

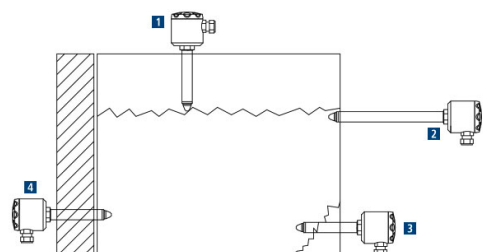
LWFS01

Point level detection based on frequency sweep technology

LWFS01-0####.999

Overview

- Reliable in diverse media
- Wide variety of process connections
- For hygienic and industrial applications



Technical data

Performance characteristics

Measuring principle	CleverLevel level switches (Frequency Sweep)
Hysteresis	± 1 mm
Media characteristics	DC > 1.5
Response time	0.1 s , typ. 0.2 s , max.
Damping	0... 10 s , adjustable
Repeatability	± 1 mm

Process conditions

Process temperature	Refer to section "Operating conditions"
Process pressure	Refer to section "Operating conditions"

Process connection

Connection variants	Refer to section "Dimensional drawings"
Mounting position	Any, top, bottom, side
Wetted parts material	PEEK Natura AISI 316L (1.4404) AISI 304 (1.4301), optional

Surface roughness wetted parts	Ra ≤ 0.8 µm
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Ambient conditions

Operating temperature range	-40 ... 85 °C -25 ... 70 °C , with cable outlet -5 ... 70 °C , when cable is moved
Storage temperature range	-40 ... 85 °C -25 ... 70 °C , with cable outlet
Degree of protection (EN 60529)	IP 67 IP 69K , with appropriate cable
Humidity	< 98 % RH , condensing
Cable bending radius	r ≥ 10 mm
Vibration (sinusoidal) (EN 60068-2-6)	1.6 mm p-p (2 ... 25 Hz), 4 g (25 ... 100 Hz), 1 octave / min. GL, test 2

Output signal

Output type	PNP NPN
Switching logic	Normally closed (NC) Normally open (NO)
Voltage drop	PNP: (+Vs -1.5 V) ± 0.5 V, Rload = 10 kΩ NPN: (+1.5 V) ± 0.5 V, Rload = 10 kΩ
Current rating	20 mA , max.
Off leak current	< 100 µA , max.
Status indication	Status indication by bright, blue LED
Short circuit protection	Yes

Housing

Style	Compact transmitter
Overall size	Refer to section "Dimensional drawings"
Material	Stainless steel

Electrical connection

Connector	M12-A, 4-pin, polycarbonate M12-A, 4-pin, stainless steel
Cable	5 m, 4-wire, PVC

Power supply

Voltage supply range	12 ... 30 V DC
Current consumption (no load)	25 mA , typ. 50 mA , max.
Power-up time	< 2 s
Reverse polarity protection	Yes

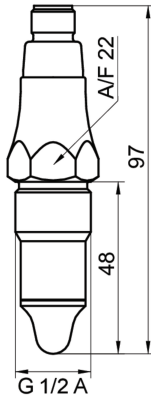
Factory settings

Switching range (dielectric constant DC)	< 75 % , DC > 2
Damping	0.1 s

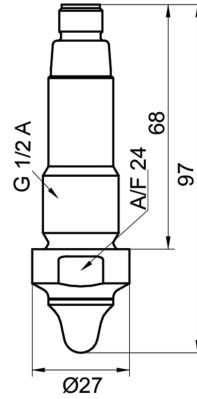
ATEX II 1D Ex ta IIIC T100 °C Da

Voltage supply range, Un	30 V DC , max.
Current rating, In	100 mA , max.

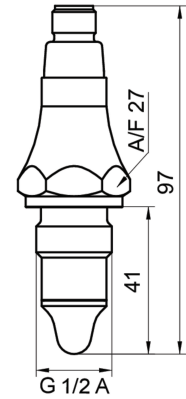
Dimensional drawings



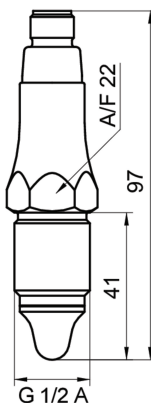
G 1/2 A hygienic



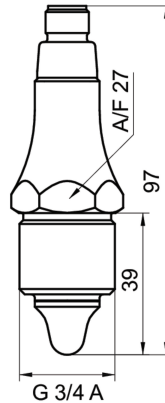
G 1/2 A ISO 228-1 for reverse assembly
(in-shell thread)



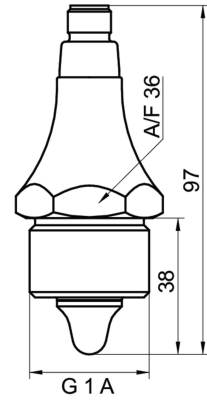
G 1/2 A DIN 3852-E



G 1/2 A ISO 228-1 BSC

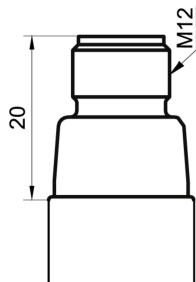


G 3/4 A ISO 228-1

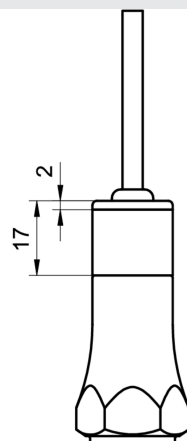


G 1 A ISO 228-1

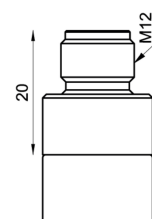
Housing



Connector M12-A, 4-pin, polycarbonate



Cable outlet, 4-wire, 5 m length



Connector M12-A, 4-pin, stainless steel

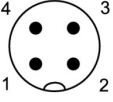
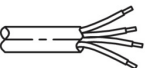
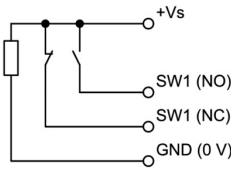
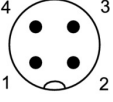
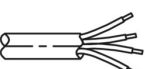
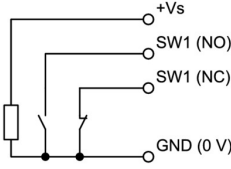
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Electrical connection

Process connection

Output type	Electrical connection	Equivalent circuit	Function	Pin assignment
PNP	 		+Vs	1
			SW1, Normally open (NO)	4
			SW2, Normally closed (NC)	2
			GND (0 V)	3
			+Vs	BN
			SW1, Normally open (NO)	BK
NPN	 		+Vs	1
			SW1, Normally open (NO)	4
			SW2, Normally closed (NC)	2
			GND (0 V)	3
			+Vs	BN
			SW1, Normally open (NO)	BK
			SW2, Normally closed (NC)	WH
			GND (0 V)	BU

Ordering information

Ordering key - Configuration possibilities see website

Product

Level switches

LWFS01 - 0 # # # # . #
LWFS01

Electrical Connection

M12-A, 4-pin, polycarbonate
Cable outlet 5 m, 4-wire, PVC
M12-A, 4-pin, stainless steel

1
2
3

Process Connection

G 1/2 A ISO 228-1
G 3/4 A ISO 228-1
G 1 A ISO 228-1
G 1/2 A hygienic
G 1/2 A ISO 228-1 for reverse assembly (in-shell thread)
G 1/2 A DIN 3852 form E, NBR gasket
Customer

1
2
3
4
5
6
9

Process connection material

Stainless Steel 1.4301 - AISI 304
Stainless Steel 1.4404 - AISI 316L

1
2

Output Configuration

PNP output
NPN output

1
2

Configuration

Factory settings
Customer-specific

0
999