

## 4.6 Oxygen sensors

**MF 39, MF 39-T**



MF 39 SMEK

**MF 39:**

- oxygen sensor for waste water
- integrated temperature sensor
- robust plastic shaft
- membrane head is changeable

**MF 39-T:**

- oxygen sensor for sea water and process chemistry
- corrosion-resistant because of titanium design
- integrated temperature sensor
- robust plastic shaft
- membrane head is changeable

**MF 41-N SMEK**



MF 41-N SMEK

- oxygen sensor for fish farming in fresh water and sea water
- corrosion-resistant
- integrated temperature sensor
- robust plastic shaft
- membrane head is changeable

### Technical Data:

Type	MF 39	MF 39-T	MF 41-N SMEK
<b>Shaft</b>	plastic, stainless steel, Ø 18 mm	plastic, titanium, Ø 18 mm	plastic, Ø 12 mm
<b>Immersion length</b>	120 mm	120 mm	120 mm
<b>Cathode</b>	platinum	platinum	platinum
<b>Anode</b>	Ag/AgCl	Ag/AgCl	Ag/AgCl
<b>Temperature sensor</b>	Pt 1000	Pt 1000	Pt 1000
<b>Measuring principle</b>	amperometric (Clark)	amperometric (Clark)	amperometric (Clark)
<b>Signal in air</b>	100 ... 130 nA	100 ... 130 nA	100 ... 130 nA
<b>Response time in N<sub>2</sub></b>	t <sub>90</sub> < 70 s	t <sub>90</sub> < 70 s	t <sub>90</sub> < 30 s
<b>Flow rate</b>	> 9 cm/s	> 9 cm/s	> 9 cm/s
<b>Measuring range</b>	0 ... 60 mg/l, 0 ... 200 % air saturation	0 ... 60 mg/l, 0 ... 200 % air saturation	0 ... 20 mg/l, 0 ... 200 % air saturation
<b>Temperature range</b>	-5 ... 45 °C	-5 ... 45 °C	-5 ... 45 °C
<b>Pressure</b>	< 3 bar	< 3 bar	< 1 bar
<b>Application</b>	drinking water, aquarium water, surface water, waste water	sea water, corrosive mediums	aquarium water, surface water, sea water
<b>Electrical connection</b>	SMEK lab plug head with thread PG 16 or Variopin plug head with thread PG 16	SMEK lab plug head with thread PG 16 or Variopin plug head with thread PG 16	SMEK plug head with thread PG 13.5
<b>Order code/ Order key</b>	MF 39 SMEK MF 39 VP	MF 39-T SMEK MF 39-T VP	MF 41-N SMEK

The connection cables for the plug connectors (SMEK lab plug head, Variopin plug head and SMEK plug head with thread PG 13.5) are illustrated on page 30.

## MF 441



- oxygen sensor for composting plants
- integrated temperature sensor
- design in stainless steel
- membrane head is changeable

MF 441-K010-F

### Technical Data:

<b>Type</b>	<b>MF 441</b>
<b>Shaft</b>	stainless steel, Ø 18 mm
<b>Immersion length</b>	shaft length: 105 mm
<b>Cathode</b>	platinum
<b>Anode</b>	Ag/AgCl
<b>Temperature sensor</b>	Pt 1000
<b>Measuring principle</b>	amperometric (Clark)
<b>Signal in air</b>	60 ... 80 nA
<b>Response time in N<sub>2</sub></b>	t <sub>90</sub> < 180 s
<b>Flow rate</b>	-
<b>Measuring range</b>	0 ... 20 mg/l, 0 ... 200 % air saturation
<b>Temperature range</b>	-5 ... 80 °C
<b>Pressure</b>	< 1 bar
<b>Application</b>	oxygen measurements in composting plants
<b>Electrical connection</b>	fixed cable
<b>Order code/ Order key</b>	Refer to the right book cover!

The oxygen sensor MF 441 can be configured according to cable length and plug (Refer to the right book cover!).  
The MF 441 can not be equipped with SMEK lab plug head (E) and thread PG 13.5 (P).