NOLTA

Level controller MS1 EX

Operation and installation manual

The MS1 EX float switch can be used in a certified, intrinsically safe circuit electrical system for the control and regulation of liquid levels in Zones 0, 1 and 2 Ex- areas. It can also be used in the presence of gas groups IIA, IIB and IIC, where there is a risk of explosion when these are in contact with flammable materials and exposed to temperatures in the range T1 - T6.

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Characteristics

Technical data:

Ex classification:	Ⓔx 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:	0 nF + 0.11 nF/m (connection cable)
Ci:	0 µH + 0.35 µH/m (connection cable)

EC Declaration of Conformity
according to
ATEX and IECEx Directives
EC Directive RoHS 2002 / 95 / EC

We
NOLTA GmbH
35091 Cölbe

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

Product:	Level controller
Type:	MS 1 EX
EX – Protective system:	Ⓔx II 1G Ex ia IIC T6 Ga
EC – type examination certificate:	SEV 13 ATEX 0102
IECEx-certificate:	IECEx SEV 13.0001
Notified body:	(1258) Electrosuisse Testing and Certification 8320 Fehraltorf Switzerland
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, 28.10.2013

Dr.-Ing. Jochen Knake / Managing director

Wolfgang Seip / Quality manager

Electrical installation

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

Installation:

The level controller is freely suspended from a highly flexible, heavy-duty cable and set at the required level ”On, Off and Alarm”. The position of the level controller changes with the rise and fall of the water level. A micro switch opens and closes the circuit, switching a pump on or off or triggering an alarm. One level controller is required respectively for each switching impulse.
It is very important to ensure that the float switch can hang freely, does not lie on the ground, can operate without interference by 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. Also ensure that moisture cannot penetrate cable ends.
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:

Important: For installation in EX-Zones 0,1 and 2 the use of an intrinsically safe electrical circuit relay is mandatory.

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 an appropriately qualified electrician.
Please install in accordance with the instructions provided in the table to the left.

Maintenance:

If level controllers are installed and assembled correctly, they will function 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 as necessary.