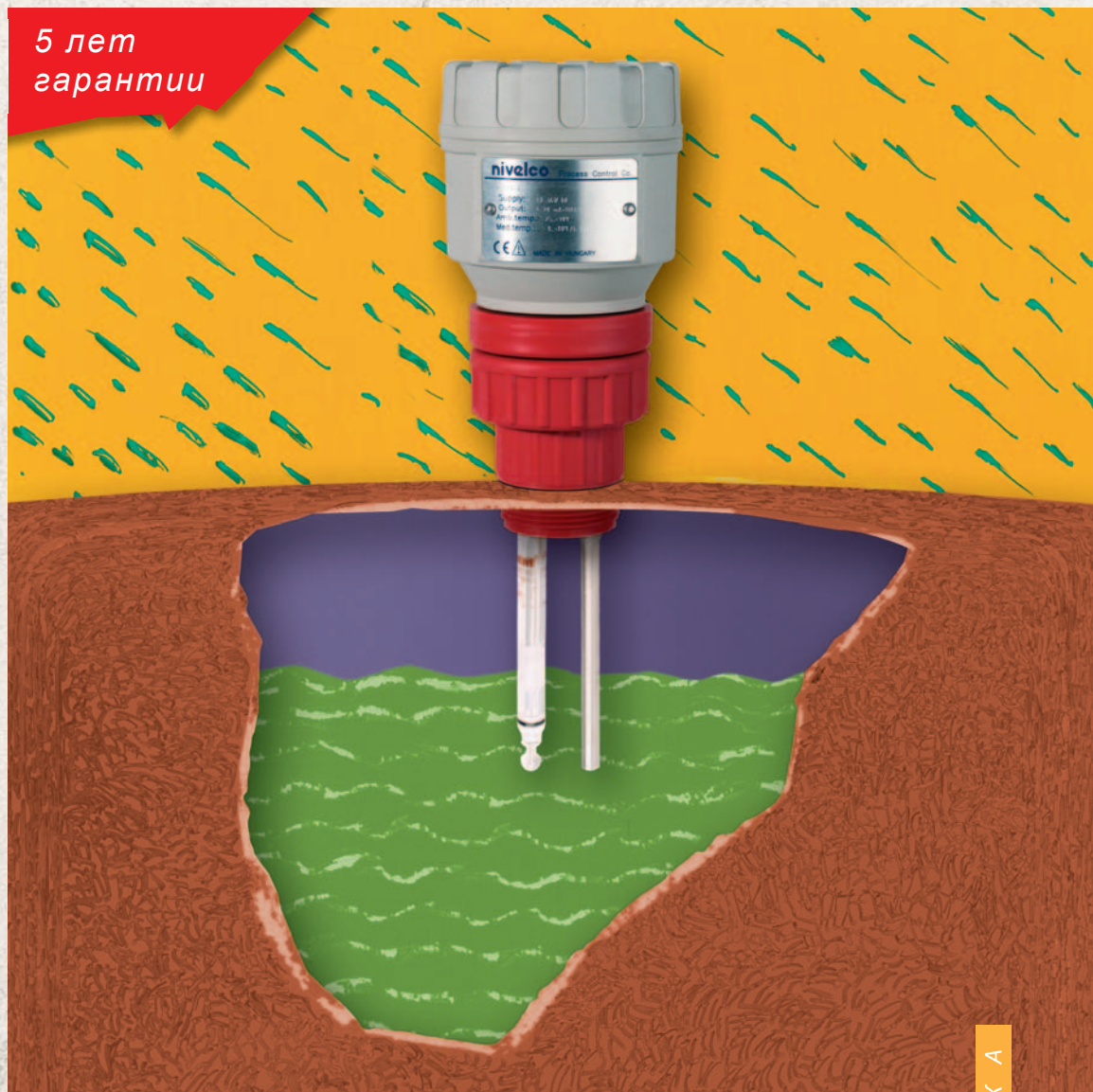


AnaCONT

КОМПАКТНЫЕ PH И ORP ПРЕОБРАЗОВАТЕЛИ

5 лет
гарантии



В С Е Г Д А Н А В Ы С Ш Е М У Р О В Н Е

А Н А Л И Т И К А

AnaCONT devices are designed to measure pH and redox potential values of liquids and aqueous solutions.

pH measurement: Continuous measurement of acidity ($pH < 7$) and of basicity ($pH > 7$) liquids can be performed by the help of AnaCONT transmitters. The necessary feeding of chemicals and other technological functions can be controlled by the processed measured values. The potential difference between the submerged measuring and reference probe generates a voltage proportional to the concentration of the hydrogen ion in the measured fluid. This voltage is evaluated by the signal processing electronic module of the device. Based on the signals of the submerged probe and the temperature sensor the smart signal processing electronic module calculates a pH value normalized to +25 °C and generates a proportional output signal. The long term stability and accuracy of the measurement requires a periodic calibration of the sensors using the standard buffer solutions.

Redox potential (ORP) measurement: Similarly to the pH measurement, the measurement of the redox potential is based on the potential difference between measuring and reference probes. Oxidation or reduction occurs on the platinum surface of the measuring probe. Redox potential is a parameter that indicates the sum of oxidants and reducers in the measured medium. The output signals of the probes are processed by the electronic unit and it converts them into a proportional output signal. In order to get the desired medium parameters the reduction of liquids or feeding of suitable oxidant is executed based on the processed values.

FEATURES

- Compact and integrated variants
- Remote-mount versions up to 10 m
- Measuring range: pH: 1...14;
ORP: ±1000 mV
- Wide probe selection to suit a host of applications
- User friendly software, graphic display
- 4...20 mA, HART®, relay output
- Measurement simulation
- Wide range of accessories
- IP67 / IP68
- 5 years warranty

APPLICATIONS

- Checking of water quality
- Water production, wastewater treatment
- Pharmaceutical industry
- Food and beverage industry



LPP / LPR-100



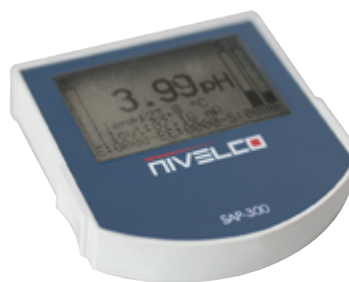
LEP / LER-200

CERTIFICATES

- ATEX (Ex ia G)



pH, ORP electrodes



SAP-300 Display



Cleaning solution



Calibration solution



MultiCONT

TECHNICAL DATA

	LQP – pH transmitter	LQR – ORP transmitter
Measuring values	Range: 1...14 pH Reserve: ±2 pH Resolution: 0.01 pH (internal resolution 0.004 pH) Linearity: ±0.004 pH	Range: ±1000 mV Reserve: ±200 mV Resolution: 0.1 mV (internal resolution 0.8 mV) Linearity: ±0.001%
Temperature measurement (semiconductive sensor)	Accuracy ⁽¹⁾ : 0.1% of the measured value ±1 digit ±0.01% / °C, Measuring rate: 300 ms, on the display (refreshing rate): 1 s	
Liquid-potential (complementary) electrode	Range: -50...+130 °C. Accuracy: ±0.5 °C. Resolution: 0.1 °C	
Probe input	Stainless steel housing of the temperature sensor (1.4571), connection: SN6	
Supply voltage / Power consumption	Combined probe, galvanically isolated, input impedance: >10 ¹² Ω, connection: SN6	
Output	Analog	12...36 V DC / 48...720 mW, galvanically isolated, protection against surge transients
	Relay	4...20 mA, (3.9...20.5 mA), R _{Lmax} = 1200 Ω galvanically isolated, transient overvoltage protection
	Display	SPDT: 30 V DC, 1 A DC
	Digital communication	SAP-300 LCD graphic display, units of measure and bar graph (only for compact version) HART®
Process temperature (pressure dependent) ⁽¹⁾	PP probe housing: -10...+90 °C, PVDF probe housing: -15...+100 °C	
Pressure (absolute) ⁽¹⁾	0.5...10 bar (0.05...1 MPa) @ +25 °C	
Ambient temperature	With metal housing: -30...+70 °C, with plastic housing: -25...+70 °C, both with display: -20...+70 °C	
Seal	PP probe housing: EPDM, All other probe housing: FPM (Viton®)	
Ingress protection	Probe housing: IP68, Electronic housing: IP67; Integrated version: IP68	
Housing material	Probe housing: IP68, Electronic housing: IP67; Integrated version: IP68	
Probe housing material	Compact version: Painted aluminum or plastic PBT. Integrated version: Same as the probe housing	
Electrical connection	Polypropylene (PP), PVDF	
Electrical protection	Compact version: 2× M20×1.5 metal cable gland for cable: Ø7...Ø13 mm, or 2× M20×1.5 plastic cable gland for cable: Ø6...Ø12 mm connecting cable cross section: 0.5...1.5 mm ² (shielded cable is recommended) + 2× internally threaded ½" NPT connection for protective pipes. Integrated version: 6× 0.5 mm ² shielded cable Ø6 mm × 5 m (up to max. 30 m cable length)	
Electrical protection	Class III electric shock protection	

⁽¹⁾ Depending on probe

Ex INFORMATION

Protection type	Intrinsic safety
Ex marking	Ⓔ III G Ex ia IIB T6 Ga
Intrinsic safety data	C _i ≤ 15 nF, L _i ≤ 200 µH, U _i ≤ 30 V, I _i ≤ 140 mA, P _i ≤ 1 W Ex transmitters must use an Ex ia power supply
Process temperature	PP probe housing: -10...+70 °C, PVDF probe housing: -15... +80 °C
Ambient temperature	Metal housing: -30...+70 °C, with display: -20...+70 °C, Plastic housing: -20...+70 °C

PROBES

pH Probes						
Order code	Max. temp.	Max. pressure	Min. conductivity	Material / Mounting angle ⁽²⁾	pH	Application areas
LQP-010	+80 °C	6 bar	50 µS/cm	Glass / max. 45°	1...12	Potable water, swimming pools, public/industrial wastewater, water in chemical industry, suspensions
LQP-020		8 bar	150 µS/cm			Process water, potable water, slightly contaminated wastewater
LQP-030	16 bar (<25 °C) / 6 bar (<100 °C)		500 µS/cm		3...14	Process water, wastewater, water in chemical industry
LQP-040	6 bar (<25 °C) / 3 bar (<100 °C)		150 µS/cm			Highly alkaline mediums, chemical industry
LQP-050	+60 °C	0.5 bar			150 µS/cm	1...12
LQP-060		3 bar		Potable water, swimming pools, slightly contaminated industrial and wastewater		
LQP-070	+80 °C	6 bar	150 µS/cm	Polycarbonate / max. +90°	1...12	Potable water, swimming pools, process water, slightly contaminated industrial and wastewater
LQP-080	+60 °C	3 bar				Potable water, swimming pools, process water, slightly contaminated industrial and wastewater
ORP Probes						
Order code	Max. temp.	Max. pressure	Min. conductivity	Material / Mounting angle		Application areas
LQR-010	+80 °C	6 bar	50 µS/cm	Glass / max. 45°		Potable water, swimming pools, public / industrial wastewater
LQR-020	16 bar (<25 °C) / 6 bar (<100 °C)		500 µS/cm			Polluted water emulsions, mediums containing sulphides, high-pressure applications
LQR-040	+60 °C	3 bar	150 µS/cm			Potable water, swimming pools, slightly polluted water
LQR-050	+80 °C	6 bar				Slightly polluted water, chemical applications
LQR-060	+60 °C	3 bar			Polycarbonate / max. 90°	

⁽²⁾ Angle relative to the vertical

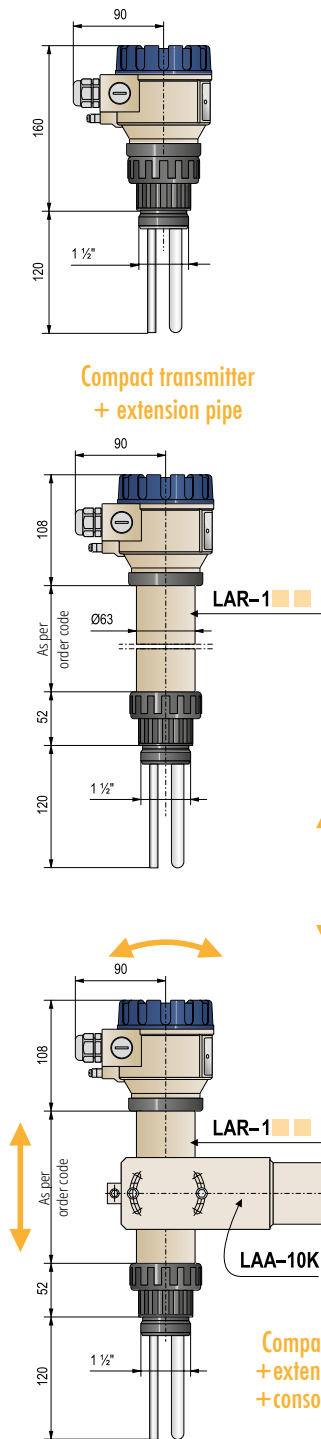
MOUNTING VERSIONS

The constructions of the sensors on the compact and integrated versions are identical, so all accessories are applicable for both versions.

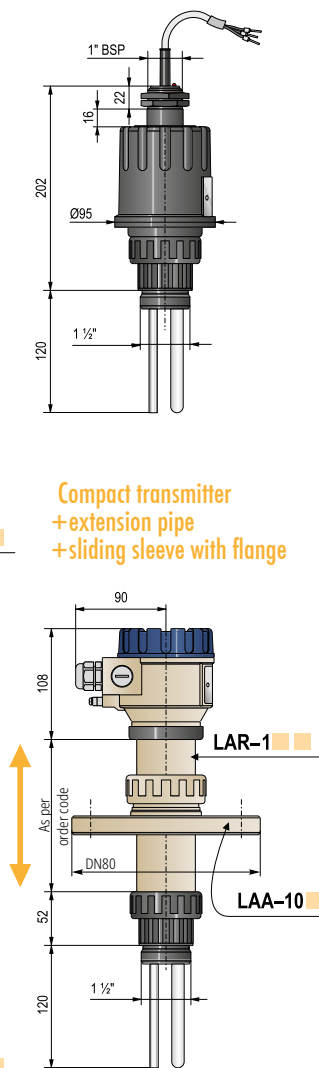
Using the accessories designed specifically for the AnaCONT family helps optimizing the installation of the transmitters making the installation process easier.

By using extension pipes and extension cables, the remote-mount versions allow the mounting of the electronics and the electrode part at any distance from each other.

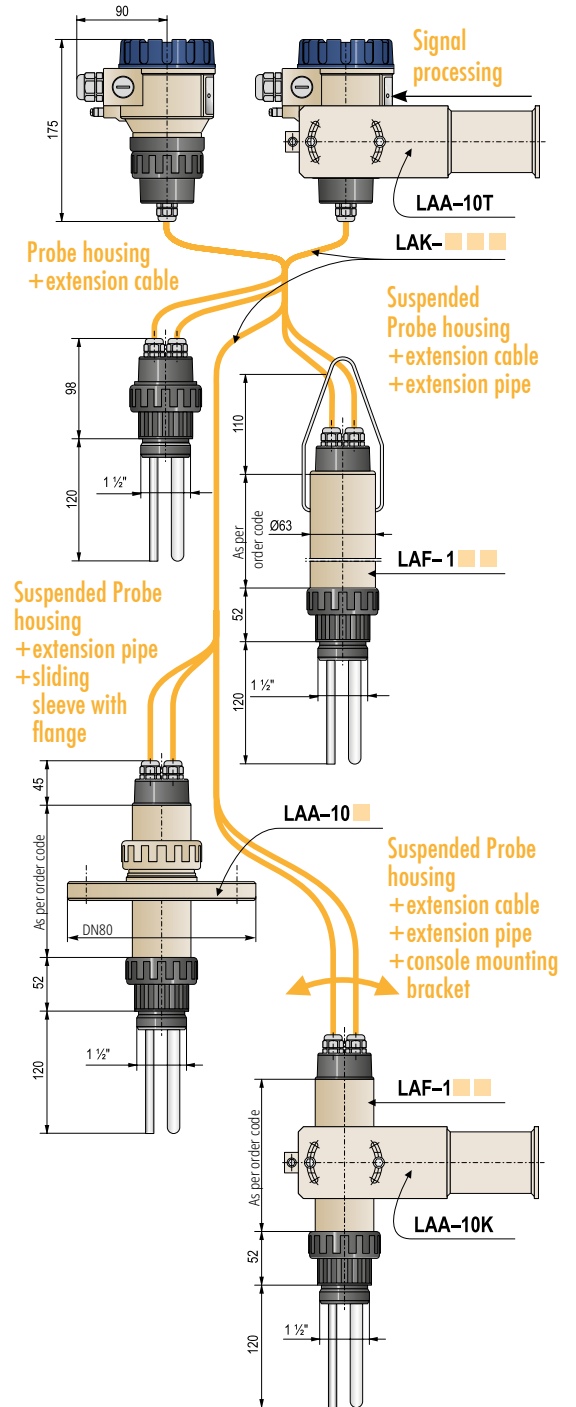
COMPACT TRANSMITTER



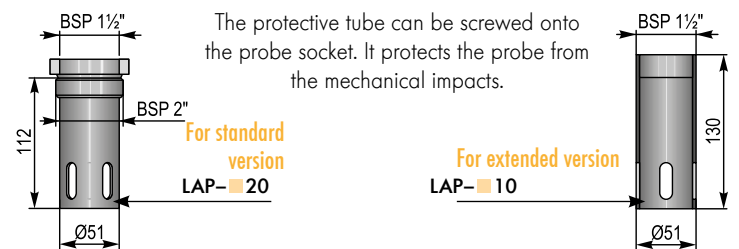
INTEGRATED TRANSMITTER



DETACHED COMPACT TRANSMITTER



PROTECTIVE TUBE



AnaCONT LEP-100 Compact

5 years

2-wire compact liquid analytical pH transmitter with 4...20 mA / 4...20 mA + HART® and relay output
pH measuring range: 1...14 pH, IP67/IP68 protection

Type

L	□	-	□	□	□	-	□
P	Compact pH transmitter						

Version

L	□	P	-	□	□	□	-	□
E	Transmitter							
G	Transmitter with plug-in display							

Housing

L	□	P	-	□	□	□	-	□
1	Fiberglass-reinforced plastic (PBT)							
2	Painted aluminum							

Probe: pH range / Max. pressure / Max. temperature / Medium

L	□	P	-	□	□	□	-	□
1	1...12 / 6 bar / +80 °C / with solid particles							
2	1...12 / 8 bar / +80 °C / clear fluid							
3	1...12 / 16 bar@+25 °C / 6 bar@+100 °C / with solid particles							
4	3...14 / 6 bar@+25 °C / 3 bar@+100 °C / clear fluid							
6	1...12 / 3 bar / +60 °C / clear fluid							
7	1...12 / 6 bar / +80 °C / clear fluid							
8	1...12 / 3 bar / +60 °C / clear fluid (horizontally mountable)							

Process connection / Material

L	□	P	-	□	□	□	-	□
1	1½" BSP / PP							
2	1½" BSP / PVDF							
4	1½" NPT / PP							
5	1½" NPT / PVDF							

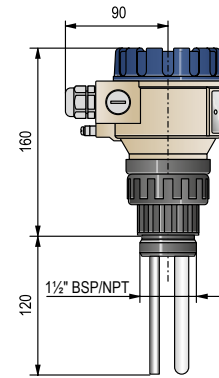
Output / Certificates

L	□	P	-	□	□	□	-	□
2	4...20 mA							
4	4...20 mA + HART®							
6	4...20 mA / Ex ia G							
8	4...20 mA + HART® / Ex ia G							
R	4...20 mA + Relay							
H	4...20 mA + HART® + Relay							

Accessories sold separately; see relevant page for details

S A P - 3 0 0 - 0	Graphic plug-in display module
S A T - 5 0 4 - □	HART®-USB/Bluetooth® modem
S A K - 3 0 5 - □	HART®-USB/RS485 modem

For further accessories see AnaCONT accessories



LEP-100

AnaCONT LPP-100 Integrated **5 years**

2-wire integrated liquid analytical pH transmitter with 4...20 mA + HART® and relay output
 pH measuring range: 1...14 pH, IP68 protection

Type

L P ■ - 1 ■ ■ - ■	
P	Integrated pH transmitter

Probe: pH range / Max. pressure / Max. temperature / Medium

L P P - 1 ■ ■ - ■	
1	1...12 / 6 bar / +80 °C / with solid particles
2	1...12 / 8 bar / +80 °C / clear fluid
3	1...12 / 16 bar@+25 °C / 6 bar@+100 °C / with solid particles
4	3...14 / 6 bar@+25 °C / 3 bar@+100 °C / clear fluid
6	1...12 / 3 bar / +60 °C / clear fluid
7	1...12 / 6 bar / +80 °C / clear fluid
8	1...12 / 3 bar / +60 °C / clear fluid (horizontally mountable)

Process connection / Material

L P P - 1 ■ ■ - ■	
1	1½" BSP / PP
2	1½" BSP / PVDF
4	1½" NPT / PP
5	1½" NPT / PVDF

Output / Certificates

L P P - 1 ■ ■ - ■	
4	4...20 mA + HART®
8	4...20 mA + HART® / Ex ia G
H	4...20 mA + HART® + Relay

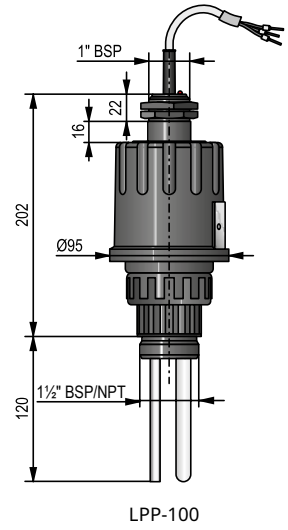
Cable

Max. length 30 m; sold by the meter over the standard 5 m
 LPP-1_ _-8 Ex version comes with a 5 m cable only

Accessories sold separately; see relevant page for details

S A T - 5 0 4 - ■	HART®-USB/Bluetooth® modem
S A K - 3 0 5 - ■	HART®-USB/RS485 modem
P ■ F - 1 ■ - ■	Smart Field Display and Data Logger
P ■ F - 0 1 - ■	Loop Display

For further accessories see AnaCONT accessories



AnaCONT LER-100 Compact

5 years

2-wire compact liquid analytical ORP (redox potential) transmitter with 4...20 mA / 4...20 mA + HART® and relay output; ORP measuring range: ±1000 mV, IP67/IP68 protection

Type

L - -

R ORP transmitter

Version

L - -

E Transmitter

G Transmitter with plug-in display

Housing

L - -

1 Fiberglass-reinforced plastic (PBT)

2 Painted aluminum

Probe: Min. conductivity / Max. pressure / Max. temperature / Medium

L - -

1 50 µS/cm / 6 bar / +80 °C / with solid particles

2 500 µS/cm / 16 bar@+25 °C / 6 bar@+100 °C / with solid particles

4 150 µS/cm / 3 bar / +60 °C / clear fluid

5 150 µS/cm / 6 bar / +80 °C / clear fluid

6 150 µS/cm / 3 bar / +60 °C / clear fluid (horizontally mountable)

Process connection / Material

L - -

1 1½" BSP / PP

2 1½" BSP / PVDF

4 1½" NPT / PP

5 1½" NPT / PVDF

Output / Certificates

L - -

2 4...20 mA

4 4...20 mA + HART®

6 4...20 mA / Ex ia G

8 4...20 mA + HART® / Ex ia G

R 4...20 mA + Relay

H 4...20 mA + HART® + Relay

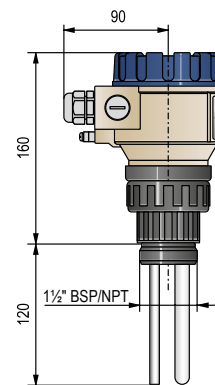
Accessories sold separately; see relevant page for details

S A P - 3 0 0 - 0 Graphic plug-in display module

S A T - 5 0 4 - HART®-USB/Bluetooth® modem

S A K - 3 0 5 - HART®-USB/RS485 modem

For further accessories see AnaCONT accessories



LER-100 / 200

AnaCONT LPR-100 Integrated **5 years**

2-wire integrated liquid analytical ORP (redox potential) transmitter with 4...20 mA + HART® and relay output; ORP measuring range: ±1000 mV, IP68 protection

Type

L P <input type="checkbox"/> - 1 <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/>	
R	Integrated ORP transmitter

Probe: Min. conductivity / Max. pressure / Max. temperature / Medium

L P R - 1 <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/>	
1	50 µS/cm / 6 bar / +80 °C / with solid particles
2	500 µS/cm / 16 bar@+25 °C / 6 bar@+100 °C / with solid particles
4	150 µS/cm / 3 bar / +60 °C / clear fluid
5	150 µS/cm / 6 bar / +80 °C / clear fluid
6	150 µS/cm / 3 bar / +60 °C / clear fluid (horizontally mountable)

Process connection / Material

L P R - 1 <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/>	
1	1½" BSP / PP
2	1½" BSP / PVDF
4	1½" NPT / PP
5	1½" NPT / PVDF

Output / Certificates

L P R - 1 <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/>	
4	4...20 mA + HART®
8	4...20 mA + HART® / Ex ia G
H	4...20 mA + HART® + Relay

Cable

Max. length 30 m; sold by the meter over the standard 5 m
LPR-1_8 Ex version comes with 5 m cable only

Accessories to order (see relevant page for details)

S A T - 5 0 4 - <input type="checkbox"/>	HART®-USB/Bluetooth® modem
S A K - 3 0 5 - <input type="checkbox"/>	HART®-USB/RS485 modem
P F - 1 <input type="checkbox"/> - <input type="checkbox"/>	Smart Field Display and Data Logger
P F - 0 1 - <input type="checkbox"/>	Loop Display

For further accessories see AnaCONT accessories

