

Device overview

Device	Input	Measuring range	Output	Process connection	Operating temperature	Process pressure	Page
<b>Displays</b>							
ph9648	PH, ORP, Pt100/1000	1..+15 pH, ±1500 mV -40..+160 °C	0/4..20 mA 0/2..10 V DC max. 4 alarm outputs	Terminals	-10..+55 °C	-	12
UNICON-pH	PH, ORP, Pt100/1000	-1..+15 pH, ±1500 mV -40..+160 °C	4..20 mA 2 alarm outputs	Terminals	-10..+55 °C	-	15
<b>Transmitter</b>							
ph40	pH	-1..+15 pH	-1..+15 pH oder 4..20 mA	8 pol. round connector	-10..+60 °C	-	17
GPHU	pH	0..14 pH	4..20 mA oder 0..10 V DC	BNC- or Cinch connector	0..50 °C	-	18
GRMU	ORP	± 2000 mV	4..20 mA oder 0..10 V DC	BNC- or Cinch connector	0..50 °C	-	19
<b>Combined Electrodes pH</b>							
AL70pH-00	-	2..13 pH	-	PG13,5	-5..+80 °C	3 bar	20
EGA142-VP	-	0..14 pH	-	PG13,5	-5..+80 °C	6 bar	20
EGAT173-VP	-	0..14 pH	-	PG13,5	-5..+80 °C	6 bar	20
SL81-120pHT-VP	-	0..14 pH	-	PG13,5	0..135 °C	10 bar	20
APS-X1Q2K1A-00	-	1..12 pH	-	PG13,5	-15..+80 °C	6 bar	20
L9080	-	0..12 pH	-	PG13,5	-30..+80°C	6 bar	20
<b>Combined electrodes ORP</b>							
AL79Pt-00	-	2..13 pH	-	PG13,5	-5..+80 °C	3 bar	20
Pt8281HD-00	-	2..13 pH	-	PG13,5	-5..+100 °C	10 bar	20
<b>Fittingsn</b>							
EA1200 / EA2200	-	-	-	PVC-U Systems	0..60 °C	16 bar / 22 °C	22
EA1630 / EA2630	-	-	-	G ¾, G 1	-10..+120 °C	16 bar	23
EA1730 / EA2730	-	-	-	Milk pipe DIN 11887	-10..+120°C	16 bar	24
EA2650	-	-	-	G ½, G ¾, G 1	Depending to the sensor	16 bar	25
DFG	-	-	-	PG13,5, G ¼, G1	140 °C	16 bar	26
Accessories							27

Mistakes reserved, technical specifications subject to change without notice.

# pH and ORP Panelmeter pH9648



- LED-Display 14,2 mm red
- Measuring range programmable -1..+15 pH / ±1500 mV
- Temperature compensation via P100/Pt1000 sensor
- Analog output 0/4..20 mA or 0/2..10 V for pH/ORP
- Max. 4 alarm outputs relay or transistor

## Characteristics

The pH and ORP Panelmeter pH9648 is suitable for pH and ORP measurement in food technology, chemistry within pharmaceutical and sewage-water technology. The pH9648 operates with all common pH- and ORP electrodes. It is recommended to connect the Impedance-Converter pH40 for cable length > 5 m.

## Technical data

### Power supply

Supply voltage : 230 V AC ±10 %; 115 V AC ±10 %;  
24 V AC ±10 % or 24 V DC ±15 %

Power consumption: max. 3.5 VA, with analog output 5 VA

### Operating

temperature : -10..+55 °C

CE-conformity : EN 61326-1:2013

EN 60664-1:2007

### Input

#### pH/ORP

Measuring range : -1.00..+15.00 pH or -1500..+1500 mV

R<sub>i</sub> : > 10<sup>12</sup> Ω

Input current : < 10<sup>-12</sup> A

Accuracy : 0.2 % measuring value, ±2 Digit

pH setup : electrode zero point 4.00..10.00 pH  
slope 40.0..70.0 mV/pH

ORP setup : ± 200 mV

Calibration mode : - **1- or 2-point-calibration**

Buffer selection possible:

-Schott

-WTW

-Ingold (Mettler Toledo)

-Puffer acc. to DIN 19266

-or manual buffer input

- **Data** entering for zero point and slope

- **ORP** offset

### Temperature

Sensor : RTD, Pt100 or Pt1000,  
(2- or 3-wire connection)

Unit : programmable °C, °F

Measuring range : -40.0..+160.0 °C (-40.0..+320.0 °F)

Accuracy : ± 0.1 %, ±1Digit

Transmitter supply : 24 V DC, R<sub>i</sub> approx. 150 Ω,  
max. 50 mA (25 mA with 4 relay outputs)

### Display

Parameter display : LED 2-digit red, 7 mm

(Parameter - and output indicator)

### Output

Relay SPDT : < 250 V AC < 250 VA < 2 A,  
< 300 V DC < 50 W < 2 A

Transistor : < 35 V AC/DC, max.100 mA,  
short-circuit-proof

### Analog output

*active* : 0/4..20 mA burden ≤500 Ω;  
0/2..10 V burden > 500 Ω, isolated  
automatic output changing  
(burden dependent)

### Analog output

*passive* : 4..20 mA, ext. burden =  
RA[Ω] ≤ (U<sub>B</sub>-5 V) ÷ 0,02 A ;  
supply voltage 5..30 V DC

### Accuracy

: 0.1 %

### Panel case

: DIN 96x48 mm, material PA6-GF; UL94V-0

Dimensions : Front 96x48 mm, mounting depth 100 mm,

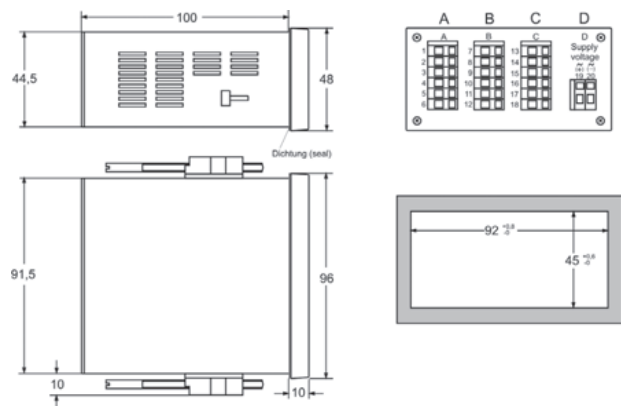
Weight : max. 390 g

Connection : clamp terminals, 2.5 mm<sup>2</sup> single wire,

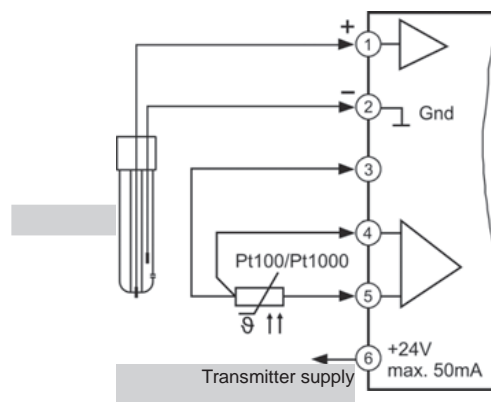
1.5 mm<sup>2</sup> flex wire, AWG14

Protection class : Front IP65, terminals IP20,  
finger save acc. to BGV A3

## Dimensions



## Connection diagram input

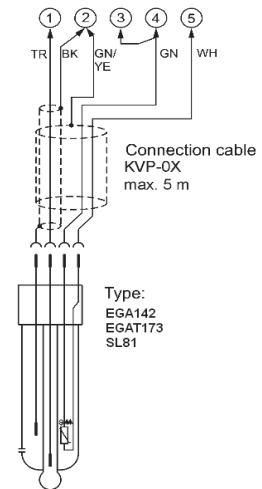


## Ordering code

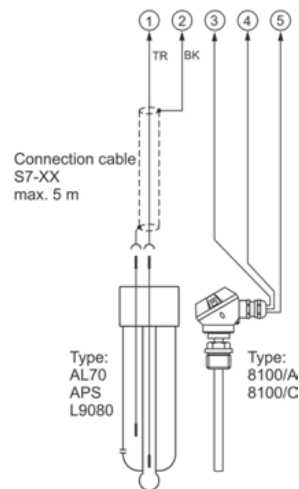
pH9648 -  1. -  2. -  3. -  4. -  5. -  6. -  7.

<b>1. Terminal strip A</b>	
13	input pH / ORP electrode, temperature compensation via Pt100 / Pt1000
<b>2. Terminal strip B</b>	
00	not installed
2R	2 relay outputs
2T	2 electronic outputs
<b>3. Terminal strip C</b>	
00	not installed
2R	2 relay outputs
2T	2 electronic outputs
AO	analog output 0/4..20 mA, 0/2..10 V DC
2A	2 analog outputs 4..20 mA passive
<b>4. Terminal strip B supply voltage</b>	
0	230 V AC $\pm 10\%$ 50-60Hz
1	115 V AC $\pm 10\%$ 50-60Hz
4	24 V AC $\pm 10\%$ 50-60Hz
5	24 V DC $\pm 15\%$
<b>5. Options</b>	
00	without option
<b>6. Unit</b> appears in the unit field	
<b>7. Additional text</b> above the display (3x90 mm HxW)	

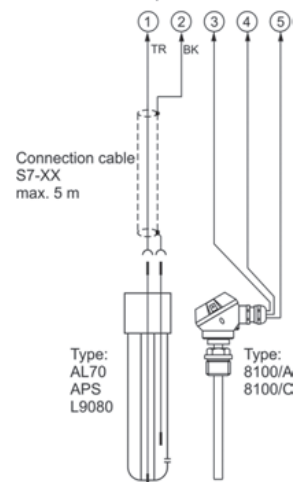
pH-electrode with ext. temperature sensor



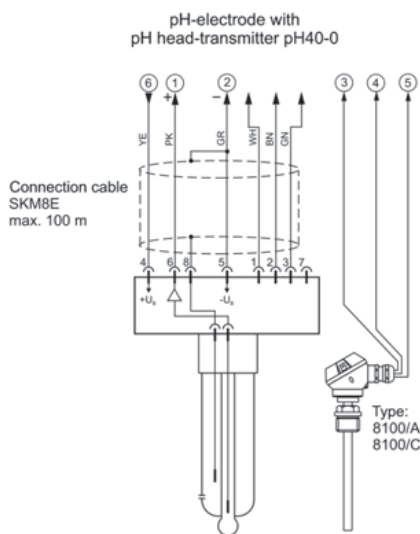
pH-electrode with ext. temperature sensor



ORP-electrode with ext. temperature sensor



## Connection examples pH9648

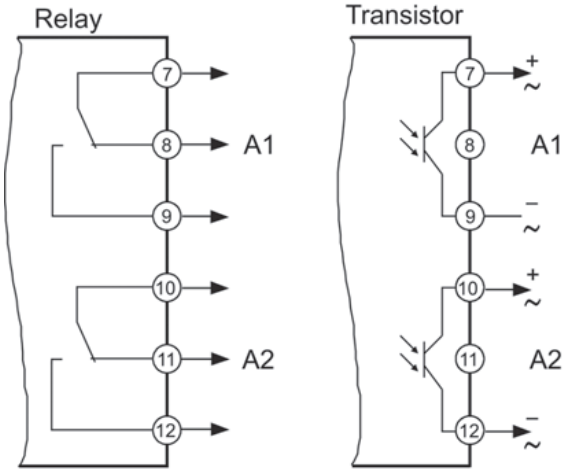


# Connection Diagrams X9648, Terminals B-D

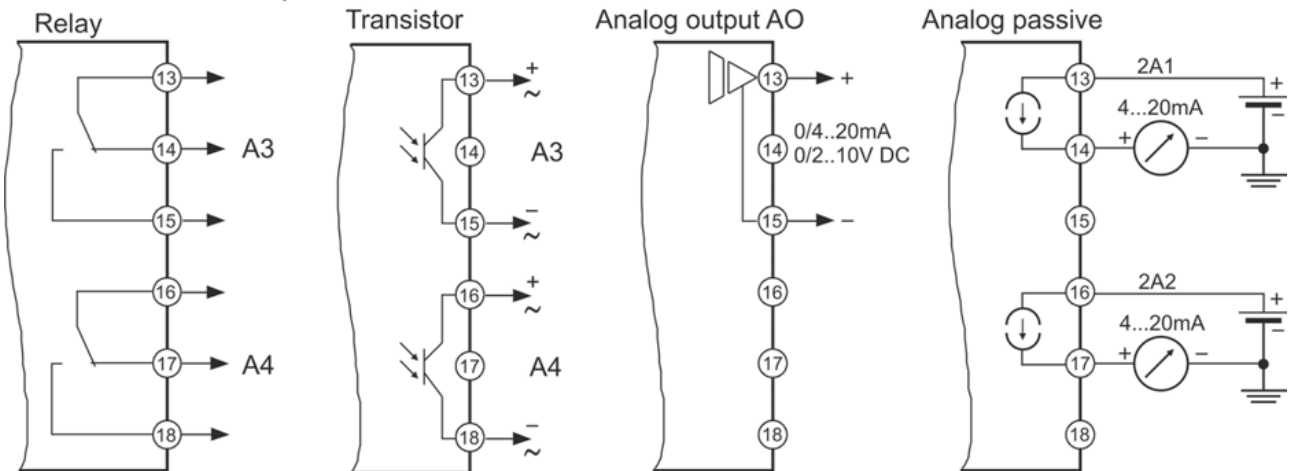
## Terminal strips B, C, D

Terminal strip A belongs to each article.

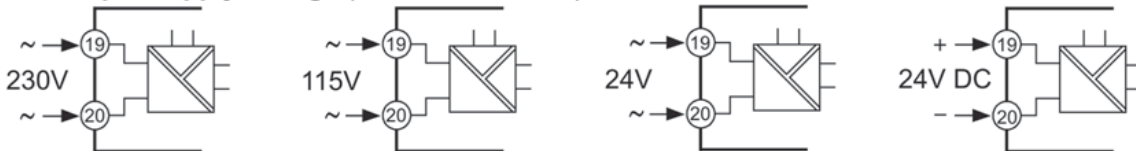
**Terminal strip B** (varies with versions)  
2 alarm outputs



**Terminal strip C** (varies with versions)  
2 alarm outputs



**Terminal strip D supply voltage** (varies with version)



# pH and ORP Converter UNICON®-pH



- Field or head mounting
- Measuring range programmable -1..+15 pH / ±1500 mV
- Temperature compensation via P100/Pt1000 sensor
- Analog output 4..20 mA for pH/ORP and temperature
- 2 alarm outputs, transistor

## Characteristics

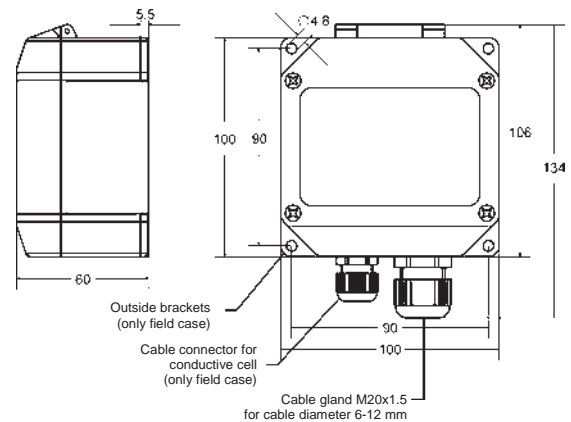
The pH and ORP converter UNICON-pH is suitable for pH and ORP measurement in food technology, chemistry within pharmaceutical and sewage-water technology. The converter works with all common pH- and ORP electrodes.

## Technical data

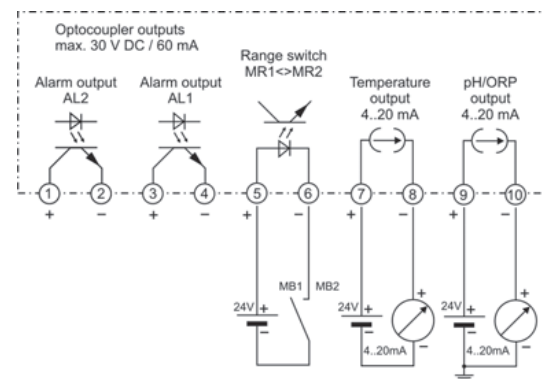
<b>Power supply</b>	
Supply voltage	: 14..30 V DC, 2-wire
Operating temperature	: 0..55 °C
CE- conformity	: EN 61326-1:2013
<b>Input</b>	
<b>pH/ORP</b>	
Output signal	: 4..20 mA
Burden	: $RA[\Omega] \leq (U_B - 14 V) \div 0,02 A$
Measuring range	: -1.00..+15.00 pH or -1500..+1500 mV
R <sub>i</sub>	: $>10^{12} \Omega$
Input current	: $<10^{-12} A$
Accuracy	: 0.2 % measuring value, ±2 Digit
Electrode zero point	: 7.00 pH
Slope	: 30..80 mV/pH
ORP setup	: ± 200 mV
Calibration mode	: - <b>1- or 2-point-calibration</b> buffer selection possible : - Schott - WTW - Ingold (Mettler Toledo) - Buffer acc. to DIN 19266 - or manual buffer input - <b>Data</b> entering for zero point and slope - <b>ORP</b> setup
<b>Temperature</b>	
Output signal	: 4..20 mA
Burden	: $RA[\Omega] \leq (U_B - 14 V) \div 0,02 A$
Temperature sensor	: Pt100 or Pt1000, (2-wire)
Unit	: programmable °C, °F
Measuring range	: -40.0..+160.0 °C (-40.0..+320.0 °F)
Accuracy	: ± 0.1 %, ±1Digit
Glass impedance	: 0..1 GΩ (temperature compensated)
Detection range	: 0.001..2 GΩ (non compensated)

Accuracy	: ± 20 %
Reference imped.	: 0..100 kΩ (non compensated)
Monitoring of the calibration interval	: 1..1000 days
<b>Display</b>	: LCD-dot matrix, 3.8 mm characters 2 lines 16 characters each
<b>Alarm outputs</b>	
Transistor	: 14..30 V DC<, max.60 mA, with short-circuit-proof
Voltage drop	: < 2 V
<b>Range switch</b>	
R <sub>i</sub>	: >10 kΩ
MB1 active	: U = 0..3 V DC
MB2 active	: U = 12..30 V DC
<b>Case</b>	: Head-field case
Material	: Polyamide fiber glass PA6-GF/GK 15/15, front foil polyester
Dimensions	: 100 x 100 x 60 mm (WxHxD)
Weight	: max. 360 g
Connection	: screw terminals pressure plate, 2.5 mm <sup>2</sup> flexible, 4 mm <sup>2</sup> single wire connection cable
Protection class	: IP65, terminals IP20 acc. to BGV A3

## Dimensions



## Connection diagram



For supplying the converter use terminals 9 and 10 as shown. If the converter is used form monitoring only, terminals 9 and 10 must be connected directly to the supply voltage.

Continue next page

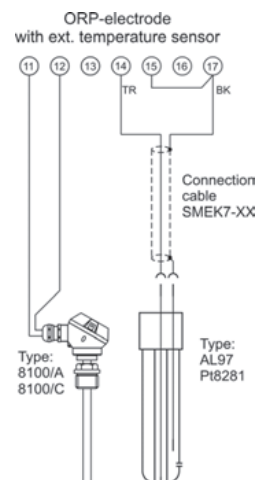
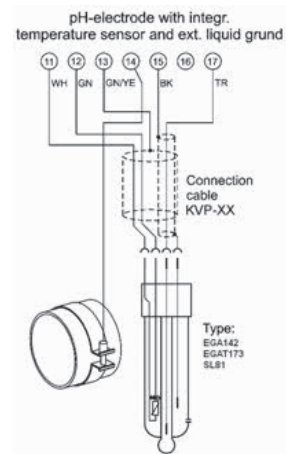
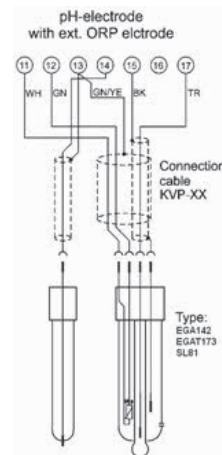
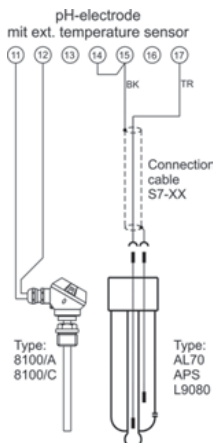
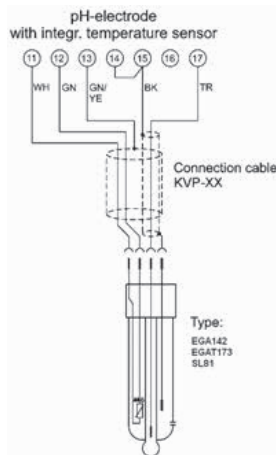
**Ordering code**

UNICON-pH -  1. -  2. -  3. -  4. -  5.

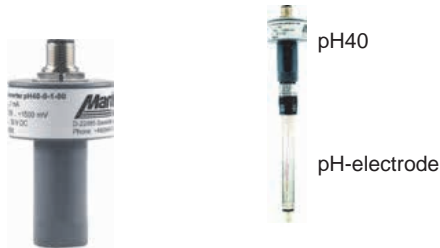
<b>1. Model</b>	
1	output 4..20 mA for pH/ORP, 2 electronic alarm outputs
2	as 1, but 2 <sup>nd</sup> measuring range for pH/ORP, output 4..20 mA for temperature, monitoring of the glass impedance, reference electrode and the calibration interval
<b>2. Mounting</b>	
01	head mounting, on the electrode
02	field mounting, separate connection cable see page Fehler: Referenz nicht gefunden
<b>3. Reference system</b>	
3	all systems with electrode zero point pH7.00 e.g. silver/silver chloride
<b>4. Temperature compensation</b>	
13	Pt100/Pt1000 sensor via software selectable
<b>5. Options</b>	
00	without option

Accessories see page Fehler: Referenz nicht gefunden

**Connection diagram input UNICON-pH**



# pH Head-Transmitter pH40



- Measuring range -1..+15 pH
- 2-wire transmitter 4..20 mA
- Error free measurement up to 100 m

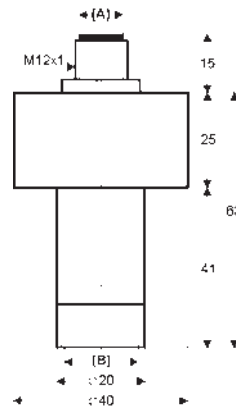
### Characteristics

The head transmitter is designed for direct mounting on the pH-electrode with input lock nut connector B. The output signal is located at output connector A.

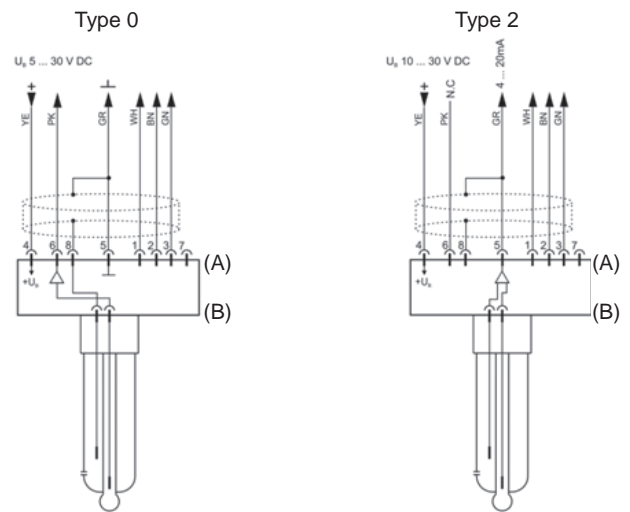
### Technical data

<b>Power supply</b>	
Supply voltage	: 5..30 V DC output 0 : 10..30 V DC output 2
Operating temperature	: -10..+60 °C
<b>Input pH/ORP</b>	
Measuring range	: -1..+15 pH / ± 1500 mV
Input resistance	: >10 <sup>12</sup> Ω
<b>Output</b>	
Type 0	: 1:1 transfer of the pH-signal with low output impedance, error free measurement up to 100 m
Type 2	: 4..20 mA, 2-wire technology in the range -1..+15 pH depending at 25 °C, zero-point pH 7.0, slope 59.2 mV/pH, not compensated
Accuracy	: type 0 = 0.01 % type 2 = 0.2 %
<b>Case</b>	
Material	: PVC-U
Weight	: approx. 100 g
Process connection	: S7 or SMEK plug
Electrical connection	: 8 pole round socket, M12x1
Material	: brass plated
Protection class	: IP65

### Dimensions



### Connection diagram



### Ordering code

pH40 -  1. -  2. -  3.

<b>1. Output</b>	
0	-1..+15 pH = 1:1 signal transfer
2	4..20 mA = -1..+15 pH
<b>2. Input plug B</b>	process connection for pH-electrode
2	S7 socket
<b>3. Options</b>	
00	without option
<b>Accessories</b> connection cable with 8 pole cable socket brass plated and pigtail, PU-cable	
SKM8E-02	2 m IP67
SKM8E-05	5 m IP67
SKM8E-10	10 m IP67
SKM8E-25	25 m IP67
other length on request	
8 pole cable socket for self assembling	

# pH Measuring Transducer GPHU



- With local display and galvanic isolation
- Automatic and manual temperature compensation
- 2-point calibration
- 4 to 20 mA version with 2 wires: Power supply via current loop (optionally with 0-10V 3-wire)

## Features

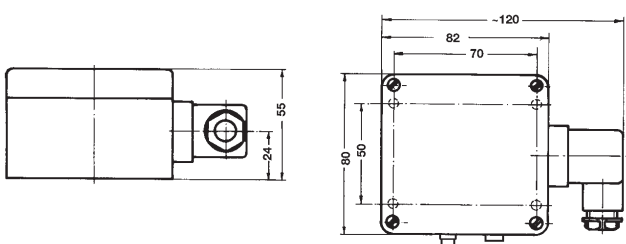
The GPHU is used in control, measurement and monitoring tasks, e.g. in environmental and medical technology.

Any standard pH electrode with a BNC or Cinch socket can be used for the GPHU. In addition, the GPHU has a Pt1000 temperature input for connection of electrodes with integrated temperature sensors or a separate Pt1000 sensor via two banana sockets. The temperature compensation can also be adjusted manually with buttons.

## Technical data

Measuring range	: 0.00..14.00 pH
Accuracy	: 0.02 pH ±1 digit (at nominal temperature 25 °C)
Output signal	: 4..20 mA, (2-wire) 0..10 V (3-wire)
Galvanic Isolation	: Galvanically isolated input
Auxiliary energy	: 12..30 V DC at 4..20 mA 18..30 V DC at 0..10 V
Permissible resistance	: $R_A[\Omega] = (U_V [V] - 12V) / 0.02 A$
Permissible load	: $R_L > 3000 \Omega$
Electrode	: all standard pH electrodes are suitable No pH electrodes included
Input resistance	: $10^{12} \Omega$
Electrode connection socket	: BNC / Cinch
Temp. compensation	: -30..+150 °C, manually adjustable with buttons or automatically by means of external Pt1000 sensor
Temperature input	: 2x banana socket Ø 4 mm, for Pt1000 sensor
Display	: 10 mm height, 4-digit display
Electrical connection	: Angle connector according to EN 175301-803/A,
Working temperature	: 0..50 °C
Housing	: ABS
Ingress protection	: IP65 (excluding electrode and temperature connection sockets)

## Dimension



## Ordering code

GPHU14MP -  -  -

1.      2.      3.

<b>1. Electrode connection socket</b>	
BNC	BNC socket
CINCH	Cinch jack
<b>2. Output signal</b>	
A1	4..20 mA
V2	0..10 V
<b>3. Option</b>	
00	No options
MB	Limited measuring range (please specify range separately, e.g.: 2.00..10.00 pH)

Order example:  
GPHU14MP-BNC-A1-00

## Accessories

### GTF 2000 WD-B

Waterproof Pt1000 temperature sensor with 2 banana plugs Ø 4 mm, measuring range: -20..+105 °C

### Accessory electrodes

GE 126-BNC-L05	pH electrode, extremely low maintenance/calibration, adapter 1/2" NPT, Ø26.4 mm, 5 m cable
GE 108-BNC-L02	pH electrode, pressure-resistant to 6 bar, adapter PG13.5, low-maintenance, gel-filled, 2 m cable
GE 117-BNC-L02	pH electrode, pressure-resistant to 6 bar, adapter PG13.5, low-maintenance, gel-filled, with integrated Pt 1000 temperature sensor, 2 m cable
GE 173-BNC-L01	pH electrode, pressure-resistant to 6 bar, adapter PG13.5, alkaline-resistant, ground diaphragm, 1 m cable (optionally with S7 connection)
GE 171-S7	pH electrode, pressure-resistant to 6 bar, adapter PG13.5, S7 connection, sterilisation / autoclave-compatible
GE 117	pH electrode with integrated Pt1000 sensor 1x BNC plug and 1x banana plug Ø 4 mm and PG 13.5 thread, pressure-resistant to 6 bar
GE 100 BNC	Standard electrode, BNC plug (for technical data, see GE 100)

### Electrode adapter accessories

GEAK-2S7-BNC	Adapter cable S7-BNC, 2 m
GEAK-5S7-BNC	Adapter cable S7-BNC, 5 m
GWA1Z	Thread adapter from PG13.5 to G1", plastic
PG 13.5	Plug-in thread adapter for pressureless insert, with PG 13.5 male thread (electrode plug-in without adapter)

### Consumable accessories

Ready-to-use buffer solutions and working sets, see extra data sheet



# Redox Measuring Transducer GRMU



- Galvanic isolation
- Optional local display
- 4 to 20 mA version with 2 wires: Power supply via current loop (optionally with 0-10V 3-wire)

## Features

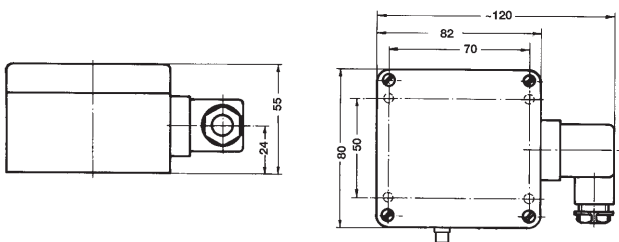
The GRMU is used in control, measurement and monitoring tasks, e.g. in environmental and medical technology.

Any standard Redox electrode with a BNC or Cinch socket can be used for the GRMU.

## Technical data

Measuring range	: ±2000 mV
Accuracy	: 0.2 % FS
Output signal	: 4..20 mA, (2-wire) 0..10 V (3-wire)
Galvanic Isolation	: Galvanically isolated input
Auxiliary energy	: 12..30 V DC at 4..20 mA 18..30 V DC at 0..10 V
Permissible resistance	: $R_A [\Omega] = (U_V [V] - 12V) / 0.02 A$
Permissible load	: $R_L > 3000 \Omega$
Electrode	: all stand. Redox electrodes are suitable no Redox electrodes included
Input resistance	: $10^{12} \Omega$
Electrode connection socket	: BNC / Cinch
Display	: 10 mm height, 4-digit display
Electrical connection	: Angle connector EN 175301-803 / A
Housing	: ABS
Working temperature	: 0 – 50 °C
Ingress protection	: IP65 (excluding electrode connection sockets)

## Dimension



## Ordering code

GRMU2000MP -  -  -

1.    2.    3.

<b>1. Electrode connection socket</b>	
BNC	BNC socket
CINCH	Cinch jack
<b>2. Output signal</b>	
A1	4..20 mA
V2	0..10 V
<b>3. Option</b>	
00	No options
VO	Local display
MB	Limited measuring range (please specify range separately)

Order example:  
GRMU2000MP-CINCH-A1-VO

## Accessories

### GR 105-BNC art. no. 607798

Redox electrode with BNC plug  
Measuring range ±2000 mV  
Temperature range 0 ... 80 °C  
Medium conductivity > 25 µS/cm, not pressure-resistant, 1m cable

### GR 175-BNC

Redox electrode with BNC plug, thread PG 13.5  
Measuring range ±2000 mV, temperature range 0 ... 80 °C  
Medium conductivity > 25 µS/cm, pressure-resistant to 6 bar, 1m cable  
(also available in S7 version)

### GWA1Z art. no. 602914

Thread adapter from PG13.5 to G1", plastic

### PG 13.5 art. no. 603205

Plug-in thread adapter for pressureless insert, for electrode Ø12 mm for connection without adapter

### GRP 100 art. no. 601424

Redox testing solution (220 mV at 25°C), 100ml

# Standard pH and Redox Single Rod Electrodes



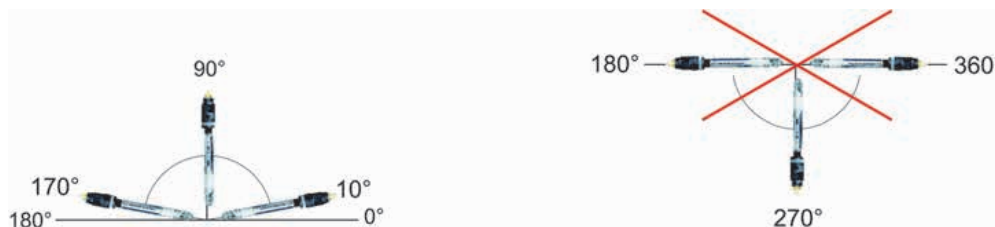
## pH single rod electrodes

### Technical data

Type	AL70pH-00	EGA142-VP	EGAT173-VP-X	SL81-120pHT-VP	APS-X1Q2K1A-00	L9080
Range of application	2 - 13 pH	0 - 14 pH	0 - 14 pH	0 - 14 pH	1 - 12 pH	0 - 12 pH
Area of application	water	water, swimming pool, sewer	heavily contaminated waste water electroplating	foods (sterilisable) water, waste water	refrigeration	purest water boiler feed water
Working temperature	-5..+80 °C	-5..+80 °C	-5..+80 °C	0..135 °C	-15..+80 °C	-30..+80 °C
Max. pressure	3 bar	6 bar	6 bar	10 bar	6 bar	6 bar
Installation location	120 mm	120 mm	120 mm	120 mm	120 mm	120 mm
Process connection	PG13.5	PG13.5	PG13.5	PG13.5	PG13.5	PG13.5
Temperature sensor	-	Pt1000	Pt1000	Pt1000	-	-
Electrical connection*	S7	VP	VP	VP	S7	S7
Reference system	Silver/silver chloride (Ag/AGCl) electrode zero point pH7.00					
Reference electrodes Electrolyte	Gel	Gel	Gel	Gel	Gel	Liquid
Diaphragm	ceramic	ceramic	cut	ceramic	PTFE	ceramic
Min. media conductivity	50 µS/cm	100 µS/cm	50 µS/cm	50 µS/cm	50 µS/cm	< 1 µS/cm
Installation location	10..170°	30..150°	30..150°	10..170°	10..170°	10..170°

Patch cords, refer to page Fehler: Referenz nicht gefunden

## Installation location



**Redox Redox Single Rod Electrodes**

**Technical data**

Type	AL79Pt-00	Pt8281HD-00
Range of application	2 - 13 pH	2 - 13 pH
Area of application	Environmental technology, disinfection	Environmental technology, disinfection
Working temperature	-5..+80 °C	-5..+100 °C
Max. pressure	3 bar	10 bar
Installation location	120 mm	120 mm
Process connection	PG13.5	PG13.5
Temperature sensor	-	-
Electrical connection*	S7	S7
Reference system	Silver/silver chloride (Ag/AgCl) electrode zero point pH7.00	
Reference electrodes Electrolyte	Polymer (Referid)	Polymer (Referid)
Diaphragm	ceramic	KPG
Min. media conductivity	50 µS/cm	50 µS/cm
Installation location (see previous page)	10..170°	10..170°

Patch cords, refer to page Fehler: Referenz nicht gefunden

**pH and Redox Single Rod Electrodes Instructions for Use**

- 1.) pH and Redox Single Rod Electrodes are delivered with a protective cap filled with a 3 mole KCL solution. The electrodes can be stored for up to 1 year in this state. Therefore, the protective cap should only be removed immediately before installation and use.
- 2.) The shaft of the single rod electrodes is made of glass and breaks easily. It must be ensured that the tips do not strike against anything during installation.
- 3.) Since the characteristics of single rod electrodes deviate from the ideal line, they must be calibrated at the time of commissioning and on a regular basis thereafter in order to provide exact measurements.
- 4.) The tip of single rod electrodes must not dry out; otherwise they are unusable. The active area of the electrode is immersed in a 3 mole KCL storage solution for approximately 24 hours for regeneration. Then calibration is necessary, because the zero point and transmittance may have shifted.
- 5.) The electrodes must be cleaned from time to time when used in dirty media and media containing proteins. We offer a special cleaning solution for this purpose. The electrodes must be rinsed off with water after cleaning.

**Important!**

pH and Redox electrodes have a limited service life. This depends on the usage conditions, such as medium, pressure, and temperature, and can vary from a few weeks to several years. There are special cases in which a service life of only a few days can be achieved due to extreme usage conditions. The characteristic and adjusting time of the electrode shaft due to ageing. The resulting error due to recalibration in combination with downstream electronics (e.g. UNICON-pH converter) can be compensated up to a certain degree of ageing.

*pH and Redox single rod electrodes are consumables and not subject to the normal guarantee. No returns or exchanges are accepted.*

Our offer also includes technical advice on the selection of the optimal pH and Redox single rod electrodes, free of charge. In addition to the standard electrodes indicated in the list, we also provide versions specially adapted to the respective usage conditions.

# In-line Fitting EA 1200 / EA 2200



## Characteristics

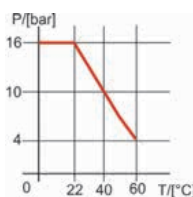
For flow fittings with outer pipe diameter from 20mm up to 63 mm. This In-line fitting has been designed for electrochemical cells like pH/ORP-, conductivity-cells with PG13.5 process connection. It protects the sensor and ensures a proper measurement. The fitting fits for operating at the flow-fitting DFA32. The application field includes swimming pools technology and drinking water measurement.

## Technical data

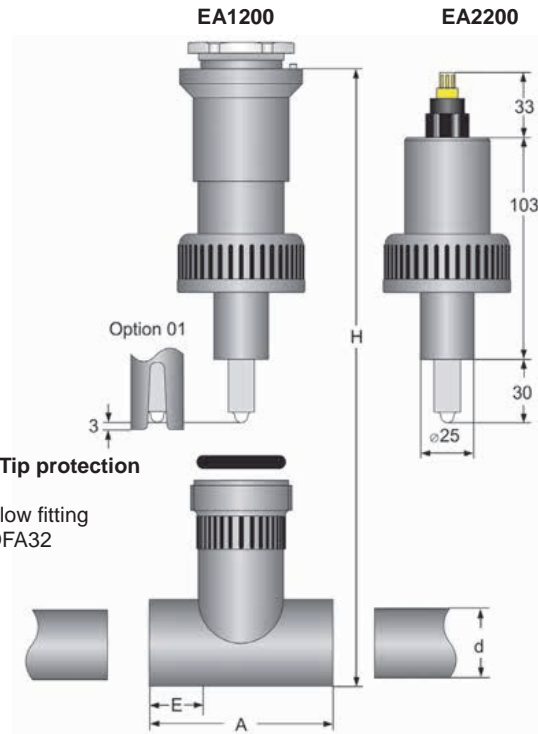
Sensor connection : PG13.5  
Process connection : screw cap for adhesive coupling  
Process material : PVC-U acc. to DIN 8061 and 8062

Screw cap : PVC-U  
Operating temperature : 0..60 °C  
Process pressure : max. 16 bar at 22 °C

Pressure-temperature table PVC-U



## Dimensions



### Dimensions [mm]

d	H	A	E
20	180	78	22
25	180	78	22
32	180	78	22
40	192	98	26
50	202	118	31
63	216	144	38

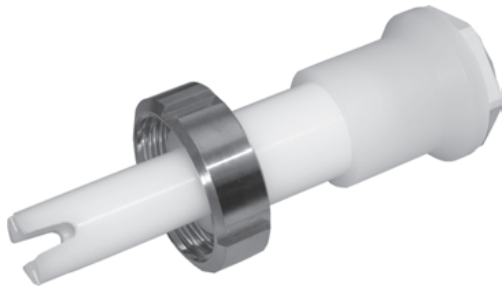
## Ordering code

EA  1. -  2. -  3.

<b>1. Model</b>	1200	head mounting at UNICON-pH, incl. cap nut
	2200	field mounting, incl. cap nut
<b>2. Sensor type</b>	0	standard pH / ORP combined-electrodes
<b>3. Options</b>	00	without option
	01	with integrated tip protection (only for pH and ORP combined-electrodes)
<b>Accessories</b>	flow fitting DFA32 material PVC-U	
	DFA32-20-1-1	outer pipe diameter d=20 mm
	DFA32-25-1-1	outer pipe diameter d=25 mm
	DFA32-32-1-1	outer pipe diameter d=32 mm
	DFA32-40-1-1	outer pipe diameter d=40 mm
	DFA32-50-1-1	outer pipe diameter d=50 mm
	DFA32-63-1-1	outer pipe diameter d=63 mm



# In-line Fitting EA1730 / EA2730



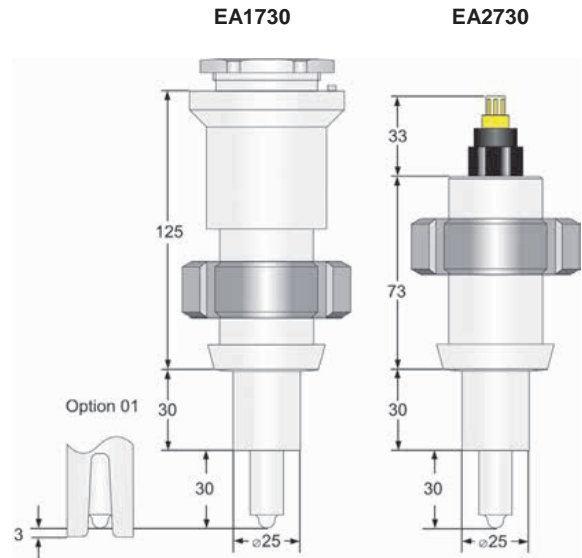
## Characteristics

Hygienic fitting; material PVDF for milk-pipe connection acc. to DIN 11887.  
This In-line fitting has been designed for electrochemical cells like pH/ORP-, conductivity-cells with PG13.5 process connection. It protects the sensor and ensures a proper measurement.  
The application field includes food and chemical technology.

## Technical data

Process connection: milk pipe acc. to DIN 11887  
Process material : PVDF  
                          FDA compliant  
Cap nut : stainless steel 1.4301  
Operating temperature : -10..+120 °C  
                                  steam sterilization 140 °C < 1 h  
Process pressure : max. 16 bar

## Dimensions



Tip protection

## Ordering code

EA  1. -  2. -  3. -  4.

<b>1. Model</b>	
1730	head mounting at UNICON-pH, incl. Cap nut
2730	field mounting, incl. cap nut
<b>2. Process connection</b>	
DN25	
DN40	
DN50	
DN65	
<b>3. Sensor type</b>	
0	standard pH / ORP combined-electrodes
<b>4. Options</b>	
00	without option
01	with integrated tip protection (only for pH and ORP combined-electrodes)

## In-line Fitting EA2650



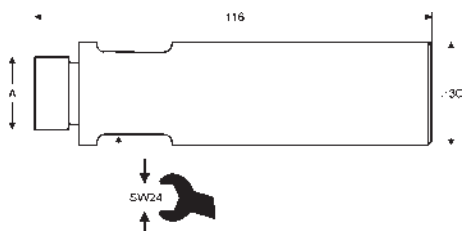
### Characteristics

This In-line fitting has been designed for electrochemical cells like pH/ORP-, conductivity-cells with PG13.5 process connection.

### Technical data

Material : stainless steel 1.4571, seal Viton®  
 Process pressure : max. 16 bar  
 Operating temperature : depends to the sensor  
 Process connection : G ½ A, G ¾ A, G 1 A

### Dimensions



### Ordering code

EA  1. -  2. -  3. -  4.

<b>1. Model</b>	2650	field mounting
<b>2. Process connection (A)</b>	G ½ A	
	G ¾ A	
	G 1 A	
<b>3. Cells/combined electrodes</b>	0	for standard pH / ORP electrodes
<b>4. Options</b>	00	without option

## Flow-Tank DFG



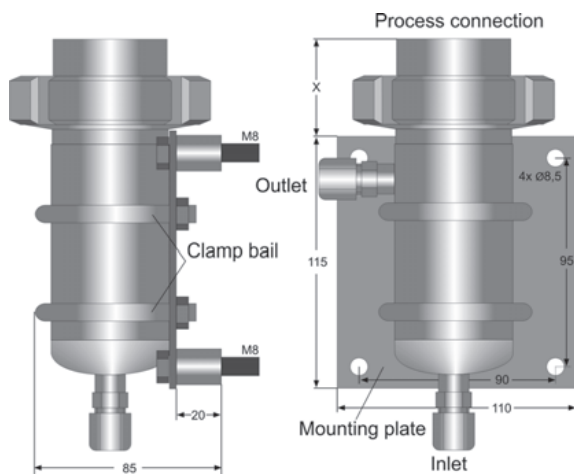
### Characteristics

For continuous analysis measurement with pH-, ORP-cells in liquid media with installation length of max. 120 mm.

### Technical data

Material : stainless steel 1.4571  
 Process pressure : max. 16 bar  
 Operating temperature : max. 140 °C  
 Process connection : PG 13.5, G ¼ B or G1A  
 Inlet-, outlet : clamping sleeve for pipes 10x2 mm  
 Tank diameter : 54 mm

### Dimensions



### Accessories



Lid with 3 x PG13.5 process connections and blind gland VS

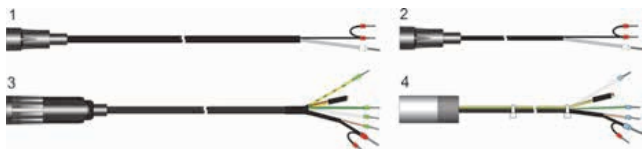
### Ordering code

DFG -  1. -  2. -  3.

<b>1. Model</b>	50	measuring tank D=54 mm
<b>2. Process connection</b>	1 x PG13.5	*X = 45 mm
	3 x PG13.5	*X = 45 mm
	3 x G ¼ B	*X = 45 mm
	1 x G 1 A	*X = 27 mm
<b>3. Options</b>	00	without option
<b>Accessories</b>	(stainless steel 1.4571)	
	MP50	mounting plate incl. Mounting parts
	RSB50	2 clamp bails incl. Bolt nuts
	VS PG13,5	blind glands PG13.5



**Connection cable**



**Connection cable 1**  
for electrodes with S7-connector

Order no.	Length [m]	Protection class
S7-02	2	IP67
S7-05	5	IP67

**Connection cable 2**  
for electrodes with S7-connector at UNICON-pH, head mounting.

Order no.	Length [m]	Protection class
S7-K	-	-

**Connection cable 3**  
for electrodes with SMEK-VP-connector

Order no.	Length [m]	Protection class
KVP-03	3	IP67
KVP-05	5	IP67
KVP-10	10	IP67

(not used cables could be cutting)

**Connection cable 4**  
for electrodes with SMEK-VP-connector at UNICON-pH, head mounting.

Order no.	Length [m]	Protection class
KVP-K	-	-

**Calibrations tools**

**WTW technical buffer**, 1000 ml with dosing container

Order no.	PH-buffer value
TEP-4	4.01
TEP-7	7.00
TEP-10	10.00



**WTW ORP-buffer** 250 ml bottle

Order no.	Buffer value [mV]
RH28	427 (pH7)

**Storage solutions** 250 ml DURAN-glass bottle,  
3 mol KCL sterilized

Order no.
pH-AL-250



**Cleaning solution** 250 ml DURAN-glass bottle,  
Pepsin / hydrochloride acid

Order no.
pH-RL-250

**Calibration container**  
for in-front-calibration material PMMA with level sign(20ml) and screw-cap PG13.5.  
(the pH-electrode must be screwed-in with the filled container).

Order no.
pH-KR-250



**Cleaning container** 250 ml, to rinse the electrodes with water,  
material PP

Order no.
pH-SB-250

