

TecMicro Oxygen Sensor

- Opto-chemical Oxygen Sensor
- 2,00ppb – 100% Models
- Gases and fluid Models
- RS485 or USB Data Connection
- Self-diagnosing System
- Factory calibrated – plug and play
- Extremely fast
- Sterilize in Place & Clean in Place
- No cross sensitivity to CO₂, H₂S, ionic strength, flow
- ATEX Rated for Explosive Environments



Applications

- Industrial Processes, Petrochemical & Electronics Industries
- Technical and Process Gases, Gas Generators
- MAP-Pillow Bags, Inline Control Before Sealing
- Pharma Industry, Biotechnology, Fermentation, Bioreactors
- Food and Beverage Industry – Breweries
- Wastewater and Fish Farming

Revision 5

Models - Gas

TS-System Range	TS-401 Gas Trace		TS-402 Gas Low Range		TS-403 Gas Medium Range		TS-404 Gas High Range	
	0-2000 ppm O2		0-5% O2		0-22% O2		0-100% O2	
	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	1ppm		0.001%		0.001%		0.001%	
Response time at 25°C/ 77°F	< 15s		5 sec w/o protective layer		5 sec w/o protective layer		5 sec w/o protective layer	
Max. Pressure	5bar		5 bar		5 bar		5 bar	
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	
Medium	Gas		Gas		Gas		Gas	
Average lifetime LED	10,000 hours minimum		10,000 hours minimum		10,000 hours minimum		10,000 hours minimum	
Power supply	5VDC		5VDC		5VDC		5VDC	
Data Interface	USB / RS485		USB / RS485		USB / RS485		USB / RS485	
Temperature compensation	4 - 40°C		4 - 40°C		4 - 40°C		4 - 40°C	
	39 - 104°F		39 - 104°F		39 - 104°F		39 - 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 organic solvents, 40% EtOH		No organic solvents, 40% EtOH		No organic solvents, 40% EtOH		No organic 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	
Connection	1/2" hex nut		1/2" hex nut		1/2" hex nut		1/2" hex nut	
Protection	IP65		IP65		IP65		IP65	
Guaranteed Sensor cap lifetime @ 5-60°C, no corrosive gases or hydrocarbons	1 year		1 year		1 year		1 year	
Sensor cap replacement interval	1 year. May be longer if verified in software		1 year. May be longer if verified in software		1 year. May be longer if verified in software		1 year. May be longer if verified in software	
Expected lifetime of cap under defined conditions	1 year		2 years		2 years		2 years	
Recommended zero point adjustment by customer	3 months		3 months		3 months		3 months	
Full service interval by manufacturer	3 years		3 years		3 years		3 years	

**Mev = measured end value

*Mv = measured value

Models - Liquid

TS-System Measurement range	TS-405 Fluid Trace		TS-406 Fluid Low Range		TS-407 Fluid Medium Range		TS-408 Fluid High Range	
	Range	Accuracy	Range	Accuracy	Range	Accuracy	Range	Accuracy
	0 - 200 ppb	± 2% Mv*	0-200ppb	± 2% Mev**	0-2 mg/L	± 2% Mev**	0-2 mg/L	± 2% Mev**
			200-1000 ppb	± 3% Mv*	2-8 mg/L	±3% Mv*	2-8 mg/L	±4% Mv*
			1000-2000 ppb	± 2% Mv*	8-10 mg/L	± 5% Mv*	8-10 mg/L	± 4% Mv*
							10-40 mg/L	± 5% Mv*
Resolution	1ppb		1ppb		0.001 mg/L		0.001 mg/L	
Response time at 25°C/ 77°F	<20s		<20s		<20s		<20s	
Max. Pressure	20 bar		20 bar		20 bar		20 bar	
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	
Medium	Fluid		Fluid		Fluid		Fluid	
Average lifetime LED	10.000 hours min.		10.000 hours min.		10.000 hours min.		10.000 hours min.	
Power supply	5VDC		5VDC		5VDC		5VDC	
Data Interface	USB / RS485		USB / RS485		USB / RS485		USB / RS485	
Temperature compensation	4 - 40°C		4 - 40°C		4 - 40°C		4 - 40°C	
	39.2 - 104°F		39.2 - 104°F		39.2 - 104°F		39.2 - 104°F	
Data Output	RS485		RS485		RS485		RS485	
Cleaning	No organic solvents, 40% EtOH		No organic solvents, 40% EtOH		No organic solvents, 40% EtOH		No organic 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	
Connection	1/2" hex nut		1/2" hex nut		1/2" hex nut		1/2" hex nut	
Protection	IP65		IP65		IP65		IP65	
Guaranteed lifetime of sensor cap C5 (5-90°C or 41-194°F; CIP/SIP every 5th day)	6 months		6 months					
Guaranteed lifetime of sensor cap C3/C6/C10 in water w. protective layer (5 - 60°C or 41-140°F. pH 3-9)					12 months		12 months	
Sensor cap replacement interval	6 months. May be longer if verified in TecService software.		6 months. May be longer if verified in TecService software.		6 months. May be longer if verified in TecService software.		6 months. May be longer if verified in TecService software.	
Expected lifetime of cap under defined conditions	1 year		1 year		2 years		2 years	

Recommended zero-point adjustment interval by customer	3 months	3 months	3 months	3 months
Full service interval by Manufacturer (includes necessary retrofitting)	3 years	3 years	3 years	3 years

**Mev = measured end value

*Mv = measured value

Sensor Assembly Warranty: 1 Year ex works

Mounting Options

1/2 or 3/4" T Piece



Varivent



TriClamp



Flange with 1/2" Fine Thread

