


Buoyancy Level Switch

8181

STAINLESS STEEL



PRELIMINARY
dd. 22.02.2001
Vers. 20.0

- ✓ Easy LINK thanks to reed output or junction box
- ✓ Process connection and junction box (relay or AS-interface) available 
- ✓ One level switch for normally open or closed connection
- ✓ LED in junction box

Level - ON/OFF Control

The level switch can be used to detect high and low level of a liquid and to switch pumps, valves, PLCs relays and alarms.

Process Specifications

Materials

Stem and float vertical	Stainless steel 304 (316L on request)
Stem and float horizontal	Stainless steel 304
Housing and cover	Polycarbonate (PC)
Connectors	Polyamide (PA)

Max. pressure

Vertical	10 bar
Horizontal	5 bar

Float density

Approx. 0.7 g/cm³

Process temperature

-40°C up to +120°C

Environment Specifications

Max. pressure

Atmospheric

Ambient temperature

-10°C up to +80°C

Rating

IP65

Electrical Specifications

Reed

Max. cut-off voltage	48 VA AC/DC
Max. cut-off current	0.5 A
Contact type	NO / NC

Relay

Voltage supply	24 V/DC ±20%
Current consumption	30 mA max.
Nominal voltage	250 V/AC / 30 V/DC
Nominal current	3 A
Contact type	NO / NC

Electrical Connections

Reed

Flying leads

Relay

5 pin, multipin plug M12
+ cable plug 2508
DIN 43 650 A

AS-interface

4 pin, multipin plug M12
+ cable plug 2508
DIN 43 650 A

Standards

EMI

EN 50081-1

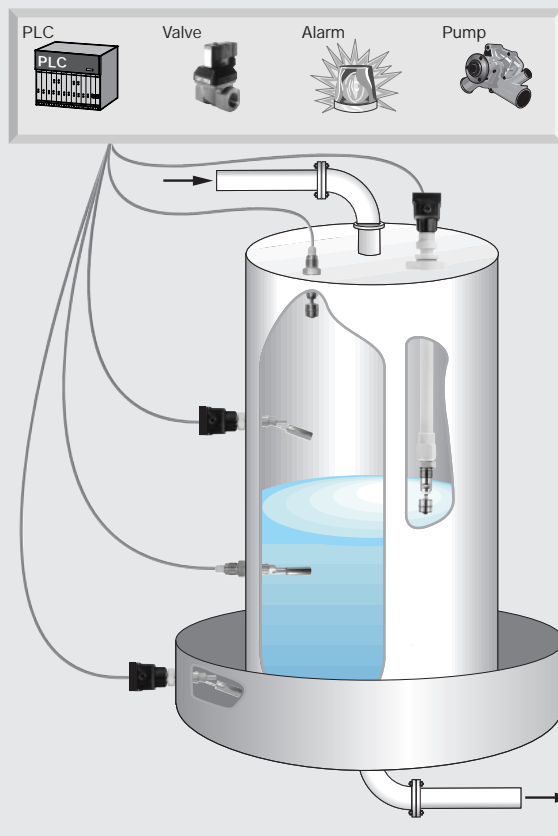
Safety

EN 50082-2

EN 61010

Applications:

- Level control
- Min./Max. level monitoring
- Leak detection
- Pump protection
- Overfill protection



Buoyancy Level Switch

Specifications - Ordering Chart for Type 8181

Description for Switch with Reed Contact	Cable length [m]	Process Connection	Electrical Connection	Item No. Vertical	Item No. Horizontal
Stainless Steel (304) Body and Floater World Wide					
Sensor type, up to 48 V AC/DC	-	G 1/8	Flying leads	438 159 G	438 150 B
Sensor type, up to 48 V AC/DC	2.0	G 3/4	Flying leads	438 504 T	438 498 V
Sensor type, up to 48 V AC/DC	5.0	G 3/4	Flying leads	438 505 U	438 499 W
Stainless Steel (304) Body and Floater ASEAN					
Sensor type, up to 48 V AC/DC	2.0	Rc 3/4	Flying leads	438 528 S	438 522 L
Sensor type, up to 48 V AC/DC	5.0	Rc 3/4	Flying leads	438 529 T	438 523 M
Stainless Steel (304) Body and Floater NAFTA					
Sensor type, up to 48 V AC/DC	2.0	NPT 3/4	Flying leads	438 516 N	438 510 U
Sensor type, up to 48 V AC/DC	5.0	NPT 3/4	Flying leads	438 517 P	438 511 R

Description for Switch with Relay	Voltage Supply	Process Connection	Electrical Connection	Item No. Vertical	Item No. Horizontal
Stainless Steel (304) Body and Floater World Wide					
Sensor type	24 V/DC	G 3/4	M12 plug + cable plug 2508*	438 506 V	438 500 B
Stainless Steel (304) Body and Floater ASEAN					
Sensor type	24 V/DC	Rc 3/4	M12 plug + cable plug 2508*	438 530 Y	438 524 N
Stainless Steel (304) Body and Floater NAFTA					
Sensor type	24 V/DC	NPT 3/4	M12 plug + cable plug 2508*	438 518 Y	438 512 J

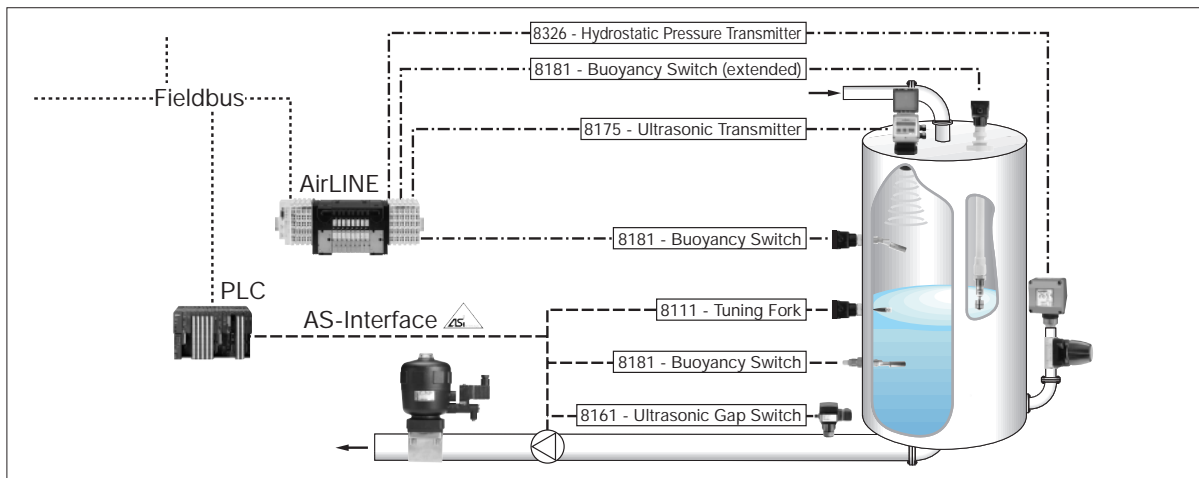
Description for Switch with AS-interface and Relay	Voltage Supply	Process Connection	Electrical Connection	Item No. Vertical	Item No. Horizontal
Stainless Steel (304) Body and Floater World Wide					
Sensor type	AS-i bus	G 3/4	M12 plug + cable plug 2508*	440 310 R	440 308 U
Stainless Steel (304) Body and Floater ASEAN					
Sensor type	AS-i bus	Rc 3/4	M12 plug + cable plug 2508*	440 318 M	440 316 B
Stainless Steel (304) Body and Floater NAFTA					
Sensor type	AS-i bus	NPT 3/4	M12 plug + cable plug 2508*	440 314 H	440 312 F

* Europe / Asia (G / Rc): PG9 connection on cable plug
 * USA / CDN (NPT): G 1/2 connection on cable plug

Specifications - Ordering Chart Accessories for Type 8181 (to be ordered separately)

Description	Item No.
Extension	see data sheet type 8130
Cable connector M12 female with plastic threaded locking ring	917 116 D
Cable connector 5 pin M12 female with moulded-in cable (2 m, shielded)	438 680 F

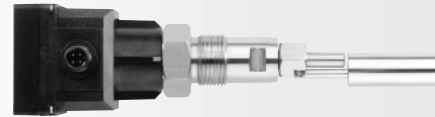
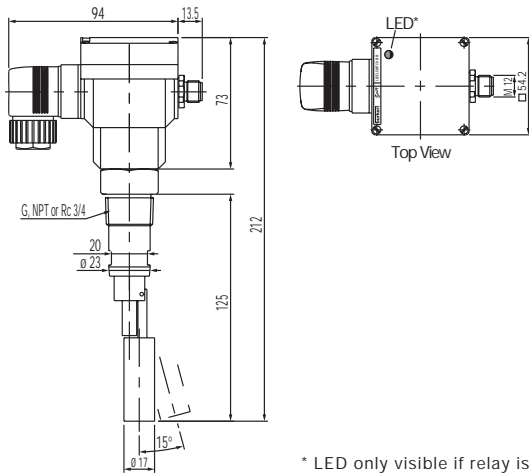
Picture of our Total Offering in Level Control



Buoyancy Level Switch

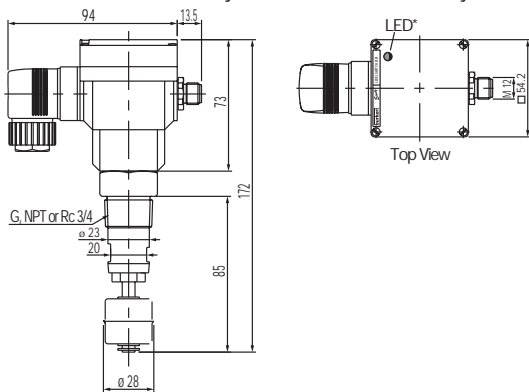
Dimensions [mm] and Electrical Connections for Type 8181 with Junction Box

Horizontal Version with Relay or AS-interface and Relay



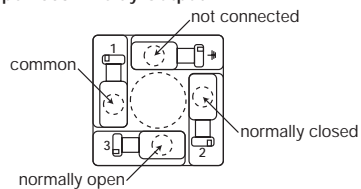
* LED only visible if relay is switched on

Vertical Version with Relay or AS-interface and Relay

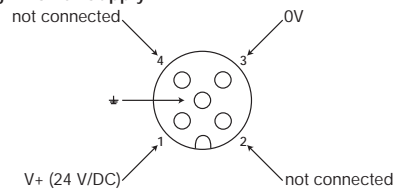


* LED only visible if relay is switched on

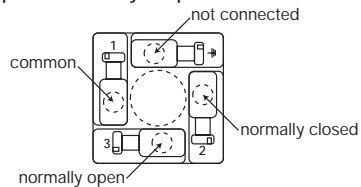
Electrical Connection Relay Version Cable Plug Type 2508 - Relay Output



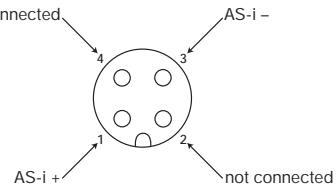
M12 Plug - Power Supply



Electrical Connection AS-Interface and Relay Version Cable Plug Type 2508 - Relay Output



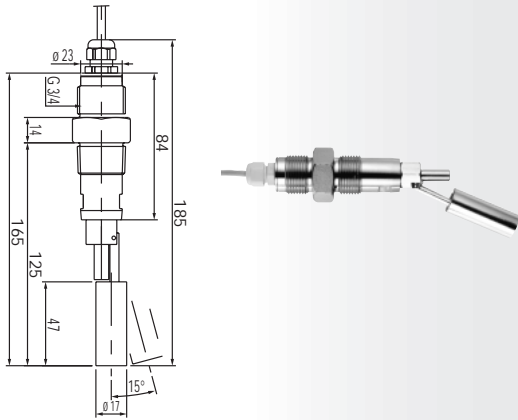
M12 Plug - AS-Interface



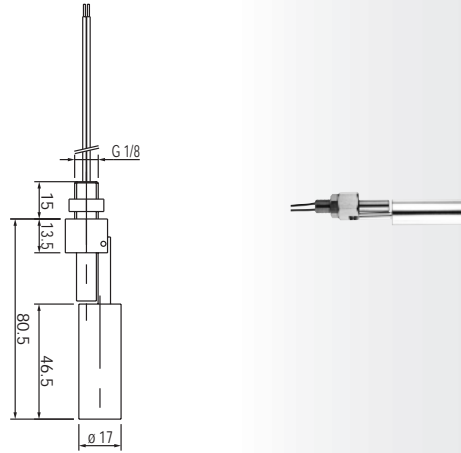
Buoyancy Level Switch

Dimensions [mm] for Type 8181 without Junction Box

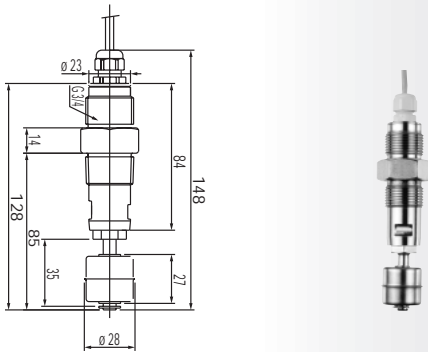
Horizontal Version with Reed and Process Connection G 3/4



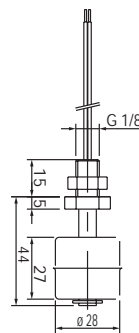
Horizontal Version with Reed and Process Connection G 1/8



Vertical Version with Reed and Process Connection G 3/4



Vertical Version with Reed and Process Connection G 1/8



In case of special requirements please consult for advice.

We reserve the right to make technical changes without notice.
010-GB/ 1-0XXX