

NDIR SF₆ SENSOR MODULE

LARK-1MBCT SF6 1000PPM| Order No.: 001-080A-L03

DATASHEET



Parameters

Principle	NDIR
Range	0 ~ 1000 ppm SF ₆
Sampling Mode	Pumping
Response Time	≤ 6 s (@500 ml/min)
Recovery Time	≤ 6 s (@500 ml/min)
Long-term Stability*	≤ ±15 ppm (Zero) ≤ ±100 ppm (FS)
Temperature	-30 °C ~ 70 °C
Tolerance	± 8 ppm (20°C ~ 30°C) ±15 ppm (0°C ~ 50°C) ±30 ppm (-30°C ~ 70°C)
Zero Temp. Drift	±30 ppm (-30°C ~ 70°C)
Resolution	< 500 ppb
Reading Unit	ppb
Detection Limit	500 ppb

*Long-term Stability: 28 days of zero drift measured in clean air of 0~90% RH、0~35 °C

Mechanics

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

Applications

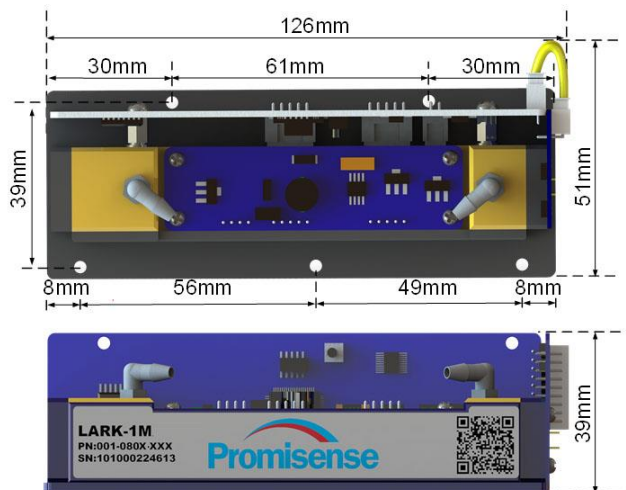
- SF₆ leakage detection
- Gas fluid tracing analysis

Merits

- Low Detection Limit
- Wide Temperature Range
- Small Size
- Long Life
- Fast Response
- Fast Warming up

Dimensions

- Length: 126 mm ± 1 mm
- Width: 51 mm ± 1 mm
- Height: 39 mm ± 1 mm
- Weight: 212 g ± 5 g
- Screw Hole Diameter: 3 mm



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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
PTC Heating Power	< 4 W
Warm-up Time	3 minutes (Tolerance \pm 5 ppm) 30 minutes (Tolerance \pm 3 ppm)
Output Voltage	0.4 ~ 2.0 VDC (#2 pin) (0.3 ~ 0.4 V for Negative Reading)
Warranty	18 months*

Application Condition

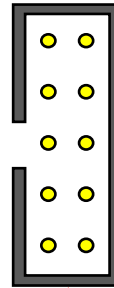
Prefer Condition	Room Temperature, Dry, Clean
Safety	None Explosion-proof Design
Temperature	-20 °C ~ 50 °C
Humidity	0% RH ~ 85% RH (No Condensation)
Flow Rate	300 ~ 800 ml/min
Pressure	0.5 ~ 2.0 ATM (Ambient air pressure measured, without pressure compensation)

*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.

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.

Connector Definition



1.ALM	2.V _{out} (DAC)
3.RXD(TTL)	4.TXD(TTL)
5.RXD(RS232)	6.TXD(RS232)
7.CS1*	8.GND
9.PWR DC	10.GND



*CS1: 0-3.3 VDC Output, for RS485

Accessory

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