

Float switch for point level detection in liquids

# Liquifloat T FTS20



€ 49.-

11-35 pcs.



Complete product information:  
[www.e-direct.endress.com/fts20](http://www.e-direct.endress.com/fts20)

- Simple and cost-effective
- Switching element as proximity or microswitch
- Different cable materials for different liquids

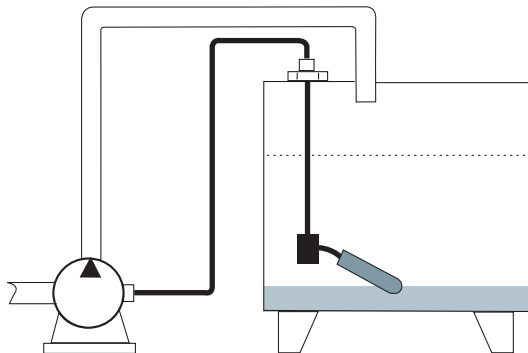
## **i** Specs at a glance:

- **Product:**  
Liquids
- **Ambient temperature:**  
≤85 °C (185 °F)
- **Density:**  
≥0.8 g/cm<sup>3</sup>
- **Ambient pressure:**  
≤3 bar (44 psi)

**Application** The Liquifloat T FTS20 is an easy and cost-effective alternative for point level detection in liquids. It can be used as overspill or pump protection. Different cable materials are available for a range of liquids including acids, alkalies, oils and wastewater.

**Function** An element built into the float switch switches when a change in level is detected. The switching process is triggered by the movement of a steel ball and, depending on the version, is carried out by an inductive initiator or a microswitch. The inductive initiator acts as a switching output and provides a switching signal to EN 60947- 5- 6 (NAMUR). The microswitch version is a two-way switch.

## Application Example



Liquifloat T FTS20 for pump control.

- The measuring system consists of
- a FTS20 float switch and
  - a NAMUR isolating amplifier (e.g. Nivotester FTL325N) or
  - FTS20 in AC/DC version

## Technical data

### FTS20 AC/DC

Switching element	Microswitch with switching ball
Switching function	Changeover contact
Switching voltage	AC: max. 250 V; DC: max. 150 V
Switching current	AC: max. 3 A; DC: max. 1 A
Switching angle	Upper switching point: $+25^{\circ} \pm 10^{\circ}$ ; lower switching point: $-14^{\circ} \pm 10^{\circ}$ ; measured to the horizontal
Process temperature range	PVC and PUR: $+5$ to $+70^{\circ}\text{C}$ ( $+41$ to $+158^{\circ}\text{F}$ ); CSM: $-20$ to $+85^{\circ}\text{C}$ ( $-4$ to $+185^{\circ}\text{F}$ )
Process pressure	$\leq 3$ bar (44 psi) at $+20^{\circ}\text{C}$ ( $+68^{\circ}\text{F}$ )
Density	$\geq 0.8$ g/cm <sup>3</sup>

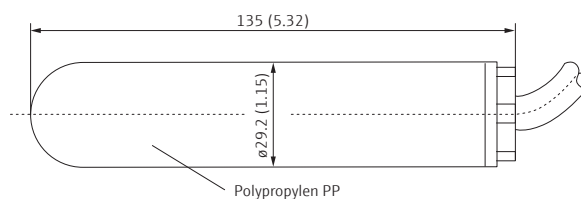
### FTS20 NAMUR

Switching element	Inductive proximity switch with switching ball, closed when floating
Power supply	8.2 V $\pm 2$ V
Operating current	$< 1.2$ mA unswitched; $> 2.1$ mA switched
Reverse polarity protection	Yes
Switching angle	Upper switching point: $+15^{\circ} \pm 5^{\circ}$ ; lower switching point: $-15^{\circ} \pm 5^{\circ}$ ; measured to the horizontal
Process temperature range	PVC and PUR: $+5$ to $+70^{\circ}\text{C}$ ( $+41$ to $+158^{\circ}\text{F}$ ); CSM: $-20$ to $+85^{\circ}\text{C}$ ( $-4$ to $+185^{\circ}\text{F}$ )
Process pressure	$\leq 3$ bar (44 psi) at $+20^{\circ}\text{C}$ ( $+68^{\circ}\text{F}$ )
Density	$\geq 0.8$ g/cm <sup>3</sup>
Approvals	TÜV 01 ATEX 1709, Ex approval: II 2G EEx ia IIB T5

### Cable

Material	AC/DC, PVC, CSM: cross section $3 \times 0.75$ mm <sup>2</sup> PUR: cross section $3 \times 0.50$ mm <sup>2</sup>
Areas of application and minimum cable length between fixing and floating body	PVC: $\geq 50$ mm (1.97") suitable for water, dirty water, slightly aggressive media PUR: $\geq 100$ mm (3.94") suitable for fuels, heating oils, liquids containing oil CSM: $\geq 100$ mm (3.94") suitable for acids and alkalis

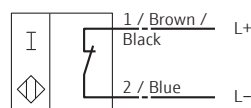
## Dimensions in mm (inches)



Installation according to instruction manual

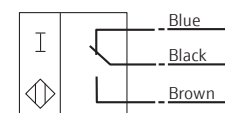
## Electrical connection

### Inductive proximity switch with switching ball (NAMUR)



Connection indication:  
L+ = black or brown  
L- = blue  
(closing when floating)

### Changeover contact (AC/DC)



Connection indication:  
Cable colors:  
black + brown = contact open  
black + blue = contact closed  
(contact position when floating)

## Price table

Liquifloat T FTS20			Order no.	Price/pcs. in €			
Electronics	Cable	Version		1 to 3	4 to 10	11 to 35	
250 V AC/150 V DC	5 m (16 ft)	With PVC cable material	52010122	56.-	52.-	49.-	
		With PUR cable material	52010123	56.-	52.-	49.-	
		With CSM cable material	52010124	56.-	52.-	49.-	
	20 m (66 ft)	With PVC cable material	71035520	111.-	103.-	97.-	
		With PUR cable material	71035521	111.-	103.-	97.-	
		With CSM cable material	71035522	111.-	103.-	97.-	
	NAMUR ATEX	5 m (16 ft)	With PVC cable material	52010119	56.-	52.-	49.-
			With PUR cable material	52010120	56.-	52.-	49.-
			With CSM cable material	52010121	56.-	52.-	49.-
20 m (66 ft)		With PVC cable material	71035516	111.-	103.-	97.-	
		With PUR cable material	71035517	111.-	103.-	97.-	
		With CSM cable material	71035518	111.-	103.-	97.-	

Accessories	Order no.	Price/pcs. in €
Compression gland G1", PVC	52010125	20.55
Weight coated with polyamide (The weight may not be used in hazardous areas.)	52010127	27.71
Counter nut G1", PVC	52010126	6.17

Prices are applicable for Estonia until 30/06/2020, in euro per unit, net excluding value added tax (VAT), cost of packing and dispatch.  
Endress+Hauser retains the right to change or modify pricing at any time. The terms of sales and delivery of Endress+Hauser are applicable.  
Current prices and delivery times can be verified prior to ordering on [www.e-direct.endress.com](http://www.e-direct.endress.com).

 Complete product information:  
[www.e-direct.endress.com/fts20](http://www.e-direct.endress.com/fts20)

More products to complete  
your measuring point ...



Isolating amplifier  
Nivotester FTL325N



Temperature sensor  
Easytemp TMR31



Barrier  
RB223