NDIR SF$_6$ SENSOR MODULE

LARK-1QMB SF6 1000PPM | Order No.: 001-0A0A-A03
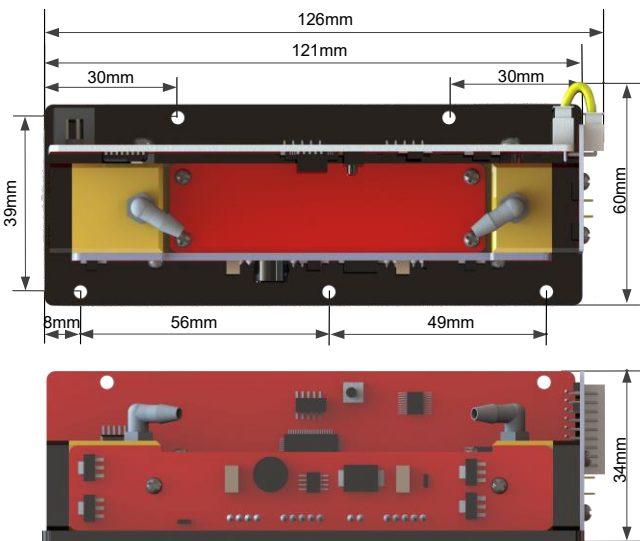
DATASHEET

Applications

- SF6 leakage detection
- Airflow Tracer Detection

Merits

- Small error
- Small size
- Fast response
- High reading refresh rate
- RS485 modbus RTU

Parameters

Principle	NDIR
Range	0 ~ 1000 ppm SF$_6$
Sampling Mode	Pumping
Response Time	T90 ≤ 5 s (@500 ml/min)
Recovery Time	RT90 ≤ 5 s (@500 ml/min)
Long-term Stability*	Testing
Temperature	-20 ℃ ~ 50 ℃
Tolerance	± 300 ppb (<1 ppm)
(@ 20℃)	± 1 ppm (1 ppm ~ 200 ppm)
	± 10 ppm (20 ppm ~ 1000 ppm)
Zero Temp. Drift	testing
Resolution	300 ppb/sec @ 1 ppm
Reading Unit	ppb
Detection Limit	600 ppb
Reading Refresh Rate	16 Hz

* Long-term stability: 28 days of zero drift measured in clean air of 0 ~ 90% RH, 0 ~ 35 ℃

Dimensions

- Length: 126 mm ± 1 mm
- Width: 60 mm ± 1 mm
- Height: 34 mm ± 1 mm
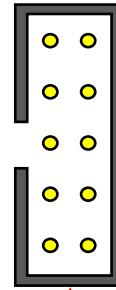- Weight: 208 g ± 5 g
- Screw Hole Diameter: 3 mm

Mechanics

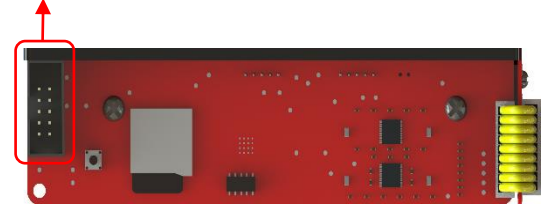|	
Optic Path	Steel
Circuit Board	FR4 / Lead-free HASL
Solder	Sn / Ag / Cu
Mounting Plate	ABS

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Electrical Parameters

Input Voltage	9 ~ 24 VDC (#9 pin)
Operating Current	< 0.15 A @9 VDC
Power	< 1 W for Average
	< 1.5 W @ Peak
Warm-up Time	3 minutes
	(Tolerance ±1 ppm)
	60 minutes
	(Tolerance ± 200 ppb)
Output Voltage	0.4 ~ 2.0 VDC (#2 pin)
	(0.3 ~ 0.4 V for negative reading)
Warranty	18 months[*]

Connector Definition

1. NC
2. V_{out} (DAC)
3. RXD(TTL)
4. TXD(TTL)
5. A+(RS485)
6. B-(RS485)
7. NC
8. GND
9. PWR DC
10. GND

* Communication protocol is modbus RTU. ID can be modified in SD card.

Application Condition

Prefer Condition	Room temperature, dry, clean
Safety	None explosion-proof design
Humidity	0% RH ~ 85% RH
	(No Condensation)
Flow Rate	300 ~ 800 ml/min
Pressure	0.5 ~ 1.5 ATM
	(Ambient air pressure measured,
	without pressure compensation)

*Non-warranty Case:
- Polluted by condensation, water or dust; Dust and water removing is strongly suggested;
- Damaged by falling, hitting, disassembling, etching or over-loading;
- Label has been torn.

Accessories Included

Tygon Tube
- Length 50 mm × 2
- Diameter 3.2 mm × 6.4 mm
- Polyethylene, transparent

Ribbon Cable
- Length 200 mm × 1
- 10-pin, 28 AWG, gray
- Female connector, 2 × 5
- 2.54 mm Pitch

* The heating module is not included, but can be purchased as an option.

We reserves the right to modify this datasheet and will optimize the product in the future. If you use this product for specific application, please contact us for more technical support.

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