



# TopLine

THE LOW-MAINTENANCE SENSOR SERIES  
IN PEEK SHAFT - FOR pH AND ORP

SI Analytics

a xylem brand

# TopLine - pH- and ORP sensors in PEEK shaft

## For laboratory, Field and Process

TopLine electrodes combine reliable measuring results with a maximum dwell time. They were developed for a wide range of applications in the lab, field and processing of wastewater via emulsions, solutions with proteins, suspensions all the way to purely aqueous samples.

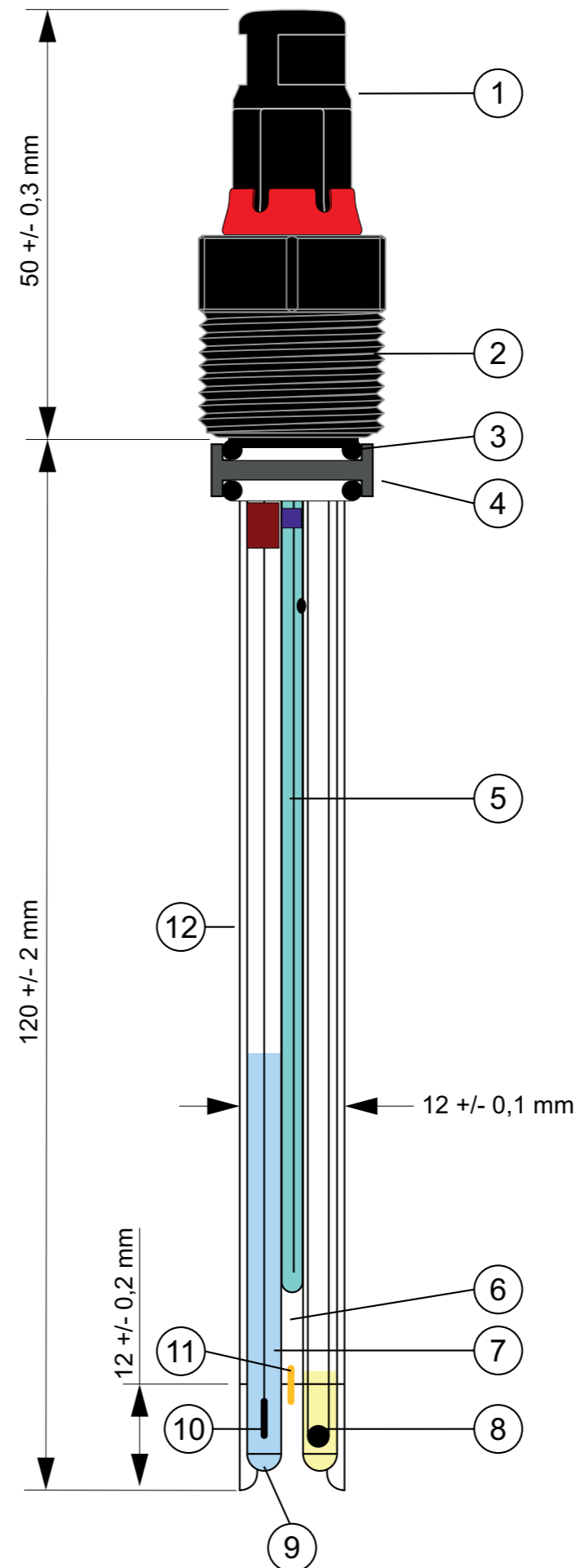
This is achieved by the special mechanical and chemical resistance of the peek shaft as well as the proven process components of the measuring and reference electrode.

The A and H membrane glass has been used for many years with great success in our various electrode families, such as Aqualine and ProcessLine. The reference electrode has a double diaphragm system with an external fiber wick hole and an interior labyrinth-like reference element (LoopRef). This design makes it very difficult for damaging substances to permeate the electrode. If it were to happen, the path to the reference-forming element is extremely long.

The maximum saturation with microdispersed KCl of the solidified DuraLid reference electrolyte is another reason for the long dwelling time of the TopLine electrode. Based on the large reserve alone, the loss of KCl (bleeding out) and the associated danger of zero offset is postponed to a much later point in time.

This was just not enough for us. While others are satisfied with a pure pinhole diaphragm, we have added a fiber wick in front of the pinhole diaphragm. This wick ensures a very good electrical connection from the reference electrode to the measuring medium and further reduces the loss of KCl. Furthermore, blockages of the diaphragm are prevented to a larger extent.

TopLine Electrode



No.	Description TopLine 83-120 NMSN
1	Screw plug head with Memosens® connection (Alternatively analogue electrodes with VP- or coax- plug head (for versions without integrated temperature sensor))
2	Screw-in thread Pg 13.5 (Material: PPS)
3	O-Ring 11-2.5 (Material: Viton®)
4	HD joint ring 18.8/12.7/6.5 (Material stainless steel 1.4571)
5	Reference element (LoopRef)
6	DuraLid electrolyte (KCl saturated) of the reference electrode
7	Inner buffer of the pH glass electrode
8	Temperature sensor (NTC 30 kOhm)
9	Glass membrane (H-glass)
10	Internal conduction element of the pH glass electrode
11	Junction (fiber packing hole)
12	Peek shaft

- ▶ Peek shaft for the highest mechanical and chemical resistance
- ▶ Most precise measurements thanks to proven process membrane glasses and reference system
- ▶ Maximum dwell time by means of a reference electrode with microdispersed KCl solid electrodes (DuraLid) as well as a multi-diaphragm system with external fiber wick hole and internal labyrinth reference element (LoopRef)
- ▶ Wide selection of electrodes for the lab, field and process, even as digital electrodes with IDS® and Memosens® head

Benefits  
TopLine

# TopLine - Specifications

## Common Specifications

pH range	0..14
Zero point [pH]	7
electrolyte	Duralid polymer electrolyte with oversaturated dispersed KCl
Outer diaphragm	Fiber packing hole
Reference system	LoopRef Labyrinth
Response time (98% between pH 4.. 7)	< 20 sec.
Shaft material	PEEK
Shaft diameter [mm]	12
Shaft length [mm]	120



**SUITABLE  
FOR VARIOUS  
FIELDS OF  
APPLICATION**



## Individual Specifications

Type No.	Order No.	Measurement parameters	Type of electrode	Connection	Temperature sensor	Temperature range [°C]	Sensor element	Membrane impedance [MΩ]
TopLine 22 pH	285111135	pH	Analogue	plug head	N.A.	-5...+100	A-Glas	400
TopLine 23 pH	285111140	pH	Analogue	1 m fixed cable with DIN plug	N.A.	-5...+100	A-Glas	400
TopLine 24 pH	285111145	pH + Temp	Analogue	1 m fixed cable with DIN- +4-mm banana plug	NTC 30 kOhm	-5...+100	A-Glas	400
TopLine 24 pH IDS	285111150	pH + Temp	Digital IDS®	1.5 m fixed cable with digital plug	NTC 30 kOhm	-5...+100	A-Glas	400
TopLine 25 pH	285111155	pH	Analogue	1 m fixed cable with BNC plug	N.A.	-5...+100	A-Glas	400
TopLine 26 pH	285111160	pH + Temp	Analogue	1 m fixed cable with BNC- +4-mm banana plug	NTC 30 kOhm	-5...+100	A-Glas	400
TopLine 26 pH Cinch	285111165	pH + Temp	Analogue	1 m fixed cable with BNC- +cinch plug	NTC 30 kOhm	-5...+100	A-Glas	400
TopLine 28 pH	285111170	pH + Temp	Analogue	1 m fixed cable with DIN- +4-mm banana plug	Pt 1000	-5...+100	A-Glas	400
TopLine 29 pH	285111175	pH + Temp	Analogue	1 m fixed cable with DIN- +4-mm banana plug	Pt 1000	-5...+100	A-Glas	400
TopLine 32 RX	285111180	ORP	Analogue	Plug head	N.A.	-5...+100	Pt-Stift	N.A.
TopLine 32 RX IDS	285111185	ORP + Temp	Digital IDS®	1.5 m fixed cable with digital plug	NTC 30 kOhm	-5...+100	Pt-Stift	N.A.
TopLine 80-120 pH	285111190	pH	Analogue	plug head with Pg13.5 thread	N.A.	0...+110	H-Glas	550
TopLine 81-120 pH TVP	285111195	pH + Temp	Analogue	VP plug head with Pg13.5 thread	Pt 1000	0...+110	H-Glas	550
TopLine 83-120 NMSN	285111200	pH + Temp	Digital MEMOSENS®	MEMOSENS® plug head with Pg13.5 thread	NTC 30 kOhm	0...+110	H-Glas	550
TopLine 89-120 NMSN	285111205	ORP + Temp	Digital MEMOSENS®	MEMOSENS® plug head with Pg13.5 thread	NTC 30 kOhm	0...+110	Pt-Stift	N.A.
TopLine 89-120 Pt	285111210	ORP	Analogue	coax plug head with Pg13.5 thread	N.A.	0...+110	Pt-Stift	N.A.



TopLine with VP head

# Lab 745, Lab 845 and Lab 945

## User-friendly design for training and routine measurements as ideal partner for TopLine sensors

Its intuitive operation and robust aluminum housing render the Lab x45 product series perfect for training and routine purposes.



### Lab 845 pH Meter

Measuring range	pH: 0 ... 14; - 1,999 ... 1,999 mV; Temperature: -10 ... 100 °C ISE: 0 ... 30,000 ppm
Resolution	0.01 pH; 1 mV; 0.1 °C
Accuracy	pH: ± 0.01 (± 2 pH around calibration point), U [mV] ± 0.3, T [°C] ± 0.1 (0..100 °C)
Temperature compensation	automatic with Pt1000 or fix temperature
Connectors	BNC, 2 x banana socket (4 mm), 4-pole USB Interface socket
Calibration	Direct input
	Temperature offset
	Two-point
	Automatic (DIN19266, TechDIN19267, Merck, Mettler)
Data storage	4.000 Entries with date, time, value 1+2 and temperature

## Ordering information

Type No.	Order No.	Description
Lab 845 Set/BL19pH	285206810	Measuring pH, mV, ISE, temp., 2-point-cal., micropr., BNC connection. Set includes stand, power supply, BlueLine 19 pH, and DIN buffers in ampules (6 pieces)
Lab 845 Set/BL25pH	285206820	Measuring pH, mV, ISE, temp., 2-point-cal., micropr., BNC connection. Set includes stand, power supply, BlueLine 25 pH, and DIN buffers in ampules (6 pieces)
Lab 845 Set/BL29pH	285206830	Measuring pH, mV, ISE, temp., 2-point-cal., micropr., BNC connection. Set includes stand, power supply, BlueLine 29 pH, and DIN buffers in ampules (6 pieces)
Lab 845 Set/TL29pH	285206870	Measuring pH, mV, ISE, temp., 2-point-cal., micropr., BNC connection. Set includes stand, power supply, TopLine 29 pH, and DIN buffers in ampules (6 pieces)
Z 611	285206380	Connector, stand, and electrode holder for Lab 745/845/945
Z 612	285206390	Universal power supply for Lab 745/845/945
Z 613	285206400	USB cable with data transfer software for Lab 745/845/945
Z 614	285206430	Rubber pads for Lab 745/845/945 (4pcs)
Ox 1113T	285206410	Membrane covered amperometric sensor, plastic shaft, with temperature compensation, 1 m fixed cable with 8-pole plug, length 120 mm, 12 mm Ø, -5...+45 °C
LF 435T	285206420	4 pole cell, plastic shaft, 1.5 m cable with 8 pole plug, sensor material graphite, cell constant 0.33 cm <sup>-1</sup> , temp.-sensor NTC30kOhm, length 120 mm, 12 mm Ø, -5...+80 °C
Z 615	285206440	Maintenance set for Ox1113T (3 x exchange heads, 10 x electrolytes)
Z 616	285206450	Cable for connecting a RS232 printer to Lab 745/845/945

### Lab 845 Set



### For all:

Display	Graphic LCD Display, 128 x 64 pixel, backlid
Interface	USB, isolated
Ambient temperature	-10 ... 55 °C
Housing protection	Aluminum IP40
Dimensions	145 x 185 x 55 mm (L x W x H)
Weight	Approximately 1 lb 9 oz (incl. power supply and stand)
EMC	Acc. EN 61326 class B

## Xylem | 'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

**For more information on how Xylem can help you, go to [www.xylem.com](http://www.xylem.com)**

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