



## NDIR SF6 Sensor Series

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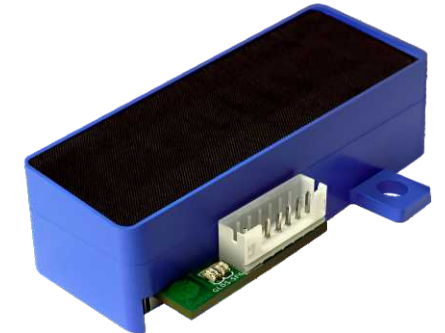
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parameters, and performances due to product improvements.

PF-SF6-C001 EN-202203-A

## NDIR SF6 Sensor Series

### Features

- Excellent selectivity to SF6, no cross gas interference or poisoning
- Matrix calibration to ensure high accuracy over full temperature
- Fast Response( $T_{90}<30s$ ) for better life-saving application
- Auto baseline calibration algorithm, low drift
- Long lifespan over 10years



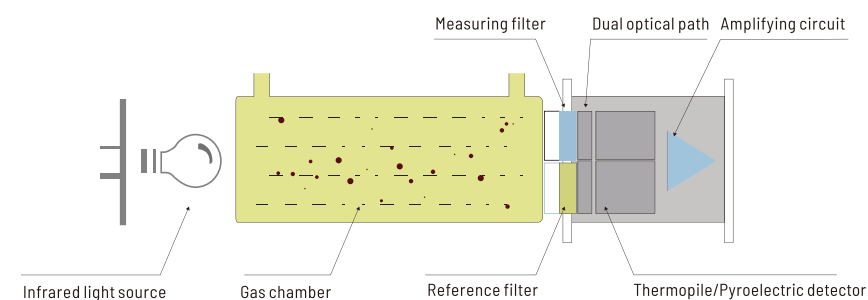
## Cubic SF6 NDIR Technology

# NDIR

Non-Dispersive Infrared Technology (NDIR) is a method based on gas absorption theory. After the infrared radiation emitted by the infrared light source is absorbed by the gas to be measured with a certain concentration, the spectral intensity proportional to the gas concentration will change.

SF6 (Sulphur Hexafluoride) gas as industrial protective gas is widely used in insulation and arc quenching of electrical high-voltage switchgears and transformers, due to its high dielectric strength, thermal stability. SF6 molecules have a specific absorption spectrum in the infrared wavelength region. When the wavelength of infrared light matches the absorption spectrum line of SF6 gas, the infrared energy is absorbed, and the absorption intensity follows the Lambert-Beer law.

- It is mainly composed of one infrared light source, one gas chamber, two optical filters and one detector.
- The light source radiates infrared light, which passes through the measured gas in the optical path, then the narrow optical filters.
- At the opposite end, the detector converts received infrared light, attenuated by target gas absorption, into an electrical signal.
- The detected attenuated electrical signal reflects the changes in target SF6 gas concentration.



### Specifications

Target gas	Sulfur hexafluoride (SF6)
Working principle	NDIR (non-dispersive infrared) technology
Measurement range	0~1500ppm
Resolution	1 ppm
Accuracy	±2%FS
Repeatability	≤±1%FS
Response time	$T_{90}<30s$ (diffusion)
Preheating time	≤15s
Output	① Modbus-RTU ② TTL/OC digital output
Working condition	-20~60°C, 0~95%RH (non-condensing)
Storage condition	-30~70°C, 0~95%RH (non-condensing)
Power supply	5V~9V DC, ripple wave<100mV
Average working current	≤130mA
Lifetime	10+ years
Dimension	L63.2*W38.5*H19.2 mm

\* For details of technical parameters, please refer to the specification sheet.

### Applications

- Gas insulated switchgears (GIS/HGIS) combination appliances
- SF6 gas leakage online monitoring
- High voltage electrical cabinet
- Industrial process control