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JUMO - CO₂ Probe for Demanding OEM Applications

The digital CO₂ probe is designed for use in harsh, demanding applications. The probe incorporates the dual wavelength NDIR CO₂ sensor, which automatically compensates for ageing effects, is highly insensitive to pollution and provides outstanding long term stability.

The IP65 enclosure and replaceable PTFE filter offer excellent protection in harsh, polluted environments. The compact size and the M12 connector allow for fast probe installation or replacement.

The measured data range of up to 10000ppm is available on the Modbus interface.

The measurement interval can be set according to the application requirements, by this the average current consumption can be reduced to 120µA for battery-operated devices.



Typical Applications

Greenhouses
Fruit and vegetable storage
Stables
Hatchers and Incubators
Data loggers and hand helds

Key Features

Autocalibration
Outstanding long-term stability
Temperature compensation
Very low current consumption
IP65 enclosure
Easy installation

Technical Data

Measured values

CO₂

Measuring principle	dual wavelength non-dispersive infrared technology (NDIR)
Measurement range	0...2000 / 5000 / 10000ppm
Accuracy at 25°C and 1013mbar ¹⁾ (77°F...14,69psi)	0...2000ppm: < ± (50ppm +2% from the measured value) 0...5000ppm: < ± (50ppm +3% from the measured value) 0...10000ppm: < ± (100ppm +5% from the measured value)
Response time t ₉₀	105s with measured data averaging (smooth output) 60s without measured data averaging
Temperature dependency	typ. 1ppm CO ₂ /°C (-20...45°C) (-4...113°F)
Measurement interval	adjustable from 15s to 1h (Factory setting 15s)

General

Digital interface	Modbus
Supply voltage	4.75 - 7.5V DC
Average current consumption ²⁾	120µA (at 1h measurement interval)...4.3mA (at 15sec. measurement interval)
Current peak	max. 350mA for 0.05s
Housing / Protection class	Plastic PC / Housing IP65
Electrical connection	Connector M12 x 1
Cable length E2 interface	max. 10m (32.8ft)
Electromagnetic compatibility (Industrial environment)	EN61326-1 EN61326-2-3
Operating conditions	-40...60°C (-40...140°F) 0...100% RH (non-condensing) 85...110kPa (12,33...15,95psi)
Storage conditions	-40...60°C (-40...140°F) 0...100% RH (non-condensing) 70...110kPa (10,15...15,95psi)

1) For averaging output

2) The average current consumption depends on the measurement interval

