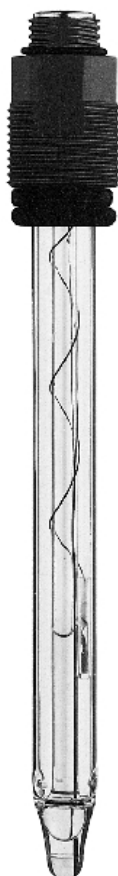


Electrodes for pH Measurement

Ceratex W CPS 31

pH electrodes with ceramic-diaphragm and gel filling



Benefits at a glance

- Three ceramic diaphragms
- Providing a small area of contact with the medium, permitting use in media with low conductivity $\geq 100 \mu\text{S/cm}$.
- Gel-filled, refilling with electrolyte is not required.
- Can be used under pressures of up to 0.6 bar.
- Shaft length 120 mm
- Four different pH membrane glasses.
- TOP 68 connector ESA, water proof (IP 68)

Areas of application

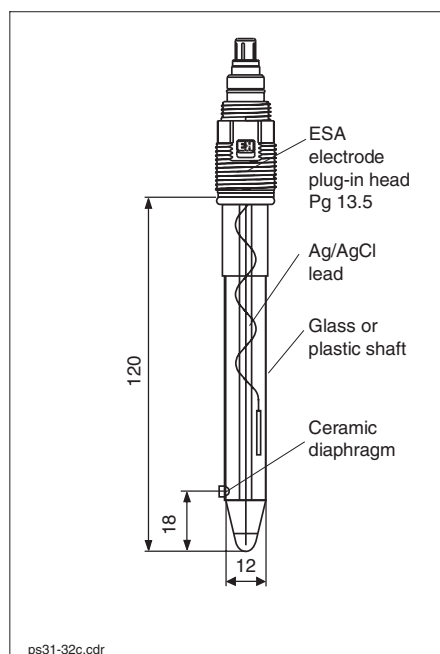
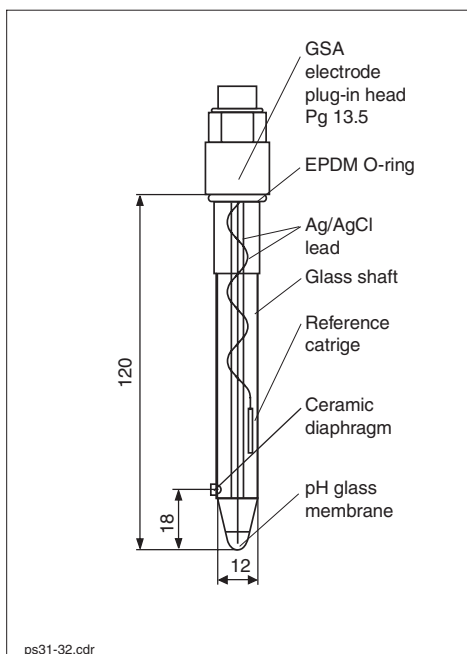
- The gel-filled Ceratex W electrodes are intended primarily for use in swimming pools.

Electrode construction and dimensions

Ceratex W combined
ph/redox electrode
CPS 31

left:
with GSA plug-in
head

right:
with ESA plug-in
head
(IP 68)



pH electrode selection

When selecting pH electrodes the pH value has to be considered as well as the temperature, the pressure and the conductivity of the medium to be measured.

The temperature/pH range table is a guide for selecting a suitable pH membrane glass.

The conductivity of the medium to be measured determines the reference system to be selected.

- Ceratex electrodes with conductivities ≥ 100 mS/cm
- Ceraliquid electrodes from $0.1 \mu\text{S/cm}$ with three ceramic diaphragms

Finally select the correct electrode length and electrode connection head according to the order code.

Type of head

GSA

Standard plug-in head with coaxial connector for electrodes **without** temperature sensor

ESA

TOP 68 plug-in head for all pH and redox electrodes with or without integrated temperature sensor.

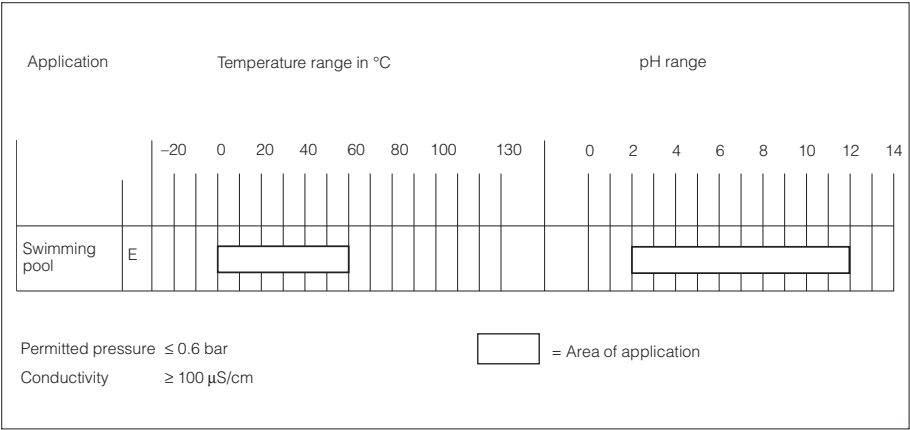
The ESA/ESS connection guarantees a stable connection between measuring cable and electrode even under hard operating conditions.

HDA

Threaded plug-in head Pg 13.5, TOP 68, 16 bar.

The connector is robust, water proof (IP 68) and highly resistant against chemicals. It is suitable for Ex applications in zone 0 / 1G acc. to ATEX 100a. An adapter ring TOP 68 / SMEK is available for the connection of ESA electrodes to the SMEK cable (Order no. 51501123).

Temperature and pH ranges



Technical data

General data

Manufacturer	Endress+Hauser
Product designation	Ceratex W CPS 31

Electrical connection

Plug-in head	GSA head with Pg 13.5 for industrial applications
	HDA head with Pg 13.5, TOP 68, 16 bar (triple safety overpressure according to TÜV-certifikate)
	ESA head with Pg 13.5 for industrial applications (IP 68)
Shaft length	120 mm
Diameter	12 mm

Reference system

Metal lead	Ag/AgCl
Electrolyte	Gel 3 mol KCl, AgCl free
Pressure range	≤ 0.6 bar
Diaphragm	Ceramic, Ø 1 mm
Temperature range	0 ... 60 °C
Minimum conductivity	100 µS/cm
Membrane glasses	type E
pH range	2 ... 12
Chain zero point	E ₀ = 7.0

Subject to modifications.

Product structure

pH electrode Ceratex W CPS 31

Electrode type

1 pH combination / $E_o = 7.0$

Application range

EC pH = 2 ... 12, T = 0 ... 60 °C, 3 diaphragms

Shaft length

2 Shaft length 120 mm

Connection head

GSA Threaded plug-in head Pg 13.5
HDA Threaded plug-in head Pg 13.5, TOP 68, 16 bar
ESA Threaded plug-in head Pg 13.5, TOP 68
SME Threaded plug-in head Pg 13.5, SMEK

CPS 31 -

complete order code

For more Endress+Hauser product please visit: www.ainstru.com
Mail: Sales@ainstru.com

Endress+Hauser GmbH+Co.
- Instruments International -
P.O. Box 2222
D-79574 Weil am Rhein
Tel. (07621) 975 - 02
Fax (07621) 975345