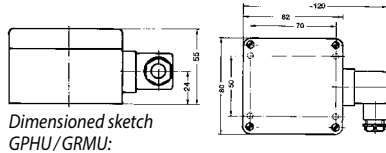


REDOX-MEASURING TRANSDUCER



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:	
Measuring range:	±2000 mV or special limited measuring ranges acc. to customer specification!
Accuracy:	0.2 % FS (at nominal temperature = 25 °C)
Output signal:	4 ... 20 mA (2-wire), standard 0 ... 10 V (3-wire), upon upcharge
Electric isolation:	input electrically isolated
Auxiliary energy:	12 ... 30 V DC (for option 0 ... 10 V: 18 ... 30 V DC)
Perm. impedance (at 4 ... 20 mA):	$R_A [\Omega] \leq (U_v [V] - 12 V) / 0.02 A$
Permissible load (at 0 ... 10 Volt):	$R_L > 3000 \Omega$
Input resistance:	10 ¹² Ohm
Electrode socket:	BNC-socket or Cinch-socket
Option: on site display	approx. 10 mm high, 4-digit LCD-display
Working temperature:	0 ... +50 °C (electronic)
Storage temperature:	-20 ... +70 °C
Electric connection:	elbow-type plug acc. to EN 175301-803/A (IP65)
Housing:	ABS (IP65) with the exception of electrode connection sockets. (cpl. IP65 upon request)
Dimensions:	82 x 80 x 55 mm (H x W x D)
Mounting:	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:	
VO:	On site display
V2:	Output signal 0 ... 10 V
MB...:	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:	
GR 105-Cinch	Art. no. 607797 Redox electrode with cinch-plug
GR 105-BNC	Art. no. 607798 Redox electrode with BNC-plug
GR 175-BNC	Art. no. 607801 Redox electrode with BNC-plug
PG 13,5	Art. no. 603205 Thread Adapter, pluggable, Pg 13,5 for sensors with shaft Ø 12 mm For pressureless insert
GRP 100	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:	
Tube length:	250 mm, 500 mm, 750 mm, 1000 mm, 1500 mm and 2000 mm
Float travel:	..0250 ..0500 ..0750 ..1000 ..1500 ..2000
LC-S45M... :	190 mm 440 mm 690 mm 940 mm
LC-S44M... :	930 mm 1430 mm 1930 mm
LC-K52K... :	160 mm 410 mm 660 mm 910 mm 1410 mm 1910 mm
Division (resolution):	10 mm (LC-S45..., LC-K52K0250) or 20 mm
Output signal:	4 ... 20 mA (2-wire) (see option)
Optional:	0 ... 10 V (3-wire) (see option)
Auxiliary energy:	10 ... 30 V DC (at option Flex: 18 ... 30 V DC)
Electrical connection:	elbow-type plug acc. to DIN 43650-A / ISO 4400 (at option Flex: 4-pole locked plug M12 x 1)
Working temperature:	0 ... 85 °C
Working pressure:	max. 20 bar (LC-S...), max. 40 bar (LC-K...)
Density medium:	>0.34 g/cm ³ (LC-S45...), >0.44 g/cm ³ (LC-S44...), >0.66 g/cm ³ (LC-K52...)
Mounting position:	vertical, float pointing downwards
Protection rating:	IP 65
Dimensions:	LC-S45... LC-S44... LC-K52...
Sensor head:	~50 x 50 x 78 mm ~60 x 58 x 78 mm Ø 69 x 78 mm
Tube length:	according to design type
Mounting SW:	SW 40 SW 46 SW 46
Screw-in thread:	G1 A G1 1/2 A G2 A
Float:	Ø 30 x 45 mm Ø 44 x 50 mm Ø 52 x 70 mm
Materials	
Housing:	Ms58 Ms58 stainl. steel 1.4571
Switching tube:	Ms58 Ms58 stainl. steel 1.4571
Float:	Spansil Spansil stainl. steel 1.4571

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

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