

**NS**  
**FLOAT LEVEL SWITCHES**



Flow  
Pressure  
Level  
Temperature  
measurement  
monitoring  
control

**N1**



- 1 **For All Types of Liquids**
- 1 **Mercury Switch or Microswitch**
- 1 **Polypropylene, Polyethylene, Teflon® or SS Construction**
- 1 **Maximum Temperature: 320°F**
- 1 **Maximum Pressure: 220 PSIG**



**USA**

KOBOLD Instruments Inc.  
1801 Parkway View Drive  
USA-Pittsburgh, PA 15205  
% +1 412-788-2830  
Fax +1 412-788-4890  
E-mail: [info@koboldusa.com](mailto:info@koboldusa.com)



**CANADA**

KOBOLD Instruments Canada Inc.  
9A Aviation  
Pointe-Claire, QC H9R 4Z2  
% +1 514-428-8090  
Fax +1 514-428-8899  
E-mail: [kobold@kobold.ca](mailto:kobold@kobold.ca)

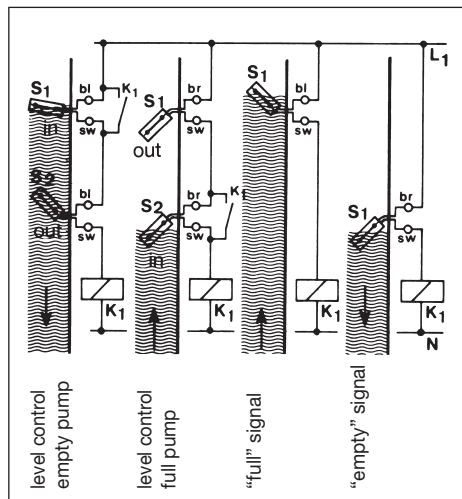
Visit KOBOLD Online at  
[www.kobold.com](http://www.kobold.com)

Model:  
**NS**

Kobold Series NSM, NSP, NSE and NST float switches enable liquid levels to be monitored easily. Filling levels may also be controlled by installing at least two floats, one as a minimum, the other as a maximum limit switch. The floats can be run to a latching relay (sold separately) for automatic level control.

These switches can be installed wherever magnetic liquid level switches are unsuitable due to the risk of the float jamming with dirt particles or coating.

Even extremely aggressive, hot, dirty or pulp-like media may be monitored with these float switches (depending on the shape and material of the float).



### Summary of Models

**Type NSM:**

**Material:** Polypropylene  
**Contact:** Microswitch  
**Maximum Temperature:** 140°F  
**Maximum Pressure:** 15 PSIG

**Type NSP:**

**Material:** Polyethylene  
**Contact:** Mercury Switch  
**Maximum Temperature:** 190°F  
**Maximum Pressure:** 30 PSIG

**Type NST:**

**Material:** Teflon®  
**Contact:** Mercury Switch  
**Maximum Temperature:** 320°F  
**Maximum Pressure:** 15 PSIG

**Type NSE:**

**Material:** 316 Ti SS  
**Contact:** Mercury Switch  
**Maximum Temperature:** 320°F  
**Maximum Pressure:** 220 PSIG

**Optional Cable Glands**

**Material:** Nylon, Buna-N  
**Maximum Temperature:** 250°F  
**Maximum Pressure:** limited to the Switch rating

### Description

The float consists of a hollow cylinder or sphere with an integral mercury or micro-switch. The switch supplied is a SPDT contact, and can be connected as normally open (N/O) or normally closed(N/C) contact.

The contact operates when the level rises above or falls below the horizontal float position. The switching point is fixed by installing the switch horizontally at the required position or by clamping the cable to the tank or vessel.

### Contact Rating

Micro switch:  
 250 V, 4 A max.  
 Mercury switch:  
 220 V, 4 A max.

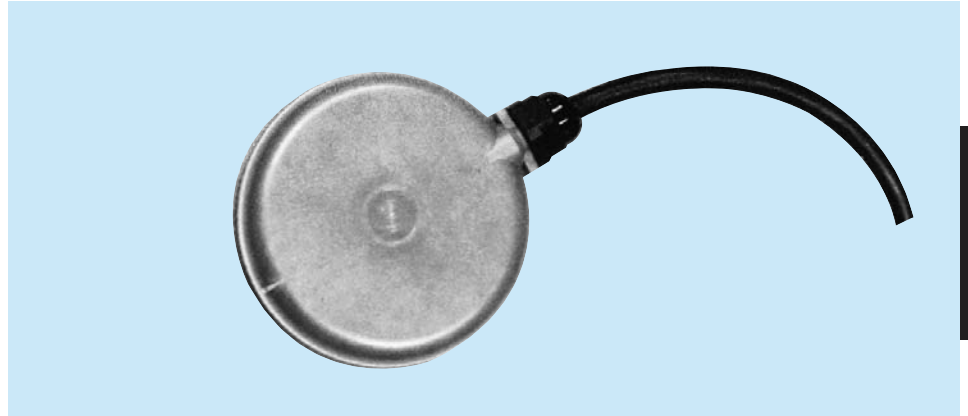
Order Information			
Order Number	Float Material	Switch Function	Cable Cladding
NSM-5101	Polypropylene	SPDT	Neoprene
NSP-5101	Polyethylene 0.9 kg/l	SPDT	PVC
NSP-5201	Polyethylene 0.8 kg/l	SPDT	PVC
NST-5101	Teflon	SPDT	Teflon
NSE-5101	316 Ti SS, 90 PSIG	SPDT	Silicone
NSE-5201	316 Ti SS, 220 PSIG	SPDT	Silicone
CG-CD 09 NRBK	3/8" NPT Cable Gland Tank Connection (except for Silicone cable)		
Options		Model# Suffix	
Silicone Cable for NSP-Series		B02	
Teflon Cable for NSP Series		B05	
When Ordering Extended Cable Length, Specify Length		EC	

### NSM-5...: Polypropylene

Reasonably priced float switch for liquids such as oils, solvents, weak acids and alkalis.

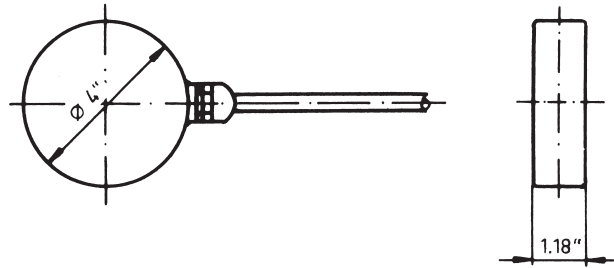
**Installation:** From above in open container or from side with cable gland

**Material:**  
 Float: Polypropylene  
 Cable Penetration: Polyamide (nylon)  
 Cable: 6 ft. Neoprene  
**Max. Pressure:** 15 PSIG  
**Max. Temperature:** 140°F  
**Switch:** SPDT Microswitch  
**Float Density:** 0.6 g/ml



N1

Float switch Model NSM-5101



### NSP-5...: Polyethylene

For all types of liquids. Eg.: dirty water, oil weak acids and alkalis.

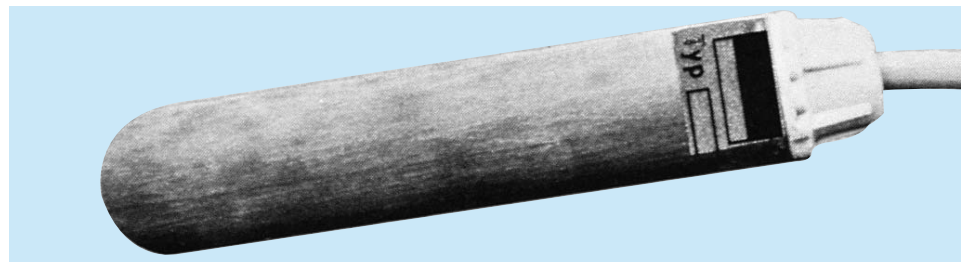
**Installation:** From above in open container or through tank side with cable gland

**Material:**  
 Float: Polyethylene  
 Cable: 13 ft. PVC  
 Optional Cables: Silicone, Oilflex, Teflon® on request

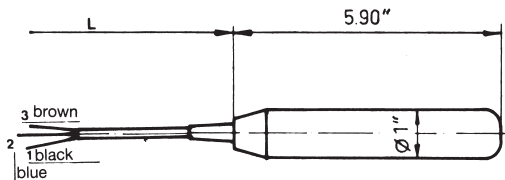
**Maximum Pressure:**  
 NSP-5101: 15 PSIG  
 NSP-5201: 30 PSIG

**Maximum Temp.:** 140°F, 190° Silicone and Teflon Cable  
**Switch:** SPDT Mercury Switch

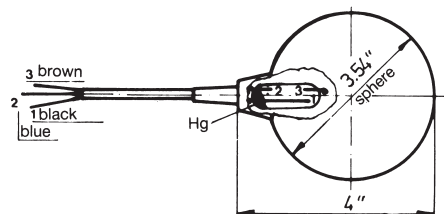
**Float Density:**  
 NSP-5101: 0.9 g/ml  
 NSP-5201: 0.8 g/ml



Float switch Model NSP-5101

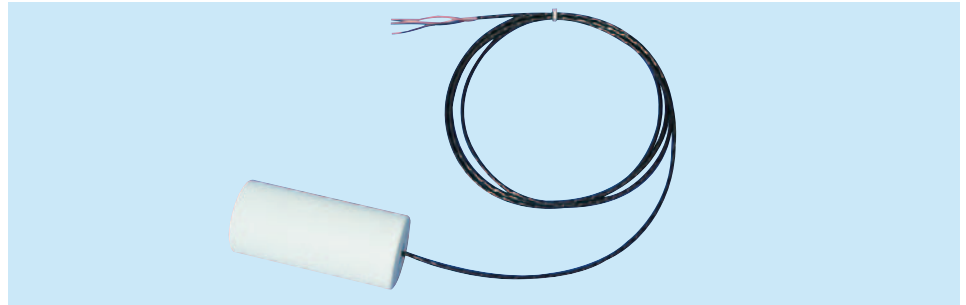


Float switch Model NSP-5201



**NST-5...: Teflon®**

Level switch for hot, extremely aggressive or dirty liquids.

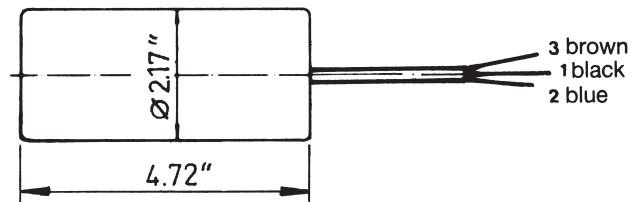


**Installation:** From above in open container or through tank side with cable gland

**Material:**  
 Float: Teflon®  
 Cable: Teflon®  
 6 Ft.

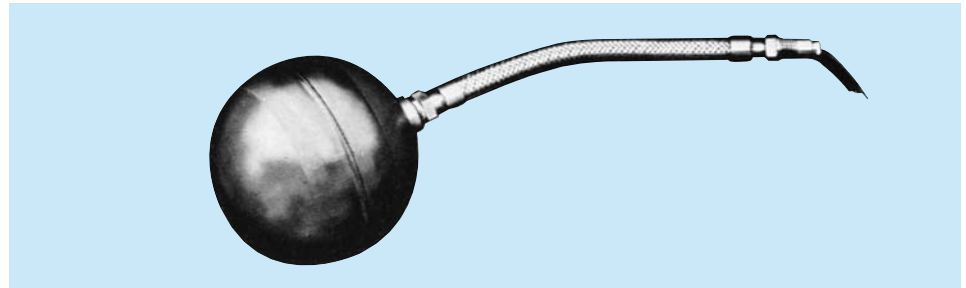
**Maximum Pressure:** 15 PSIG  
**Maximum Temperature:** 320°F  
**Switch:** SPDT Mercury Switch  
**Float Density:** 0.85 gm/ml

**Float switch Model NST-5101**



**NSE-5...: Stainless Steel**

For highly aggressive, pulp-like, or hot liquids.

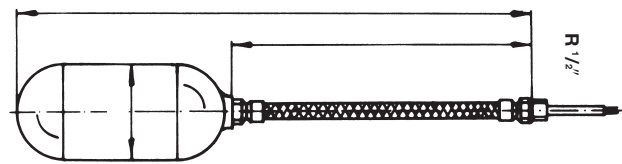


**Installation:** Through tank side  
 1/2" NPT

**Material:**  
 Float: 316 Ti SS  
 Cable: 6 ft. Silicone with  
 10 inches of SS braid

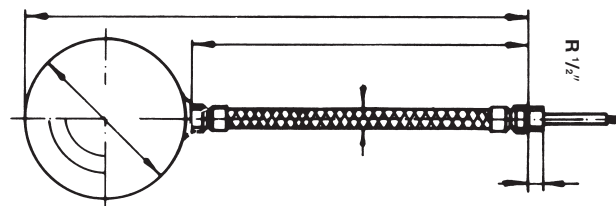
**Maximum Pressure:**  
 NSE-5101: 90 PSIG  
 NSE-5201: 220 PSIG  
**Maximum Temperature:** 320°F  
**Switch:** SPDT Mercury Switch  
 N/O or N/C  
**Float Density:** 0.8 g/ml

**Float switch Model NSE-5101**



Metal hose

**Float switch Model NSE-5201**



Metal hose