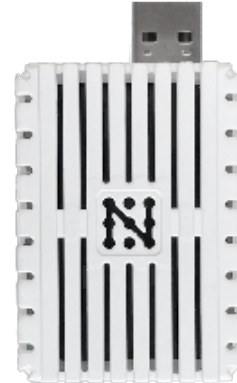## 3 Gases Density Transmitter via USB

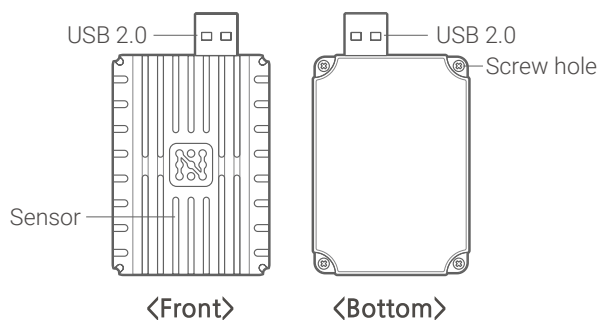# UA58-DFG

• Real-time Three Channel Gas Transmitter
• Compact Size IAQ sensor for Dining Facility
• CO,CH2O,C6H6 density support
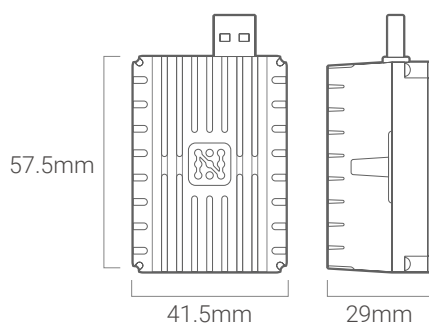• Operating on Windows/Linux/MaCOS
• AT Command Support

The UA58-DFG-U device have three electrochemical gases (Carbon monoxide, Formaldehyde, Benzene). It transmits measured density information of the three gases (CO,CH2O,C6H6) in real-time via USB connector.

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 optional RN17X model helps the UA series for you to setup remote web monitoring system. Cost-effective monitoring system Radionode365 is also available. With Radionode365, you can utilize all aspects of remote monitoring.

Hardware

USB 2.0
USB 2.0
Screw hole
Sensor
〈Front〉   〈Bottom〉

Dimensions

57.5mm
41.5mm   29mm

⚠ CAUTION!

• Volatile organic compounds (VOCs) should be avoided in applications where electrochemical sensors are used because they either dissolve in the electrolyte or adsorb onto the sensor's housing.
• Excessive impact, vibration, high concentration gases should be avoided.
• Long term exposures and high concentrations may affect the performance characteristics
• Sudden changes in temperature/humidity cause short-term transient signals
• Avoid contact with conductors.
• Static electricity can cause distorted values.

Contact Information

• www.radionode365.com
• master@dekist.com

3 Gases Density Transmitter via USB

UA58-DFG Specifications

Sensor Channel Info.	• CH1 : CO (Carbon Monoxide) • CH2 : CH2O (Formaldehyde) • CH3 : C6H6 (Benzene)
Gas Sensor Type	Electro chemical
Body Material	PC(Polycarbonate)
Measurement Range	• CO : 0~1000 ppm • CH2O : 0~2000 ug/m3 • C6H6 : 0~50 ppm
Measurement Unit (Selection using SW)	• CO : ppm • CH2O : ug/m3 • C6H6 : ppm
Sensor Resolution	• CO : 0.5 ppm • CH2O : 0.01 ppm • C6H6 : 0.1 ppm
Sensor Accuracy (Repeatability)	• CO : <3% of measured value • CH2O : <1% of measured value • C6H6 : <2% of measured value
Compensation Logic	Temperature
Long-term Drift	• CO : 10% signal loss / year • CH2O : None • C6H6 : 5% signal loss / month
Gas Response Time	• CO : T90 < 50 Secs • CH2O : T90 < 60 Secs • C6H6 : T90 < 120 Secs
Warming up Time	10 mins after power on
Operating Condition	• Temperature : 0~50 °C • Humidity : 15%~90%
Lifetime[1]	less than 24 month @ discontinuous measurement
Cross-Sensitivity	• CO : H2,NO,C2H4 • CH2O : H2,H2S, Ethanol, Methanol • C6H6 : CO, H2S, CH2CHCL, CH2O, C2H5OH, ETO
Power Consumption	5V, 111.5mw
Calibration Method	Two Point Calibration
USB Port	USB 2.0 Type A Plug
Output Signal	USB digital, CDC Device (AT Command)
LED	Device Status Indicator • BLINK RED & GREEN: Warming-up • RED KEEP ON: USB Connection Failed • BLINK GREEN: Measuring
Software Support	• 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-DFG	• UA58-DFG (1EA) • USB Extension Cable 1.5m (1EA) • Calibration Certificate (1EA)

Optional Accessories

Type	Model Number	Spec.
Sensor data transmitter via Ethernet	RN171 WC	• 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	• Supports cloud monitoring • Supports MODBUS TCP/ HTTP data transmission • Power: DC6V, 2.4W