

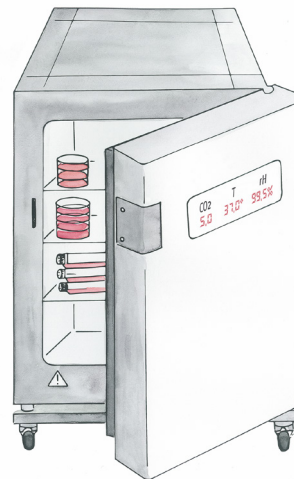
MicroSENS 180-HS

IR carbon dioxide gas sensor for reliable and accurate CO₂ measurement in incubators



Product benefits

- NDIR dual beam technology
- Temperature and pressure compensated
- Heat-sterilizable up to 190° C
- Long lifetime
- Humidity correction



Additional product information

This IR CO₂ sensor has been specially optimized for the measurement of 5 Vol-% CO₂ in cell incubators to manage ideal cell and tissue growth.

The sensor can be placed directly in the incubation chamber to measure the exact cell experienced environment. It determines the carbon dioxide concentration based on its characteristic infrared absorption.

Online shop for IR components and sensors
Filter products simply by selecting the desired properties and request your quotation.

 microhybrid.com/shop



Technical data

Technical parameter	Unit	
General		
Order number	7202.02-B.00	
Measuring gas	CO ₂	
Measurement range	0 – 20	Vol.-%
Gas supply	Diffusion	
Warm up time	< 1 minute (start-up) < 15 minutes (full spec)	
Measurement		
Accuracy ¹	± 0.2 Vol.-% ± 2 % of reading	
Response time (t ₉₀)	≤ 30	s
Digital resolution	0.001	Vol.-%
Temperature dependence ²	≤ ± 0.1	Vol.-%
Pressure dependence ³	≤ ± 0.05	Vol.-%
Long term stability ⁴	≤ ± 0.2 Vol.-% at 5 Vol.-% / year	
Humidity correction	0 ... 200	hPa H ₂ O
Electrical		
Supply voltage	12 – 24	V _{DC}
Power consumption	< 2	W
Digital interface	RS232	
Digital protocol	Micro-Hybrid industrial protocol	
Analogue interface	Current 4 – 20	mA

¹ At 37 °C, 1013 hPa, dry test gas, excludes calibration gas tolerance of ± 1 %

² With compensation at 1 Vol.-% ... 20 Vol.-% CO₂ and 20 °C ... 60 °C, 1013 hPa

³ With compensation at 600 – 1100 hPa, 37 °C and 5 Vol.-% CO₂

⁴ Stability at 37 °C, without heat sterilization

Technical data

Technical parameter		Unit
Climatic conditions		
Operating temperature	0 ... 60	°C
Humidity	< 100 % relative humidity (rH), not condensing	
Storage temperature	-25 ... 85	°C
Maximum temperature for heat sterilization (only sensor) ^{5,6}	190	°C
Pressure range ⁷	600 – 1100	hPA

⁵ Maximum humidity ≤ 1 % rH, ≥ 85 °C auto standby – no CO₂ measurement

⁶ Exceeding the maximum temperature may cause severe damage to the sensor.

⁷ Compensated

Disclaimer

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