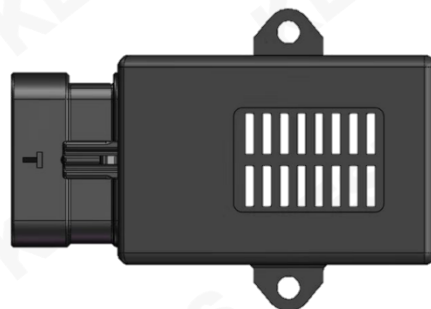


R290 浓度传感器

R290 Concentration Sensor



产品介绍 Product Description

R290浓度传感器是一种基于非分散红外（NDIR）气体检测技术，用于检测R290冷媒浓度的车用传感器。

The R290 concentration sensor is an automotive sensor based on Non-Dispersive Infrared (NDIR) gas detection technology, designed to detect the concentration of R290 refrigerant in vehicles.

产品特征及优势 Feature and Benefits

- 基于非分散红外气体检测技术
Based on Non-Dispersive Infrared (NDIR) Gas Detection Technology
- 基于冷光源和光电探测技术
Based on Cold Light Source and Photoelectric Detection Technology
- 0~100%LFL测量范围
0~100% LFL Measurement Range
- 检测精度高
High Detection Accuracy
- 灵敏度高
High Sensitivity
- 寿命长
Long Lifespan
- 支持自动校准算法
Support Automatic Calibration Algorithm
- 支持故障自诊断功能
Support Fault Self-Diagnosis Function
- 支持LIN通信（可定制）
Supports LIN Communication (Customizable)
- 出厂校准
Factory Calibration

产品应用 Product Application

该R290浓度传感器响应速度快，长期稳定可靠，适用于车载应用场景。汽车空调系统通过实时采集R290浓度传感器的输出数据，可以实现对R290冷媒泄漏的有效安全监测。

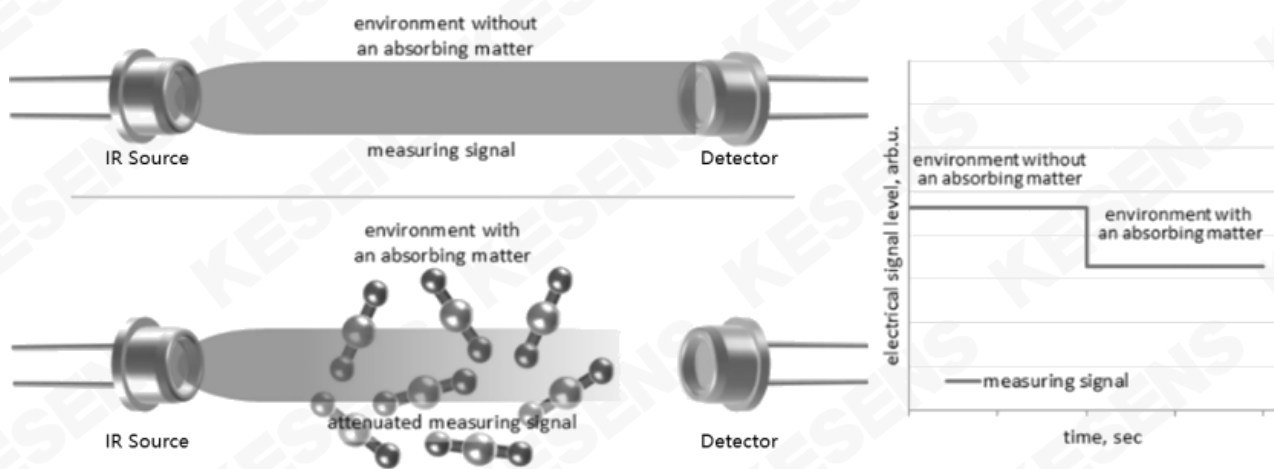
The R290 concentration sensor features fast response time, long-term stability, and reliability, making it ideal for automotive applications. By collecting the sensor's output data in real-time, the automotive air conditioning system can achieve effective and safe monitoring of R290 refrigerant leakage.

操作 Operation

基本原理 Basic Principle

R290浓度传感器采用NDIR气体检测技术，该技术基于气体吸收理论。红外光源发出的红外辐射经过一定浓度的待测气体之后，与气体浓度成正比的光谱强度会发生变化，计算出光谱强度的变化量，就可以推导出待测气体的浓度。

The R290 concentration sensor utilizes Non-Dispersive Infrared (NDIR) gas detection technology, which is based on gas absorption theory. When infrared radiation emitted by the light source passes through the target gas at a specific concentration, the spectral intensity—proportional to the gas concentration—undergoes measurable changes. By quantifying these spectral intensity variations, the concentration of the target gas can be precisely derived.



气体吸收原理 / Gas Absorption Theory

连接选项 Connection Options

根据客户选择定制连接系统。

Customized to customer choice of connection system.

包装选项 Packaging Options

可提供定制包装以满足任何需要，请联系KESENS技术部了解详情。

Custom packaging can be provided to meet any need, please contact KESSENS Engineering for details.

技术参数 Technical Characteristics

参数PARAMETER	符号SYMBOL	最小值MIN.	典型值TYPE.	最大值MAX.	单位UNITS
测量范围 MEASUREMENT RANGE	Cg	0	-	100	%LFL
精度 ACCURACY	Ag	-	±2.5	±5	%
分辨率 RESOLUTION	Rg	-	0.1	-	%LFL
响应时间 RESPONSE TIME	Tres		10		s
数据更新速率 DATA UPDATE RATE	Rda		1		s
工作电压 SUPPLY VOLTAGE	Vcc	9	12	16	V
峰值电流 PEAK CURRENT	Ip	-	-	100	mA
平均电流 AVERAGE CURRENT	Ia	-	20	-	mA
工作温度 OPERATING TEMPERATURE	Tw	-40	-	85	°C
工作湿度 OPERATING HUMIDITY	Hw	0	-	95	%RH
寿命 EXPECTED LIFETIME	n/a	-	15	-	Year
通信接口 COMMUNICATION INTERFACE	n/a	-	LIN	-	-
IP等级 IP RATING	n/a	-	IP68	-	-

可根据客户需求定制产品，如有需求请联系我们。
Customized products available upon request. Contact us for details.

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