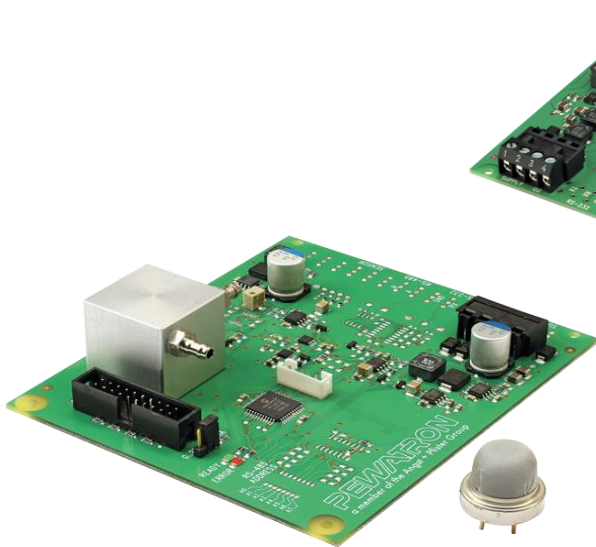


FCX-MC25 & FCX-MC95 OEM module data sheet & selection guide

Sauerstoffmodul mit einem Zirkonoxysensor



Der bekannte und verbreitete Sauerstoffsensor FCX ist mit einem Mikrokontroller verheiratet, um eine genaue Steuerung und Präzises Auswertung des Signals zu bekommen. Der FCX Sensor ist entweder direkt auf der Platine, mit oder ohne Durchflussgehäuse, oder ist extern mit einem Kabel verbunden

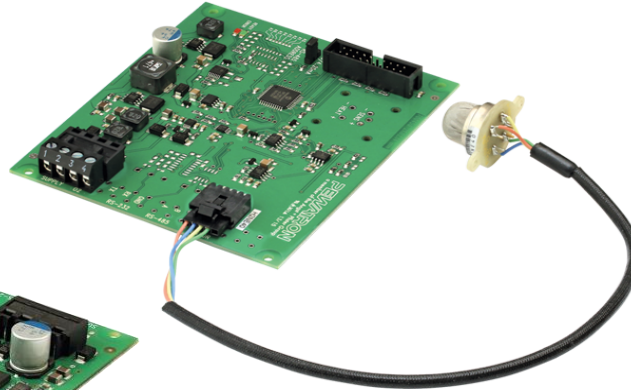
Merkmale

- 0 ...25 oder 0,1...95% O₂
- Kein Referenzgas nötig
- Lebensdauer >30'000 Betriebsstunden
- Keine Nachkalibrierung nötig
- Ausgezeichnete Langzeitstabilität
- Kleine Leistungsaufnahme
- Analog: 0/4...20mA, 0...10VDC linear
- Digital: RS485/RS232
- RoHS/Reach konform
- Hergestellt in der Schweiz

Anwendungen

- Luftqualitätsüberwachung
- Additive Fertigung
- Sauerstoff, Stickstoff und Argon-Generatoren
- Lebensmittelindustrie
- Gewächshäuser
- Frucht- und Gemüselagern
- Biogasanlagen
- Gaswarnanlagen
- Medizinische Geräte
- Laborgeräte

Oxygen module with a Zirconia Sensor



The popular oxygen sensor FCX, a reference for all oxygen sensors for the last 25 years and longer, is electronically controlled via a state-of-the-art control board for the accurate concentration measurements of oxygen. The sensor is either mounted directly on the control board, with or without a flow housing, or remote from the control board via cables.

Features

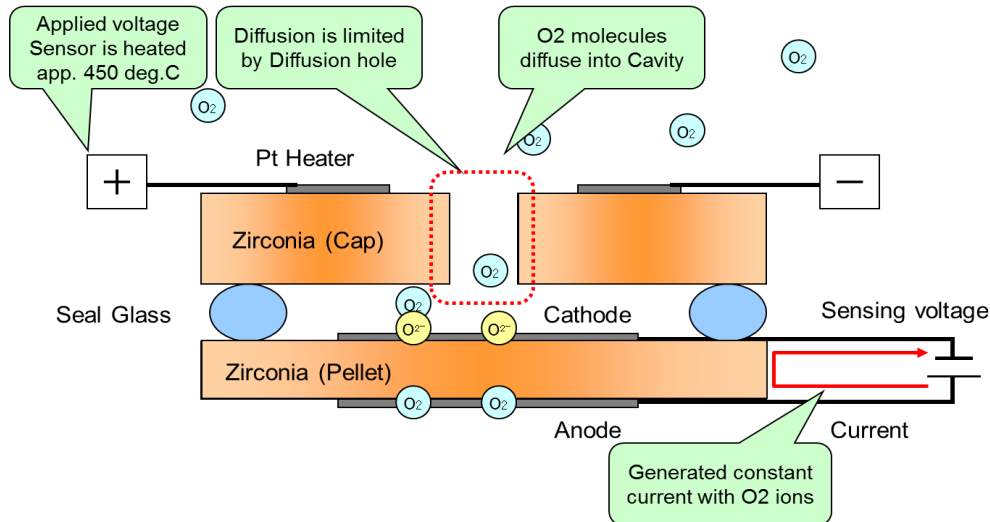
- 0...25 or 0,1...95% O₂
- No reference gas is needed
- Lifetime >30'000 operation hours
- No calibration needed
- Excellent longtime stability
- Low power consumption
- Analog: 0/4...20mA, 0 ...10VDC linear
- Digital: RS485/RS232
- RoHS/Reach conform
- Made in Switzerland

Applications

- Air quality monitoring
- Additive manufacturing
- Oxygen, Nitrogen and Argon generators
- Food industry
- Greenhouses
- Fruit & vegetable storages
- Biogas plants
- Gas security systems
- Medical units
- Laboratory equipment

Funktionsprinzip des Sensors

Zirkonoxyd Sensor nach dem Strombegrenzungsprinzip



Principle of functionality for the sensor

Limiting current type of a Zirconia oxygen sensor

Spezifikationen

Messbereiche	0...25 vol% O ₂ or 0,1...95 vol% O ₂
Genauigkeit	±0,5% Full Scale (FS)
Stabilität	±0,5% FS/year
Wiederholgenauigkeit	±1% FS
Ansprechzeit (Diffusion)	< 30 seconds (T ₉₀)
Ansprechzeit (Durchfluss)	< 8 seconds (T ₉₀)
Betriebstemperatur (Modul)	-10...+50°C
Betriebstemperatur (Sensor)	-10...+250°C (External w. proper connector)
Feuchte	0...98%RH, non-condensing
Aufwärmzeit	3 min
Speisespannung	9-28 VDC
Leistungsaufnahme	< 3W
Ausgangssignal	0/4...20 mA (standard) 0...10VDC (external shunt) option: 0...10VDC (internal shunt) RS232/RS485
Sensorlebensdauer	> 30.000 hours (in operation)
Durchflussrate	0,1...3 slm/min
Abmessungen	117,5 x 100 x 28 mm
Gewicht	200g

Specifications

Measurement ranges
Accuracy
Stability
Repeatability
Response time (diffusion)
Response time (flow)
Operating temperature (Module)
Operating temperature (Sensor)
Humidity
Warm-up time
Supply voltage
Power consumption
Output signal
Sensor lifetime
Flow rate
Dimensions
Weight

Die Angaben dieses Datenblattes enthalten die Spezifikationen der Produkte, nicht die Zusicherung von Eigenschaften. Technische Änderungen die dem Fortschritt dienen bleiben vorbehalten

The declarations on this data sheet area according to the specifications of the products, not an assurance of their quality. We reserve the right to make technical modifications in order to improve the product.

FCX-M product code																
	FCX-				-					-					-	CH
Electronics																
	linear output, analog or digital	M	C													
	logarithmic output, analog	M	L													
	linear output < 10.000 ppm, analog	M	P													
	linear output, digital	M	L	D												
Measurement range																
	ppm/vol %															
	0...1000 ppmO ₂					1	0	0	0							
	0...10000 ppmO ₂					10	0	0	0							
	0...1 %VolO ₂							0	1							
	0...5 %VolO ₂							0	5							
	0...25 %VolO ₂							2	5							
	0...95 %VolO ₂							9	5							
	customer specific				ex.			9	6							
Gas flow type																
	forced flow															
	diffusion															
	external connected - sensor mounted on PCB, standard cable				cable length (030, 100, 200, 400 & 600 cm)											
	external connected - special flow housing, standard cable				cable length (030, 100, 200, 400 & 600 cm)											
	external connected - KF vacuum flange, HT cable				cable length (030, 100, 200, 400 & 600 cm)											
	external connected - high temperature < 200°C, HT cable				cable length (030, 100, 200, 400 & 600 cm)											
	external connected - IP65 protection, high temperature < 200°C, HT cable				cable length (030, 100, 200, 400 & 600 cm)											
	external connected - high temperature < 300°C, special HT cable				cable length (030, 100, 200, 400 & 600 cm)											
	external connected - M27 x 2 mm thread high temperature < 200°C, special HT cable				cable length (030, 100, 200, 400 & 600 cm)											
	customer specific				cable length (030, 100, 200, 400 & 600 cm)											
Cable length																
	standard 30 cm														030	
	standard 100 cm														100	
	standard 200 cm														200	
	standard 400 cm														400	
	standard 600 cm														500	
	customer specific														CUST	
Output signal																
	4...20mA/2-wire															A
	0-10 VDC/2-wire															V
	RS232 (only MC-type)														RS232	
	RS485 (only MC-type)														RS485	
	Serial, logic level 3.3 V (MLD-type)															RTX
	customer specific															CUST

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