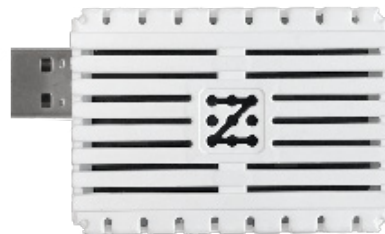




Flammable Gas Transmitter via USB

UA58-LEL

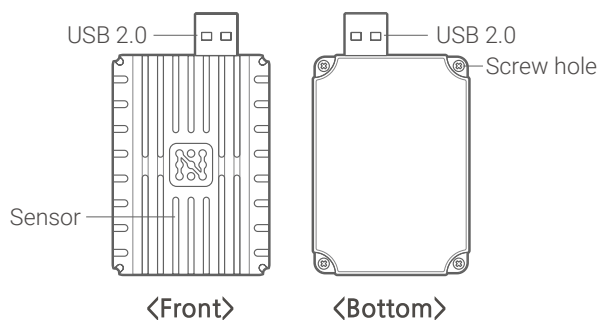
- Real-time LEL, Temperature, Humidity
- Compact size sensor in various industrial sites.
- MEMS for detecting 12 types of flammable gas
- Operating On Windows / Linux / MacOS
- AT Command Support
- Free Recording Software on PC



The UA58-LEL device contains a MEMS sensor capable of detecting 12 different flammable gas and transmits real-time density information via a USB connector. Any combustible gas not included in these 12 will be categorized based on their molecular weight and represented by a GAS ID.

The UA Series is automatically recognized as a serial port on the operating system and accessed using the AT command. Multiple USB connections of the UA device could compose the multi-channel sensor. The sensor data is not stored in the UA, but recorded in PC and Android devices. 128CH real time monitoring software on PC is downloadable on our website(www.radionode365.com). The optional RN17X model helps the UA series for you to setup remote web monitoring system or MODBUS TCP

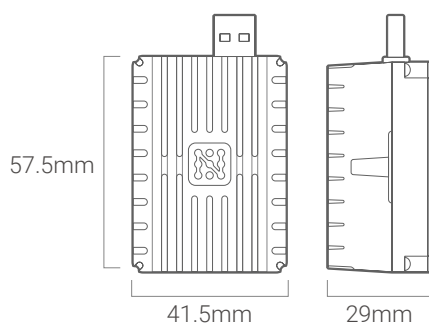
Hardware



⚠ CAUTION!

- Avoid temperatures above 90°C or below -60°C.
- Do not exceed ambient pressures above 130 kPa or below 30 kPa.
- Keep water or liquids away from the sensor.
- Direct exhalation onto the sensor may cause brief false flammable gas readings.

Dimensions



Contact Information

- www.radionode365.com
- master@dekist.com



Flammable Gas Transmitter via USB

UA58-LEL-U Specifications

Sensor Channel Info.	<ul style="list-style-type: none"> • CH1: Flammable gas (default methane) • CH2: Temperature • CH3: Humidity • CH4: gas class ID
Gas Sensor Type	MEMS sensor with True LEL Algorithm
Body Material	PC(Polycarbonate)
Measurement Range	<ul style="list-style-type: none"> • 0-100%LEL • Temperature: -30 ~ 50°C • Humidity: 5~95% • gas id: 1 ~ 6
Measurement Unit (Selection using SW)	<ul style="list-style-type: none"> • Flammable gas: %LEL • Temperature: °C(Default), °F • Humidity: % • gas id: number
Measurement Cycle	1.6 sec
Sensor Resolution	<ul style="list-style-type: none"> • 0.1%LEL • Temperature: 0.01°C • Humidity: 0.01%
Sensor Accuracy (Repeatability)	<ul style="list-style-type: none"> • Butane: ±5 %LEL • Ethane: ±5 %LEL • Hydrogen: ±5 %LEL • Isobutane: ±5 %LEL • Isobutylene: ±5 %LEL • Isopropanol: ±10 %LEL • Methane: ±3 %LEL • MEK: ±5 %LEL • Pentane: ±7 %LEL • Propane: ±7 %LEL • Propylene: ±5 %LEL • Acetone: +20 %LEL • Ethylene: -12 %LEL • Heptane: ±12 %LEL • Octane: ±12 %LEL • Styrene: -20 %LEL • Toluene: ±12 %LEL • Xylene: ±12 %LEL • Temperature: ±0.2°C • Humidity: ±2.0%
Compensation Logic	Automatic Background Calibration
Gas Classification	<ul style="list-style-type: none"> • gasID 0 : No gas • gasID 1 : Hydrogen • gasID 2 : Hydrogen Mixture • gasID 3 : Methane • gasID 4 : Light Gas <ul style="list-style-type: none"> - butane, ethane, isobutane, isobutylene - propane, propylene, ethylene • gasID 5 : Medium Gas <ul style="list-style-type: none"> - MEK, pentane, acetone, heptane • gasID 6 : Heavy Gas <ul style="list-style-type: none"> - octane, styrene, toluene, xylene
Baseline Drift	CH4: 0%LEL
Long-term Drift	CH4: < ±3 %LEL signal loss/year
Gas Response Time	Flammable gas: T90 < 20 secs
Warming up Time	< 3mins after power-on (Auto-initializes to reach stable values)
Operating Condition	<ul style="list-style-type: none"> • Temperature: -40 ~ 75°C • Humidity: 0 ~ 100% R.H(non condensing) • Pressure: 80 to 120kPa
Lifetime ¹⁾	15 Years @ (20 ± 3°C, 45 ± 5% RH recommended)
Cross-Sensitivity	<ul style="list-style-type: none"> • O2: +1%VOL = +1.07%LEL • CO2: +1,000 ppm = +1.74%LEL <p>Note: In normal air, when O2 levels are up to 21.8% VOL and CO2 levels are around 400 ppm, there is no LEL response, but exceeding these levels may trigger an LEL response</p>
Power Consumption	5V (Max. 183.75mW, Avg.112mW)
USB Port	USB 2.0 Type A Plug
Output Signal	USB digital, CDC Device (AT Command)
LED	Device Status Indicator <ul style="list-style-type: none"> • BLINK RED & GREEN: Warming-up • RED KEEP ON: USB Connection Failed • BLINK GREEN: Measuring
Software Support	<ul style="list-style-type: none"> • Tapaculo Lite 128CH recording software on PC Download: www.radionode365.com • Calibration Software Calibrator that compensates measuring error. Download: www.radionode365.com

1) Gas sensors have a longer life when measured discontinuously than when measured continuously.

Application

- Industrial safety Monitoring
- Air Ventilation System

Product Components

Model	Component
UA58-LEL-U	<ul style="list-style-type: none"> • UA58-LEL-U(1EA) • Calibration Cab(1EA) • USB Extension Cable 1.5m(1EA) • Calibration Certificate(1EA)

Optional Accessories

Type	Model Number	Spec.
Sensor data transmitter via Ethernet	RN171 WC	<ul style="list-style-type: none"> • Supports cloud monitoring • Supports MODBUS TCP/ HTTP data transmission • Power: PoE 48V, IEEE802.3af/at, DC6V, 1.9W
Sensor data transmitter via WiFi	RN172 WC	<ul style="list-style-type: none"> • Supports cloud monitoring • Supports MODBUS TCP/ HTTP data transmission • Power: DC6V, 2.4W