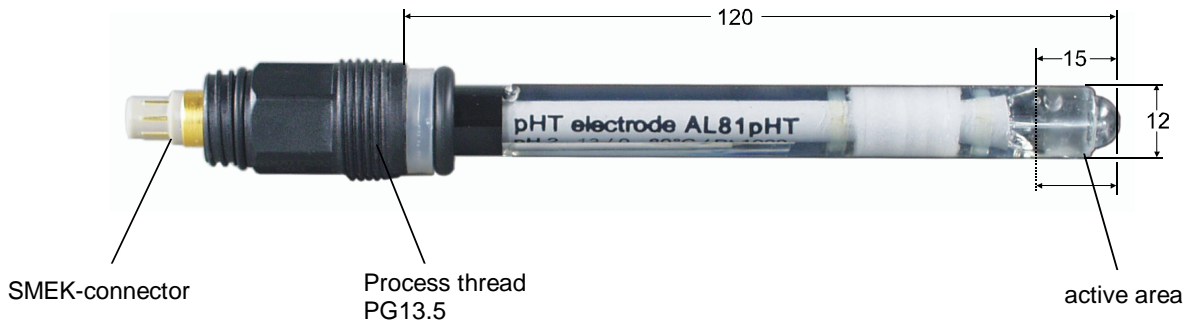


# Standard Combination pH- and Redox-electrodes



## pH-electrodes

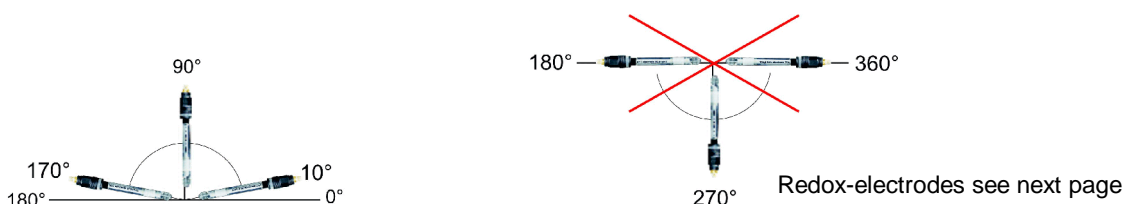
### Features

New!

New!

Type	AL32pHT-00	AL70pH-00	AL81pHT-00	SL81-120pHT-00	APS-X1Q2K1A-00	L9080
Functional range	0 ... 12pH	2 ... 13pH	2 ... 13pH	0 ... 14pH	1 ... 12pH	0 ... 12pH
Field of application	Sewage (heavy loaded)	Water/ Sewage	Water/ Sewage	Food stuff (sterilizing possible)	Refrigeration engineering	Purified water boiler feed water
Working temp.	-5 ... 80°C	-5 ... 80°C	0 ... 80°C	0 ... 135°C	-15 ... 80°C	-30 ... 80°C
max. pressure	10bar/25°C	3bar	10bar	3bar	6bar	6 bar
Mounting length	120mm	120mm	120mm	120mm	120mm	120mm
Process connection	PG13.5	PG13.5	PG13.5	PG13.5	PG13.5	PG13.5
Temperature sensor	Pt1000	-	Pt1000	Pt1000	-	-
Electr. connection	SMEK	S7	SMEK	SMEK	S7	S7
Reference system	Silver / Silver chloride (Ag / AgCl) 0-point pH 7,00					
Reference filling solution	GEL	Gel	Polymer (Referid)	Gel	Gel	Liquid
Diaphragm	PTFE	Ceramic	KPG	Ceramic	PTFE	Ceramic
min. conductivity of solution	50µS/cm	50µS/cm	50µS/cm	50µS/cm	50µS/cm	<1µS/cm
Mounting position*	10 ... 170°	10 ... 170°	10 ... 170°	10 ... 170°	10 ... 170°	10 ... 170°

\*Mounting position



# Redox-electrodes

## Features

New!

Type	AL79Pt-00	PT8281HD-00
Functional range	2 ... 13pH	2 ... 13pH
Field of application	Environmental engineering/ disinfection	Environmental engineering/ disinfection
Working temp.	-5 ... 80°C	-5 ... 100°C
max. pressure	3bar	10bar
Mounting length	120mm	120mm
Process connection	PG13.5	PG13.5
Temperature sensor	-	-
Electr. connection	S7	S7
Reference system	Silver/Silver chloride (Ag / AgCl) 0-point pH 7,00	
Reference filling solution	Polymer (Referid)	Polymer (Referid)
Diaphragm	Ceramic	KPG
min. conductivity of solution	50µS/cm	50µS/cm
Mounting position	10 ... 170°	10 ... 170°

## Utilization notes for pH- and Redox combination electrodes

- 1.) pH and redox combination electrodes are supplied with a protective cap, which is filled with a 3mol KCL solution. In this condition the electrodes can be stored max. 1 year. Therefore the protective cap should be removed only before the installation and use.
- 2.) The shank of the combination electrode consists of glass and is easily fragile. With the installation it is to be guaranteed absolutely that the tube does not push anywhere approximately.
- 3.) Since the characteristics deviate from the ideal line, it is necessary for the precise measurement to calibrate the electrode after start-up and regular time intervals.
- 4.) A combined electrode may not drain at the measuring area, since they become useless. For recovery the active area of the electrode it is necessary approx.. 24 hours dipped into a 3mol KCL storage solution. Subsequently, a calibration is necessary, since zero point and slope can have drifted.
- 5.) With employment in dirty and containing protein media a cleaning of the electrodes is necessary occasionally. For this we offer a special cleaning solution. After cleaning, the electrodes must be rinsed with water.

### Note!

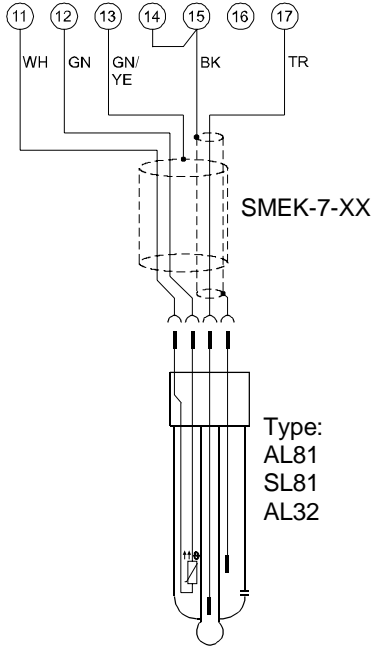
pH- and Redox electrodes only have a limited operating life. This depends on the field of applications such as medium, pressure and temperature and can differ between a number of weeks and several years. There are special cases, of environment conditions where operating life will be only some days. Characteristic and response time will change by aging. Up to a aging certain point of error can be compensated using electronic circuit (e.g. Converter UNICON-pH).

*Combination pH- and Redox electrodes are articles of consumption and no subject to common guarantee. Retaking or exchanges are excluded.*

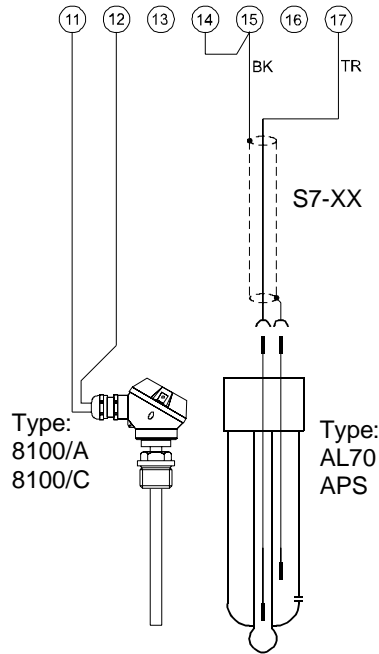
Our offer includes free technical support for selection optimal Combination pH- and Redox electrodes. Besides listed standard-electrodes we can also offer special types on customer request.

## Connection diagram @ Unicon-pH

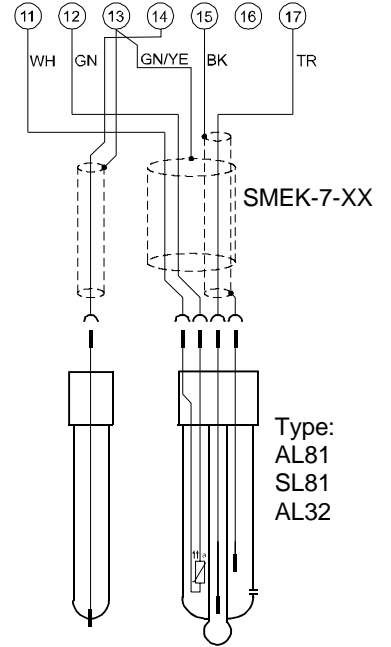
Combination pH-electrode with integr. Temperature sensor



Combination pH-electrode with ext. temperature sensor

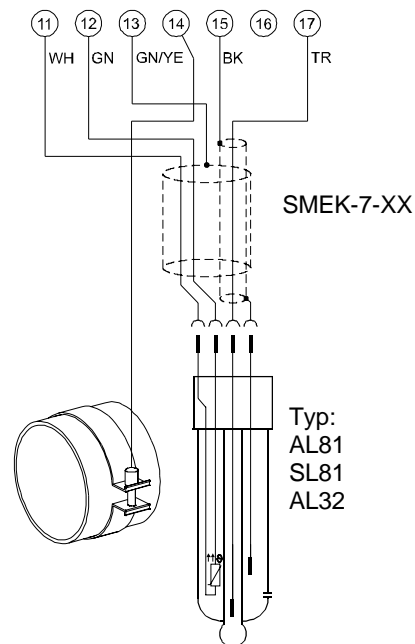


Combination pH-electrode with Redox electrode

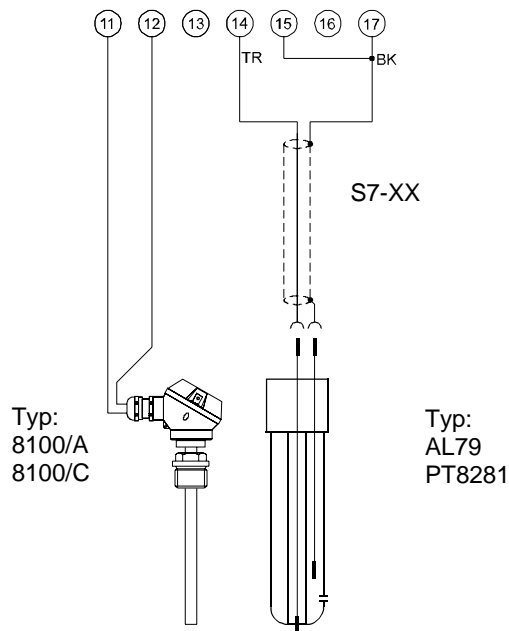


Color code				
Green (GN)	Green/Yellow (GN/YE)	Black (BK)	Transparent (TR)	White (WH)
additional cable Yellow (YE) and Brown (BN) are not connected!				

Combination pH-electrode with integr. temperature sensor and ext. liquid ground



Combination Redox-electrode with ext. temperature sensor



## Accessories for pH- and Redox-measurement

**Connection cable** for combined electrodes with S7-connector IP67



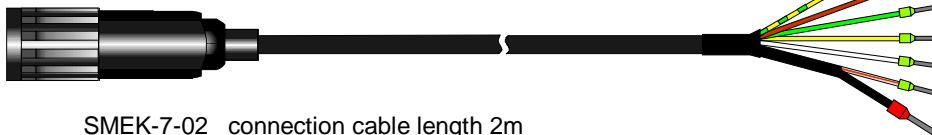
S7-02 connection cable length 2m  
 S7-05 connection cable length 5m

**Connection cable** for combined electrodes with S7-connector IP67 at UNICON-pH head mounting.



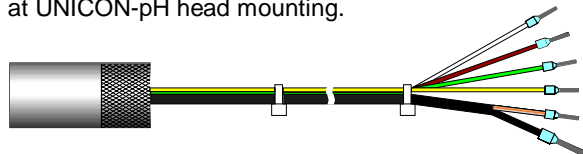
S7-K connection cable

**Connection cable** for combined electrodes with SMEK-connector IP67



SMEK-7-02 connection cable length 2m  
 SMEK-7-05 connection cable length 5m  
 (not used cables could be cut)

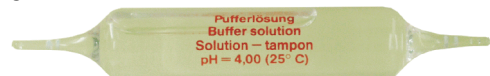
**Connection cable** for combined electrodes with SMEK-connector at UNICON-pH head mounting.



SMEK-6-K connection cable

### pH-technical buffer solutions

6 ampules (3x2) 25ml each, one way use  
 TPL pH-buffer solution pH 4,00 / 7,00 / 10,00 at 25°C



### ORP-test solutions

6 ampules (3x2) 25ml each, one way use  
 RPL OPR-test solution 220 / 470 / 640mV at 25°C

**Storage solutions** DURAN-glass bottle 250ml; 3mol KCL, sterilised  
 pH-AL-250

**Cleaning solution** DURAN-glass bottle 250ml; Pepsin/hydrochloric acid  
 pH-RL-250

