

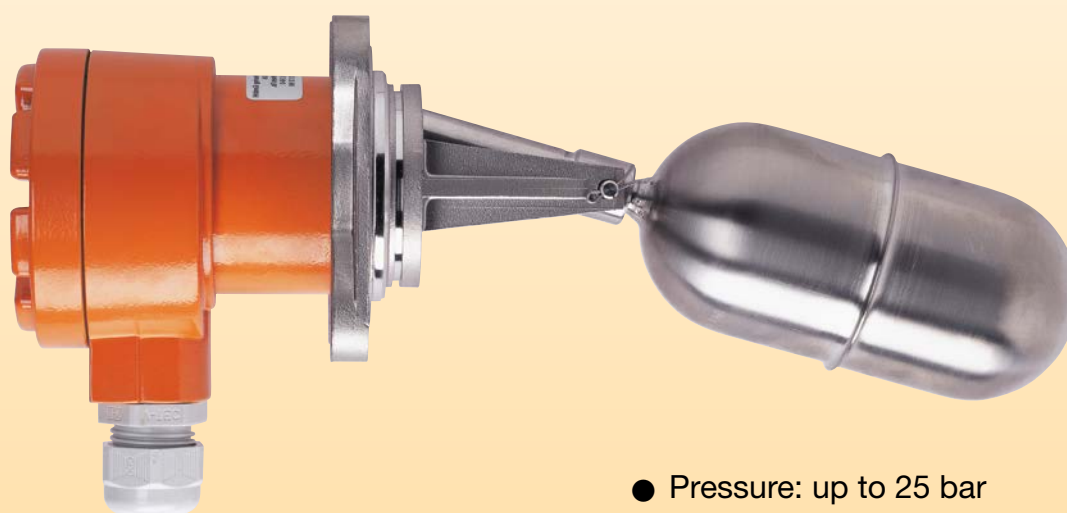


Dual-Magnet Float Switch



measuring
•
monitoring
•
analysing

NGS



- Pressure: up to 25 bar
- Medium temperature: up to 250 °C
- Density: >0.7 kg/dm³
- High switch capacity
- ATEX design
- Approval by
»Germanischer Lloyd«
- Connection:
square flange, DIN flange, BSP, NPT
- Material: stainless steel 1.4571



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Method of Operation

As the level rises and falls the inclination of the float is changed causing a permanent magnet in the float to be deflected which in turn repels a rotatable opposing magnet. This forced snap-action-contact effect operates a microswitch with a plunger. Even very small changes in level can be detected in this way.

Special advantages

- Secure and wear-free sensitive switching by repelling magnets
- High switch capacity up to 10 A with microswitch
- Very rugged for tough environments
- No regular maintenance necessary
- Medium temperature up to 250 °C
- Wetted parts made of high-quality stainless steel
- No auxiliary power necessary

Application

Control and monitoring liquid levels in open and closed vessels, especially:

- Min. or Max. monitoring of liquid levels
- Monitoring and controlling a continuous liquid level
- When only side installation is possible due to lack of space or considerations of cost
- When a very rugged monitoring device is needed for tough environments
- When hazardous areas or shipbuilding approval is required.

Technical Data

NGS-1, horizontal mounting

Max. pressure: 25 bar
 Installation position: from side
 Differential: fixed, see diagram

NGS-3, vertical mounting

Max. pressure: 16 bar
 Installation position: from above
 Differential: adjustable

General

Medium temperature: -20 °C ... +250 °C*
 Ambient temperature: -20 °C ... +80 °C*
 Min. medium density: >0.7 kg/dm³ (see table)
 Wetted parts: stainless steel 1.4571
 Switch housing: aluminium casting, colour coated
 Flat gasket: Klingerit
 Fixed cable for submersible version: CR (Chloropren-caoutchouc)
 Process connection: square flange, DIN Flange, 2" BSP, 2" NPT
 Switching element: 1 microswitch with 2 switch contacts, changeover function
 Switch capacity: 250 V_{AC}, 10 A
 220 V_{DC}, 0.6 A
 ATEX: 250 V_{AC}, 2.5 A
 220 V_{DC}, 0.3 A
 Electrical connection: M20x1,5
 Protection: Standard version: NGS-2...: IP 65
 Submersible version: NGS-4...: IP 68 (max. 20 m WC)
 ATEX-approval: II 1/2 G EEx dme IIC T6...T2
 Other approvals: GL-approval
 Weight: approx. 2.5 kg

***Temperature Details of ATEX variants**

Class	T6	T5	T4	T3	T2
Process temperature	80 °C	95 °C	130 °C	200 °C	250 °C
Ambient temperature	-20 ... +60 °C	-20 ... +70 °C	-20 ... +80 °C	-20 ... +80 °C	-20 ... +80 °C

Density table (in dependance of arm length to float size)

Float Ø [mm]	Minimum liquid density [kg/dm ³]			
	Arm length 0-100	Arm length 200	Arm length 300	Arm length 1000-3000
52	0.7	0.8	0.85	-
64	0.7	0.8	0.8	-
120	-	-	-	0.7



Order Details (Example: **NGS-2 1 0 0**)

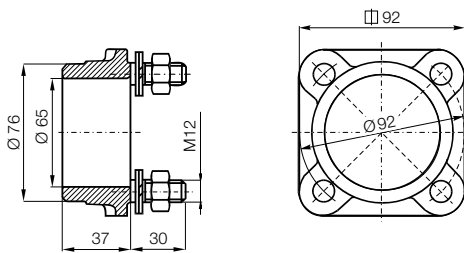
Model	Housing	Hysteresis, Installation type	Process connection	Arm length	Approval
NGS-	2 = standard 4 = submersible (with factory mounted cable**)	1 = fixed hysteresis standard (side installation) L arm (inst. from above) Z arm (side installation)	0 = 92 mm square flange PN 25 B = BSP 2" N = 2" NPT 1 = DN 80, PN 40, steel 2 = DN 100, PN 40, steel 5 = DN 80, PN 40, st. steel 1.4571 6 = DN 100, PN 40, st. steel 1.4571	0 = 0 mm 5 = 100 mm 6 = 200 mm 7 = 300 mm 8* = L or Z Arm, switch point and installation position acc. to customer specification	without = GL-approval Ex = ATEX- and GL-approval
	2 = standard	3 = adjustable hysteresis installation from above	0 = 92 mm square flange PN 25	5 = 1000 mm 6 = 2000 mm 7 = 3000 mm	

* In case of L or Z arm: please specify dimensions for the switchpoint (Lsh or Lsl) and the installation position (horizontal or vertical) in writing
 ** Please specify cable length in writing

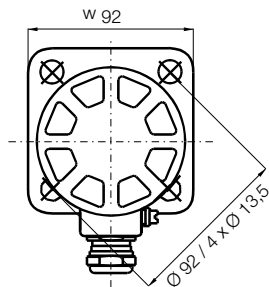
Accessory: Counter flange

Model	Material
NGS-MFF1	Counter flange, steel 1.7218
NGS-MFF2	Stainless steel 1.4404

Counter flange NGS-MFF_

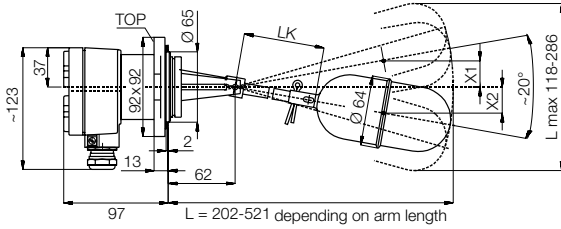


Square flange

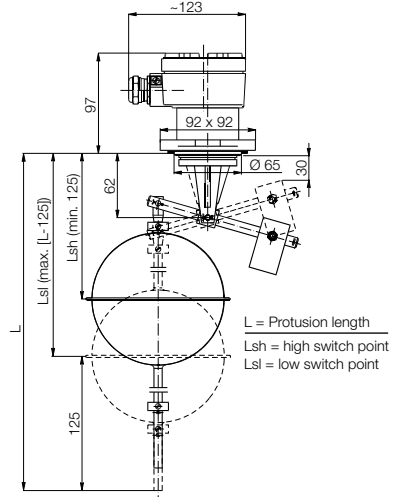


Dimensions [mm]

Fixed switch hysteresis, side installation



Adjustable hysteresis, installation from above

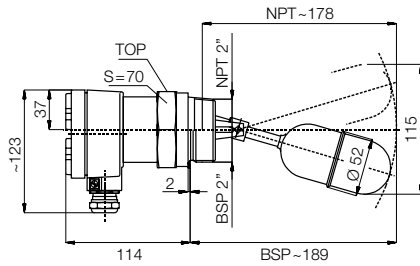


Switching data model NGS-21...

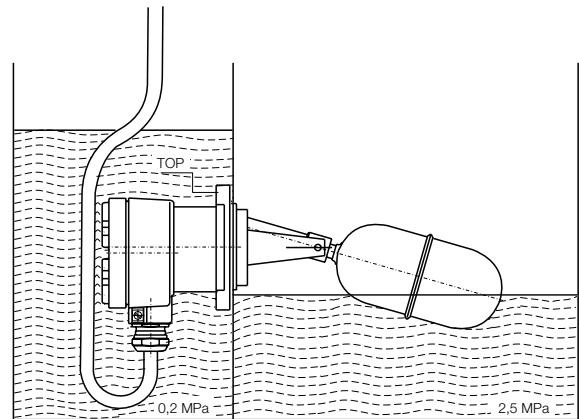
LK = linkage length	0	100	200	300
L = installation length	202	321	421	521
L _{max} = total swing	118	180	234	286
X1 = upper switch point	7	27	45	81
X2 = lower switch point	16	30	47	43

Note: The data apply to water at 20°C

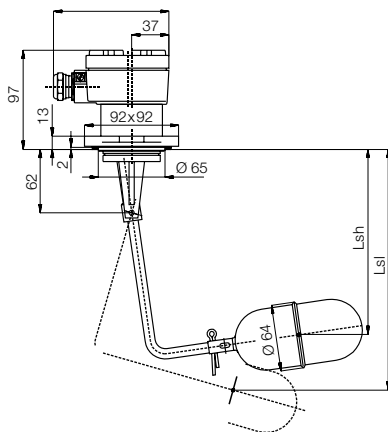
Process connection: BSP or NPT



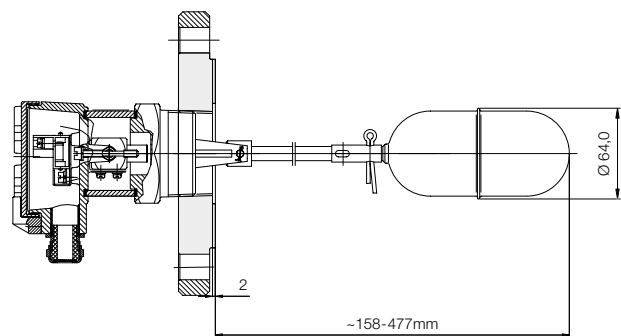
Submersible version



L arm, installation from above



Process connection: flange



Z arm, side installation

