

GM70 Hand-Held Carbon Dioxide Transmitters for Spot-Checking Applications



The GM70 is a versatile meter for measuring carbon dioxide concentration.

Features/Benefits

- User friendly meter
- Compact and light weight
- Wide selection of measurement ranges
- Short warm-up time
- Both numerical and graphical measurement data
- Data-logging and transferring capabilities
- Interchangeable probes
- Also suitable for calibration and adjustment of fixed CO₂ instruments

The GM70 Hand-held Carbon Dioxide Meter is a user friendly meter for demanding spot measurements in laboratories, greenhouses and mushroom farms. The meter can also be used in HVAC applications, industrial health investigations and as a tool for checking fixed CO₂ instruments.

CARBOCAP® Technology

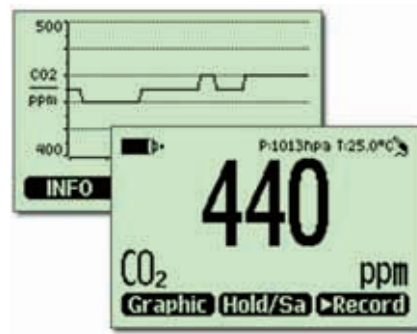
The GM70 Meter incorporates the silicon-based CARBOCAP® Sensor, which enables reliable and stable CO₂ measurement. With a two-year recommended calibration interval, GM70 is practically maintenance free.

Flexible measurement

The GM70 is configurable and it has a wide selection of measurement ranges, from low concentrations up to 20% of CO₂. GM70 is small and lightweight yet rugged and therefore an ideal choice for even the most demanding applications.

User friendly meter

Due to its short warm-up time, the GM70 is ready for use almost immediately. The menu-based interface is easy to use, and a graphical LCD display with data logger function makes the handling of measurement data convenient. Optional, ready-to-use Windows® software provides an easy way to handle data in the PC environment.



GM70 displays CO₂ concentration both numerically and graphically.

Interchangeable probes

The GM70 Meter uses the same probes as Vaisala's GM220 Series industrial transmitters. By plugging different probes into the handle, the user can easily change the measurement range.

The meter can also be used as a calibration check instrument for Vaisala's GM20 and GM220 Series fixed carbon dioxide instruments. GM220 probes can even be adjusted by using the GM70 Meter.

GM70 can be used with two probes at the same time. This allows differences to be measured, and is also a practical feature when checking probes against a calibrated probe.

Technical Data

GMH70 Handle with GMP220 Series CO₂ Measurement Probe Measured Variables

CO₂ volume concentration (% or ppm)

Measurement range	
High concentrations short probe (GMP221)	0...2% CO ₂ 0...3% CO ₂ 0...5% CO ₂ 0...10% CO ₂ 0...20% CO ₂
Low concentrations long probe (GMP222)	0...2000 ppm CO ₂ 0...3000 ppm CO ₂ 0...5000 ppm CO ₂ 0...7000 ppm CO ₂ 0...10 000 ppm CO ₂
Error at 25 °C against certified factory references (incl. repeatability and calibration uncertainty)	
GMP221	<±[0.02% CO ₂ + 2% of reading]
GMP222	<±[20 ppm CO ₂ + 2% of reading]
Non-linearity	<±0.5% of FS
Temperature dependence (typical)	0.1% of FS/°C (excluding the ideal gas law effect)
Pressure dependence (typical)	0.15% of reading/hPa (excluding the ideal gas law effect)
Long-term instability	<±5% of FS/2 years
Response time (63%)	
GMP221	20 seconds
GMP222	30 seconds
Warm-up time	
	30 seconds
	15 minutes full specifications

Measurement environment

Temperature	-20...+60 °C
Relative humidity	0...100%RH non-condensing
Operation pressure	700...1300 hPa
Flow range	0...10 m/s

Probe general

Sensor	CARBOCAP®
Housing material	
GMP221/2	PC plastic
GMH70	ABS/PC blend
Housing classification	NEMA 4 (IP65)
Storage temperature	-30...+70 °C
Storage humidity	0...100%RH non condensing
Weight	230 g

MI70 Measurement Indicator Indicator general

Menu languages	English, German, French, Finnish and Spanish
Display	LCD with backlight Graphic trend display of chosen parameter Character height up to 16 mm
Probe inputs	1 or 2
Power supply	Rechargeable NIMH battery pack with AC-POWER or 4xA4 size alkalines, type IEC LR6
Analog output	0...1 VDC
Output resolution	0.6 mV
Data interface	RS232C

Data-logging capacity	up to 2700 time stamped points
Alarm	Audible alarm function
Operating temperature range	-10...+40 °C
Operating humidity range	non-condensing
Housing material	ABS/PC blend
Housing classification	IP54
Weight	400 g

Battery operation time

Continuous use	better than 8 h at +20 °C
Data-logging use	up to 30 days

Electromagnetic Compatibility

Complies with the following standard:
EN 61326-1:1997 + Am1:1998, Electrical equipment for measurement, control and laboratory use - EMC requirements - Generic Environment.

Accessories

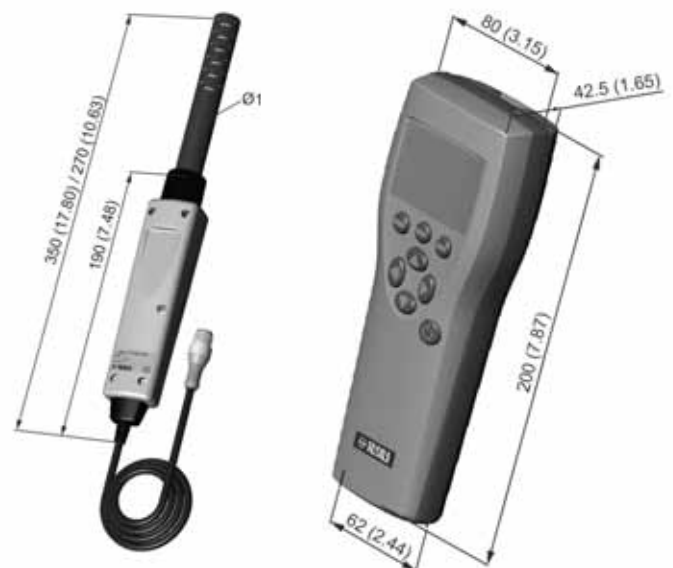
Analog output cable for 0..1 VDC analog output	ordering no: 27168ZZ
Windows® software	MI70 Link software with RS cable ordering no: MI70LINK
Field-check adapter	ordering no: 26150GM
Carrying case	MI70CASE
Other measurement ranges	Interchangeable probes. Please use separate order form to define measurement range.

Dimensions

Dimensions in mm (inches)

MI70 Indicator

GMH70 Handle+
GMP221/2 Probe



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