire analog transmission (current source)  |   |
|                               | Transmission Specifications                 | 4-20 mA DC (non-insulated linear output)<br>Maximum load resistance 600 Ω (with derating depending on power supply voltage)<br>Resolution: max. 250 divisions (depending on specifications)             |   |
|                               | Transmission cable*2                        | Shielded cable 1.25 sq (1.38 mm <sup>2</sup> /AWG16) or 2.0 sq (2.08 mm <sup>2</sup> /AWG14) (same as power supply cable)   |   |
|                               | Transmission Distance                       | For 1.25 sq (1.38 mm <sup>2</sup> /AWG16): Not exceeding 1.25 km<br>For 2.0 sq (2.08 mm <sup>2</sup> /AWG14): Not exceeding 2 km (with derating depending on supply voltage)                            |   |
| Alarm contact (Optional)*1    |   | SPDT (× 3): 2 alarms, 1 fault output, non-exciting at normal (exciting at alarm) or exciting at normal (non-exciting at alarm), 250 V AC, 2 A; 30 V DC, 1 A (resistance load), Minimum load 5V DC, 0.1A |   |
| Power supply                  | Input voltage range*3                       | 24 V DC (18 V - 30 V DC)  |   |
|                               | Power supply cable*2                        | Shielded cable 1.25 sq (1.38 mm <sup>2</sup> /AWG16) or 2.0 sq (2.08 mm <sup>2</sup> /AWG14) (same as transmission cable)   |   |
|                               | Power consumption                           | Max. 2.8 W  |   |
| Housing                       | Material                                    | Stainless steel: SCS14 (equivalent to SUS316)   |   |
|                               | Cable connectors*1                          | M25 × 1.5, conversion adapter (optional): NPT3/4, NPT1/2, M20 × 1.5   |   |
|                               | Tube connecting port                        | —   | NPT1/4 (with SUS elbow union for 0. Dφ8-1t) |
|                               | Degrees of protection                       | Equivalent to IP66/67   |   |
|                               | Installation type*1                         | Wall mounting (standard)/2B pole mounting (optional)  |   |
|                               | External dimensions (excluding projections) | Approx. 171(W) × 277(H) × 127(D) mm   | Approx. 171(W) × 289(H) × 127(D) mm         |
|                               | Weight                                      | Approx. 6.7 kg  | Approx. 7.0 kg                              |
| Operating temperature range*4 |   | -40 °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 enclosures   |   |
| Explosion-proof approvals     | ATEX  | II 2G Ex db IIC T4 Gb, -50°C ≤ Ta ≤ +70°C (when lightning arrester is not installed), -40°C ≤ Ta ≤ +70°C (when lightning arrester is installed)   |   |
|                               | IECEx                                       | Ex db IIC T4 Gb, -50°C ≤ Ta ≤ +70°C (when lightning arrester is not installed), -40°C ≤ Ta ≤ +70°C (when lightning arrester is installed)   |   |
| CE marking                    |   | ATEX directive, EMC directive, RoHS directive   |   |
| HART communication            |   | HART7   |   |

\*1 Please specify your request when ordering.

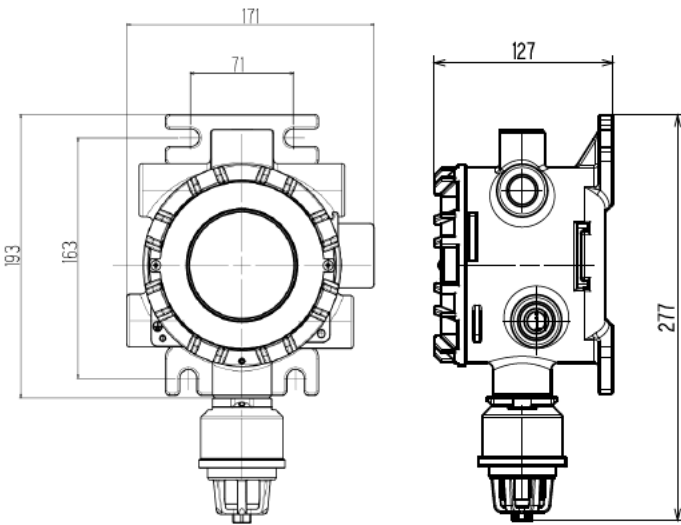
\*2 To ensure explosion protection, use a cable designed for use in temperatures at least 5 °C above the maximum anticipated ambient temperature.

\*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.

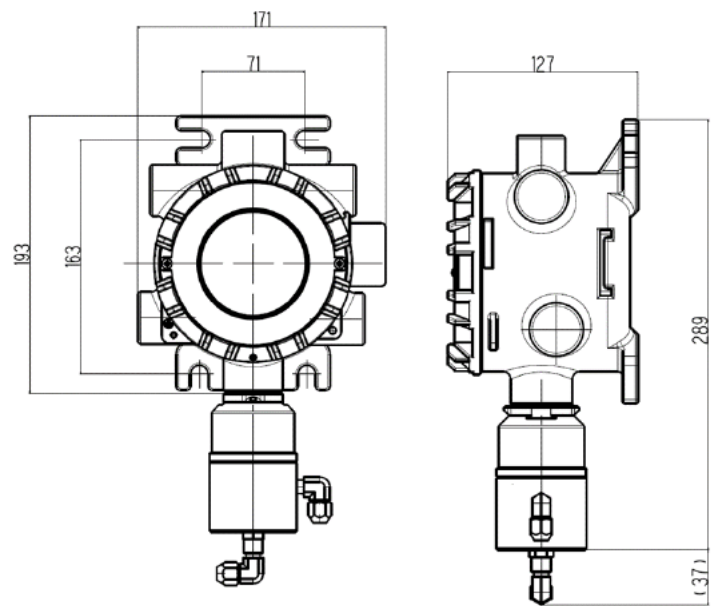
Dimensional drawings

## &lt;Diffusion type&gt;



## &lt;Suction type&gt;

\* Pour into by external unit

Terminal Block Diagram

## &lt;Using 3-core cable&gt;

| Terminal No. | Power/signal cable connection            |                      |
|--------------|--|----------------------|
| 1            | Power supply (+)                         | 24 V DC              |
| 2            | Common<br>(Power supply (-), signal (-)) |                      |
| 3            | Signal (+)                               | 4-20 mA<br>+<br>HART |
| 4            | Not used                                 |                      |

## &lt;Using 4-core cable&gt;

| Terminal No. | Power/signal cable connection |                      |
|--------------|-------------------------------|----------------------|
| 1            | Power supply (+)              | 24 V DC              |
| 2            | Power supply (-)              |                      |
| 3            | Signal (+)                    | 4-20 mA<br>+<br>HART |
| 4            | Signal (-)                    |                      |

## &lt;Contact output (optional)&gt;

## Relay1 (ALARM1)

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

## 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.            |

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

## Gas Detector with Signal Converter

### SD-3ECS Series SPECIFICATION

|                               |   |   |   |
|-------------------------------|---|---|---|
| Model                         |   | SD-3ECS   | SD-3DECS                                    |
| 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 points*1            |   | Depends on sensor specifications  |   |
| Sampling method               |   | Diffusion type  | Suction type (pour into by external unit)   |
| Setting flow rate             |   | —   | 0.4 - 1.5 L/min                             |
| Power supply indication       |   | Power lamp lit (green)  |   |
| Gas alarm                     | Alarm type                                  | Two-step alarm (H-HH)   |   |
|                               | Indication                                  | Alarm lamp lit (red)  |   |
|                               | Reset type*1                                | Auto reset or self-latching   |   |
| Fault alarm                   | Self-diagnosis                              | System abnormality (E-9), sensor abnormality (E-1)  |   |
|                               | Indication                                  | Fault lamp lit (yellow), error code display   |   |
|                               | Reset type                                  | System abnormality: Self-latching<br>Sensor abnormality: Auto reset (self-latching if sensor is disconnected)   |   |
| Warnings                      | Self-diagnosis                              | Sensor life assessment, clock abnormality diagnosis, communication diagnosis, sensor warning  |   |
|                               | Display                                     | Blinking display alternating between gas concentration and error code   |   |
|                               | Operation                                   | Same as normal operation  |   |
| Functions                     |   | Alarm delay, suppression, zero follower, sensitivity correction, HART communication   |   |
| External output*1             |   | Gas concentration signal (4-20 mA DC + HART output), contact output (optional)  |   |
| Gas concentration signal      | Transmission Method                         | 3-wire analog transmission (common power supply <power supply, signal, common>) or 2-wire analog transmission (current source)  |   |
|                               | Transmission Specifications                 | 4-20 mA DC (non-insulated linear output)<br>Maximum load resistance 600 Ω (with derating depending on power supply voltage)<br>Resolution: max. 250 divisions (depending on specifications)             |   |
|                               | Transmission cable*2                        | Shielded cable 1.25 sq (1.38 mm <sup>2</sup> /AWG16) or 2.0 sq (2.08 mm <sup>2</sup> /AWG14) (same as power supply cable)   |   |
|                               | Transmission Distance                       | For 1.25 sq (1.38 mm <sup>2</sup> /AWG16): Not exceeding 1.25 km<br>For 2.0 sq (2.08 mm <sup>2</sup> /AWG14): Not exceeding 2 km (with derating depending on supply voltage)                            |   |
| Alarm contact (Optional)*1    |   | SPDT (× 3): 2 alarms, 1 fault output, non-exciting at normal (exciting at alarm) or exciting at normal (non-exciting at alarm), 250 V AC, 2 A; 30 V DC, 1 A (resistance load), Minimum load 5V DC, 0.1A |   |
| Power supply                  | Input voltage range*3                       | 24 V DC (18 V - 30 V DC)  |   |
|                               | Power supply cable*2                        | Shielded cable 1.25 sq (1.38 mm <sup>2</sup> /AWG16) or 2.0 sq (2.08 mm <sup>2</sup> /AWG14) (same as transmission cable)   |   |
|                               | Power consumption                           | Max. 2.8 W  |   |
| Housing                       | Material                                    | Stainless steel: SCS14 (equivalent to SUS316)   |   |
|                               | Cable connectors*1                          | M25 × 1.5, conversion adapter (optional): NPT3/4, NPT1/2, M20 × 1.5   |   |
|                               | Tube connecting port                        | —   | NPT1/4 (with SUS elbow union for 0. Dφ8-1t) |
|                               | Degrees of protection                       | Equivalent to IP66/67   |   |
|                               | Installation type*1                         | Wall mounting (standard)/2B pole mounting (optional)  |   |
|                               | External dimensions (excluding projections) | Approx. 171(W) × 277(H) × 127(D) mm   | Approx. 171(W) × 289(H) × 127(D) mm         |
|                               | Weight                                      | Approx. 6.7 kg  | Approx. 7.0 kg                              |
| Operating temperature range*4 |   | -40 °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 enclosures   |   |
| Explosion-proof approvals     | ATEX  | II 2G Ex db IIC T4 Gb, -50°C ≤ Ta ≤ +70°C (when lightning arrester is not installed), -40°C ≤ Ta ≤ +70°C (when lightning arrester is installed)   |   |
|                               | IECEX                                       | Ex db IIC T4 Gb, -50°C ≤ Ta ≤ +70°C (when lightning arrester is not installed), -40°C ≤ Ta ≤ +70°C (when lightning arrester is installed)   |   |
| CE marking                    |   | ATEX directive, EMC directive, RoHS directive   |   |
| HART communication            |   | HART7   |   |

\*1 Please specify your request when ordering.

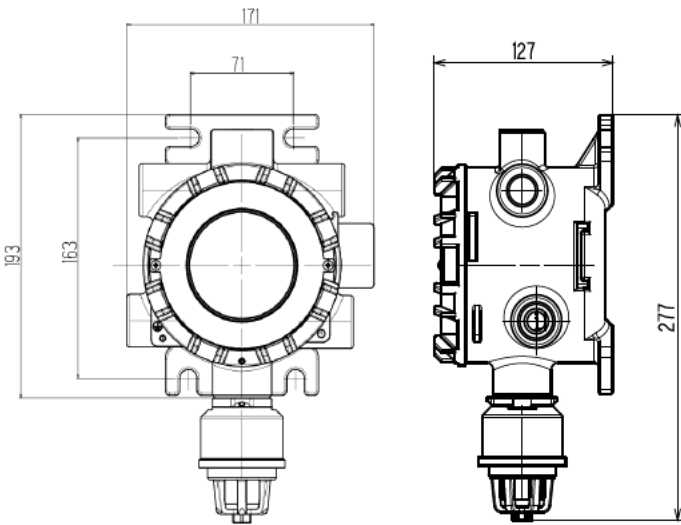
\*2 To ensure explosion protection, use a cable designed for use in temperatures at least 5 °C above the maximum anticipated ambient temperature.

\*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.

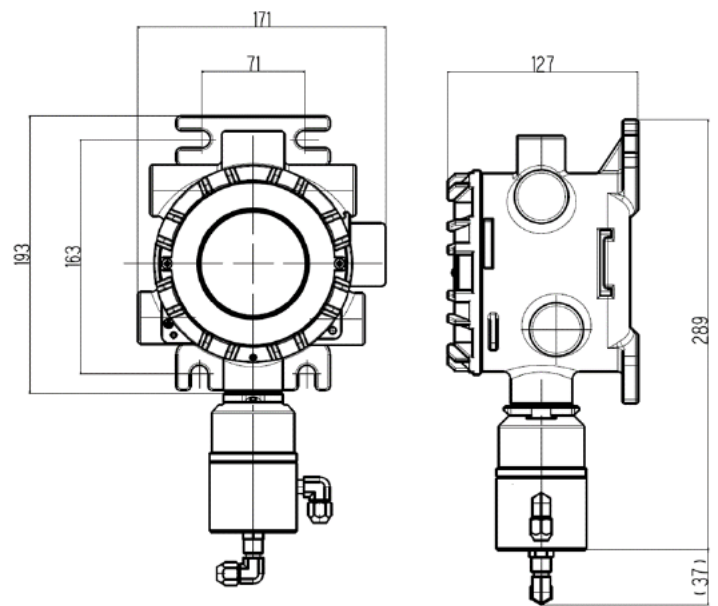
## Dimensional drawings

### <Diffusion type>



### <Suction type>

\* Pour into by external unit



## Terminal Block Diagram

### <Using 3-core cable>

| Terminal No. | Power/signal cable connection            |                      |
|--------------|--|----------------------|
| 1            | Power supply (+)                         | 24 V DC              |
| 2            | Common<br>(Power supply (-), signal (-)) |                      |
| 3            | Signal (+)                               | 4-20 mA<br>+<br>HART |
| 4            | Not used                                 |                      |

### <Using 4-core cable>

| Terminal No. | Power/signal cable connection |                      |
|--------------|-------------------------------|----------------------|
| 1            | Power supply (+)              | 24 V DC              |
| 2            | Power supply (-)              |                      |
| 3            | Signal (+)                    | 4-20 mA<br>+<br>HART |
| 4            | Signal (-)                    |                      |

### <Contact output (optional)>

#### Relay1 (ALARM1)

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

#### 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.            |

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

## Gas Detector with Signal Converter

### SD-3ECB Series SPECIFICATION

|                               |   |   |   |
|-------------------------------|---|---|---|
| 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 method               |   | Diffusion type  | Suction type (pour into by external unit)   |
| Setting flow rate             |   | —   | 0.4 - 1.5 L/min                             |
| Power supply indication       |   | Power lamp lit (green)  |   |
| Gas alarm                     | Alarm type                                  | Two-step alarm (H-HH)   |   |
|                               | Indication                                  | Alarm lamp lit (red)  |   |
|                               | Reset type*1                                | Auto reset or self-latching   |   |
| Fault alarm                   | Self-diagnosis                              | System abnormality (E-9), sensor abnormality (E-1)  |   |
|                               | Indication                                  | Fault lamp lit (yellow), error code display   |   |
|                               | Reset type                                  | System abnormality: Self-latching<br>Sensor abnormality: Auto reset (self-latching if sensor is disconnected)   |   |
| Warnings                      | Self-diagnosis                              | Sensor life assessment, clock abnormality diagnosis, communication diagnosis, sensor warning  |   |
|                               | Display                                     | Blinking display alternating between gas concentration and error code   |   |
|                               | Operation                                   | Same as normal operation  |   |
| Functions                     |   | Alarm delay, suppression, zero follower, sensitivity correction, HART communication   |   |
| External output*1             |   | Gas concentration signal (4-20 mA DC + HART output), contact output (optional)  |   |
| Gas concentration signal      | Transmission Method                         | 3-wire analog transmission (common power supply <power supply, signal, common>) or 2-wire analog transmission (current source)  |   |
|                               | Transmission Specifications                 | 4-20 mA DC (non-insulated linear output)<br>Maximum load resistance 600 Ω (with derating depending on power supply voltage)<br>Resolution: max. 250 divisions (depending on specifications)             |   |
|                               | Transmission cable*2                        | Shielded cable 1.25 sq (1.38 mm <sup>2</sup> /AWG16) or 2.0 sq (2.08 mm <sup>2</sup> /AWG14) (same as power supply cable)   |   |
|                               | Transmission Distance                       | For 1.25 sq (1.38 mm <sup>2</sup> /AWG16): Not exceeding 1.25 km<br>For 2.0 sq (2.08 mm <sup>2</sup> /AWG14): Not exceeding 2 km (with derating depending on supply voltage)                            |   |
| Alarm contact (Optional)*1    |   | SPDT (× 3): 2 alarms, 1 fault output, non-exciting at normal (exciting at alarm) or exciting at normal (non-exciting at alarm), 250 V AC, 2 A; 30 V DC, 1 A (resistance load), Minimum load 5V DC, 0.1A |   |
| Power supply                  | Input voltage range*3                       | 24 V DC (18 V - 30 V DC)  |   |
|                               | Power supply cable*2                        | Shielded cable 1.25 sq (1.38 mm <sup>2</sup> /AWG16) or 2.0 sq (2.08 mm <sup>2</sup> /AWG14) (same as transmission cable)   |   |
|                               | Power consumption                           | Max. 3.1 W  |   |
| Housing                       | Material                                    | Stainless steel: SCS14 (equivalent to SUS316)   |   |
|                               | Cable connectors*1                          | M25 × 1.5, conversion adapter (optional): NPT3/4, NPT1/2, M20 × 1.5   |   |
|                               | Tube connecting port                        | —   | NPT1/4 (with SUS elbow union for 0. Dφ8-1t) |
|                               | Degrees of protection                       | Equivalent to IP66/67   |   |
|                               | Installation type*1                         | Wall mounting (standard)/2B pole mounting (optional)  |   |
|                               | External dimensions (excluding projections) | Approx. 171(W) × 322(H) × 127(D) mm   | Approx. 171(W) × 334(H) × 127(D) mm         |
|                               | Weight                                      | Approx. 7.3 kg  | Approx. 7.6 kg                              |
| Operating temperature range*4 |   | -40 °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 + intrinsically safe explosion-proof construction   |   |
| Explosion-proof approvals     | ATEX  | II 2G Ex db ia IIC T4 Gb, -40°C ≤ Ta ≤ +70°C  |   |
|                               | IECEX                                       | Ex db ia IIC T4 Gb, -40°C ≤ Ta ≤ +70°C  |   |
| CE marking                    |   | ATEX directive, EMC directive, RoHS directive   |   |
| HART communication            |   | HART7   |   |

\*1 Please specify your request when ordering.

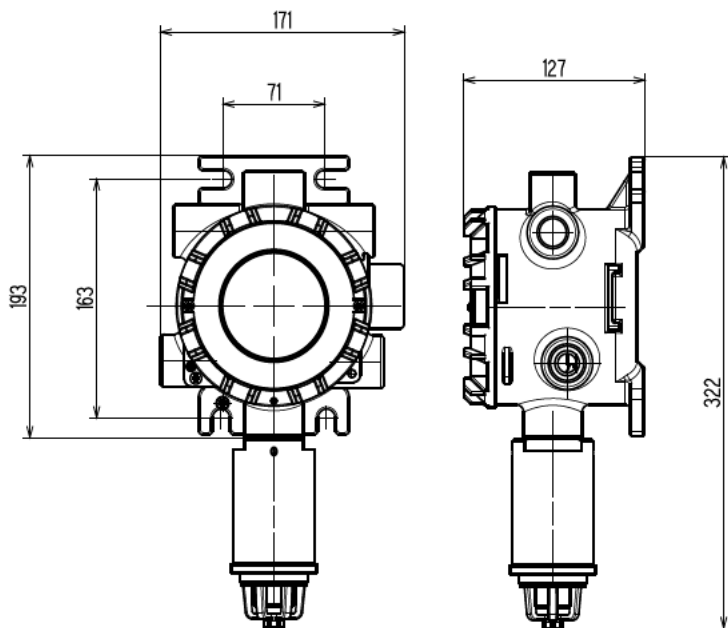
\*2 To ensure explosion protection, use a cable designed for use in temperatures at least 5 °C above the maximum anticipated ambient temperature.

\*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.

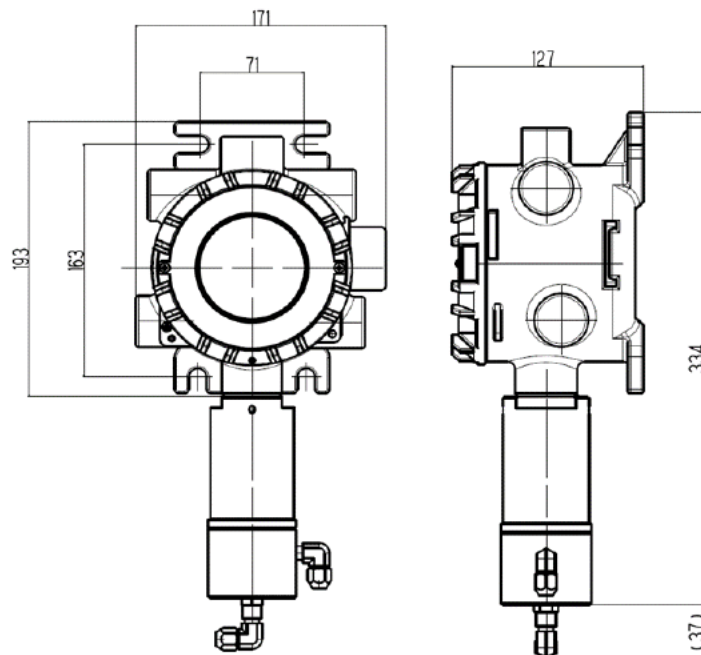
Dimensional drawings

<Diffusion type>



<Suction type>

\* Pour into by external unit



Terminal Block Diagram

<Using 3-core cable>

| Terminal No. | Power/signal cable connection            |                      |
|--------------|--|----------------------|
| 1            | Power supply (+)                         | 24 V DC              |
| 2            | Common<br>(Power supply (-), signal (-)) |                      |
| 3            | Signal (+)                               | 4-20 mA<br>+<br>HART |
| 4            | Not used                                 |                      |

<Using 4-core cable>

| Terminal No. | Power/signal cable connection |                      |
|--------------|-------------------------------|----------------------|
| 1            | Power supply (+)              | 24 V DC              |
| 2            | Power supply (-)              |                      |
| 3            | Signal (+)                    | 4-20 mA<br>+<br>HART |
| 4            | Signal (-)                    |                      |

<Contact output (optional)>

Relay1 (ALARM1)

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

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.            |

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