Level float switch

- Switch for neutral and aggressive liquids
- NO/NC
- Reed contact
- Vertical or horizontal mounting
- Molded lying leads or cable

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with

Type description

The device Type 8181 is a float switch that is insensitive to dirt particles in the liquid and is used to monitor the level in neutral or aggressive liquids in containers.

The device consists of a fixed part, which contains the hermetically sealed reed contacts, and a float (moving part), which contains the magnets. This float actuates the reed contact, which can be either normally open or normally closed, depending on fluctuations in the liquid level.

The device is available in different variants depending on the material (PP or stainless steel), installation position (horizontal or vertical), process connection (thread G ⅛ G ¼, G ¾...) and electrical connection (leads or cable).

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Visit product website

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1. General technical data

Product properties	
Material	
Make sure the device materials are compatible with the fluid you are using. Further information can be found in chapter "3.1. Bürkert resistApp" on page 4.	
Non-wetted parts	
Cable gland	For cable variant: PA
Wetted parts	
Stem, float	PP or stainless steel 1.4301/304 (1.4435/316L on request)
Retaining ring	Only for vertical variant: PP or stainless steel 1.4301/304 (1.4435/316L on request)
Dimensions	Further information can be found in chapter "4. Dimensions" on page 5.
Switching point	At tilt of 7° ± 3° (8.5 mm ± 3 mm)
Switching function	Normally closed/open
Float density	Approx. 0.7
Electrical data	
Output type	Reed contact
Switching voltage	Max. 48 V AC/DC
Switching current	Max. 0.5 A
Breaking power	• Only for vertical PP variant: 66 VA AC/DC • For other variants: 50 VA AC/DC
Contact resistance	• Only for horizontal stainless steel variant: max. 200 mΩ • For other variants: max. 150 mΩ
Breakdown voltage	• Only for vertical PP variant: min. 310 V AC • For other variants: 600 V DC
Insulating resistance	Min. 10 MΩ
Voltage supply cable	• For variant with leads: 0.25 mm² min. cross section • For variant with cable: PVC covering cable, 0.25 mm² min. cross section, 2 wires + shielding
Medium data	
Process temperature	• For PP variant: -10...+80 °C (+14...+176 °F) • For stainless steel variant: -40...+120 °C (-40...+248 °F)
Process pressure	• For PP variant: max. 1 bar (vertical or horizontal mounting position) • For stainless steel variant: – max. 10 bar (vertical mounting position) – max. 5 bar (horizontal mounting position)
Product connections	
Process connection	• Only for horizontal PP variant: thread G ¼ • For variant with leads: thread G ⅛ • For variant with cable: thread G ¾
Electrical connection	Leads 300 mm or cable 5 m
Approvals and conformities	
Directives	
CE directive	Further information on the CE Directive can be found in chapter "2.2. Standards" on page 4.
Environment and installation	
Ambient temperature	Operation and storage: -10...+80 °C (+14...+176 °F)
Degree of protection	IP65
Vibrations and shocks	For stainless steel variant: 20G

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2. Approvals and conformities

2.1. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

2.2. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

3. Materials

3.1. Bürkert resistApp

Bürkert resistApp – Chemical resistance chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

Start chemical resistance check

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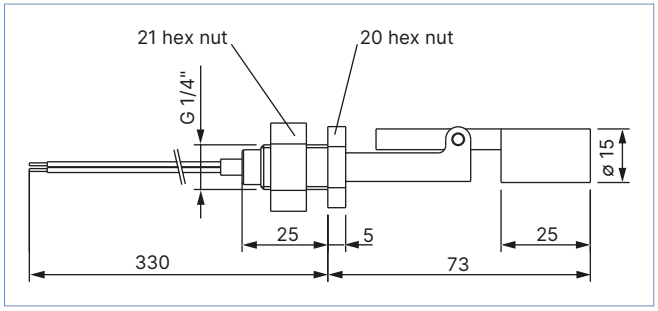
4. Dimensions

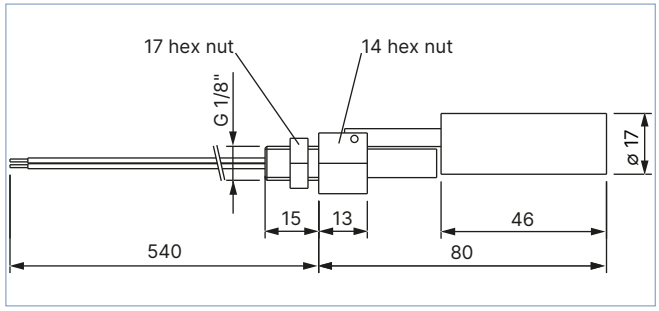
4.1. Switch with leads

Note:
Dimensions in mm, unless otherwise stated

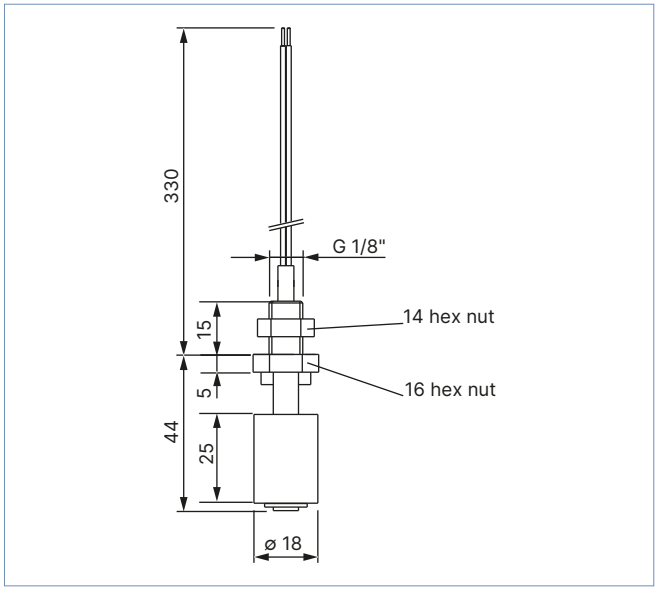
Horizontal PP variant



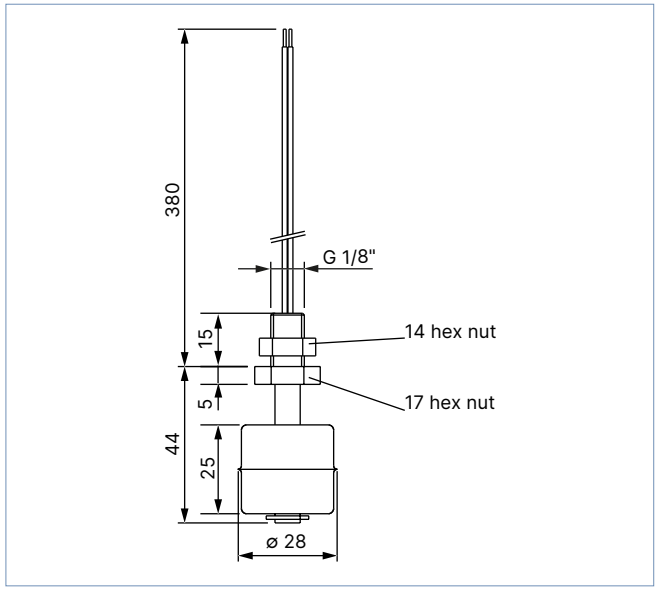
Horizontal stainless steel variant



Vertical PP variant



Vertical stainless steel variant



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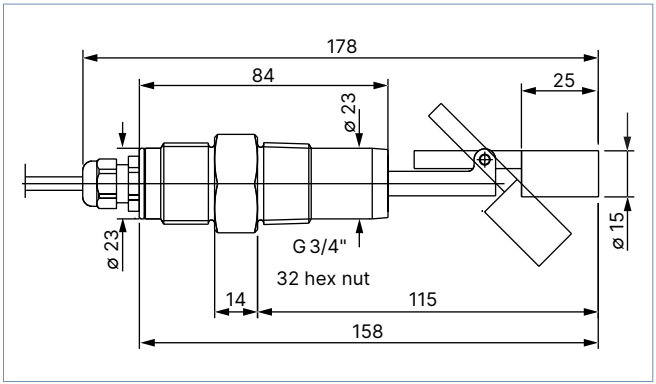
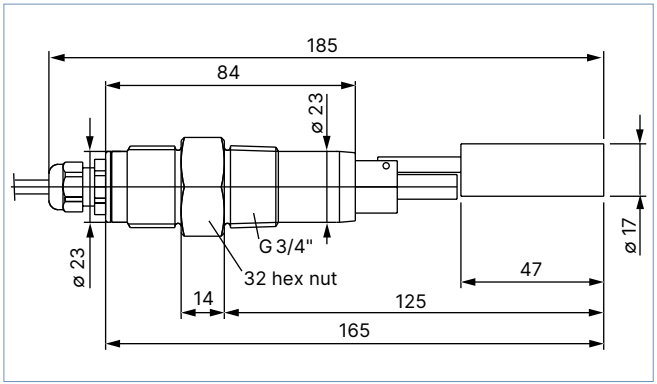
4.2. Switch with 5 m cable

Note:
Dimensions in mm, unless otherwise stated

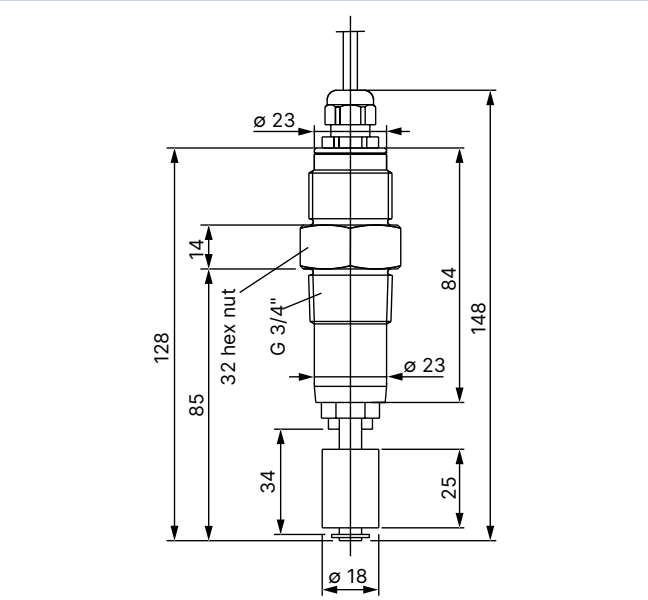
Horizontal PP variant



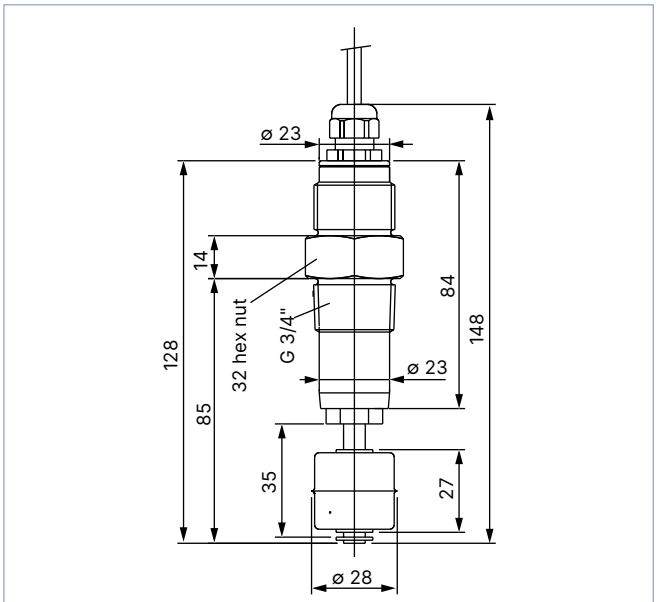
Horizontal stainless steel variant



Vertical PP variant



Vertical stainless steel variant



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5. Ordering information

5.1. Bürkert eShop

Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

Order online now

5.2. Bürkert product filter

Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements?
Use the Bürkert product filter and find suitable articles for your application quickly and easily.

Try out our product filter

5.3. Ordering chart

Switching voltage	Switching current	Switching function	Mounting position	Process connection	Material	Electrical connection	Article no.
Max. 48 V AC/DC	0.5 A	Normally closed/open [1.)]	Vertical	G ⅛	PP	300 mm leads	438132
			Horizontal		Stainless steel		438150
			Vertical				438159
			Horizontal	G ¼	PP		438141
			Horizontal	G ¾	PP	5 m cable	438496
			Vertical				438502
			Horizontal		Stainless steel		438499
			Vertical				438505

1.) Depending on the mounting orientation of the float

Process connection
- NPT ¾, NPT ¾
- Rc ¾, Rc ¾

Electrical connection
2 m cable

Additional
Variant with reed contact implemented as alternator or normally open/closed, made of PP, with an Rc ½ threaded process connection and 3 m cable as electrical connection for horizontal mounting (see **data sheet Type TCL001** ▶ for further information).

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