

DB317 CO2, Humidity & Temperature Transmitter for Smart Buildings

Wall-mounted CO2, humidity, and temperature sensor with LCD display and RS485 Modbus RTU for smart ventilation and building automation.

Overview

Designed for measuring indoor CO2, humidity, and temperature, the DABECO DB317 is a cost-effective, wall-mountable sensor with an LCD display. Smart ventilation systems rely on accurate, real-time data to optimize airflow, reduce energy consumption, and ensure healthy indoor environments. Whether managing air quality in office buildings, schools, healthcare facilities, or commercial spaces, the DB317 provides reliable measurement performance with seamless Modbus RTU RS485 integration.

Operating Principle

The DB317 combines a CO2 sensing element with humidity and temperature sensors in a single wall-mounted enclosure, displaying live readings on an integrated LCD and transmitting all three parameters over a single RS485 Modbus RTU interface for direct integration into building automation and ventilation control systems.

Key Features

- Combined CO2, humidity, and temperature measurement in one device
- CO2 range 0-2000ppm
- Humidity range 0-100% RH; temperature -40 to 60°C
- Integrated LCD display
- RS485, Modbus RTU digital output
- Wall-mountable, cost-effective design

Benefits

- Single sensor covers three key IAQ parameters, simplifying installation versus separate devices
- Modbus RTU RS485 integrates directly with smart ventilation and BMS controllers
- On-site LCD display gives instant local readings
- Suited to demand-controlled ventilation strategies that reduce energy consumption

Typical Applications

Smart Building Automation, HVAC & Demand-Controlled Ventilation, Office Buildings, Schools, Healthcare Facilities, Commercial Spaces, Indoor Air Quality (IAQ) Monitoring

Technical Specifications

Temperature

Range	-40 to 60°C
Accuracy	±0.3°C @ 25°C
Stability	<0.1°C
Response Time (63%)	<15s

Humidity

Range	0-100% RH
Accuracy	±3% RH @ 25°C
Stability	<0.5% RH/year
Response Time (63%)	<12s

CO2

Range	0-2000 ppm
Accuracy	±(40 ppm + 3% of reading)
Stability	<10 ppm

Response Time	<3 min
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Communications

Digital Output	RS485, Modbus-RTU
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Power & Environmental

Supply Voltage	12-24V
Working Temperature	0-70°C
Storage Conditions	-40 to 80°C (non-condensing)