

Level switch NS 1/GFK-xx

High operating reliability with low maintenance requirements is one of the most important requirements for modern plants and systems. That's why standards now also mandate electric monitoring of fluid levels.

The NS 1/GFK-MS (-VA) level switches are a particularly low-cost way to meet these requirements in more areas of mechanical and plant engineering. The materials used (GFK, hard PU and brass) offer good strength and resistance against strain and fluids. The heavy-duty, bistable reed contacts are mounted on a perforated rail inside the switching tube and can be adjusted. The shortest distance between two contacts is 80 mm (3.15"). Subsequent adjustment or replacement of the contacts can be carried out without removing the switch from the tank.

Level/temperature

Adjustable level contacts

Bistable = only one float

Particularly buoyant float

Connector standard

Easy installation

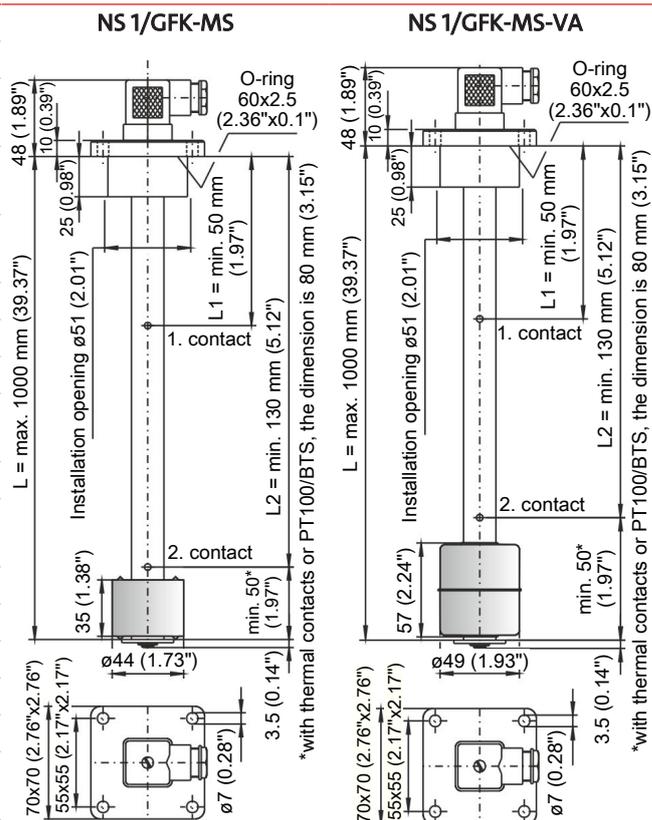
Maintenance free



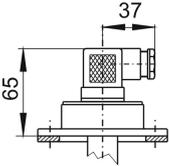
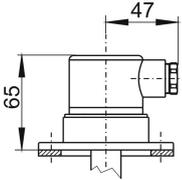
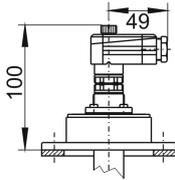
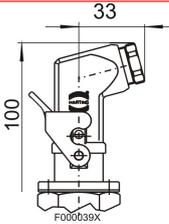
Technical data

Basic Unit		
Version	NS 1/GFK-MS	NS 1/GFK-MS-VA
Max. operating pressure:	1 bar (14.5 psi)	1 bar (14.5 psi)
Max. operating temperature:	80 °C (176 °F)	120 °C (248 °F)
Min. fluid density:	0.8 kg/dm ³ (0.029 lb/in ³)	0.8 kg/dm ³ (0.029 lb/in ³)
Lengths:	350 (13.78"), 500 mm (19.69") (standard), variable to max. 1000 mm (39.37")	
Material		
Switching tube:	MS	MS
Flange:	GFK	GFK
Float:	Rigid PU (SK 601)	1.4571 (SK 221)
Level contacts		
	K6	W7
Function:	NC/NO*	Changeover contact
min. contact spacing:	80 mm	80 mm (3.15")
Max. operating voltage:	230 V AC/DC**	230 V AC/DC**
Max. switching current:	1 A	1 A
Contact load:	50 VA	40 VA
Level contacts		
	K10	W11
Function:	NC/NO*	Changeover contact
min. contact spacing:	40 mm (1.57")	40 mm (1.57")
Max. operating voltage:	230 V AC/DC**	48 V AC/DC**
Max. switching current:	0.5 A	0.5 A
Contact load:	10 VA	20 VA
*NC = NC contact/NO = NO contact		
**when configured with temperature transmitter KT max. 30 V DC		
All data with empty tank .		
Temperature contacts		
	TKÖ	TKS
Max. operating voltage:	230 V AC	230 V AC
Max. switching current:	2 A	2 A
Max. contact load:	100 VA	100 VA
Function		
	NC*	NO*
Switching point °C (°F):	50/60/70 (122/140/158)	50/60/70 (122/140/158)
Max. hysteresis:	15 K ± 5 K	15 K ± 5 K
*NO = NO contact / NC = NC contact		
Data for rising temperature .		
Other temperatures and versions available upon request.		
Temperature signal		
Temperature sensor:	Pt100 tolerance ± 0,8 °C (1.44 °F)	
Resistance thermometer	BTS tolerance ± 1.4 °C	
Temperature transmitter KT		
Sensor element:	Pt100 Class B, DIN EN 60751	
Measuring range:	0 °C to +100 °C (32 °F to 212 °F)	
Operating voltage (U _B):	10–30 V DC	
Output:	4–20 mA	
Max. burden Ω:	= (U _B - 7.5 V) / 0.02 A	
Accuracy:	± 1 % from end value	
Other measuring ranges available upon request		

Dimensions



Plug connections

Connector	M3	S6	C6F	C7
Dimensions				
Number of pins	3-pin + PE	6-pin + PE	6-pin + PE	7-pin + PE
DIN EN	175301-803		175301-804	175301-801
Voltage max.	230 V AC/DC	230 V A/DC	230 V A/DC	230 V AC/DC
IP rating	IP65	IP65	IP65	IP65
Cable fitting	PG 11	M20 x 1.5	PG 11	PG 11
Level/temperature contacts	- / - - / -	3 x K6 (K10) 1 x W7 (W11)	3 x K6 (K10) 1 x W7 (W11)	4 x K6 (K10) 2 x W7 (W11)
Level contacts only	2 x K6 (K10) 1 x W7 (W11)	5 x K6 (K10) 2 x W7 (W11)	4 x K6 (K10) 2 x W7 (W11)	6 x K6 (K10) 3 x W7 (W11)

Ordering instructions

NS 1/GFK-□□-□□-nn-nn-□□-□□

<p>Type designation</p> <p>Version MS Brass VA float and immersion tube</p> <p>Plug connector M3 S6 C7 C6F</p> <p>Length in mm/inch (max. 1500/59.06") 280 (11.02") Standard lengths 370 (14.57") 500 (19.69") nn variable, please specify value</p> <p>Level measurement 1-4 Number of contacts</p>	<p>1. Temperature signal</p> <table border="0"> <tr> <td></td> <td><i>NC contact</i></td> <td><i>NO contact</i></td> </tr> <tr> <td>TK...</td> <td>TK50NC</td> <td>TK50NO = 50 °C (122 °F)</td> </tr> <tr> <td></td> <td>TK60NC</td> <td>TK60NO = 60 °C (140 °F)</td> </tr> <tr> <td></td> <td>TK70NC</td> <td>TK70NO = 70 °C (158 °F)</td> </tr> <tr> <td></td> <td>TK80NC</td> <td>TK80NO = 80 °C (176 °F)</td> </tr> </table> <p>Pt100 Temperature sensor ¹⁾ KT Temperature transmitter ^{1) 2)} BTS Resistance thermometer ¹⁾</p> <p>Level contact K Model K6/K10 (NC/NO) W Model W7/W11 (change-over contact)</p>		<i>NC contact</i>	<i>NO contact</i>	TK...	TK50NC	TK50NO = 50 °C (122 °F)		TK60NC	TK60NO = 60 °C (140 °F)		TK70NC	TK70NO = 70 °C (158 °F)		TK80NC	TK80NO = 80 °C (176 °F)
	<i>NC contact</i>	<i>NO contact</i>														
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	TK80NC	TK80NO = 80 °C (176 °F)														

¹⁾ cannot be combined with temperature contact.
²⁾ with KT only 10 - 30 V DC
³⁾ for version with 2 temperature contacts.

Ordering example

You need: Version NS 1/GRP-MS, plug connection S6, length L= 500 mm (19.69"), 2 level contacts, 1st contact 100 mm (3.94") NC, 2nd contact 450 mm (17.72") NO
 You order: Item no.: 1005299, NS 1/GFK-MS, 2 x kontakt K8 (1893999) L1 = 100 NC, L2 = 450 NO

Consumables and accessories

Item no.	Description
1251000	O-ring ø60x2.5 (2.36"x0.1")