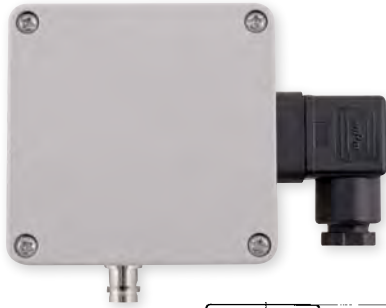
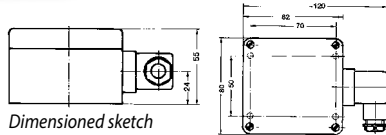


REDOX-MEASURING TRANSDUCER



WITH ELECTRICALLY ISOLATION



Dimensioned sketch  
GPHU/GRMU:

GRMU 2000 MP-BNC

Art. no. 602019

Redox-measuring transducer without electrode, BNC-connection

GRMU 2000 MP-Cinch

Art. no. 602021

Redox-measuring transducer without electrode, Cinch-connection

Specifications:	
<b>Measuring range:</b>	±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), upon upcharge
<b>Electric isolation:</b>	input electrically isolated
<b>Auxiliary energy:</b>	12 ... 30 V DC (for option 0 ... 10 V: 18 ... 30 V DC)
<b>Perm. impedance (at 4 ... 20 mA):</b>	$R_A [\Omega] \leq (U_v [V] - 12 V) / 0.02 A$
<b>Permissible load (at 0 ... 10 Volt):</b>	$R_L > 3000 \Omega$
<b>Input resistance:</b>	$10^{12} \text{ Ohm}$
<b>Electrode socket:</b>	BNC-socket or Cinch-socket
<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 EN 175301-803/A (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-Ø 4 mm

Option:	
<b>VO:</b>	On site display
<b>V2:</b>	Output signal 0 ... 10 V
<b>MB...:</b>	Limited measuring range (please state the desired range)

**Ordering example:**  
**GRMU 2000 MP-BNC-VO:**  
 Redox-measuring transducer with BNC electrode socket and on site display

Accessories and spare parts:	
<b>GR 105-Cinch</b>	Art. no. 607797 Redox electrode with cinch-plug
<b>GR 105-BNC</b>	Art. no. 607798 Redox electrode with BNC-plug
<b>GR 175-BNC</b>	Art. no. 607801 Redox electrode with BNC-plug
<b>PG 13,5</b>	Art. no. 603205 Thread Adapter, pluggable, Pg 13,5 for sensors with shaft Ø 12 mm For pressureless insert
<b>GRP 100</b>	Art. no. 601424 Redox test solution 220 mV, 100 ml

For additional electrodes and accessories see product catalogue

LEVEL TRANSMITTER



LC-S45HM...

Level transmitter (brass)

LC-S44HM...

Level transmitter (brass)

LC-K52HK...

Level transmitter (stainless steel)

**General:**  
 A magnet equipped float activates a reed chain inside a tube which is connected to resistors comparable to a potentiometer. The gapless positioning of the sensors provides a continuous signal with good resolution (up to 10 ... 20 mm) and repeatability.

- top assembly
- selectable material combinations
- optional: with user-specific characteristic (for adjustment to tank design)

**Application:**  
 Sensor suitable for: Water, oil, aggressive substances (only LC-K52K...)

Specifications:	
<b>Tube length:</b>	250 mm, 500 mm, 750 mm, 1000 mm, 1500 mm and 2000 mm
<b>Float travel:</b>	<b>..0250 ..0500 ..0750 ..1000 ..1500 ..2000</b>
<b>LC-S45M... :</b>	190 mm 440 mm 690 mm 940 mm
<b>LC-S44M... :</b>	930 mm 1430 mm 1930 mm
<b>LC-K52K... :</b>	160 mm 410 mm 660 mm 910 mm 1410 mm 1910 mm
<b>Division (resolution):</b>	10 mm (LC-S45..., LC-K52K0250) or 20 mm
<b>Output signal:</b>	4 ... 20 mA (2-wire) (see option)
<b>Optional:</b>	0 ... 10 V (3-wire) (see option)
<b>Auxiliary energy:</b>	10 ... 30 V DC (at option Flex: 18 ... 30 V DC)
<b>Electrical connection:</b>	elbow-type plug acc. to DIN 43650-A / ISO 4400 (at option Flex: 4-pole locked plug M12 x 1)
<b>Working temperature:</b>	0 ... 85 °C
<b>Working pressure:</b>	max. 20 bar (LC-S...), max. 40 bar (LC-K...)
<b>Density medium:</b>	>0.34 g/cm <sup>3</sup> (LC-S45...), >0.44 g/cm <sup>3</sup> (LC-S44...), >0.66 g/cm <sup>3</sup> (LC-K52...)
<b>Mounting position:</b>	vertical, float pointing downwards
<b>Protection rating:</b>	IP 65
<b>Dimensions:</b>	<b>LC-S45... LC-S44... LC-K52...</b>
<b>Sensor head:</b>	~50 x 50 x 78 mm ~60 x 58 x 78 mm Ø 69 x 78 mm
<b>Tube length:</b>	according to design type
<b>Mounting SW:</b>	SW 40 SW 46 SW 46
<b>Screw-in thread:</b>	G1 A G1 1/2 A G2 A
<b>Float:</b>	Ø 30 x 45 mm Ø 44 x 50 mm Ø 52 x 70 mm
<b>Materials</b>	
<b>Housing:</b>	Ms58 Ms58 stainl. steel 1.4571
<b>Switching tube:</b>	Ms58 Ms58 stainl. steel 1.4571
<b>Float:</b>	Spansil Spansil stainl. steel 1.4571

**Option:**  
 Output signals 4 ... 20 mA (2- or 3-wire), 0 ... 10 V

Design types:	
<b>Tube length:</b>	<b>..0250 ..0500 ..0750 ..1000 ..1500 ..2000</b>
<b>LC-S45HM...</b>	• • • • •
<b>LC-S44HM...</b>	• • • • •
<b>LC-K52HK...</b>	• • • • •