

Vibrating Level Switch

8112

- For universal use as overflow or dry run protection system
- Setup without adjustment
- For food and beverage industry thanks to surface finishing < 0.8 µm
- ATEX approvals



The 8112 is a vibrating level switch for liquids, using a tuning fork for level detection.

It is designed for industrial use in areas of process technology and can be used in liquids. Typical applications are overflow or dry run protection.

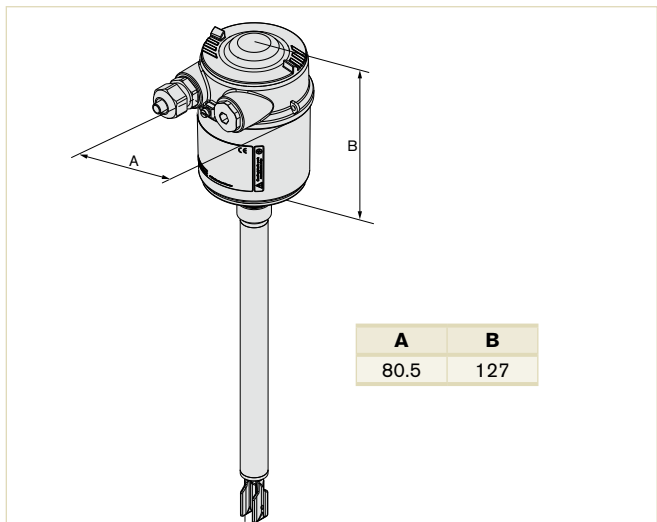
The Type 8112 is available with different sensor length using tube extension. The right length can be adapted thanks to a lock fitting.

Due to the simple and rugged measuring system, the Type 8112 is virtually unaffected by the chemical and physical features of the liquid. It works even under unfavourable conditions such as turbulence, air bubbles, foam generation, buildup or varying products.

Technical Data

Materials	
Housing / Cover / Seal ring	PBT, Stainless steel 316L (1.4435) / PC / EPDM
Wetted parts	
Tuning fork & process fitting	Stainless steel 316L (1.4435)
Extension tube ø 21.3	Stainless steel 316L (1.4435)
Process seal	Klingsil C 4400
Weight	approx. 890 g + approx. 110 g/m (tube extension)
Electrical connections	1 or 2 cable glands M20 x 1.5 (depends on output version)
Process fitting	Thread G, NPT 3/4", G, NPT 1" or Clamp 2"
Surface finishing quality	Ra < 3.2 µm (thread) / Ra < 0.8 µm (Clamp)
Extension tube length	200-1000 mm
Viscosity dynamic	0.1 up to 10000 mPa.s (requirement: with density 1)
Density	0.5 up to 2.5 g/cm ³ (selected by DIP switch) or 0.7 up to 2.5 g/cm ³
Fluid temperature	-50 °C up to +150 °C
Fluid pressure	-1 to 64 bar
Accuracy	
Hysteresis	Approx. 2 mm with vertical installation
Delay time / Frequency	Approx. 500 ms / Approx. 1200 Hz
Output	Double relay output or NAMUR output
Ambient temperature	-40 °C up to +70 °C (Operating); -40 °C up to +80 °C (Storage)

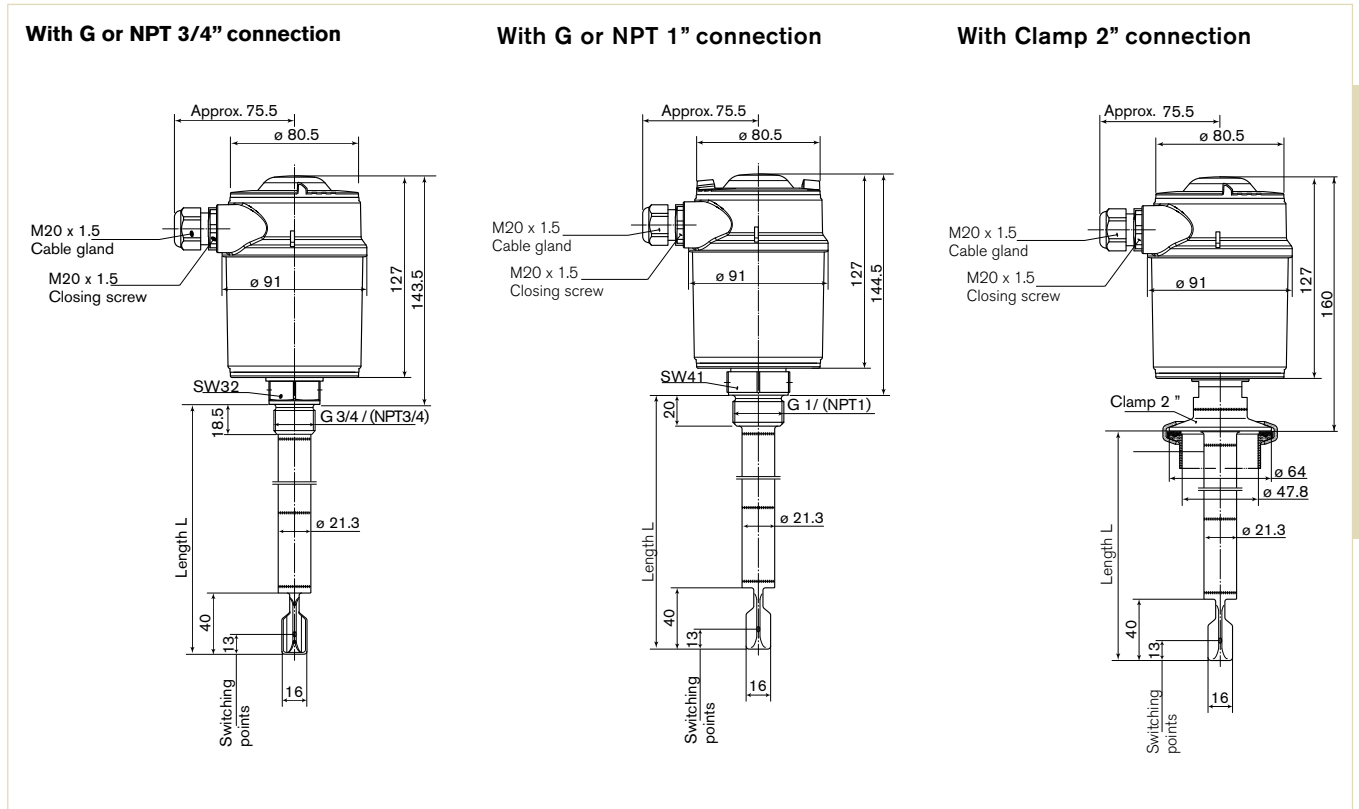
Envelope Dimensions [mm] (see datasheet for details)



Electrical data - Sensor with relay output	
Output	Relay (DPDT), 2 floating spdts
Power supply	20 to 253 V AC, 50/60 Hz or 20 to 72 V DC (at U > 60 V DC the ambient temperature must be max. 50 °C (122°F))
Power consumption	1 to 8 VA (AC); approx. 1.3 W (DC)
Turn-on voltage	min.: 10 mV; max.: 253 VAC, 253 V DC
Switching current	min.: 10 mA; max.: 5 A (AC), 1 A (DC)
Breaking capacitance	max. 1250 VA, 50 W
Modes (adjustable)	A = max. detection or overflow protection B = min. detection or dry run protection
Delay time	when immersed: 0.5 s when laid bare: 1 s
Standards and approvals	
Protection	IP66/IP67 with M20 x 1.5 gland mounted and tightened
Overvoltage category	III
Protection class	I (relay output); II (NAMUR output)
Standards	
EMC / Security	EN61326 / EN61010-1
ATEX ¹⁾	EN50014; EN50020; EN50284
NAMUR	IEC 60947-5-6 (EN 50227)

¹⁾ homologation certificate PTB 07 ATEX 2004X

Envelope Dimensions [mm] (see datasheet for details)



Ordering Chart

Output	Power supply	Extension tube length [mm]	Port connection	Electrical connection	Item no.
Double relay (DPDT) *	20 - 72 VDC / 20 - 250 V AC (5A)	300	G 3/4"	2 cable glands M20 X 1.5	558 119
		500	G 3/4"	2 cable glands M20 X 1.5	558 121
		1000	G 3/4"	2 cable glands M20 X 1.5	558 123
		300	G 1"	2 cable glands M20 X 1.5	558 125
		500	G 1"	2 cable glands M20 X 1.5	558 127
		1000	G 1"	2 cable glands M20 X 1.5	558 129
		300	Clamp 2"	2 cable glands M20 X 1.5	558 131
		500	Clamp 2"	2 cable glands M20 X 1.5	558 132
		1000	Clamp 2"	2 cable glands M20 X 1.5	558 133

* Double Pole Double Throw

Ordering Chart

Description	Item no.
Lock fitting - only for pressureless handling, -50...150 °C; G 1"	558 218
Lock fitting - only for pressureless handling, -50...150 °C; NPT 1"	558 219
Set with 2 reductions M20 x 1.5 / NPT 1/2" + 2 neoprene flat seals for cable gland + 2 screw-plugs M20 x 1.5	551 782