

LK+ CO2

DATA SHEETS



The maintenance-free, multifunctional duct air quality sensor measures CO2 content and additionally temperature and humidity (relative, absolute, enthalpy, dew point, optional). The devices with relay output for a 2-point controller or a 2-stage 2-point controller and color-changing LCD display allow a wide range of applications. Depending on the model, the sensor can be individually configured via Thermokon USEapp. Tool-free opening, closing and wiring as well as removable cable entries ensure quick and easy installation.



LK+ CO2 (100)



LK+ CO2 (100) LCD

Function overview on page 395

0..10 V / 4..20 mA



TECHNICAL DATA	
Measuring values	CO2, temperature + humidity (depending on the device)
Output voltage	2x/3x 0..10 V or 0.5 V (adjustable via jumper; live-zero configuration via Thermokon USEapp) V: 1x 0..10 V min. load 10 kΩ
Output ampere	AA: 2x 4..20 mA, max. load 500 Ω
Output switch contact	Relay: 2x floating contact NO for 24 V ~ or 24 V = / 3 A, optional
Network technology	BACnet MS/TP, LON FT (free topology), RS485 Modbus
Power supply	15..35 V = or 19..29 V ~ SELV, AA: 15..35 V = SELV
Power consumption	max. 2,5 W (24 V =) 4,3 VA (24 V ~)
Measuring range temp.	-40..+60 °C 0..+50 °C -20..+80 °C -15..+35 °C, default setting: 0..+50 °C optionally configurable via Thermokon USEapp
Measuring range humidity	0..100% rH non-condensing enthalpy: 0..85 KJ/kg absolute humidity: 0..50 0..80 g/m³ dew point: 0..+50 -20..+80 °C optionally configurable via Thermokon USEapp
Measuring range CO2	0..2000 ppm BUS: 0..5000 ppm
Accuracy temperature	VV AA 3xV: ±0,5 K (typ. at 21 °C within default measuring range)
Accuracy humidity	±2% between 10..90% rH (typ. at 21 °C)
Accuracy CO2	±50 ppm +3% of measured value (typ. at 21 °C, 50% rH, 1015 hPa)
Air speed	min. 0,3 m/s, max. 12 m/s
Calibration	self-calibration, Dual Channel
Sensor	CO2: NDIR (non-dispersive, infrared)
Display	LCD 29x35 mm with RGB backlight, optional indicating air quality by switching display color (traffic light function 'TLF')

Enclosure	enclosure USE-M, PC, pure white LCD: cover PC, transparent
Protection	IP65 according to EN 60529
Cable entry	Flextherm M16 for wire Ø=3..7 mm Relay/BUS: M25 with fourfold cable entry for wire with max. Ø=7 mm 3xV: M20 for wire max. Ø=10 mm incl. seal insert for double cable entry for wire max Ø=6 mm removable
Connection electrical	removable plug-in terminal, max. 2,5 mm ² BUS terminal: removable plug-in terminal, max. 1,5 mm ²
Pipe	PA6, black, Ø=19,5 mm, length 180 mm types 100: length 100 mm types without temperature: length 150 mm; types 100: 70 mm
Filter	stainless steel wire mesh type V without filter
Ambient condition	0..+50 °C, max. 85% rH short term condensation
Mounting	installation is also possible using mounting base
Delivery contents	MF20 flange included

LK+ CO2 active

Item description: product | measuring values | output

Duct sensor CO2 – active 0..10 V			AQ2
Item description	Item No.	On stock	
LK+ CO2 V	662253	⊖	
LK+ CO2 100 V	670418		

Duct sensor CO2 + temperature – active 2x 0..10 V 2x 4..20 mA				AQ2
Item description	USEapp	Item No.	On stock	
LK+ CO2 Temp VV	✓	662260	⊖	
LK+ CO2 100 Temp VV	✓	670432		
LK+ CO2 Temp AA	✓	662277		
LK+ CO2 100 Temp AA	✓	670449		

Duct sensor CO2 + temperature – active 2x 0..10 V 2x 4..20 mA relay				AQ1
Item description	USEapp	Item No.	On stock	
LK+ CO2 Temp VV relay	✓	662307		
LK+ CO2 100 Temp VV relay	✓	670456		
LK+ CO2 LCD Temp VV	✓	662284	⊖	
LK+ CO2 100 LCD Temp VV	✓	670463		
LK+ CO2 LCD Temp AA	✓	662291		
LK+ CO2 100 LCD Temp AA	✓	670470		
LK+ CO2 LCD Temp VV relay	✓	662314		
LK+ CO2 100 LCD Temp VV relay	✓	670487		