SO_2 GAS TRANSMITTER, 4-20 mA OUTPUT

User Guide for SRAQ-D462

Product Description

The SRAQ-D462 is a wall-mounted Sulfur Dioxide (SO_2) transmitter that offers continuous monitoring and warning of SO_2 gas leaks. Utilizing a electrochemical sensor, the SRAQ-D462 provides quick, accurate SO_2 concentration levels of this highly toxic gas. A wide sensing range of 0 – 20 ppm makes this device suitable for a variety of applications where SO_2 is either used or produced. These include factories such as paper mills, food and beverage industry, mining, and the petro-chemical industry which accounts for about seventy-five percent of total sulfur dioxide emissions.

Features

- High sensitivity and accuracy
- Fast response time
- Detection range 0 – 20 ppm
- Good repeatability and stability
- Easy wall-mount installation

Applications

- Chemicals production
- Factories
- Mining industry
- Waste management
- Oil and gas industry
- General air quality and environmental monitoring

Thank you for choosing L-com product. To ensure safe, accurate performance and product longevity, please take a moment to familiarize yourself with this manual before powering the device. Please keep it handy for future reference. In case of any questions regarding the installation or use of product, please call us at 800.341.5266.

Reach out to us at customerservice@l-com.com and visit our website at www.l-com.com

M_L-com_SRAQ-D462_09/2022_R1.0

Technical Parameters

Working voltage	12 – 24 VDC	
Power consumption	< 0.15 W (@ 12 VDC, 25 °C)	
Detection range	0 – 20 ppm	
Resolution	0.1 ppm	
Detection accuracy	Readings ±3% (25 °C)	
Response Time	< 15 sec	
Detection method	Diffusion type	
Output mode	Analog 4 – 20 mA	
Work environment	Temperature	-30 – 50 °C
	Humidity	15 – 95% RH
Working pressure range	0.9 – 1.1 atm	

Output Correlation

Analog 4 – 20 mA current output

Current value	SO_2
4 mA	0 ppm
20 mA	20 ppm

The formula is: $P(SO_2)$ = (I (current) - 4 mA) * 1.25 ppm

P is concentration in ppm and I is current in mA.

For example, the data collected in the current situation is 8.125 mA and the value of SO_2 is 5.15 ppm.

SO_2 measurement unit ppm and ug/m3 correlation

According to the calculation, user can get the conversion relationship, which is only valid for SO_2:

1 ppm = 64/22.4 = 2.857 mg/m3 = 2857 ug/m3

1 ppb = 64/22.4 = 2.857 ug/m3

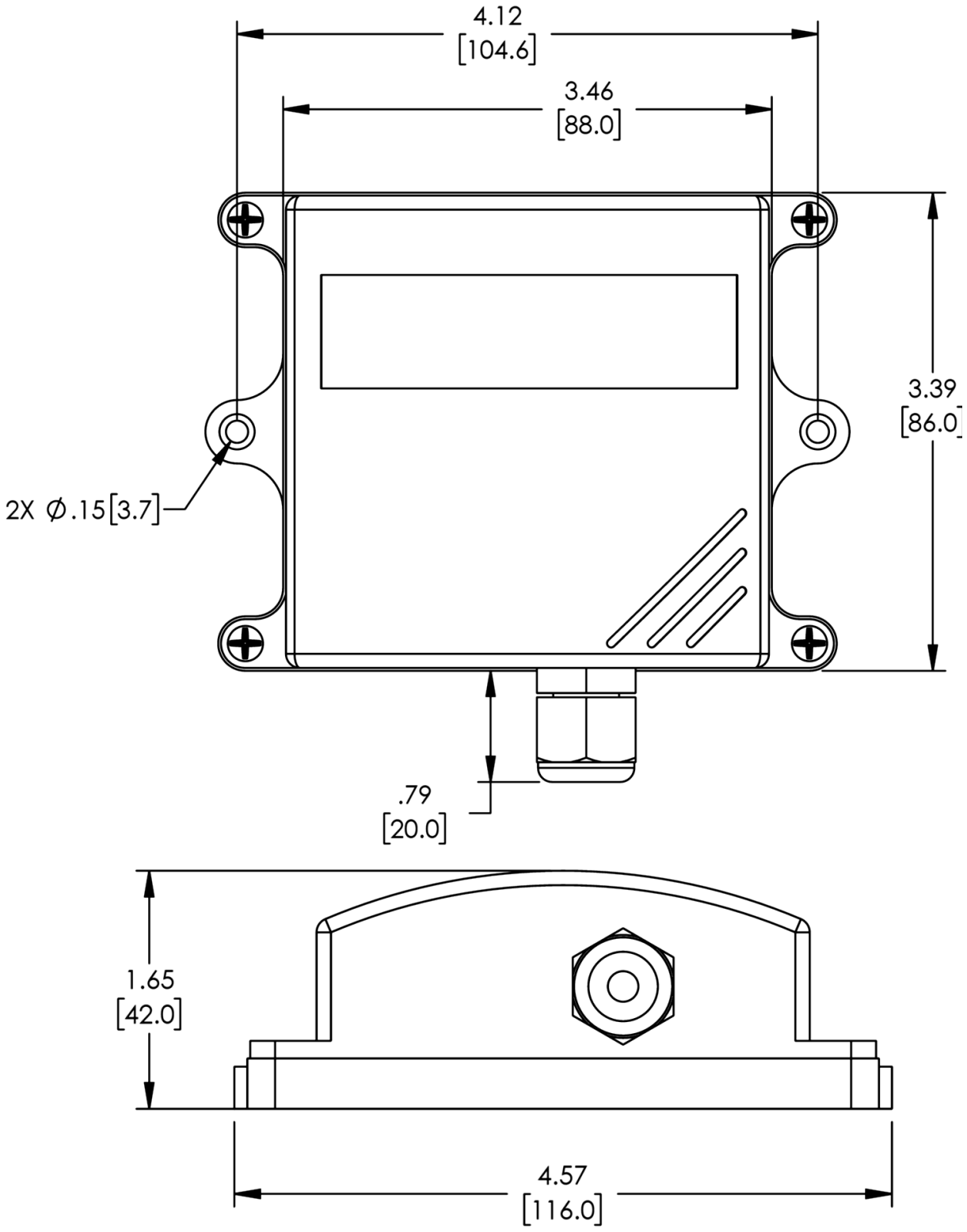
The above calculations are for the case of standard atmospheric pressure.

Cable Connection

Category	Wire Color	Definition
Power	Brown	Power supply positive (12 – 24 VDC)
	Black	Power supply negative (GND)
Communication	Yellow (Gray)	Iout+ (Positive current output)
	Blue	Iout- (Negative current output)

Mounting Diagram

Mounting type: Wall mount (vertical mount), fixed hole diameter: 3 mm, pitch: 105 mm



Notes

1. The sensor needs to be placed in a sheltered environment, vertical to the ground.
2. Hang it on the wall and keep the sensor vent hole straight down to prevent water entry.
3. It is a point type diffused gas detection device, it only detects the gas concentration at the probe position.
4. When measuring leaks, it is necessary to pay attention to the fact that the concentration of gas in the environment is affected by the diffusion. The concentration changes inversely with the change of the distance from the leak point. The gas concentration is the biggest at the leak point. The further the distance, the lower the concentration is.