

## pH-measuring transducer with on site display and electrically isolation



### GPHU 014 MP without electrode

#### Properties

- automatically and manually temperature compensation
- external Pt1000-temperature probe connectable
- sensor input electrically isolated
- 2-point calibration

#### Specification

<b>Measuring range:</b>	0.00 to 14.00 pH
<b>Accuracy:</b>	0.02 pH $\pm 1$ digit (at nominal temperature = 25°C)
<b>Output signal:</b>	4 - 20 mA (2-wire), standard 0 - 10 V (3-wire), optional
<b>Electric isolation:</b>	input electrically isolated
<b>Auxiliary energy:</b>	12 ... 30 V DC (for option 0-10V: 18 ... 30 V DC)
<b>Perm. impedance (at 4-20mA):</b>	$R_A [\Omega] = (U_v [V] - 12V) / 0.02 A$
<b>Permissible load (at 0-10V):</b>	$R_L > 3000 \Omega$
<b>Electrode:</b>	any standard pH electrode is suitable. (pH electrode not included in scope of supply)
<b>Input resistance:</b>	$10^{12} \Omega$
<b>Electrode socket:</b>	Cinch-socket (standard) BNC-socket with upcharge
<b>Temperature compensation:</b>	-30 ... 150°C, manually via 3 keys or automatically via external Pt1000 sensor.
<b>Adjustment:</b>	via 3 keys and integrated LCD
<b>Temp. sensor socket:</b>	2x banana socket $\varnothing 4$ mm, for Pt1000 probe.
<b>Display:</b>	approx. 10 mm high, 4-digit LCD-display
<b>Working temperature:</b>	0 ... +50 °C (electronic)
<b>Storage temperature:</b>	-20 ... +70 °C
<b>Electric connection:</b>	elbow-type plug acc. to DIN 43650 (IP65)
<b>Housing:</b>	ABS
<b>IP rating:</b>	IP65, with the exception of electrode and temp. connection sockets. (cpl. IP65 upon request)
<b>Dimensions:</b>	82 x 80 x 55 mm (H x W x D)
<b>Mounting:</b>	with fixing holes for wall mounting
Mounting distance:	70 x 50 mm (W x H)
Fixing screws:	max. shaft- $\varnothing$

#### Options / upcharge

<b>AV010:</b>	output signal 0-10V
<b>BNC:</b>	electrode socket: BNC
<b>MB...:</b>	limited measuring range (please state the desired range)

#### Ordering example

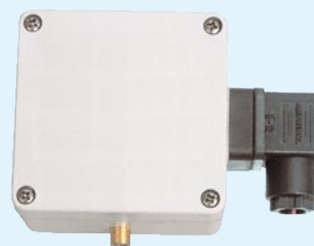
**GPHU 014 MP / BNC, AV010:**  
GPHU014MP with BNC electrode socket and 0-10V output signal

#### Accessories / spare parts

<b>GTF 2000 WD - B</b>	water proof Pt1000-temperature probe, with 2 banana plugs $\varnothing 4$ mm	
<b>for additional Pt1000-temperature probes</b>		<i>p.r.t. page 102, 110</i>
<b>GE 100</b>	standard electrode, cinch-plug	
<b>GE 117</b>	pH electrode with integrated Pt1000-sensor 1 x BNC-plug and 1 x banana plug $\varnothing 4$ mm, thread PG13.5, pressure resistant up to 6bar	
<b>PG 13,5</b>	plug on thread adapter for pressureless use	
<b>GAK 1400</b>	working and calibration set (p.r.t. page 35)	

for additional electrodes and accessories p.r.t. page 35, 102 and 110

## Redox-measuring transducer with electrically isolation



### GRMU 2000 MP without electrode

#### Specification

<b>Measuring range:</b>	$\pm 2000$ mV or special limited measuring ranges acc. to customer specification!
<b>Accuracy:</b>	0.2 % FS (at nominal temperature = 25°C)
<b>Output signal:</b>	4 - 20 mA (2-wire), standard 0 - 10 V (3-wire), optional
<b>Electric isolation:</b>	input electrically isolated
<b>Auxiliary energy:</b>	12 ... 30 V DC (for option 0-10V: 18 ... 30 V DC)
<b>Perm. impedance (at 4-20mA):</b>	$R_A [\Omega] = (U_v [V] - 12V) / 0.02 A$
<b>Permissible load (at 0-10V):</b>	$R_L > 3000 \Omega$
<b>Electrode:</b>	redox electrode GE105 (electrode not included in scope of supply!)
<b>Input resistance:</b>	$10^{12} \Omega$
<b>Electrode socket:</b>	Cinch-socket (standard) BNC-socket with upcharge
<b>Option: on site display</b>	approx. 10 mm high, 4-digit LCD-display
<b>Working temperature:</b>	0 ... +50 °C (electronic)
<b>Storage temperature:</b>	-20 ... +70 °C
<b>Electric connection:</b>	elbow-type plug acc. to DIN 43650 (IP65)
<b>Housing:</b>	ABS (IP65) with the exception of electrode connection sockets. (cpl. IP65 upon request)
<b>Dimensions:</b>	82 x 80 x 55 mm (H x W x D)
<b>Mounting:</b>	with fixing holes for wall mounting (accessible after removal of cover) Mounting distance: 70 x 50 mm (W x H) Fixing screws: max. shaft- $\varnothing$ 4 mm

#### Options / upcharge

<b>VO:</b>	on site display
<b>AV010:</b>	output signal 0-10V
<b>BNC:</b>	electrode socket: BNC
<b>MB...:</b>	limited measuring range (please state the desired range)

#### Ordering example

**GRMU 2000 MP / BNC, VO:**  
GRMU2000MP with BNC electrode socket and on site display

#### Accessories / spare parts

<b>GE 105</b>	redox electrode with cinch-plug and testing solution
<b>PG 13,5</b>	plug on thread adapter for pressureless use, with external thread PG 13.5 (suitable for any electrode)

For additional electrodes and accessories p.r.t. page 35

#### Dimensioned sketch GPHU / GRMU

