

Duct Air Quality Sensor

To measure CO₂ only or integrated temperature, humidity and VOC in one device. 0 to 5/10 V outputs and an optional LCD display. See options below for integrated sensor options.





ype Overview						
Туре	Output Signal Active CO ₂	Output Signal Active VOC	Output Signal Active Temperature	Output Signal Active Humidity	Output Signal Active CO ₂ /VOC	Display Type
22DC-51	DC 05 V, DC 010 V	-	-	-	-	-
22DCK-51	DC 05 V, DC 010 V	DC 05 V, DC 010 V	DC 05 V, DC 010 V	-	DC 05 V, DC 010 V	-
22DCM-51	DC 05 V, DC 010 V	DC 05 V, DC 010 V	DC 05 V, DC 010 V	-	-	-
22DCV-51	DC 05 V, DC 010 V	DC 05 V, DC 010 V	-	-	-	-
22DTC-51	DC 05 V, DC 010 V	-	DC 05 V, DC 010 V	-	-	-
22DTM-51	DC 05 V, DC 010 V	-	DC 05 V, DC 010 V	DC 05 V, DC 010 V	-	-
22DTM-5106	DC 05 V, DC 010 V	<u>-</u>	DC 05 V, DC 010 V	DC 05 V, DC 010 V	-	LCD

	DC 010 V	DC 010 V	DC 010 V	
Technical Data				
	Electrical Data	Power Supply DC	1524 V, ±10%, 1.5 W	
		Power Supply AC	24 V, ±10%, 2.9 VA	
		Cable Entry	cable gland PG11 Ø6 to 10 mm, with strain relief Ø6 to 8 mm, 1/2" conduit adapter included	
	Functional Data	Sensor Technology	NDIR (non dispersive infrared) with stainless steel wire mesh filter, dual channel calibration	
		Output Signal Active Note	output DC 0 to 5/10 V with jumper adjustable voltage output: min. 10 $k\Omega$ load	
		Display	LCD, measured values: CO₂, temperature, rH, VOC	
		Media	air	
	Measuring Data	Measured Values	CO ₂ VOC mix CO ₂ /VOC temperature relative humidity	
		Measuring Range CO₂	0 to 2000 ppm	
		Measuring Range Humidity	0 to 100% RH	
		Measuring range temperature	40°F to 140°F [0°C to 50°C]	
		Accuracy CO ₂	±75 ppm; >750 ppm: ±10% of measuring value	
		Accuracy Humidity	±2% between 10 to 90% RH @ 70°F [21°C]	
		Accuracy temperature passive	±0.5 °C @ 21 °C	
		Operating Condition Air Flow	min. 1 ft/s [0.3 m/s] max. 33 ft/s [10 m/s]	



Sensor Datasheet	22DC51
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Cable Gland	PA6, black
Housing	cover: lexan, Belimo orange NCS S0580- Y6OR base: lexan, Belimo orange NCS S0580- Y6OR seal: 0467 NBR70, black
Probe Material	PA6, black
Ambient Humidity	85% RH non-condensing
Ambient temperature	32°F to 120°F [0°C to 50°C]
Medium temperature	32°F to 120°F [0°C to 50°C]
Operating Condition Air Flow	min. 1 ft/s [0.3 m/s] max 33 ft/s [10 m/s]

Safety Data

	Seal. 0407 NDN70, Dlack
Probe Material	PA6, black
Ambient Humidity	85% RH non-condensing
Ambient temperature	32°F to 120°F [0°C to 50°C]
Medium temperature	32°F to 120°F [0°C to 50°C]
Operating Condition Air Flow	min. 1 ft/s [0.3 m/s] max. 33 ft/s [10 m/s]
Protection Class IEC/EN	III safety extra-low voltage (selv)
Protection Class UL	UL Class 2 Supply
Certification IEC/EN	IEC/EN 60730-1
Certification UL	pending
Degree of Protection IEC/EN	IP65
Degree of Protection NEMA/ UL	NEMA 4X
Quality Standard	ISO 9001
Weight	0.26 lbs

Safety Notes



The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorized modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- · Local laws, health & safety regulations, technical standards and regulations
- · Condition of the device at the time of installation, to ensure safe installation
- · This data sheet and installation manual

Remarks

Information Self-Calibration Feature CO₂

All gas sensors are subject to drift caused by components, resulting in regular re-calibration or replacement units. However the dual channel technology integrates automatic selfcalibration technology vs common used ABC-Logic sensors. Dual channel self-calibration technology is ideally suited for applications operating 24/7 hours such as hosiptals or other commerical applications. Manual calibration is not required.

Accessories

Scope of Delivery mounting flange

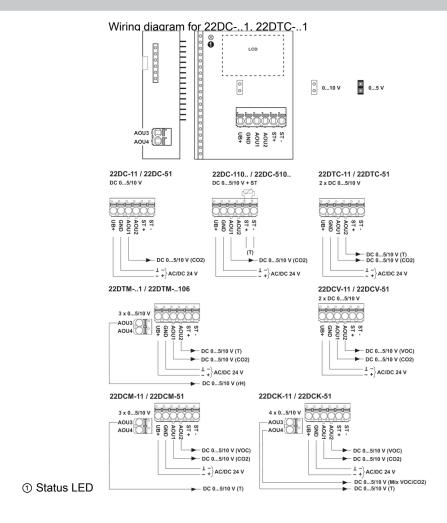
cable gland nut conduit 1/2" NPT

Optional Accessories Description

Type mounting flange for duct humidity and CO2 sensor A-22D-A34



Wiring Diagram





Dimensions

