

Technical Information

OCPF81 and OCPF82

Compact pH and ORP electrodes with ¾" MNPT housing for flow and immersion installation

For process applications, industrial water and wastewater



Application

- Process monitoring and control
- Industrial and municipal wastewater treatment
- Water treatment
- Mining processes (flotation and leaching processes)

Your benefits

- Second electrolyte bridge for improved protection against electrode poisons such as S^{2-} or CN^- ions
- TOP68 plug-in head or fixed cable in three lengths:
 - 4.6 m (15 ft)
 - 9.2 m (30 ft)
 - 13.8 m (45 ft)
- Optionally available with flat membrane for viscous, fibrous media
- Threaded connection NPT ¾" top and bottom for easy installation at user end
- OCPF81: Suitable for measurements within pH range 0 to 14 and within temperature range 0 to 110 °C (32 to 230 °F)
- OCPF82: Suitable for measurements within ORP range -1500 mV to 1500 mV
- With or without integrated temperature sensor
- Protection guard against damage

Input

Measured variables

OCPF81

pH value
Temperature

OCPF82

ORP

Measuring range

OCPF81

Version LH:

pH 0 to 14
Temperature 0 to 110 °C (32 to 230 °F)

Version NN:

pH 0 to 12
Temperature 0 to 80 °C (32 to 176 °F)

OCPF82

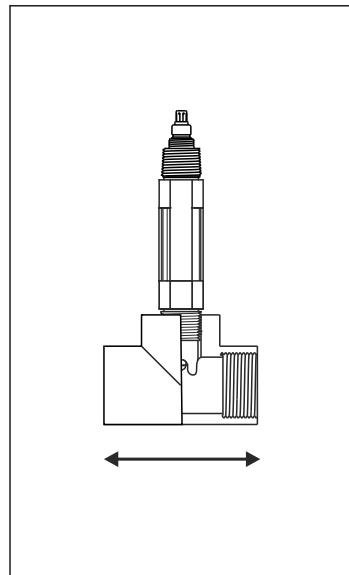
ORP: -1500 to 1500 mV
Temperature: 0 to 80 °C (32 to 176 °F)



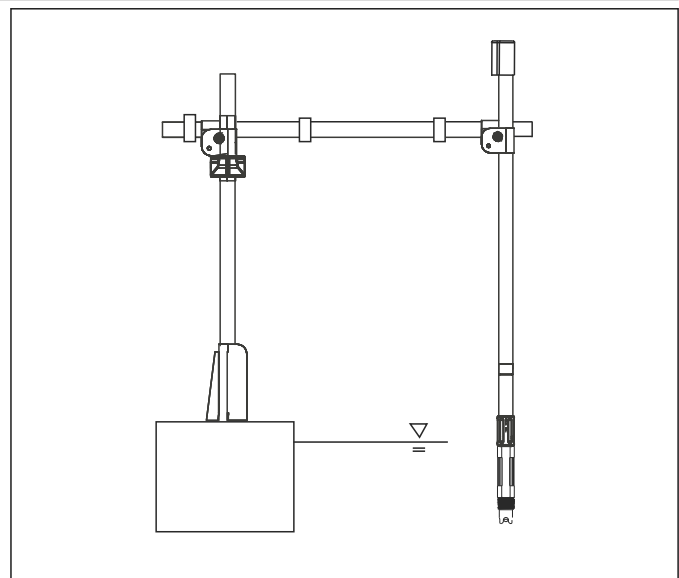
Please note the process operating conditions.

Installation

Installation instructions



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1 Flow installation

2 Immersion installation with Flexdip CYA112



Make sure to follow the installation instructions in the Operating Instructions of the used assembly.

Environment

Ambient temperature

NOTICE

Danger of frost damage

- ▶ The sensor must not be used at temperatures below 0 °C (32 °F).

Storage temperature

0 to 50 °C (32 to 120 °F)

Degree of protection

Fixed cable version: IP67
 TOP68 plug-in head: IP68

Process

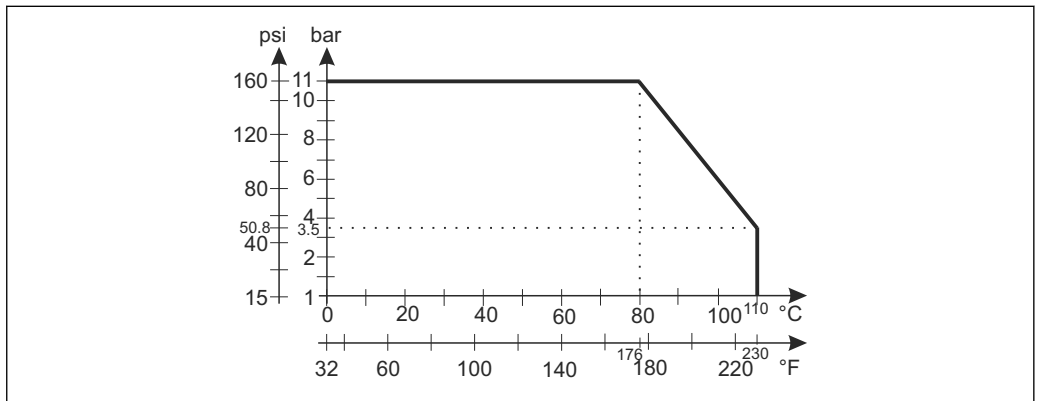
Process temperature

OCPF81		
Version LH		0 to 110 °C (32 to 230 °F)
Version NN		0 to 80 °C (32 to 176 °F)
OCPF82		0 to 80 °C (32 to 176 °F)

Process pressure

1 to 11 bar (15 to 160 psi), absolute

Pressure temperature load curve



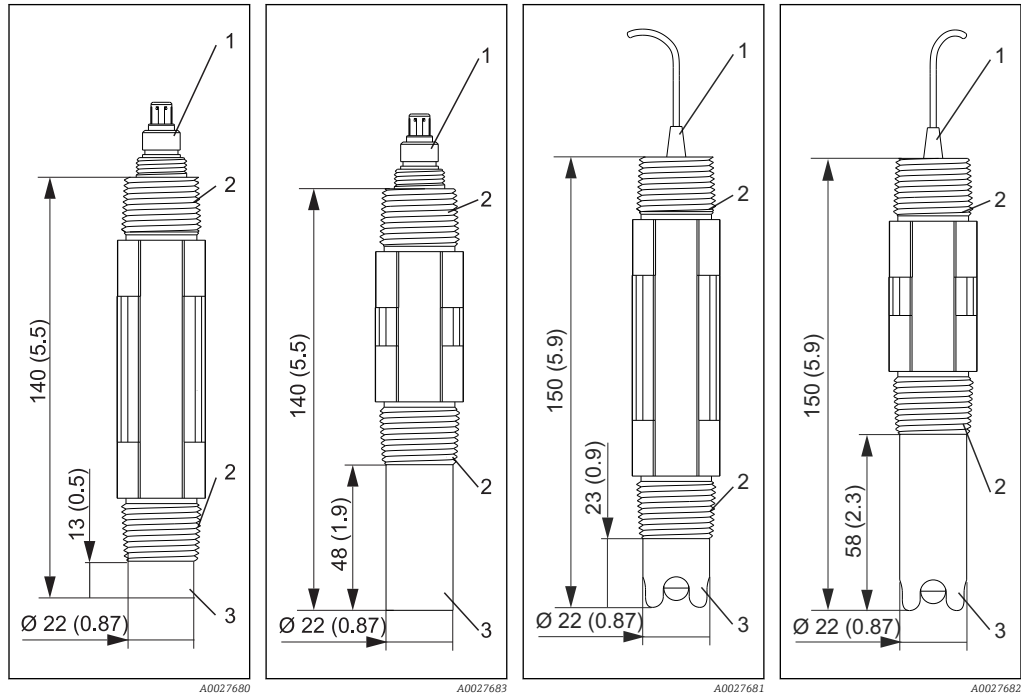
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Minimum conductivity

Min. 50 µS/cm

Mechanical construction

Design, dimensions



3 TOP68 plug-in head, short shaft, flat membrane

4 TOP68 plug-in head, long shaft, flat membrane

5 Fixed cable, short shaft, protection guard

6 Fixed cable, long shaft, protection guard

1 TOP68 plug-in head
2 NPT 3/4" thread
3 Flat membrane

1 TOP68 plug-in head
2 NPT 3/4" thread
3 Flat membrane

1 Fixed cable
2 NPT 3/4" thread
3 Protection guard

1 Fixed cable
2 NPT 3/4" thread
3 Protection guard

Dimensions in mm (inch)

Weight

0.27 to 0.91 kg (0.6 to 2.0 lbs, depending on version and without cable)

Materials

Housing, electrode shaft	PPS
pH electrode (in contact with medium)	Lead-free membrane glass, suitable for process applications
ORP electrode (in contact with medium):	Platinum
Double chamber reference system:	KCl and KCl/AgCl

Process connection

NPT 3/4"

Ordering information: OCPF81

OCPF81-	← Order code (1 feature must be selected per category.)
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Application:

LH	0 to 14 pH, 0 to 110 °C (32 to 230 °F)
NN	0 to 11 pH, 0 to 80 °C (32 to 176 °F)

Insertion length:

1	23 mm (0.91 inch) + electrode protection
2	13 mm (0.51 inch) + flat membrane
3	58.5 mm (2.30 inch) + electrode protection
4	13 mm (0.51 inch), recessed glass
5	24.5 mm (0.96 inch) + flat membrane
9	Special version, TSP-no. to be spec.

Process connection:

1	NPT 3/4" thread
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Accessories:

E	Standard
F	Pt 100
H	Pt 1000
Y	Special version, TSP-no. to be spec.

Cable length:

1	None
2	4.6 m (15 ft)
3	9.1 m (30 ft)
7	to m
8	to ft
9	Special version, TSP-no. to be spec.

Connection:

1	BNC
2	Ferrules
3	TOP68-/ESA plug-in head
9	Special version, TSP-no. to be spec.

Ordering information: OCPF82

OCPF82- < Order code (1 feature must be selected per category.)

Application:

PE ORP, platinum, 0 to 80 °C (32 to 176 °F)

Insertion length:

- 1 23 mm (0.91 inch) + electrode protection
- 2 13 mm (0.51 inch) + flat membrane
- 3 58.5 mm (2.30 inch) + electrode protection
- 5 24.5 mm (0.96 Inch) + flat membrane
- 9 Special version, TSP-no. to be spec.

Process connection:

- 1 NPT ¾" thread

Accessories:

E Standard

Cable length:

- 1 None
- 2 4.6 m (15 ft)
- 3 9.1 m (30 ft)
- 7 to m
- 8 to ft
- 9 Special version, TSP-no. to be spec.

Connection:

- 1 BNC
- 2 Ferrules
- 3 TOP68-/ESA plug-in head
- 9 Special version, TSP-no. to be spec.

Ordering information: OPK9

OPK9-	← Order code (1 feature must be selected per category.)	
	Cable Length, Sheath:	
	NA	5 m (16 ft), PVC, max. 80 °C (176 °F)
	NB	10 m (33 ft), PVC, max. 80 °C (176 °F)
	NC	15 m (49 ft), PVC, max. 80 °C (176 °F)
	ND	20 m (66 ft), PVC, max. 80 °C (176 °F)
	NE	25 m (82 ft), PVC, max. 80 °C (176 °F)
	NF	... m (... ft), PVC, max. 80 °C (176 °F)
	NO	1 m (3 ft), PVC sheath, max. 80 °C (176 °F)
	NP	1.5 m (5 ft), PVC, max. 80 °C (176 °F)
	NQ	3 m (10 ft), PVC, max. 80 °C (176 °F)
	Application, Colour:	
	A	Non-hazardous area, black
	Connection:	
	1	Wire terminals
	3	Plug TOP68
	9	Special version, TSP-no. to be spec.
	Potential Match Connection:	
	A	Externally, flat connector
	B	Internally
	C	PM wire not used

