Digitron
Series HLX871

CO_2 Probe for OEM / HVAC Applications

The offset CO_2 sensor HLX871 features a large measurement range up to 10000ppm and the smallest housing dimensions.

The digital E2 interface facilitates a simple querying and processing of the measured values and an individual configuration of the sensing head. The measurement is based on infrared technology (NDIR).

The patented auto calibration process makes the HLX871 maintenance-free, aging effects are compensated for and an outstanding long-term stability is also ensured. Calibration data and other important functions such as linearisation or temperature compensation are stored in the electronics in the sensor tube. In combination with the integrated flange coupling, a rapid replaceability of the sensing head is possible without the need for readjusting the end device.

Moreover, the low current consumption of the HLX871 is unique! The adjustable measurement interval allows the average current consumption to be reduced to less than 60µA. The perfect solution for battery-operated devices.

Typical applications

Greenhouses
Fruit and vegetable storage
Stables
Data loggers
OEM applications

Properties

maintenance-free through auto-calibration
very low current consumption
digital interface
highest accuracy
outstanding long-term stability
adjustable measurement interval

Technical data

Measured values

CO_2

Measuring principle	non-dispersive infrared technology (NDIR)	
Sensor	2 beam infrared cell	
Measurement range	0...2000 / 5000 / 10000ppm	
Accuracy at 25°C and 1013mbar	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}	< 195s	
Temperature dependency	type 2ppm CO_2/°C (0...50°C)	
Long-term stability	type 20ppm / a	
Measurement interval [1]	adjustable from 15s to 1h	

Output

Measurement range	0...2000 / 5000 / 10000ppm
Interface	digital E2
max. cable length	up to 10m allowable

General

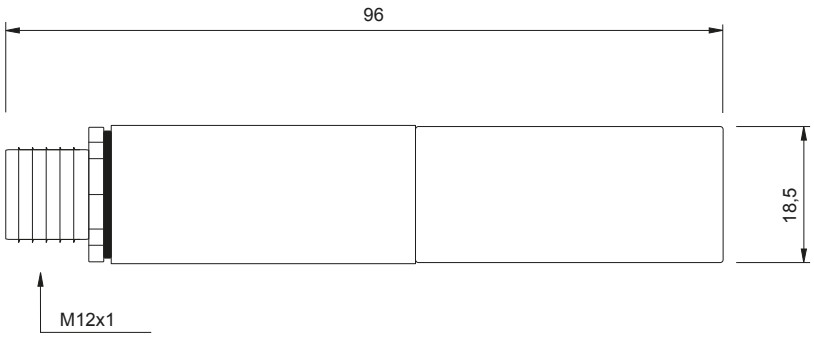
Supply voltage	4.75 - 7.5V DC		
average current consumption [2]	3.7mA at 15sec. measurement interval		
	58µA at 1h measurement interval		
Current peak	max. 500mA for 0.05s		
Housing / Protection class	Plastic PC / Housing IP65		
Electrical connection	Connector M12 x 1		
Electromagnetic compatibility	EN61326-1		
	EN61326-2-3		
Operating temperature and conditions	-40...60°C	0...100% rF (non-condensing)	85...110kPa
Storage temperature and condition	-40...60°C	0...100% rF (non-condensing)	70...110kPa
Dimensions	96 x Ø18.5mm		
Weight	approx. 40g		

CE

1) Factory setting = 15sec.

2) The average current consumption depends on the measurement interval set

Connection / Dimensions (mm)

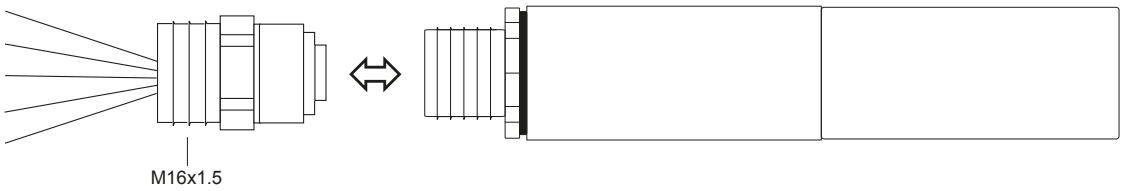


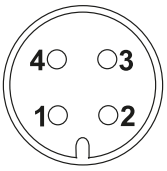
Connection

HLX871:

M12x1 flanged mounting with 50mm stranded wire (HA010705):

brown.....GND
white.....+UB
blue.....DATA
black...CLOCK
grey.....Shielding





1...GND
2...+UB
3...DATA
4...CLOCK

Ordering information

MEASUREMENT RANGE		TYPE		OUTPUT		FILTER	
0...2000ppm	(2)	CO_2	(C)	E2 interface	(9)	PTFE filter	(5)
0...5000ppm	(5)						
0...10000ppm	(10)						

HLX871-

Order example

HLX871-2C95

Measurement range: 0...2000ppm
Type: CO_2
Output: digital interface
Filter: PTFE filter

Accessories

HLX87x test board (HA011010)
mounting flange (HA010212)

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