

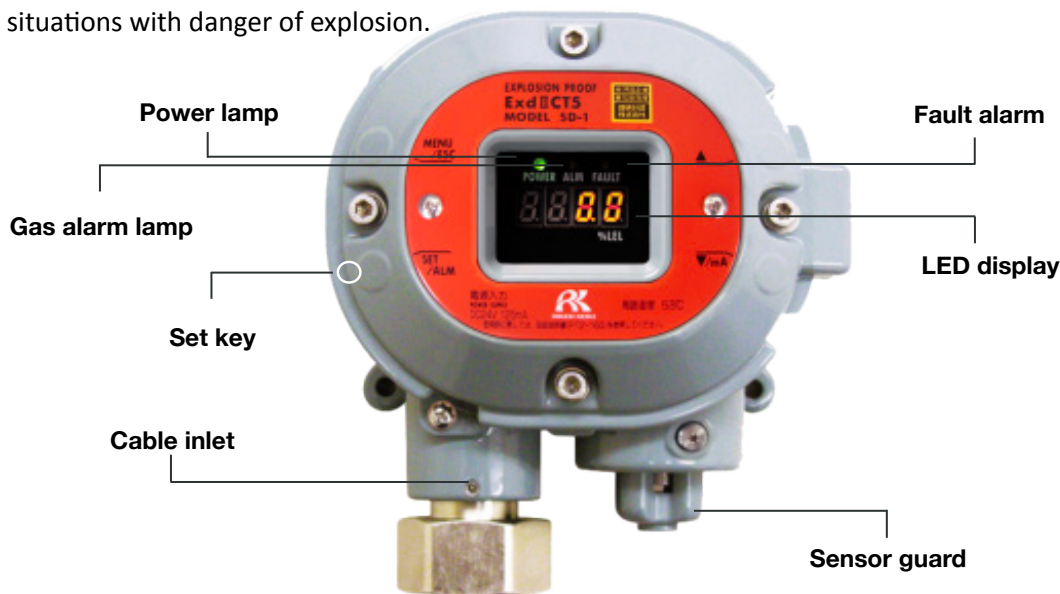
SD-1

Smart Transmitter Detector

- **Wide range of detectable gases**
 - % LEL Combustibles, catalytic
 - % LEL Combustibles, IR
 - H2S, CO, & O2
 - PPM for acrylonitrile, hydrogen, ethylene oxide,
 - Methyl pyrolidone, Methylene chloride and others
- **Sensor types include**
 - Catalytic, Galvanic Cell, MOS, IR, & Electrochemical
- **Direct digital display of gas readings**
- **HART Communication protocol or 4-20 linear output**
- **Available with SIL2 approval (IR, EC, OX versions)**
- **Easy maintenance using a magnetic key**
- **Self-diagnosis by microprocessor**
- **Low power operation (Maximum: 3W)**
- **Explosion proof: ATEX, IECEx, ExdIICT5**

Overview

Our SD-1 line of smart transmitters feature state-of-the-art gas detectors with durable flameproof enclosure, maximum safety, especially in hydrogen/ acetylene atmospheres. 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 in situations with danger of explosion.



SD- 1GP
CAT



SD- 1RI
IR



SD- 1GH
MOS



SD- 1EC
EC



SD- 1OX
OX

Applications

- LNG Terminal
- Petrochemical/Chemical plants
- Power plant
- Utilities
- Iron and steel works

CAT

IR

MOS

EC

OX



Scan
For More
Information

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| Common Specifications | | | | | |
|------------------------------------|--|-------------------------------|---------------------------|--|---------------|
| Model | SD-1GP | SD-1 RI | SD-1-GH | SD-1EC | SD-10X |
| Detection principle | Catalytic | Infrared | Semiconductor | Electrochemical | Galvanic cell |
| Measuring gas | Variety of hydrocarbons | | See chart below | CO/H2S | Oxygen |
| Measuring range | 0-100% LEL | | | CO: 0-75 ppm H2S: 0-30 ppm | 0-25% Vol |
| Alarm setting | 2 programmable alarm set points/increasing/decreasing/latching/ self resetting/on delays/off delays/energized/de-energized | | | | |
| Alarm contacts | Normally open or normally closed | | | | |
| Sampling method | Diffusion (Flow adapter and air aspiration available) | | | | |
| Display | 4 digit Digital LED | | | | |
| Output | 4-20 mA or HART (optional without 4-20 mA) | | | | |
| Relay | 1 Relay with 4-20 mA versions or No relay with HART versions | | | | |
| Contact capacity | 30 VDC 0.5A or 120 VAC 0.5A (load resistance) | | | | |
| Fail alert self diagnosis | Circuit failure / Sensor failure | | | | |
| Fail alert display | Fail lamp (Yellow) | | | | |
| Power source | 24VDC (17VDC ~ 26.4VDC) | | | | |
| Operating temp and humidity | -20 ~ + 60°C / below 95% RH (non-condensing), (SD-1EC Below 80% RH) | | | | |
| Dimension and weight | 148(W) x 161(H) x 88(D) mm, Approx. 2.0kg | | | | |
| Approvals | Exd II CT5,ATEX ** IECEX EN60079-29-1 | CML 15ATEX1034 IECEX, SIL2 | Exd II CT5,ATEX, IECEX | DEKRA 13ATEX0035 IECEX DEK 13.0024X, SIL2 | |

| Detectable Gases | | | | | | | | | | | |
|-----------------------|---------|-------------------|------------|-----------|------|-------------------------------|---------|-------------------|------------|-----------|-----------|
| Detection Gas | Formula | Full Scale Ranges | | TWA (ppm) | LEL | Detection Gas | Formula | Full Scale Ranges | | TWA (ppm) | LEL |
| | | Low (ppm) | High (ppm) | | | | | Low (ppm) | High (ppm) | | |
| Acetic acid | C2H4O2 | 500 | 3000 | 10 | 4.0 | R-12 | CHClF2 | 300 | 5000 | 1000 | - |
| Acetone | C3H6O | 100 | 10000 | 500 | 2.15 | Hydrogen | H2 | 200 | 10000 | - | 4.0 |
| Acetylene | C2H2 | 200 | 3000 | - | 1.5 | Hydrogen Specific | H2 | 200 | 2000 | - | 4.0 |
| Acrylonitrile | C3H3N | 500 | 1000 | 2 | 2.8 | Hydrogen sulfide | H2S | 20 | 100 | 1 | - |
| Ammonia | NH3 | 500 | 1000 | 25 | 15 | Isopropyl alcohol | C3H8O | 300 | 5000 | 200 | 2.0 |
| Benzene | C6H6 | 200 | 2000 | 0.5 | 1.2 | Methane | CH4 | 2000 | 100%LEL | - | 5.0(CH4) |
| Buthylacetate | C6H12O2 | 100 | 5000 | 150 | 1.4 | Propane | C3H8 | 2000 | 100%LEL | - | 2.0(C3H8) |
| Buthylacrylate | C7H12O2 | 50 | 1000 | 2 | 1.5 | Methyl alcohol | CH3OH | 100 | 5000 | 200 | 5.5 |
| n-Buthyl alcohol | C4H10O | 100 | 5000 | 400 | 1.4 | Methyl bromide | CH3Br | 200 | 1000 | 5 | 8.6 |
| Chloroform | CHCl3 | 200 | 5000 | 10 | - | Methyl ethyl ketone | C4H8O | 30 | 5000 | 200 | 1.8 |
| Cyclohexane | C6H12 | 200 | 5000 | 100 | 1.3 | Methyl isobutyl ketone | C6H12O | 50 | 500 | 50 | 1.2 |
| Cyclohexanone | C6H10O | 50 | 1000 | 20 | 1.1 | Methylene choride | CH2Cl2 | 500 | 5000 | 50 | 13.0 |
| 2-ethoxyethyl acetate | C6H12O3 | 100 | 3000 | 5 | 1.7 | n-Hexane | n-C6H14 | 100 | 5000 | 50 | 1.2 |
| Ethyl acetate | C4H8O2 | 100 | 5000 | 20 | 2.1 | Tetrahydrofuran | C4H8O | 20 | 3000 | 100 | 1.2 |
| Ethyl alcohol | C2H5OH | 100 | 5000 | 1000 | 3.3 | Toluene | C7H8 | 20 | 3000 | 100 | 1.2 |
| Ethylene | C2H4 | 200 | 5000 | 200 | 2.7 | Trichloroethylene | C2HCl3 | 300 | 5000 | 50 | 7.9 |
| Ethylene oxide | C2H4O | 100 | 1000 | 1 | 3.0 | Vinyl chloride | C2H3Cl | 200 | 3000 | 5 | 3.8 |
| R-11 | CCl3F | 2000 | 5000 | 1000 | - | Xylene | C8H10 | 100 | 2000 | 100 | 1.0 |