IAQ Monitor

Indoor Air Quality Monitor

HD21ABE17

Member of GHM GROUP

LIGHT AND PORTABLE

Simple solution for the **monitor** and the **analysis of indoor air quality** in variuous situations
Instrument and sensors **factory calibrated**

IMMEDIATE AND DIRECT READING

Backlit LCD **graphic display** for **immediate reading** of detected quantities

MULTIPLE PARAMETERS AT THE SAME TIME

Simoultaneous detection of **CO_2 / CO / Patm / T / RH**
Calculation of Dew Point / Wet Bulb Temperature / Absolute Humidity / Mixing Ratio / Enthalpy

ACCORDING TO THE STANDARDS

According to **ASHRAE 62.1**applying to all confinated spaces used by people

SAVE YOUR MEASUREMENTS

Datalogging function with large memory capacity to store the data and transfer to a PC

Principali Applicazioni

Misure IAQ (Indoor Air Quality)
Analisi e studio della sindrome da edificio malato (Sick Building Syndrome)
Verifica dell'efficienza dei sistemi HVAC
Verifiche in building Automation

Technical specifications of the instrument

Memory	Divided in 64 blocks
Storage capacity	67600 recordings
Logging interval	selectable among 15, 30 s; 1, 2, 5, 10, 15, 20, 30, min and 1 hour
Instrument uncertainty	± 1 digit @ 20 °C
Operating conditions	-5…50 °C 0…85 %RH without condensation
Storage temperature	-25…65 °C
Dimensions	300 x 90 x 40 mm (with probe)
Weight	470 g (complete with batteries)
Materials	ABS, rubber
Display	Backlit, Dot Matrix 160 x 160 dots,visible area 52 x 42 mm

Power supply	Mains adapter	12 Vdc/1A
	Batteries	4 x 1.2V Ni-MH rechargeable batteries AA type
	Autonomy	8 hours of continuous use in measure mode
	Power absorbed with instrument off	< 45 µA
Serial Interface	Socket	mini-USB
	Type	USB 1.1 or 2.0 non insulated
	Baud rate	460800
	Data bits	8
	Parity	None
	Stop bits	1
	Flow Control	Xon/Xoff
	Cable length	Max 5 m

Logging interval	Storage capacity	Logging interval	Storage capacity
15 seconds	About 11 days and 17 hours	10 minutes	About 1 year and 104 days
30 seconds	About 23 days and 11 hours	15 minutes	About 1 year and 339 days
1 minute	About 46 days and 22 hours	20 minutes	About 2 years and 208 days
2 minutes	About 93 days and 21 hours	30 minutes	About 3 years and 313 days
5 minutes	About 234 days and 17 hours	1 hour	About 7 years and 261 days

Technical specifications of the sensors

CO_2 Carbon Dioxide	Sensor	NDIR Dual Wavelength
	Measurement range	0…5000 ppm
	Sensor working range	-5…50 °C
	Accuracy	±50 ppm+3% of measure
	Resolution	1 ppm
	Temperature dependence	0.1% f.s./°C
	Response time (T_{90})	< 120 sec (wind speed = 2 m/s)
	Long-term stability	5% of measure/5 years
CO Carbon Monoxide	Sensor	Electrochemical cell
	Measurement range	0…500 ppm
	Sensor working range	-5…50 °C
	Accuracy	±3 ppm+3% of measure
	Resolution	1 ppm
	Response time (T_{90})	< 50 sec
	Long-term stability	5% of measure/year
	Service life	> 5 years in normal environment conditions
Atmospheric Pressure	Type of sensor	Piezo-resistive
	Measurement range	750…1100 hPa
	Accuracy	±1.5 hPa @ 25 °C
	Resolution	1 hPa
	Long-term stability	2 hPa/year
	Temperature drift	±3 hPa with T= -20…+60 °C
Relative Humidity	Type of sensor	Capacitive
	Sensor protection	Stainless steel grid filter
	Measurement range	0…100 % RH
	Sensor working range	-20…+60°C
	Accuracy	±2% (10÷90 %RH) ±2.5% in the remaining range
	Resolution	0.1 %RH
	Temperature dependence	±2% on all temperature range
	Hysteresis and repeatability	1 %RH
	Response time (T_{90})	< 20 sec (wind speed = 2m/s) without filter
	Long-term stability	1%/year

Temperature	Type of sensor	NTC 10kΩ
	Measurement range	-20…+60 °C
	Accuracy	±0.2°C ±0.15% of measure
	Resolution	0.1°C
	Response time (T_{90})	< 30 sec (wind speed = 2m/s)
	Long-term stability	0.1°C/year

ORDERING CODES

HD21ABE17	Datalogger for indoor air quality analysis (IAQ). Supplied with 4 x 1.2 V NiMH rechargeable batteries, CP23 USB cable, SWD10 power supply/battery charger, instruction manual and carrying case.
SWD10	100-240 Vac/12 Vdc-1 A stabilized mains power supply.
CP23	PC connecting cable with male mini-USB connector on instrument side and male A type USB connector on PC side.
BAT-40	Spare battery pack with built-in temperature sensor.
HD37.36	Connection tube kit between instrument and nitrogen cylinder for CO calibration.
HD21AB17.9	Connection accessory between instrument and nitrogen cylinder for CO2 calibration. The connecting tube is included.
HD75 /HD33 / HD11	Saturated solution for verifying relative humidity probes at 75 or 33 or 11 %RH, with fixing adapter for probes Ø14 mm thread M12×1.
P6	10 µm sintered stainless steel protection for probes Ø14 mm, thread M12x1. Operating temperature: -40…180 °C.
P7	20 µm PTFE protection for probes Ø14 mm, thread M12x1. Operating temperature: -40…150 °C.
P8	PBT and 10 µm stainless steel grid protection for probes Ø14 mm, thread M12x1. Operating temperature: -40…120 °C.

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In order to ensure the quality of our instruments, we are constantly re-evaluating our products. Improvements can imply changes in specification; we advise you to always check our website for the newest version of our documentation.

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