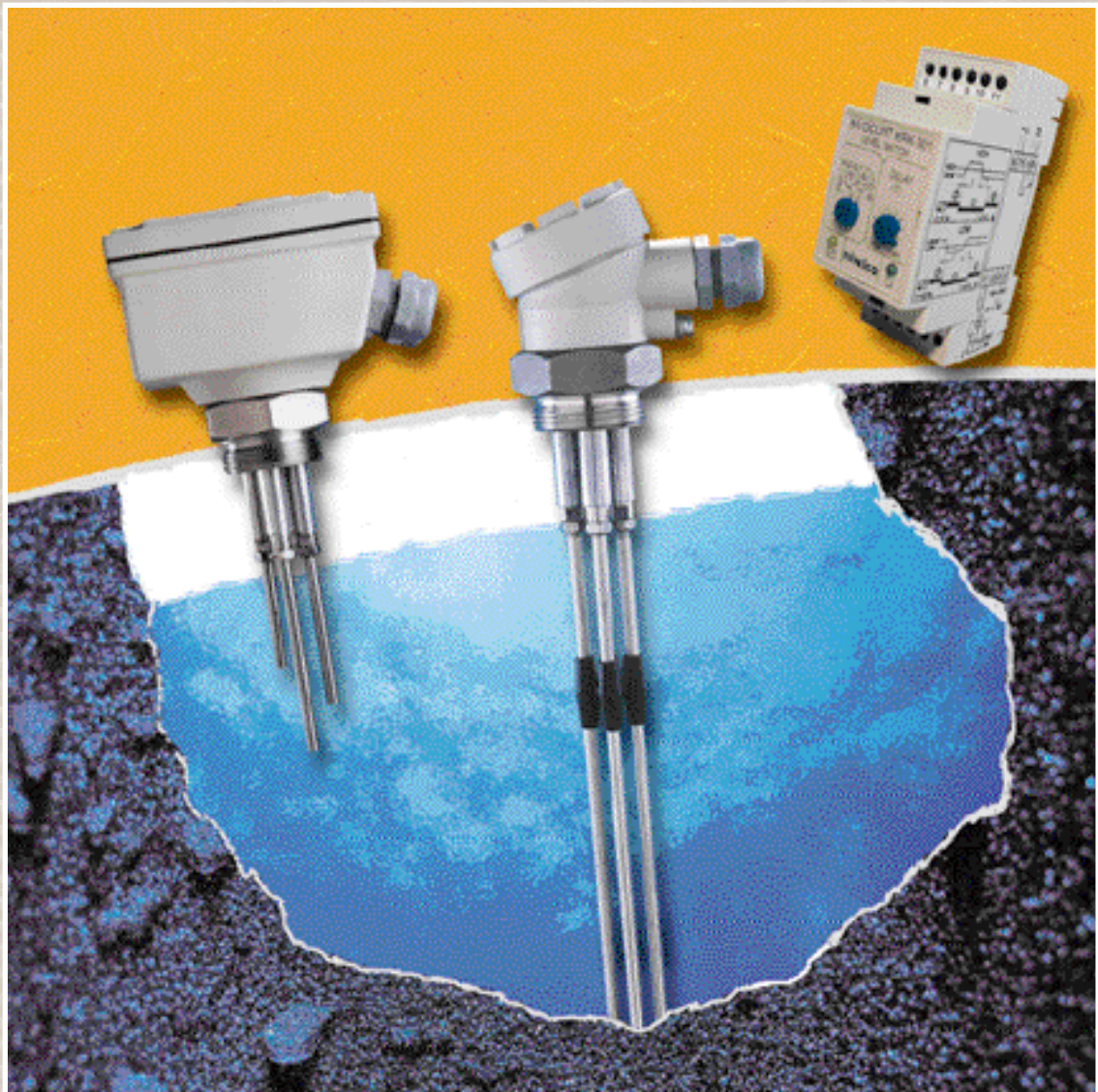




NIVOCONT

CONDUCTIVE LEVEL SWITCHES



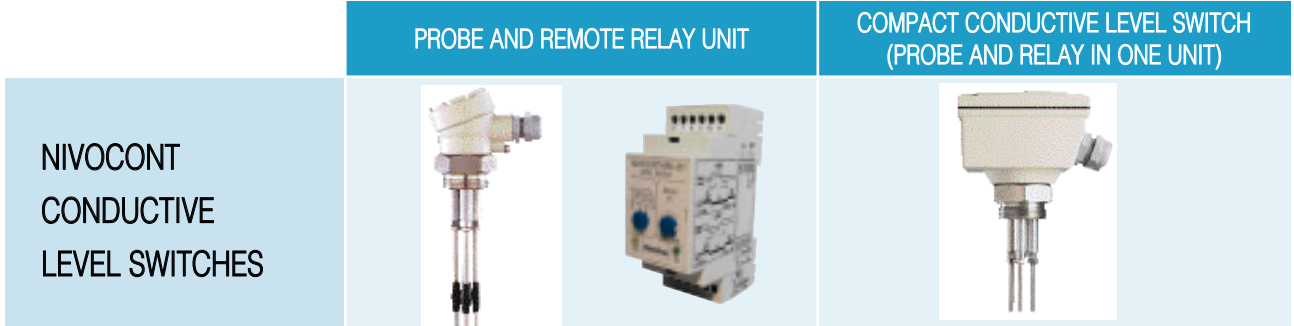
OUR PROFESSION IS YOUR LEVEL

GENERAL

Level switches based on the conductivity principle can be applied to liquids with conductivity higher than 20 $\mu\text{S}/\text{cm}$.

For detecting the level, probes are immersed into the tank. These probes (and the conductive tank wall) serve as contacts of an electric circuit.

The connection will be established by the conductive liquid, which will be converted to an output signal. Instruments can be equipped with maximum 4 probes and an additional reference probe for cases of non-conductive tank wall. Their length should be in accordance with the level to be detected.



FEATURES

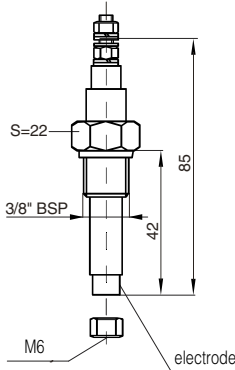
KRK-301	KRK-302	KKH-102
<ul style="list-style-type: none"> ◆ Suitable for single point level switching ◆ Low or high fail safe ◆ Selectable NO/NC relay function ◆ Selectable sensitivity ◆ Output and power ON indication ◆ 1 electrode + reference* is required ◆ Switch on/off delay 	<ul style="list-style-type: none"> ◆ Suitable for differential level switching ◆ Pump control ◆ Selectable NO/NC relay function ◆ Selectable sensitivity ◆ Output and power ON indication ◆ 2 electrodes + reference* are required ◆ Switch on/off delay 	<ul style="list-style-type: none"> ◆ Probe and relay in one unit ◆ 2 independent relay outputs for pump control or differential level switching ◆ Selectable NO/NC relay function ◆ Switch on/off delay ◆ Adjustable sensitivity

* In unlined metallic tanks, the tank wall serves as reference electrode.

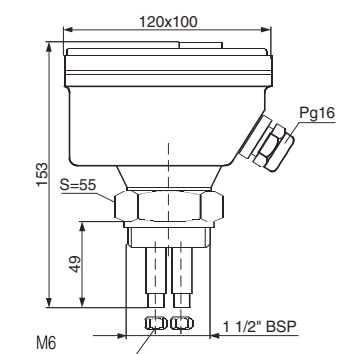
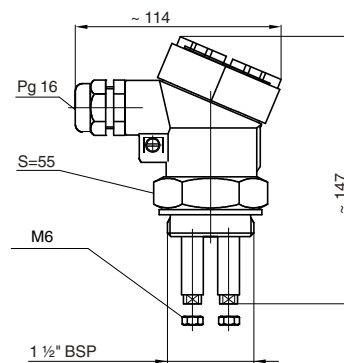
PROBES

COMPACT CONDUCTIVE LEVEL SWITCH

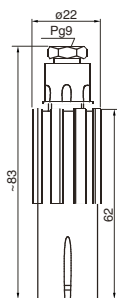
Single probe socket



Multi probe socket

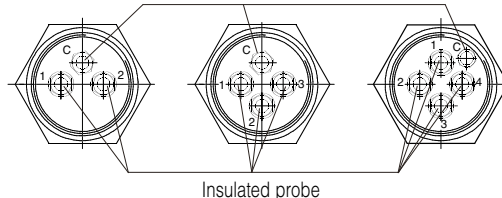


Submersible probe



KSK-201

Uninsulated reference probe

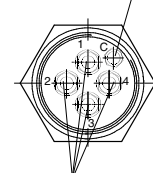


KSH-202

KSH-203

KSH-204

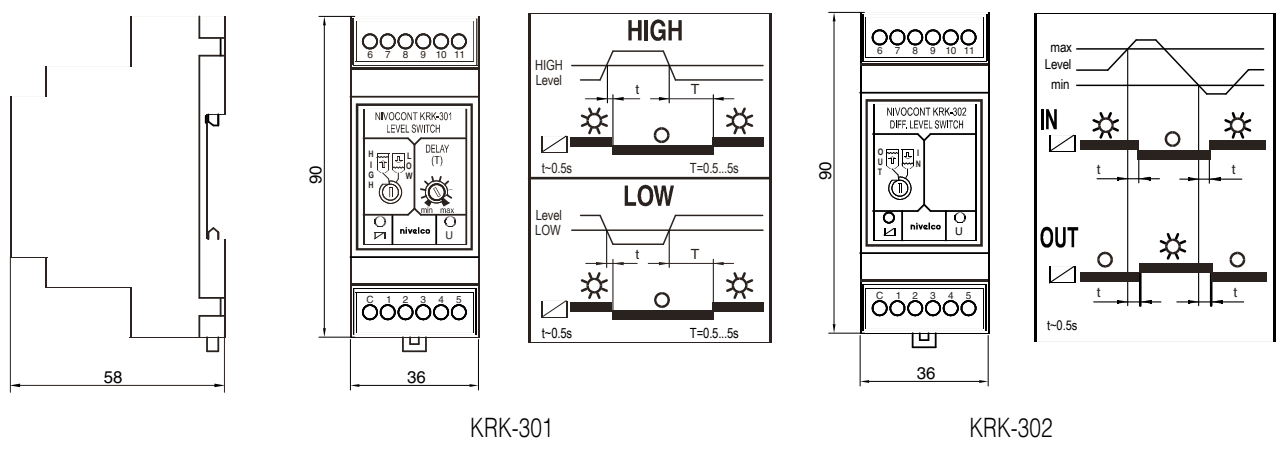
Uninsulated reference probe



Insulated probes

KKH-102

REMOTE RELAY UNITS

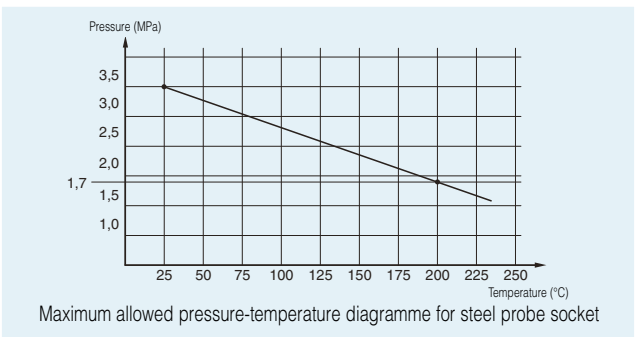
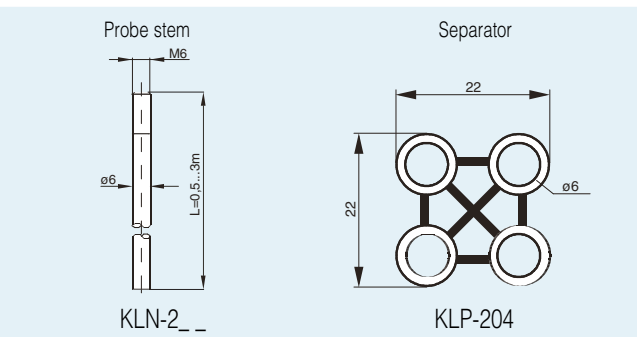


KRK-301

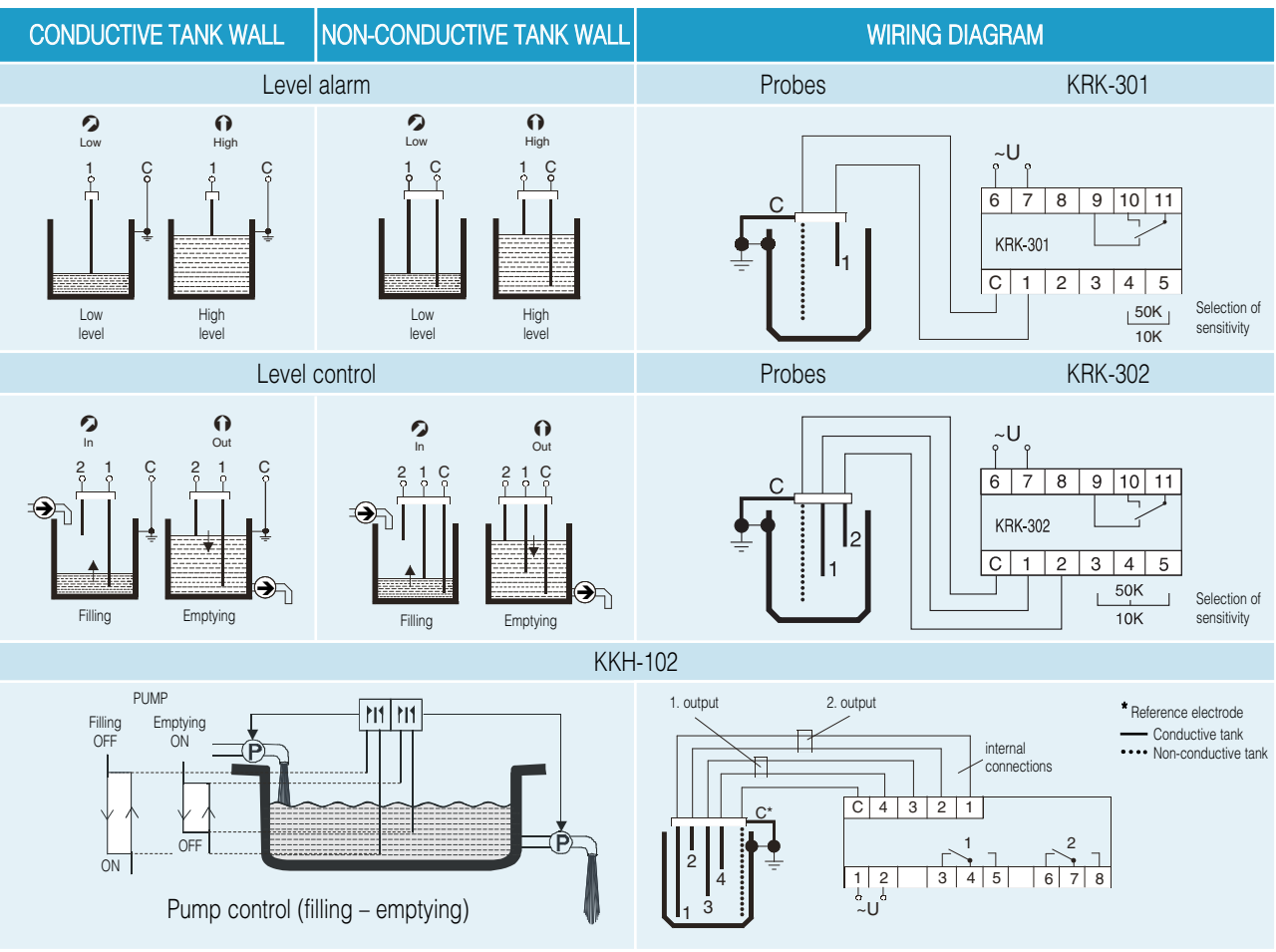
KRK-302

ACCESSORIES

DERATING DIAGRAMME



APPLICATION EXAMPLES



TECHNICAL DATA

PROBES	SINGLE PROBE			MULTI PROBE			SUBMERSIBLE
	KSP-201	KSS-201	KSN-201	KSH-202	KSH-203	KSH-204	KSK-201
Number of probe stems	1			2 + reference	3 + reference	4 + reference	1
Probe socket material	PP	alloy carbon steel	1.4571	1.4571			1.4571
Housing	-			Alucast			PP
Insulation	PP	PFA			-		
Temperature	-20 °C...+80 °C	-20 °C...+200 °C / see derating diagram				-20 °C...+80 °C	
Pressure	max. 0.3 MPa	max. 1.6 MPa				-	
Process connection	3/8" BSP			1 1/2" BSP			with integrated cable
Electrical connection	M6, with rubber cap			1xPg 16			1xPg 9
Ingress Protection	IP 20			IP 65			-
Weight (w.o. probe)	0.1 kg			0.4 kg			0.04 kg

RELAY UNITS	KRK-301	KRK-302
Power supply	24, 110, 230V AC, 50/60 Hz, ±10%	
Consumption	< 4 VA	
Probe voltage	20 V AC	
Probe current	max. 1.2 mA	
Output	1 pc. SPDT relay, 250 V AC, 8A, AC1	
Ingress protection	IP 20	
Electrical protection	Class II	
Ambient temperature	-10°C...+55°C	
Sensitivity	selectable: max. 50 kΩ / max. 10 kΩ	
Switch ON time delay	0.5-5 sec	0.5 sec
Switch OFF time delay	0.5 sec	0.5 sec
Connection	DIN EN 50022-35 rail	
Weight	0.21 kg	

COMPACT UNIT	KKH-102	
Probes	4 insulated + reference probe	
Liquid temperature	-15 °C ... +120 °C	
Pressure	max. 1,6 MPa	
Ambient temperature	-15 °C ... +80 °C	
Relay contact	2 pcs. SPDT relay 250 V AC, 8A, AC1	
Sensitivity	Adjustable, 35...50 kΩ	
Probe voltage	24 V AC	
Probe current	max. 0.45 mA	
Supply voltage	24/110/230 V AC, +10% -15%, 50/60 Hz	
Power consumption	< 4 VA	
Housing	Alucast	
Material of wetted parts	Process connection	Stainless Steel 1.4571
	Insulation	PFA
	Probe	Stainless Steel 1.4571
Process connection	BSP 1 1/2"	
Electrical connection	2 x Pg16 for Ø 8 to 15 mm cables; 0.75 to 2.5 mm ² wire cross section	
Electrical protection	Class I	
Ingress protection	IP 65	
Weight	0.6 kg (without probe stems)	

ORDER CODES

Probe

NIVOCONT K S - 2 0

TYPE	CODE	NUMBER OF POLES	CODE
Single probe, PP socket	P	1 pc.	1
Single probe, alloy carbon steel socket	S	2 pcs. + reference probe	2
Single probe, 1.4571 socket	N	3 pcs. + reference probe	3
Multi probe, 1.4571 socket	H	4 pcs. + reference probe	4
Submersible	K		

Relay Unit

NIVOCONT K R K - 3 0 -

FUNCTION	CODE	POWER SUPPLY	CODE
Limit switch	1	230V AC	1
Level control	2	110V AC	2
		24V AC	3

Probe stem

NIVOCONT K L N - 2

LENGTH *	CODE
0.5 m ... 3 m	05 ... 30

* with steps of 0.5 m

Separator

NIVOCONT KLP-204

Compact Switch

NIVOCONT KKH-102