

Duct Sensor CO₂

For CO₂ measurement in duct applications.
Dual channel CO₂ technology.
NEMA 4X / IP65 rated enclosure.


Type Overview

Type	Output signal active CO ₂	Output signal active VOC	Output signal active temperature	Output signal passive temperature	Output signal active CO ₂ /VOC
22DC-11	DC 0...5 V, DC 0...10 V	-	-	-	-
22DC-110L	DC 0...5 V, DC 0...10 V	-	-	NTC10k (10k2)	-
22DCK-11	DC 0...5 V, DC 0...10 V	DC 0...5 V, DC 0...10 V	DC 0...5 V, DC 0...10 V	-	DC 0...5 V, DC 0...10 V
22DCM-11	DC 0...5 V, DC 0...10 V	DC 0...5 V, DC 0...10 V	DC 0...5 V, DC 0...10 V	-	-
22DCV-11	DC 0...5 V, DC 0...10 V	DC 0...5 V, DC 0...10 V	-	-	-
22DTC-11	DC 0...5 V, DC 0...10 V	-	DC 0...5 V, DC 0...10 V	-	-

Technical Data

Electrical data	Power Supply DC	15...24 V, ±10%, 1.5 W
	Power Supply AC	24 V, ±10%, 2.9 VA
	Electrical connection	Removable spring loaded terminal block max. 2.5 mm ²
	Cable entry	cable gland PG11 Ø6...10 mm, with strain relief Ø6...8 mm
Functional data	Sensor Technology	NDIR (non dispersive infrared) with stainless steel wire mesh filter
	Output signal active note	Output DC 0...5/10 V with Jumper adjustable Voltage output: min. 10 kΩ load
Measuring data	Media	Air
	Measured values	CO ₂ VOC Mix CO ₂ /VOC Temperature
	Measuring range CO ₂	0...2000 ppm
	Measuring range humidity	0...100% rH
	Accuracy CO ₂	±75 ppm; >750 ppm: ±10% of measuring value
	Accuracy humidity	±2% between 10...90% rH @ 21 °C
	Accuracy temperature	±1% of measuring range @ 21 °C NTC10k (10k2): ±0.22 °C @ 25 °C
	Operating condition air flow	min. 0.3 m/s max. 10 m/s

Materials	Cable gland	PA6, black
	Housing	Cover: Lexan, Belimo orange NCS S0580-Y6OR Bottom: Lexan, Belimo orange NCS S0580-Y6OR Seal: 0467 NBR70, black
Safety data	Probe material	PA6, black
	Ambient humidity	85% r.h., non-condensing
	Ambient Temperature	0...50 °C [32...122 °F]
	Operating condition air flow	min. 0.3 m/s max. 10 m/s
	Protection class IEC/EN	III Safety Extra-Low Voltage (SELV)
	Protection class UL	UL Class 2 Supply
	EU Conformity	CE Marking
	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

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. Unauthorised 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

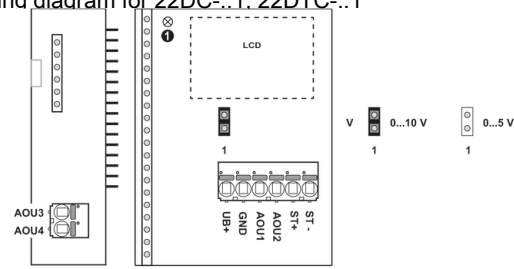
All gas sensors are subject to drift caused by components, resulting in regular re-calibration or replacement units. However the dual channel technology integrates automatic self-calibration technology vs common used ABC-Logic sensors. Dual channel self-calibration technology is ideally suited for applications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

Accessories

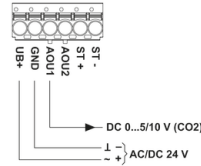
Scope of delivery Mounting flange

Wiring diagram

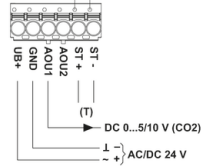
Wiring diagram for 22DC-..1, 22DTC-..1



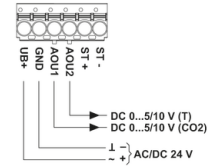
22DC-11 / 22DC-51
DC 0...5/10 V



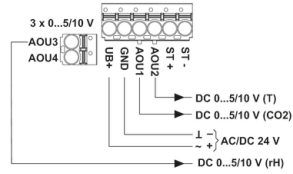
22DC-110.. / 22DC-510..
DC 0...5/10 V + ST



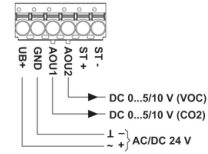
22DTC-11 / 22DTC-51
2 x DC 0...5/10 V



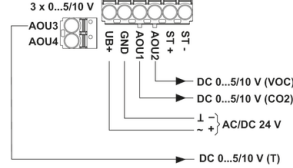
22DTM-51 / 22DTM-5106



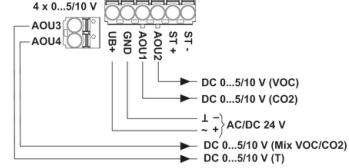
22DCV-11 / 22DCV-51
2 x DC 0...5/10 V



22DCM-11 / 22DCM-51



22DCK-11 / 22DCK-51



① Status LED

Dimensions

