



NIVOCONT

CONDUCTIVE LEVEL SWITCH

New type!



- ◆ Level switch for conductive liquids
- ◆ Control of filling and emptying
- ◆ Minimum or maximum monitoring
- ◆ 10 $\mu\text{S}/\text{cm}$ minimum conductivity
- ◆ Delay for switching in and out
- ◆ Double insulated circuit
- ◆ Double relay output

ABOUT NIVOCONT

The NIVOCONT KRK – 402 type conductive level switch of NIVELCO Process Control Co. is the electronic signal-processing unit of remote switching systems of conductive liquids. The signal-processing unit provides voltage to the level sensor probes. When the level of the liquid to be measured reaches the probes, it induces conductivity, the circuit closes and the output relay changes its state: it pulls or lets go. The conductivity of the liquid has to be greater than 10 $\mu\text{S}/\text{cm}$ in order to accomplish a measurement with KSH probes. The minimal conductivity between the probes can be set with a potentiometer on the front panel between the values of 0,25 k Ω ...100 k Ω [4 mS...10 μS]. The level sensor probe can be any conductive metal that is isolated from the metal container.

It is advisable to choose the NIVELCO KSN–201, KSS–201, KSP–201 type single, or KSH–202, KSH–203, KSH–204 type multiple probe sensors. The KRK–402 type sensor replaces the previously manufactured KRK–301 and KRK–302 types.

The technical data of the probes can be found in the kr30s02a0605b data sheet of NIVOCONT conductive level switches of NIVELCO Co.

A maximum of 3 probes can be connected to the NIVOCONT KRK-402 type signal-processing electronics unit: a maximum of 2 pieces of level sensor probes and 1 reference probe.

The following types of switching can be achieved:

- low level switch
- high level switch
- filling control
- emptying control

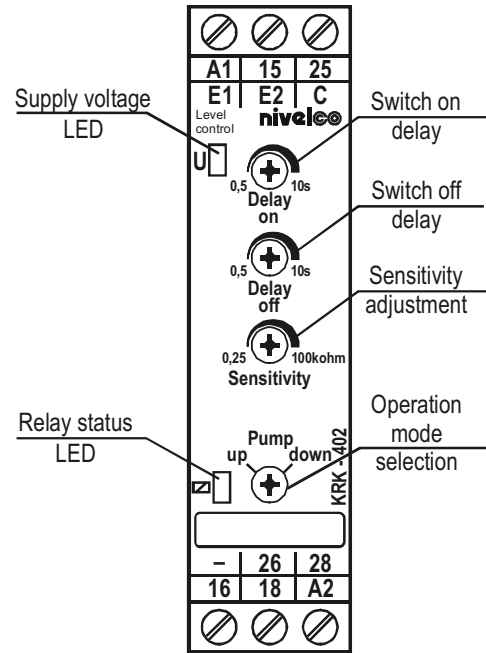
The operation and the switching of the output relay on and off can be delayed by 0,5 s to 10 s.

The electronics disregard the level crossing that is shorter than the delay (a wave for example).

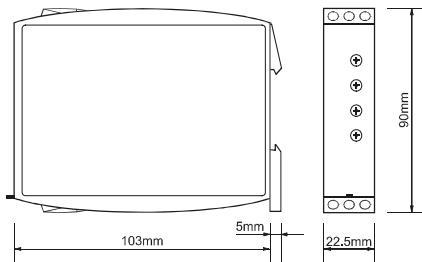
TECHNICAL DATA

TÍPUS	KRK-402-□
Operation mode / Input	Level limit switch: / 1 sensor + 1 ref. probe level control / 2 sensors + 1 ref. probe
Probe voltage	max. 16 V AC
Probe current	max. 7 mA
Sensitivity	adjustable: 0,25 kΩ ... 100 kΩ (4 mS... 10μS)
Switch on delay	adjustable: 0,5 s ... 10 s
Switch off delay	adjustable: 0,5 s ... 10 s
Output	2 relays (DPDT)
Maximum resistance	250V AC, 5A, 1250 W for devices mounted more than 5 mm apart
Insulation voltage	4000 V 50 Hz
Mechanical life span	20 x 10 ⁶ switching
Electrical life span	2 x 10 ⁶ switching
Nominal supply voltage	24, 110, 230 V AC, 50...60 Hz based on ordering code
Supply voltage range	A nominal voltage -15% ... +10%-a
Power consumption	< 2 VA
Ambient temperature	- 25 °C ... + 55 °C
Electric connection	0,5 ... 2,5 mm ² or 2 x 0,5...1,5 mm ² wire
Electric protection	II. class increased insulation
Mechanical protection	IP 40
Mechanical connection	Mounting on DIN rail 35 (EN 50022)
Mass	~ 0,2 kg

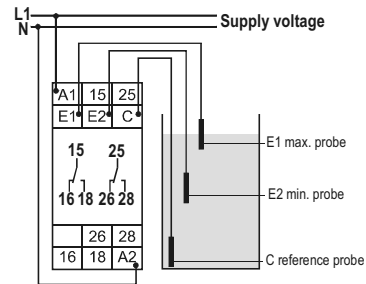
FRONT PANEL



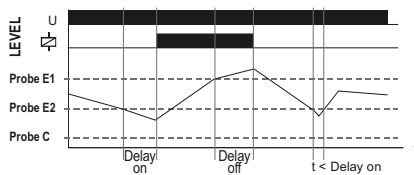
DIMENSIONS



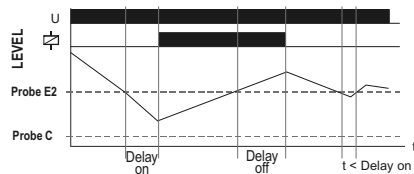
WIRING



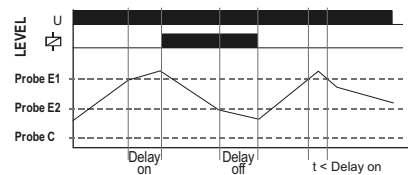
OPERATION MODE



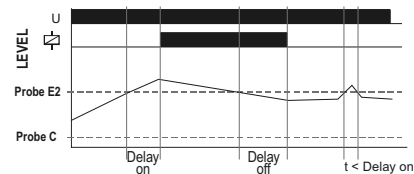
Filling control with switch on/off delay
Operation mode selector switch in Pump up state



Low level signal with switch on/off delay
Operation mode switch in Pump up state



Emptying control with switch on/off delay
Operation mode selector switch in Pump down state



High level signal with on/off switch delay
Operation mode switch in Pump down state

ORDERING CODE

NIVOCONT K R K - 4 0 2 - □

POWER SUPPLY	CODE
230 V AC	1
110 V AC	2
24 V AC	3