

SDS-97D Series

SENSOR/TRANSMITTERS FOR A WIDE RANGE OF TOXIC GASES, HYDROGEN AND OXYGEN

FEATURES

- Non-intrusive push button calibration
- Excellent chemical selectivity
- 4-20 mA output, 24 Vdc loop powered
- One-person calibration
- Digital display
- Electrochemical sensors
- RFI/EMI resistant
- Optional Precalibrated Sensor Exchange

SPECIFICATIONS

Size, approx: 4.75 w x 2.60 h x 1.85 d inches (12 x 6.6 x 4.7 cm)

Weight: 1 lb. (454 g)

Enclosure: Painted (polyurethane enamel) aluminum

Sensor: Electrochemical cell, disposable, plug-in type

Display: 8 character, dot matrix LCD with backlight

Sensor Location from Controller: Up to 2,000 feet (600 meters). Consult factory for greater distance.

Cable: 3-wire, shielded
Max. loop resistance: 300 ohms @ 24 Vdc
Typical installation wire: 20 AWG (0.5 mm²)

Voltage: 24 Vdc (10-30 Vdc), loop powered

Current Draw: 45 mA maximum

Output: 4-20 mA

Temperature Range: -4° to 104° F (-20° to 40° C)

Humidity Range: 5 to 90% rH, non-condensing

Pressure Range: Atmospheric ±10%



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SDS-97D shown with optional communication port

SDS-97D Series Sensor/Transmitters utilize electrochemical type cells to detect the target gas. These cells consist of electrodes, electrolyte and an air/liquid separation barrier. Gas molecules enter the cell and, as a result of an oxidation/reduction reaction, generate an electrical current proportional to the gas concentration. This current is measured, conditioned, converted to the gas concentration, digitally displayed and transmitted as a 4-20 mA output signal. ENMET offers a variety of multi-channel controller/alarm modules that provide the 24 Vdc loop power and receive the 4-20 mA signal from the sensor/transmitters. These sensor/transmitters can also be connected to various computer based instrumentation, PLCs, etc.

The use of a gas sampler generally improves monitoring performance for all gases. It is particularly recommended for Cl₂, HCl, AsH₃, and it is required for monitoring HF and O₃.

The standard SDS-97D Sensor/Transmitters (P/N 10022-XXXX) incorporate an external push button for non-intrusive zeroing and gas calibration of the device. An optional version of the SDS-97D Sensor/Transmitters (P/N 10021-XXXX) feature a communication port and hand-held programming module (P/N 10021-001) which facilitate the elimination of the need for on-site gas calibration. Contact ENMET for details regarding the Precalibrated Sensor Exchange Program.

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ORDERING INFORMATION

INSTRUMENT PART NUMBERS & SPECIFICATIONS

Gas (1)	Model	Part Number (4)	Range, PPM	LDL (5)	Life (6)	Controller Alarms, PPM (7)
Ammonia, NH ₃	SDS-2400-97D	10022-2400	100	6 ppm	1 year	25, 50, 75
Arsine, AsH ₃ (2)	SDS-4001-97D	10022-4001	0.50	0.04 ppm	1-1.5 yrs	0.05, 0.1, 0.4
Carbon monoxide, CO	SDS-1200-97D	10022-1200	500	4 ppm	2-3 yrs	35, 50, 200
Chlorine, Cl ₂ (2)	SDS-0100-97D	10022-0100	10.0	0.4 ppm	1-2 yrs	0.5, 1, 5
Ethylene oxide, ETO	SDS-5200-97D	10022-5200	10.0	1.2 ppm	1-2 yrs	3, 5, 9
Hydrogen, H ₂	SDS-1500-97D	10022-1500	2000	24 ppm	1-2 yrs	200, 500, 1000
Hydrogen chloride, HCl (2)	SDS-0400-97D	10022-0400	30.0	0.8 ppm	1-2 yrs	5, 10, 20
Hydrogen fluoride, HF (3)	SDS-0700-97D	10022-0700	10.0	0.8 ppm	1 year	3, 6, 9
Hydrogen sulfide, H ₂ S	SDS-0200-97D	10022-0200	100	4 ppm	2-3 yrs	10, 20, 50
Nitric oxide, NO	SDS-1750-97D	10022-1750	100	4 ppm	1-2 yrs	25, 50, 75
Nitrogen dioxide, NO ₂	SDS-1700-97D	10022-1700	30.0	1.2 ppm	1-2 yrs	3, 5, 10
Oxygen, O ₂	SDS-1100-97D	10022-1100	30.0%V	0.2%V	1.5-2 yrs	17, 19.5, 23.5%V
Ozone, O ₃ (3)	SDS-0800-97D	10022-0803	1.00	0.04 ppm	1-1.5 yrs	0.1, 0.5, 0.75
Silane, SiH ₄	SDS-4003-97D	10022-4003	30.0	3.2 ppm	1-1.5 yrs	5, 10, 20
Sulfur dioxide, SO ₂	SDS-0500-97D	10022-0500	30.0	0.8 ppm	1-2 yrs	2, 5, 10

- (1) Consult ENMET for gases not on this list
- (2) For best performance, it is recommended that a sample draw system be used for monitoring these gases
- (3) Monitoring of these gases requires the use of a sample draw system
- (4) This is the part number for the standard sensor/transmitter with push button for non-intrusive manual gas calibration. For the optional Precalibrated

Sensor Exchange Program the part numbers are 10021-XXXX.

- (5) Lower Detectable Limit calculated from baseline noise level, thermal drift and interference data used to derive zero point deviation estimates
- (6) Typical sensor life
- (7) Standard factory alarm points for ENMET controllers when used with these SDS-97D Series Sensor/Transmitters.

GAS SAMPLER

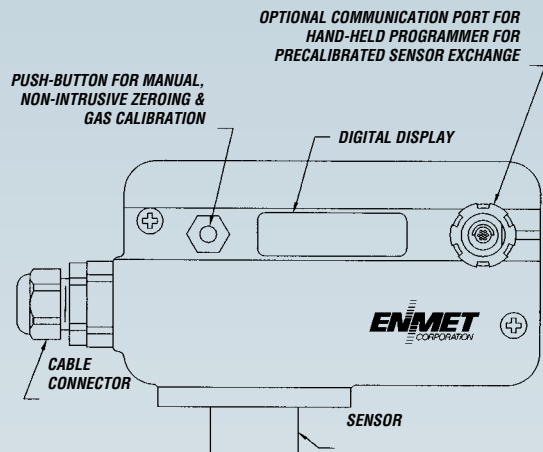
The use of a sample draw system generally improves monitor performance for all gases. Also see notes 2 & 3 above.



Model GS-24-DF, P/N 04565-311 Gas Sampler, 24 Vdc with digital flow display. Shown here with SDS-97D Series Sensor/Transmitter.

Note: Other models and variations of gas samplers are available.

SDS-97D SENSOR/TRANSMITTER FEATURES



Drawing of SDS Series Sensor/Transmitter, showing communication port for optional Precalibrated Sensor Exchange Program.

SEE PRICE LIST FOR CALIBRATION EQUIPMENT

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

