DATASHEET

rev. 00 - 00-00-0000

TOTAL AIR
VOC probe for heat recovery unit

ACD600028

APPLICATION:

The ambient air quality sensor is regulated by a self-calibrating microprocessor and is used for air quality detection based on a mixed gas sensor / VOC sensor (VOC = volatile organic compounds).
Is used:
For measuring the air quality in offices, hotels, halls and conference centres, apartments, shops, restaurants, etc.
For a quantitative estimation of pollution of the room's air by harmful gases (cigarette smoke, perspiration, stale air, solvent vapours, emissions from building occupants and cleaning agents)
To adjust the sensitivity compared to the maximum expected air contamination
To ventilate the environment as required, consuming the energy only when necessary by exchanging the polluted air.
Room air quality is understood as a subjective quality, felt by humans with their olfactory organs.
As perception varies from person to person and therefore air quality is assessed differently, a general definition of the criteria for air quality in an environment is impossible.
As a result of linearisation and high operating temperatures, the air quality sensor achieves marginal drift and good stability. The sensor calibrates automatically. The air quality sensor does not track individual gas concentrations, but evaluates the mixed gas, as gas concentrations are not measured selectively. Therefore, it is not possible to report gas concentrations through the ppm unit.
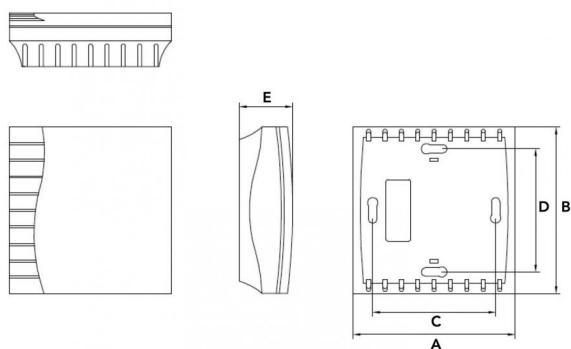Detectable gases: mixed gas, alkanol vapours, cigarette smoke, car exhaust gas, air produced by human breathing, combustion smoke (from wood, paper, plastic).
In addition, alkanes, aromas, terpenes, halogenated hydrocarbons, esters, aldehydes, ketones as well as original VOCs such as the class of terpenes and isoprene among VOC volatile organic compounds.
VOCs evaporate also from chemicals used in construction such as coating materials, adhesive or sealing materials, furniture, cleaning and care products, office chemicals and floor carpets.
The duration of the sensor depends on the type of load and on the gas concentration detected or to which it has been subjected to.

DIMENSIONS

Tecnosystemi S.p.A. - Benefit Company | www.tecnosystemi.com
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1

CODE	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
ACD600028	79	81	60		26

DATA

SPECIFICATIONS	DATA
Voltage supply	24V AC / DC, power consumption approx. 70 mA at 24V
Sensor	COV sensor (metal oxide)
Fields of work	0... 100% air quality: in reference to the calibration gas
Output signal	0-10V [OV= clean air, 10V = polluted air) or 4... 20mA (selectable via jumper) 0... 2000 ppm; 0... 5000 ppm
Exact measurement	±20% of final value (in reference to the calibration gas)
Room temperature	0 +50 °C
methane gas detector	not selective
Electrical connection	0.14-1.5 mm2 with screw clamps whichever is greater
Duration stability	<10% per year
Heating time	1 hour whichever is greater
Reaction/response time	< 60s whichever is greater
Closure:	plastic, ABS material, pure white colour (similar to RAL 9010)
Dimensions [mm]	79 x 81 x26 mm
Installation	Wall-mounted or flush-mounted box 55 mm, base with 4 holes for mounting in flush-mounted boxes installed vertically or horizontally. With prepared opening for the entry of the cable into the wall
Protection class	III (according to EN 60730)
Type of protection	IP 30 (according to IEC 529)
Standard	EC compliant,electromagnetic compatibility according to EN 61326+A 1+A2 EMC Directive 89 /336 / EWG Low Voltage Directive 73 / 23 / EWG

WIRING DIAGRAM
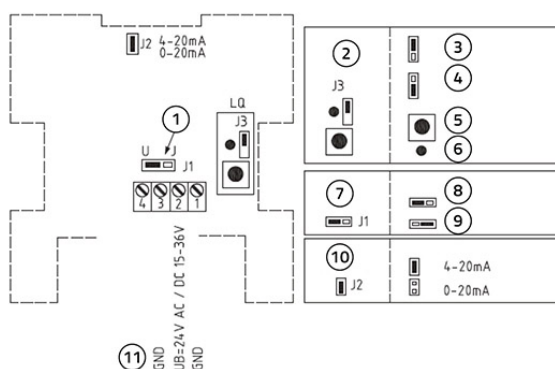
[1] Output choice
[2] Air quality calibration
[3] Automatic
[4] Manual
[5] Manual LQ calibration feeler
[6] LED calibration
[7] Selection of output
[8] Default voltage (V)
[9] Current (mA)
[10] Current output
[11] Air quality output

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2

CONNECTION DIAGRAM

[12] UB-GND
[13] UB+supply voltage 24 V AC/DC
[14] GND
[15] Output air quality 0-10V/ 4-20mA

ITEMS

CODE	DESCRIPTION
ACD600028	VOC SENSOR FOR HEAT RECOVERY UNITS "TOTAL AIR"

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3