TecSense
unique solutions in sensor technology

TecMicro Gas

Optochemical oxygen sensor system for process control
and industrial processes

- Optochemical O2 sensor system for gases
- Suitable for use in hazardous areas Ex II 1G Ex ia IIC T4 Ga und Ex II1D Ex ia IIIC T135°C DA (optional)
- No maintenance
- Extremely fast
- Self-diagnostic system TecService software (sensor reports when 80% of its lifetime has been reached)
- Replaceable sensor cap
- Factory Calibrated - Plug & Play
- Easy implementation in your system
- No problem with smaller particles
- No cross-sensitivity to moisture
- Extremely accurate measurement results in trace ranges
- No sensitivity to magnetic and electric fields
- Minimum shelf life of 1 year for gases in neutral atmosphere

- Measuring speed from 2ms
- Best performance at a competitive price
- No problem with Stop and Go
- 0-point adjustment easily done by the customer

Applikation

- MAP cushion bags, inline inspection before sealing
- Industrial processes, petrochemical industry, electronics industry
- Pharmaceutical Industry, Biotechnology, Fermentation, Bioreactors
- Technical and process gases, gas generators

Technical Specifications

TecMicro Gas variants up to 15% O_2 also available as ATEX II version upon customer request

TS-System	TecMicro Gas Trace		TecMicro Gas Low		TecMicro Gas Medium		TecMicro Gas High	
Measurement range	0-2000 ppm		0,0-5%		0,0-22%		0,0-100%	
	Range	**Accuracy**	**Range**	**Accuracy**	**Range**	**Accuracy**	**Range**	**Accuracy**
	0-100ppm	± 2% Mev**	0-0,5%	± 2% Mev**	0-5%	± 2% Mev**	0-5%	± 3% Mev**
	100-1000ppm	±3% Mv*	0,5-2,5%	±3% Mv*	5-15%	±3% Mv*	5-22%	± 4% Mv*
	1000-2000ppm	± 4% Mv*	2,5-5%	±5% Mv*	15-22%	± 3% Mv*	22-100%	± 5% Mv*
Resolution	1 ppm		0,001%		0,001%		0,001%	
Response time at 26°C/77°F	<15s		5s		5s		5s	
Max. Pressure	5bar		5bar		5bar		5bar	
Temp. Range Min./Max	-10°C/ +60°C		-10°C/ +60°C		-10°C/ +60°C		-10°C/ +60°C	
	14°F/140°F		14°F/140°F		14°F/140°F		14°F/140°F	
Average lifetime LED	min. 10.000h		min. 10.000h		min. 10.000h		min. 10.000h	
Power supply	5V DC		5V DC		5V DC		5V DC	
Data Interface	RS232 / USB / RS485		RS232 / USB / RS485		RS232 / USB / RS485		RS232 / USB / RS485	
Temperature compensation	4 - 40°C or 39,2 - 104°F		4 - 40°C or 39,2 - 104°F		4 - 40°C or 39,2 - 104°F		4 - 40°C or 39,2 - 104°F	
Pressure compensation	STP by default. Changed in software.		STP by default. Changed in software.		STP by default. Changed in software.		STP by default. Changed in software.	
Data Output	digital		digital		digital		digital	
Cleaning	No org. Solvents, 40% EtOH		No org. Solvents, 40% EtOH		No org. Solvents, 40% EtOH		No org. Solvents, 40% EtOH	
Parts touching sample	St.1.4404/ PTFE/ Glass		St.1.4404/ PTFE/ Glass		St.1.4404/ PTFE/ Glass		St.1.4404/ PTFE/ Glass	
Protection	IP65		IP65		IP65		IP65	
Guaranteed lifetime of sensor cap C9 [1]	12 months							
Lifetime sensor cap C3/6/10[1]			12 months		12 months		12 months	
Main service interval [2]	3 years		3 years		3 years		3 years	
Sensor cap replacement interval	12 months or TecService Command		12 months or TecService Command		12 months or TecService Command		12 months or TecService Command	
Expected lifetime of cap [3]	1 year		2 year		2 year		2 year	
Recommended 0-point adjustment	3 months		3 months		3 months		3 months	
Warranty	1-year ex works Grambach		1-year ex works Grambach		1-year ex works Grambach		1-year ex works Grambach	

**Mev= measured end value
* Mv = measured value

1. 5-60°C or 41-140°F; no corrosive gases, no hydrocarbon

2. Service including necessary retrofitting
3. Under defined conditions

Scope of delivery

- TecMicro in ordered configuration
- Manufacturer certificate
- 10m cable with appropriate connection (Connection only after according costumer request)
- TecService Software

- Optional Connections (they have to be separately ordered)

  - ½ or ¾ inch T-piece
  - Varivent (Tuchenhagen)
  - TriClamp
  - Flange with ½" fine thread

½ or ¾ inch T-piece	Varivent (Tuchenhagen)
TriClamp	**Flange with ½" fine thread**