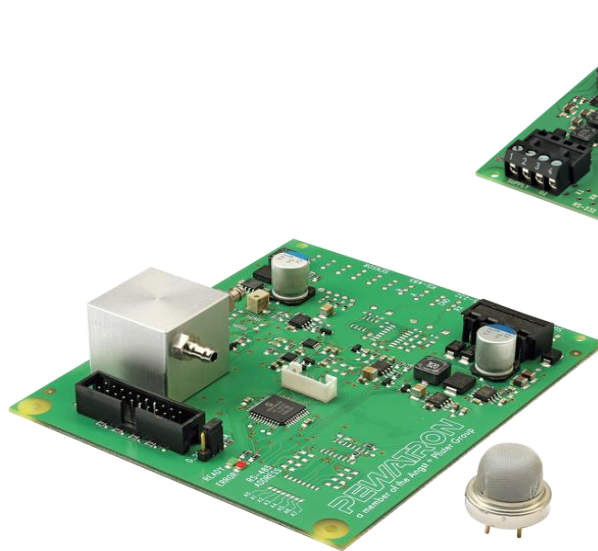


## FCX-MC25 & FCX-MC95 OEM module data sheet & selection guide

### Sauerstoffmodul mit einem Zirkonoxydsensor



Der bekannte und verbreitete Sauerstoffsensoren 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

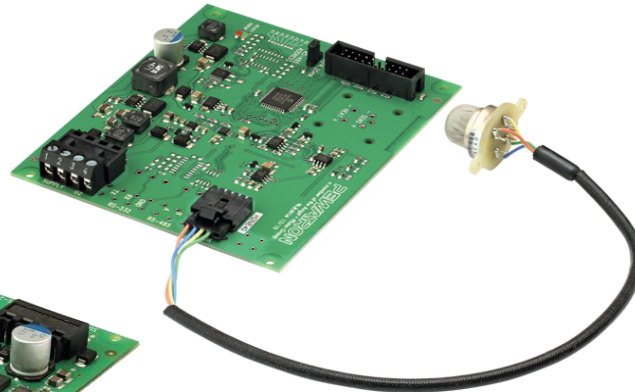
#### Merkmale

- 0 ...25 oder 0,1 ...95% O<sub>2</sub>
- 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

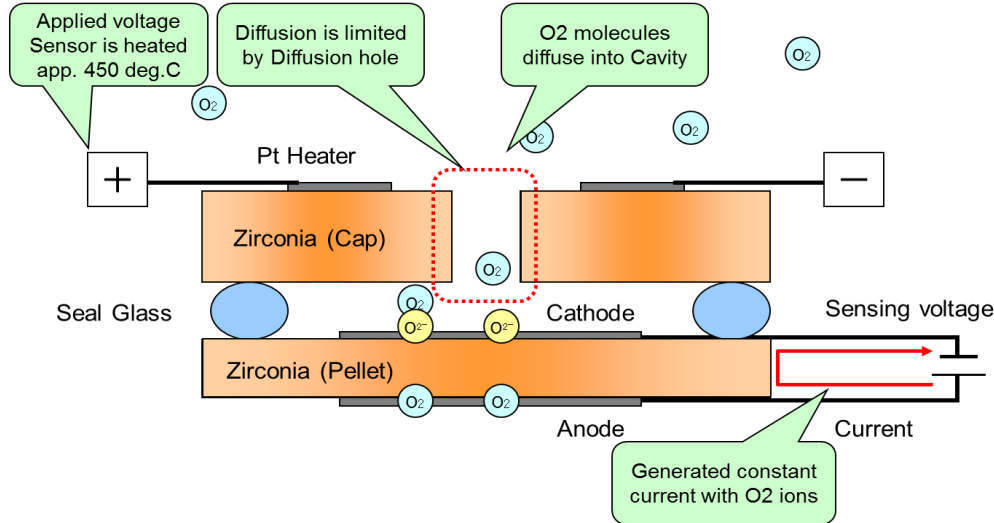
- 0...25 or 0,1...95% O<sub>2</sub>
- No reference gas is needed
- Lifetime >30'000 operation hours
- No calibration needed
- Excellent longtime stability
- Low power consumption
- Analog: 0/4...20mA, 0 ...10VDC linear
- Digital: RS485/RS232
- RoHS/Reach conform
- Made in Switzerland

#### 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

Zirkonoxid Sensor nach dem Strombegrenzungsprinzip



## Principle of functionality for the sensor

Limiting current type of a Zirconia oxygen sensor

## Spezifikationen

Messbereiche	0...25 vol% O <sub>2</sub> or 0,1...95 vol% O <sub>2</sub>
Genauigkeit	±0,5% Full Scale (FS)
Stabilität	±0,5% FS/year
Wiederholgenauigkeit	±1% FS
Ansprechzeit (Diffusion)	< 30 seconds (T <sub>90</sub> )
Ansprechzeit (Durchfluss)	< 8 seconds (T <sub>90</sub> )
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
<b>Electronics</b>																		
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															
<b>Measurement range</b>																		
ppm/vol%																		
0...1000 ppmO <sub>2</sub>						1	0	0	0									
0...10000 ppmO <sub>2</sub>						10	0	0	0									
0...1 %VolO <sub>2</sub>								0	1									
0...5 %VolO <sub>2</sub>								0	5									
0...25 %VolO <sub>2</sub>								2	5									
0...95 %VolO <sub>2</sub>								9	5									
customer specific					ex.			9	6									
<b>Gas flow type</b>																		
forced flow diffusion																		FLOW DIFF
external connected - sensor mounted on PCB, standard cable																		EXT- STD
external connected - special flow housing, standard cable																		EXT- FH
external connected - KF vacuum flange, HT cable																		EXT- KF
external connected - high temperature < 200°C, HT cable																		EXT- HT200
external connected - IP65 protection, high temperature < 200°C, HT cable																		EXT- LEMO
external connected - high temperature < 300°C, special HT cable																		EXT- HT300
external connected - M27 x 2 mm thread high temperature < 200°C, special HT cable																		EXT- THD
customer specific																		EXT- CUST
<b>Cable length</b>																		
standard 30 cm																		030
standard 100 cm																		100
standard 200 cm																		200
standard 400 cm																		400
standard 600 cm																		500
customer specific																		CUST
<b>Output signal</b>																		
4...20mA/2-wire																		A
0-10VDC/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

## We are here for you. Addresses and Contacts.

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