



## **BERNSTEIN Float Switches**

Contactless level control

## Process safety has its limits

**BERNSTEIN makes them manageable**



Technical processes are becoming more and more autonomous – and therefore require more stringent monitoring. The efficient interaction between sensors, actuators and control systems is an important prerequisite for automated processes.

The level of liquid media is an important reference variable in many applications and it is therefore essential that it is monitored effectively. Examples include fuel and water level measurement in commercial vehicles, level monitoring while transporting liquids, measuring milk yield in agricultural applications or monitoring water levels in water treatment facilities. In addition, liquid levels are also subject to constant monitoring in many other branches of industry such as air conditioning and ventilation technology, printing and chemical process engineering.

BERNSTEIN has been actively involved in safe liquid level monitoring technology since the mid 1970s and has been continuously setting innovative standards in float switch systems.

Decisively shaping the switch and sensor market, BERNSTEIN is an experienced provider of durable and efficient switching elements.

Today we therefore offer a progressive and complete range of float switches featuring versatile combination options.

## 99.9% reliability can be very little

**Even the millionth BERNSTEIN contact is safe**

Reliability knows no compromises. This promise is reliably kept by non-wearing BERNSTEIN float switches. The float with integrated magnet adapts to the liquid level and activates the reed contact enclosed in the immersion tube on reaching a defined level.

Featuring contactless operation and a service life of several million switching cycles, the design is as reliable as it is simple.

Depending on pressure, temperature and aggressivity of the medium to be monitored, the right float can be chosen for specific applications.

Float switches with one or several reed contacts are also available.

### 100 % BERNSTEIN

- **Efficient**
  - Easy and quick to install
  - Maintenance-free and non-wearing
  - cost-effective modular design
- **Reliable**
  - Straightforward design
  - Several million switching cycles
- **Adaptable**
  - Several switching points/floats available
  - Floating contacts that work in de-energised state
  - Quasi-analogue output possible
  - Temperature sensor combinations

## Every application is different

## Individuality at no extra cost

### And there is always an ideal solution

### Easy-to-configure solutions with BERNSTEIN



Depending on the branch of industry and application liquids have different viscosities, temperatures and pressures. Also the chemical properties of alkaline and acid solutions play an important role in selecting the right float switch.

We are able to provide the best solution for all applications. In addition to float switches with reed contact technology we also have available other systems to suit specific applications:

- Capacitive level sensors
- Optical sensors
- Ultrasonic sensors

BERNSTEIN float switches are used in the following sectors:

- **Commercial/municipal vehicles**  
Fuel gauging,  
Water level monitoring
- **Process technology**  
Level monitoring of chemical substances,  
Ink level monitoring in printing machines,  
Fire extinguisher filling
- **Water / environment / climate**  
Monitoring systems in water and sewage  
treatment installations
- **Food technology**  
Milk yield measurement, level monitoring of  
transported food products and tank installations

The BERNSTEIN modular system makes it possible to create various combinations and configurations from standard components. This saves time and money in installation, project planning and stockkeeping.

Reed contacts can be used as normally closed or normally open contacts for measuring when media overshoot or undershoot defined levels. There are also no restrictions in configuring different types of connections with various immersion tube/float combinations. Different levels can be reliably monitored with only one float switch and several reed contacts. There are also no limits to the variations in terms of connected load, switching function and type of connection head.

With BERNSTEIN individual solutions can be configured from standard components – at no extra cost and as from batch size 1.

### BERNSTEIN advantages

- Modular system
- 3D component library
- Customised versions
- Short delivery times
- Tested quality
- Application service
- Hotline

<b>Standard float switches</b>									
<b>Mechanical connection</b>	R3/8"	PG9	Flange ø 75	Oval flange	Flange ø 78	R 1"	R 1,5"	R 2"	
<b>Material Connection head</b>	Stainless steel Brass PVC	Stainless steel Brass PVC	PC	PC	Aluminium	Stainless steel PVC	Stainless steel PVC	Stainless steel PVC	
<b>Material Tube Ø 12 mm Max. length</b>	Stainless steel 2 m Brass 2 m PVC 1 m	Stainless steel 2 m Brass 2 m PVC 1 m	Stainless steel 2 m Brass 2 m PVC 1 m	Stainless steel 2 m Brass 2 m PVC 1 m	Stainless steel 2 m Brass 2 m PVC 1 m	Stainless steel 2 m PVC 1 m	Stainless steel 2 m PVC 1 m	Stainless steel 2 m PVC 1 m	
<b>Electrical connection</b>	PVC cable SIL cable	PVC cable SIL cable	Connector, Din 43650	Connector, Din 43650	Connection terminals	Terminal enclosure	Terminal enclosure	Terminal enclosure	
<b>Switching contact</b>	NC contact NO contact Changeover contact	NC contact NO contact Changeover contact	NC contact NO contact Changeover contact	NC contact NO contact Changeover contact	NC contact NO contact Changeover contact	NC contact NO contact Changeover contact	NC contact NO contact Changeover contact	NC contact NO contact Changeover contact	
<b>Maximum number of contacts</b>	NC contact 3 NO contact 3 Changeover contact 3	NC contact 3 NO contact 3 Changeover contact 3	NC contact 2 NO contact 2 Changeover contact 1	NC contact 2 NO contact 2 Changeover contact 1	NC contact 3 NO contact 3 Changeover contact 3	NC contact 3 NO contact 3 Changeover contact 3	NC contact 3 NO contact 3 Changeover contact 3	NC contact 3 NO contact 3 Changeover contact 3	
<b>Switching power</b>	0.5 A 30 VA 1.0 A 60 VA	0.5 A 30 VA 1.0 A 60 VA	0.5 A 30 VA 1.0 A 60 VA	0.5 A 30 VA 1.0 A 60 VA	0.5 A 30 VA 1.0 A 60 VA	0.5 A 30 VA 1.0 A 60 VA	0.5 A 30 VA 1.0 A 60 VA	0.5 A 30 VA 1.0 A 60 VA	

### Configuration example

Mechanical connection:	Flange ø 78
Material:	Aluminium
Material: tube Ø 12 mm Max. length:	Stainless steel 2 m
Electrical connection:	Connection terminals
Switching contact:	Changeover contact
Maximum number of contacts:	Changeover contact 3
Switching power:	0.5 A 30 VA
Float:	1.4571 ø 44 x 45 mm



<b>Floats</b>								
<b>Material Dimensions</b>	POM ø 40 x 27 mm	PP ø 30 x 44 mm	NBR ø 30 x 44 mm	PVC ø 42 x 44 mm	1.4571 ø 44 x 45 mm	1.4571 ø 52 mm	1.4571 ø 62 mm	1.4571 ø 84 mm

<b>Further options</b>	<ul style="list-style-type: none"> <li>Elbow versions (except MS versions and 1", 1.5" and 2")</li> <li>Separate contacts</li> <li>Switching point limited by adjustment rings</li> <li>Versions with several floats</li> <li>Integrated PT100 / PT1000</li> <li>Heat resistant versions</li> </ul>
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See catalogue or go to [www.bernstein.eu](http://www.bernstein.eu) for enquiries and level switch order form.

Miniature float switches					
<b>Mechanical connection</b>	R1/8"	R3/8"	PG7	R3/8" Connector	R1"
<b>Material Connection head</b>	Stainless steel Brass PP PVC	Stainless steel Brass PP PVC	Stainless steel Brass PP PVC	Stainless steel Brass PP PVC	Stainless steel PVC
<b>Material Tube Ø 8 mm Max. length</b>	Stainless steel 1 m Brass 1 m PP 41 mm PVC 500 mm	Stainless steel 1 m Brass 1 m PP 41 mm PVC 500 mm	Stainless steel 1 m Brass 1 m PP 41 mm PVC 500 mm	Stainless steel 1 m Brass 1 m PVC 500 mm	Stainless steel 1 m PVC 500 mm
<b>Electrical connection</b>	PVC cable SIL cable	PVC cable SIL cable	PVC cable SIL cable	Connector M12x1	Terminal enclosure Connector, DIN 43650
<b>Switching contact</b>	NO contact NC contact Changeover contact	NC contact NO contact Changeover contact	NC contact NO contact Changeover contact	NC contact NO contact Changeover contact	NC contact NO contact Changeover contact
<b>Maximum number of contacts</b>	3 1 (PP)	3 1 (PP)	3 1 (PP)	NC contact 3 NO contact 3 Changeover contact 1	NC contact 2 NO contact 2 Changeover contact 1
<b>Switching power</b>	0.5 A 10 VA 0.3 A 3 VA	0.5 A 10 VA 0.3 A 3 VA	0.5 A 10 VA 0.3 A 3 VA	0.5 A 10 VA 0.3 A 3 VA	0.5 A 10 VA 0.3 A 3 VA

Floats				
<b>Material Dimensions</b>	NBR Ø 17.3 x 25 mm	NBR Ø 20 x 20 mm	NBR Ø 23 x 25 mm	PVC Ø 25 x 21 mm
<b>Floats</b>				
<b>Material Dimensions</b>	PP Ø 25 x 21 mm	1.4571 Ø 29 x 25 mm	1.4571 Ø 30 mm	

### Configuration example

Mechanical connection: R3/8"

Material: PP

Material: tube Ø 8 mm: PP  
Max. length: 41 mm

Electrical connection: PVC cable

Switching contact: Changeover contact

Maximum number of contacts: 1 (bei PP)

Switching power: 0.3 A 3 VA

Float: PP  
Ø 25 x 21 mm

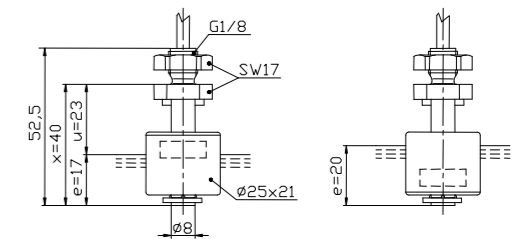


### Extract from product range

#### Miniature float switches R1/8"

Type designation  
**MSK1-PP-R1/8-S 0040**

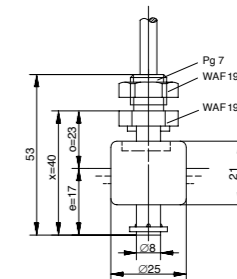
Article number  
**6891411005**



#### Miniature float switches PG7

Type designation  
**MSK1-PP-PG7-S**

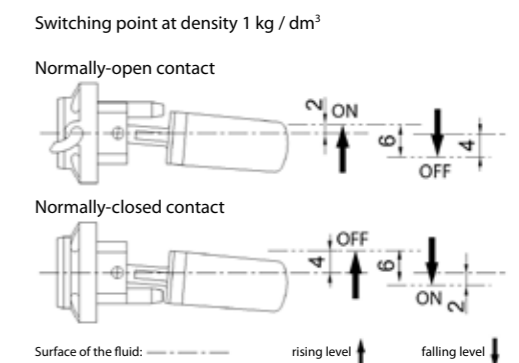
Article number  
**6891414002**



#### Miniature float switches Horizontal installation


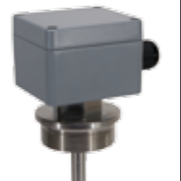
Type designation  
**MSKS-PA-FL36-OS**



Article number  
**6891700002**



#### Further options

- Elbow versions (except MS versions and 1")
- Separate contacts
- Switching point limited by adjustment rings
- Versions with several floats
- Integrated PT100/PT1000
- Heat resistant versions

<b>Adjustable Float Switches</b>			
<b>Mechanical connection</b>	R1.5"	R2"	
<b>Material Connection head</b>	Stainless steel PVC	Stainless steel PVC	
<b>Terminal enclosure</b>	Aluminium PVC	Aluminium PVC	
<b>Tube material</b>	ø 18 mm stainless steel ø 20 mm PVC	ø 18 mm stainless steel ø 20 mm PVC	
<b>Switching contact</b>	NC/NO contact (bistable) Changeover contact	NC/NO contact (bistable) Changeover contact	
<b>Tube length</b> ( ) Max. number of contacts NC/NO contact [ ] Max. number of contacts Changeover contact	250 mm (2) [2] 500 mm (3) [3] 750 mm (4) [3] 1000 mm (4) [3]	250 mm (2) [2] 500 mm (3) [3] 750 mm (4) [3] 1000 mm (4) [3]	
<b>Switching power</b>	5 A 250 VA 1 A 60 VA	5 A 250 VA 1 A 60 VA	

<b>Floats</b>		
<b>Material Dimensions</b>	PVC ø 52 x 55 mm	1.4571 ø 52 x 55 mm

<b>Switching modules</b> For positioning on hole strip NC/NO contact (bistable) Changeover contact	
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See catalogue or go to [www.bernstein.eu](http://www.bernstein.eu) for enquiries and level switch order form.

## BERNSTEIN float switches

### ... safety you can rely on

- Reliable, contactless reed switching technology
- Extremely long service life
- Individual configuration at no extra cost
- Fast availability
- Available as from batch size 1
- Maintenance-free and non-wearing
- Fast installation and start-up

**Technical Hotline:**  
**+49 571 793-493**

### Reasons for choosing BERNSTEIN

Our sales markets throughout the world demand compliance with stringent safety requirements, configuration of customised applications and maximum efficiency.

Customer specifications test and refine our expertise. We accept challenges and grow with the solutions. We have been following this principle for more than 60 years.

**Talk to us about your specific applications.**



**Switch technology –  
Economy meets safety**



**Sensor technology –  
Compact intelligence**



**Enclosure technology –  
Function and design**

[www.bernstein.eu](http://www.bernstein.eu)

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