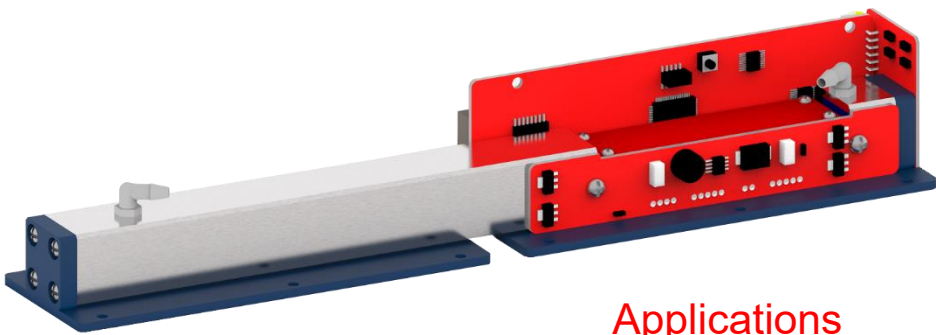


NDIR SF₆ SENSOR MODULE

LARK-1QLM SF6 1000PPM | Order No.: 001-0A0A-803

DATASHEET



Parameters

| | |
|----------------------|---|
| Principle | NDIR |
| Range | 0 ~ 1000 ppm SF ₆ |
| Sampling Mode | Pumping |
| Response Time | ≤ 10 s (@500 ml/min) |
| Recovery Time | ≤ 10 s (@500 ml/min) |
| Long-term Stability* | ± 5 ppm/mon |
| Temperature | -20 °C ~ 50 °C |
| Tolerance | ± 200 ppb (0 ~ 1ppm) ± 2 ppm (1 ~ 1000ppm) |
| Zero Temp. Drift | Testing(can be calibrated on line) |
| Resolution | < 100 ppb @ 1 ppm |
| Reading Unit | ppb |
| Detection Limit | 300 ppb |
| Reading Refresh Rate | 16 Hz |

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

Applications

- Trace SF₆ detection
- Airflow tracer detection

Merits

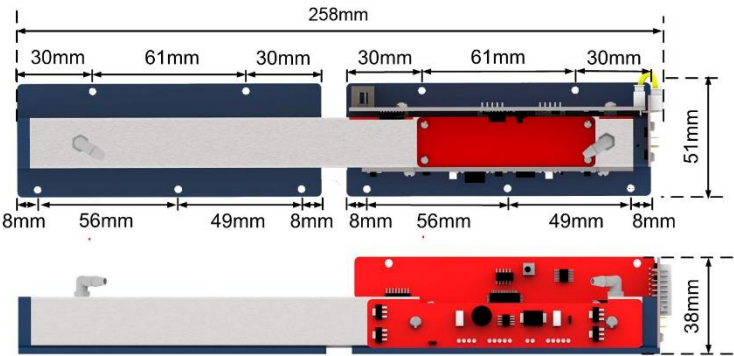
- Low zero drift
- High Resolution
- Fast response
- Long life
- High reading refresh rate

Dimensions

- Length: 258 mm ± 1 mm
- Width: 51 mm ± 1 mm
- Height: 38 mm ± 1 mm
- Weight: 540 g ± 5 g
- Screw Hole Diameter: 3 mm

Mechanics

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

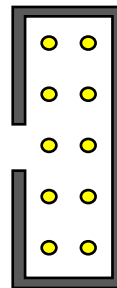


DATASHEET

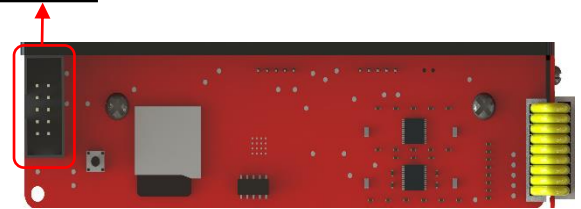
Electronics

| | |
|-------------------------|---|
| Input Voltage | 9 ~ 24 VDC (#9 pin) |
| Operating Current | < 0.15 A @9 VDC |
| Power | < 1 W average < 1.5 W @Peak |
| Warm-up Time | 3 minutes (Tolerance ± 4 ppm) 60 minutes (Tolerance ± 2 ppm) |
| Output Voltage (DAC) | 0.4 ~ 2.0 VDC (<0.4V is negative drift) |
| Warranty | 18 months* |

Connector Definition



| | |
|--------------|---------------|
| 1. NC | 2. Vout (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 is 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) |

Accessories Included

Tygon Tube

- Length 50 mm \times 2
- Diameter 3.2 mm \times 6.4 mm
- Polyethylene, transparent

Ribbon Cable

- Length 400 mm \times 1
- 10-pin, 28 AWG, gray
- Female connector, 2 \times 5
- 2.54 mm pitch

*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.

* Optical cell heating module (PTC) is not included, but can be purchased as an option.

* Using within this humidity range will not damage the sensing module, but the accuracy of the module will be affected. It is recommended to perform pre-treatment for dust and water removal.

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.

June 2025

Page 2 of 2