

## Float switch KR1 Ex



The KR1 electronic Ex float switch can be used with a certified, intrinsically safe circuit electrical system for the control and regulation of liquid levels in Zone 0, 1 and 2 Ex- areas and in the presence of gas groups IIA, IIB and IIC, for which there is a risk of explosion when these gases are in contact with flammable materials and exposed to temperatures in the range T1 - T6.

### Technical data:

Ex -classification:  $\text{Ex II 1G Ex ia IIC T6 Ga}$   
 Current / Ii: 100mA  
 Voltage / Ui: 40 V  
 Ambient temperature: -20°C ... +80°C  
 Protection class: IP68 / 2 bar  
 Li / Ci: Ci = 0 nF + 0,11 nF/m (connector cable)  
 Li = 0 µH + 0,35 µH/m (connector cable)

### EC Declaration of Conformity

according to  
 The appropriate ATEX and IECEx guidelines as well  
 as the EG Directiv RoHS 2002 / 95 / EC

We  
 NOLTA GmbH  
 35091 Coelbe

hereby declare, that the products we manufacture conform in conception, design and circulated model to the relevant basic health, safety and environmental protection requirements of EC directives. If any changes are made to the float switch without our prior consent, this declaration loses its validity.

Product: Float switch  
 Type: KR 1 EX  
 EX – Protective system:  $\text{Ex II 1G Ex ia IIC T6 Ga}$   
 EC – type examination certificate: SEV 13 ATEX 0103  
 IECEx-certificate: IECEx SEV 13.0002  
 Notified body: (1258)  
 Electrosuisse Testing and Certification  
 8320 Fehraltorf  
 Switzerland (CH)  
 Applied harmonised EC-Norms: • EN 60079-0  
 • EN 60079-11  
 • EN 60079-26  
 Application: in intrinsically safe electrical circuits in  
 EX-Zone 0. 1 and 2

Coelbe, 30.09.2013

Dr.-Ing. Jochen Knake / Managing director

Wolfgang Seip / Quality manager

## Electrical installation

### Installation:

The float switch is a 2-point regulator. The difference between cut-in and cut-off points is determined by the length of free cable between switch box and attachment point, e.g. on the conduit or as determined by any special cable weight.

It is very important to ensure that the float switch can hang freely, does not lie on the ground, can operate without interference from shaft walls, piping or fittings etc. and is not directly in the liquid flow.

The power cable of the float switch should be carefully laid along its entire length to prevent any risk of mechanical damage. It must also be ensured that liquid and moisture cannot penetrate cable ends.

In order to avoid the risk of the build up of an electrostatic charge, the casing of the float switch must be connected to the equipment's potential equalization system using the potential equalization conductor in the connection cable.

### Electrical installation:

The use of a circuit breaker is necessary in the Ex - Areas Zone 0, 1 and 2.

Ensure the electrical unit is switched off before connecting the switch to the power supply, and prior to any repair or maintenance work.

Switches should only be installed by a qualified electrician. Please install in accordance with the instructions provided in the table to the left.

### Maintenance:

If float switches are installed and assembled correctly, they will function perfectly for years and will require next to no maintenance.

Depending on the degree of soiling in the medium, it may be necessary to check the system occasionally and clean float switches if necessary.

Connection of float switches	To empty	grey	black	brown	yellow / green
		isolate	X	X	to ground
	Alert at high liquid level	X	isolate	X	
		isolate	X	X	
Alert at low liquid level	X	isolate	X		
	isolate	X	X		