

Smart Auto Suction Gas Detector for Oxygen

DA - 750 - 02 - 0P



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1. Introduction

1.1 Product Overview

The DA-750 has a comprehensive range of advanced functions, making it an ideal Suction type detector for effectively preventing gas leak incidents in various industrial areas. It is capable of detecting the presence of combustible gas, toxic gas, and VOC (Volatile Organic Compounds) leaks. DA-750 is an essential safety product designed to prevent accidents by detecting gas leaks in industrial settings, particularly in factories and facilities that deal with toxic gases. Its main features include continuous gas detection through the use of a micro pump, enabling gas monitoring even in locations where it is challenging to install traditional gas sensors or manage them effectively. The device promptly displays the concentration levels on-site, and it efficiently converts the detection signals into standard current signals for external output.

1.2 Product Description

The cutting-edge DA-750 transmitter is equipped with an easy-to-read LCD that displays gas concentrations by accurately converting the sensor's current and voltage signals. Through this process, it ensures stable and reliable readings, transforming them into standard current signals ranging from 4 to 20mA. These output signals can then be seamlessly transmitted to external devices, such as gas leakage alarm systems or controllers like PLC, DDC, Recorder and more. As a result, the DA-750 enables the creation of a sophisticated and integrated gas monitoring system, whether used independently or as a crucial component within a larger setup. The DA-750 transmitter boasts an integrated microprocessor, delivering a plethora of precise and versatile functions. Its built-in high-resolution A/D converter ensures the transmission of accurate indicated values. The incorporation of a HIGH / LOW 2-stage alarm contact point enables flexible interlocking with external devices. Moreover, the transmitter provides a 4 - 20mA external output, enabling the transmission of signals over long distances of up to 2.5km. Utilizing programmed menus, users gain the power to customize and set their desired parameters to suit individual environmental requirements. This user-friendly feature allows seamless adaptation to different monitoring conditions, enhancing the overall efficiency and effectiveness of the gas monitoring system.

2. Product Features

- **Manual Calibration Function**

This device can be calibrated as per requirement and types of gases. This device has very easy calibration process that makes the maintenance and operation easy. Calibration ensures that the gas detector maintains accurate and reliable measurements over time. It is typically recommended to calibrate gas detectors regularly

- **Built-in HD (High Resolution) A/D Converter**

The device is equipped with a high-resolution analog-to-digital (A/D) converter, ensuring precise and accurate conversion of analog signals into digital output. This technology enhances the accuracy of the output signal, resulting in reliable and trustworthy measurements.

- **User Programming**

The device allows users to customize various settings, such as the detection range and other functions, according to their specific requirements and preferences. This feature provides flexibility and adaptability to meet diverse monitoring needs.

- **Analog 4-20mA Transmitter**

With the analog 4-20mA output, the device enables stable and long-distance signal transmission of up to 2.5 kilometers. This ensures reliable communication and allows for extended signal transmission distances while maintaining signal integrity.

- **Alarm Output**

The device also features an alarm output capability. It is equipped with a Single-Pole Single-Throw (SPST) relay contact that provides a two-step alarm functionality. This means it can trigger two separate alarm states, denoted as alarm 1 and alarm 2, enabling effective alerting and response to gas detection events.

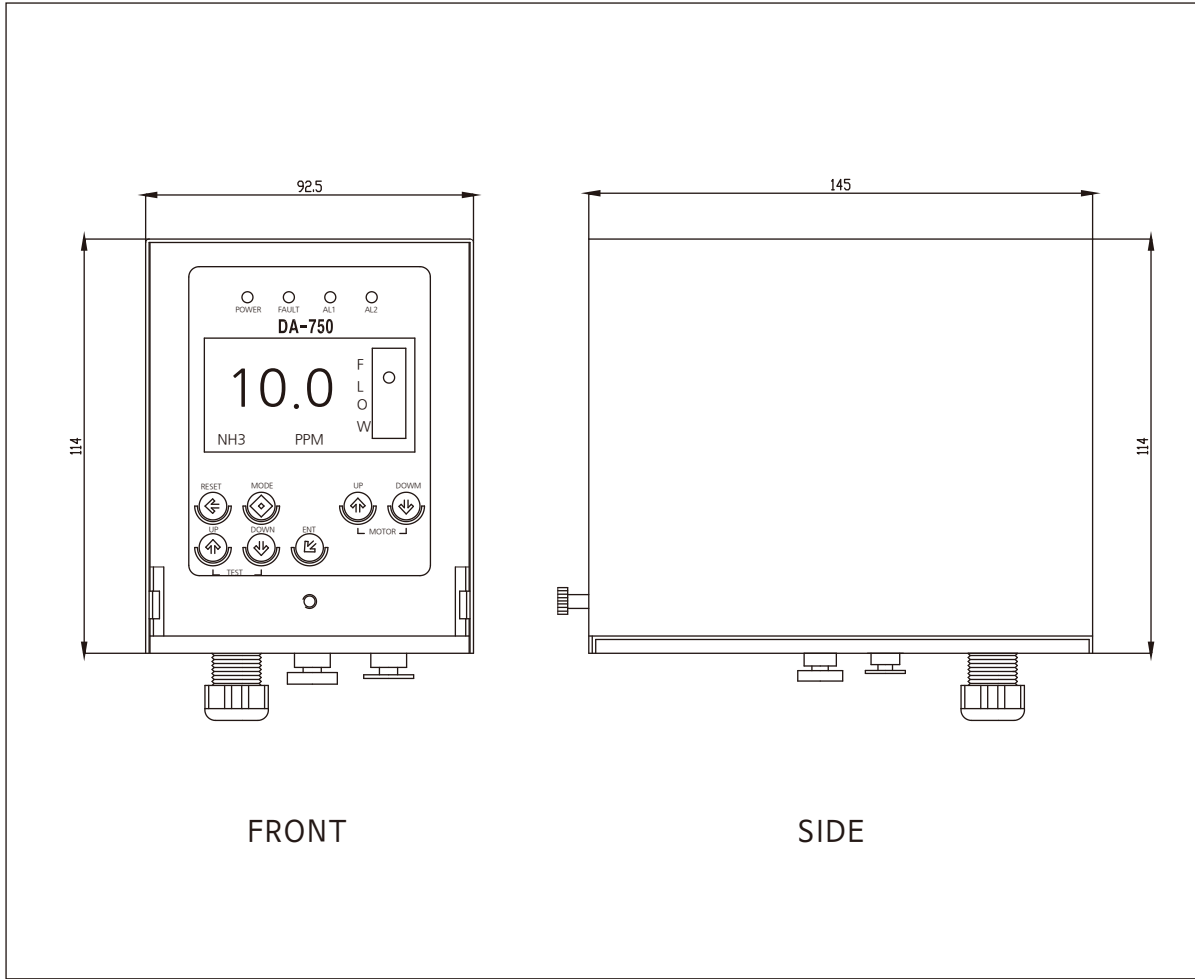
- **Diverse Output Signals**

This device provides a diverse range of output signals, facilitating seamless integration with various devices. It supports multiple output options, including an analog 4-20mA transmitter, Modbus RTU over RS-485 (optional), and a two-stage relay for alarms.

3. Product Specifications

Product Code	DA-750-O2-OP
Detection Method	Suction Type
Detection Principle	Optical
Display	LCD Display
Measuring Method	Suction Type
Sucking Capacity	1.5 L/min~2.5 L/min
Alarm Signal	LOW LED (RED) HIGH LED (RED)
Response speed & Accuracy	Within 0- 90sec, $\leq \pm 3\%$ /full scale
Measurement Range	0~99.99% VOL
Input Power	DC 20~30V,
Output Signal	4 ~ 20mA DC/ F.S
Detector Output	4-20 mA source or sink selectable 2mA = Fault 4-20 mA = Normal gas range 24 mA = Over range
Alarm Reset	Manual and Auto Reset
Ambient Temperatures & Humidity Range	-10°C ~ 50°C, 5 ~ 95% RH (Non-condensing)
Signal Wire	CVVS & CVVSB 1.25sq x 3 wire-shield Type
Installation Method	Wall Mounting Type

4. Product Diagram



Unit: mm

5. Product Model No. & Gases Names

Gases Names	Chemical Formula	Range	Product Codes	Sensor Types
Acetylene	C ₂ H ₂	0~10.0 PPM	DA-750-C ₂ H ₂	Electrochemical
Ammonia	NH ₃	0 - 100 ppm	DA-750-NH ₃	Electrochemical
Argon	Ar	0~100% VOL	DA-750-AR	TCD
Arsine	AsH ₃	0 - 3.0 ppm	DA-750-AsH ₃	Electrochemical
Boron Trichloride	BCl ₃	0 - 10.0 ppm	DA-750- BCl ₃	Electrochemical
Boron Trifluoride	BF ₃	0-10.0 PPM	DA-750- BF ₃	Electrochemical
Bromine	Br ₂	0-2.0 PPM	DA-750-BR ₂	Electrochemical
Carbon Dioxide	CO ₂	0~5000 PPM	DA-750-CO ₂ -L-ND	NDIR
Carbon Dioxide	CO ₂	0 - 5.00%VOL	DA-750-CO ₂ -M-ND	NDIR
Carbon Dioxide	CO ₂	0~100% VOL	DA-750-CO ₂ -H-ND	NDIR
Carbon Monoxide	CO	0-100 PPM	DA-750-CO-L	Electrochemical
Carbon Monoxide	CO	0-500 PPM	DA-750-CO-M	Electrochemical
Chlorine	CL ₂	0~5.0 PPM	DA-750-CL ₂	Electrochemical
Chlorine Dioxide	CLO ₂	0~5.0 PPM	DA-750-CLO ₂	Electrochemical
Chlorine Trifluoride	ClF ₃	0-5.0 PPM	DA-750-ClF ₃	Electrochemical
Diborane	B ₂ H ₆	0-1.0 PPM	DA-750-B ₂ H ₆	Electrochemical
Dichlorosilane	H ₂ SiCl ₂	0~10.0 PPM	DA-750- H ₂ SiCl ₂	Electrochemical
Difluoromethane	CH ₂ F ₂	0~1000 PPM	DA-750-CH ₂ F ₂ -ND	NDIR
Disilane	Si ₂ H ₆	0~20.0 PPM	DA-750- Si ₂ H ₆	Electrochemical
Ethylene	C ₂ H ₄	0~10.0 PPM	DA-750-C ₂ H ₄	Electrochemical
Ethylene Oxide	ETO	0~10.0 PPM	DA-750-ETO	Electrochemical
Fluorine	F ₂	0 -5.0 ppm	DA-750- F ₂	Electrochemical
Formaldehyde	CH ₂ O	0~10.0 PPM	DA-750-CH ₂ O	Electrochemical
Germane	GeH ₄	0~1.0 PPM	DA-750-GeH ₄	Electrochemical

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Helium	He	0~100% VOL	DA-750-He	TCD
Hexafluoro butadiene	C4F6	0~1,000 PPM	DA-750-C4F6-ND	NDIR
Hydrazine	N2H4	0~2.0 PPM	DA-750-N2H4	Electrochemical
Hydrogen (% LEL)	H2	0~100%LEL	DA-750-H2-H	Electrochemical
Hydrogen (ppm)	H2	0~1000 PPM	DA-750-H2-L	Electrochemical
Hydrocarbon(%LEL)	HC	0~100%LEL	DA-750-HC-CAT	Catalytic
Hydrocarbon(%LEL)	HC	0~100%LEL	DA-750-HC-ND	NDIR
Hydrogen Bromide	HBr	0~10.0 PPM	DA-750-HBr	Electrochemical
Hydrogen Chloride	HCL	0~10.0 PPM	DA-750-HCL	Electrochemical
Hydrogen Cyanide	HCN	0~20.0 PPM	DA-750-HCN	Electrochemical
Hydrogen Fluoride	HF	0~10.0 PPM	DA-750-HF	Electrochemical
Hydrogen Selenide	H2Se	0~5.0 PPM	DA-750-H2Se	Electrochemical
Hydrogen Sulfide	H2S	0~10.0 PPM	DA-750-H2S	Electrochemical
Methanethiol	CH4S	0~20.0 PPM	DA-750- CH4S	Electrochemical
Methyl Fluoride	CH3F	0~1000 PPM	DA-750-CH3F	NDIR
Nitrogen Dioxide	NO2	0~30.0 PPM	DA-750-NO2	Electrochemical
Nitrogen Oxide	NO	0~100PPM	DA-750-NO	Electrochemical
Nitrogen Trifluoride	NF3	0~100 PPM	DA-750-NF3	Electrochemical
Nitrous oxide	N2O	0~1000 PPM	DA-750-N2O	NDIR
Octafluorocyclobutane	C4F8	0~1000 PPM	DA-750-C4F8-ND	NDIR
Octofluorocyclopentene	C5F8	0~1000 PPM	DA-750-C5F8-ND	NDIR
Oxygen	O2	0~25.0 %VOL	DA-750-O2	Electrochemical
Oxygen	O2	0~99.99 %VOL	DA-750-O2-OP	Optical
Oxygen	O2	0~10000 PPM	DA-750-O2-PPM	Electrochemical
Ozone	O3	0~5.00 PPM	DA-750-O3	Electrochemical
Phosphine	PH3	0~5.00 PPM	DA-750-PH3	Electrochemical
Phosphorous Oxychloride	POCL3	0~1.00 PPM	DA-750-POCL3	Electrochemical

5. Product Model No. & Gases Names

Gases Names	Chemical Formula	Range	Product Codes	Sensor Types
Refrigerants	R290	0~100%LEL	DA-750-Propan-ND	NDIR
Silane	SiH ₄	0~10.0 PPM	DA-750-SiH ₄	Electrochemical
Sulfur Dioxide	SO ₂	0~20.0 PPM	DA-750-SO ₂	Electrochemical
Sulfur Hexafluoride	SF ₆	0~1000 PPM	DA-750-SF ₆ -ND	NDIR
Sulfur Tetrafluoride	SF ₄	0~1000 PPM	DA-750-SF ₄ -ND	NDIR
Tetrahydrothiophene	THT	0~100 PPM	DA-750-THT	Electrochemical
Trimethyl Borate	TMB	0~500 PPM	DA-750-TMB	Electrochemical
Tetra Ethyl Ortho Silicate	TEOS	0~50.0 PPM	DA-750-TEOS	Electrochemical
Tetrafluoromethane	CF ₄	0~2000 PPM	DA-750-CF ₄ -ND	NDIR
Trifluoro methane	CHF ₃	0~2000 PPM	DA-750-CHF ₃ -ND	NDIR
Tungsten Hexafluoride	WF ₆	0~10.0 PPM	DA-750- WF ₆	Electrochemical
Vinyl Chloride	C ₂ H ₃ CL	0~10.0 PPM	DA-750-C ₂ H ₃ CL	Electrochemical
Volatile Organic Compounds	VOC	0~100 PPM	DA-750-VOC-L-PID	Photoionization
Volatile Organic Compounds	VOC	0~1000 PPM	DA-750-VOC-M-PID	Photoionization
Volatile Organic Compounds	VOC	0~5000 PPM	DA-750-VOC-H-PID	Photoionization