Type SMW   Standard-Version

basic @ level

Limit switch of the fill level for the food industry

Basic features

▶ Limit switch of the fill level for liquids
▶ 7 base settings for several medias
▶ Further settings via PC and programming interface
▶ welding sleeve-system with modular process conections
▶ Aseptic measuring point
▶ defined position of the gland
▶ Wetting parts made of peek
▶ FDA, EHEDG-conformal

Technical features

▶ High-grade steel connecting head Material No. 1.4305
▶ Optional couplings:
  - PG-bolting
  - M12 plug
▶ Thread G 1/2" elastomer-free sealing system
▶ Sensor heads made of Peek
▶ CIP-/SIP cleaning 0... + 150°C (30 min)
▶ Reversible output (Inversion)
▶ Supply voltage 18...32 VDC
▶ Output signal active; 50 mA max.
▶ Response time < 0,2s
▶ Ambient temperature -10...+70°C
▶ Medium temperature durable 0...+100°C
▶ Storage temperature -20...+70°C
▶ Working pressure 10bar max. (Higher pressures on request)
▶ Protection class up to IP69K
▶ Torque max.: 5...10 Nm

Favoured fields of application are e.g:

The smw is a micro-processor controlled limit switch for liquids or paste-like and adhesive medias.

▶ Low- / high alarm in containers
▶ Media registration in pipes as pump protection
▶ Fill level detection of liquids in containers pipes

Sensitivity adjustment of various media

Switch			Turn on/off values	
6	5	4	On in 0%	Off
0	0	0	86	84
0	0	1	97	96
0	1	0	72	70
0	1	1	60	58
1	0	0	50	48
1	0	1	11	9
1	1	0	5	4
1	1	1	configurable via PC and programming interface (optional)	

Delay

Switch		Delay in sec
3	2	
0	0	0 sec
0	1	2 sec
1	0	4 sec
1	1	8 sec

Configuration switch

0   1

6 — Sensitivity or media
5
4
3 — Time delay
2 — Inversion
1 — empty

Full   ex works

Visualization via PC-USB interface Software incl. for readoout and parametrization of SMW

ATTENTION!
At lower deviation of dew points water condensation is possible, that can destroy the sensor. At stress with change of temperatures, e. G. a cold water jet on the hot sensor, it can come to absorption of fluids in to the sensor. (Requirements cf. DIN EN 60068-2-14)
At applications with dew point, temperature shock or thermal shock stresses we recommend a part or better to full grouting.

The tightness classification after IP68 does not mean that these parts are suitable! for applications with lower deviation ot dew point or temperature shock. (DIN 60068-2-14)
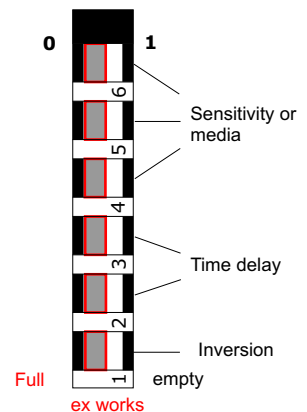
2009-08

Type SMW   Standard-Version   basic @ level

Structure and mode of action

The limit switch SMW is a micro-processor unit with an integrated interface. With this interface it´s possible to adjust the sensitivity of the unit to the particular device. Adherance and passing-off characteristics of medias, are visualizable with the software. Process immages are visible and adjustable. Turn on and turn off points and first of all the thereby severed adjustment of hysteresis to each other are operative characteristics fot the regulation in the process.

The adjustet value is reproducable by taking additional measures, e.g. a dynamic temperature compensation. A further essential advantage to optimize the current processes is the ability to document and to watch processes during a longer period.
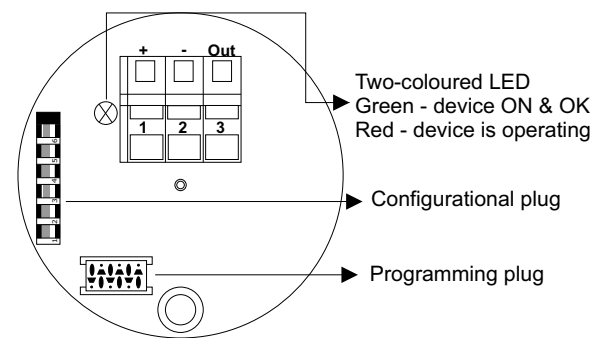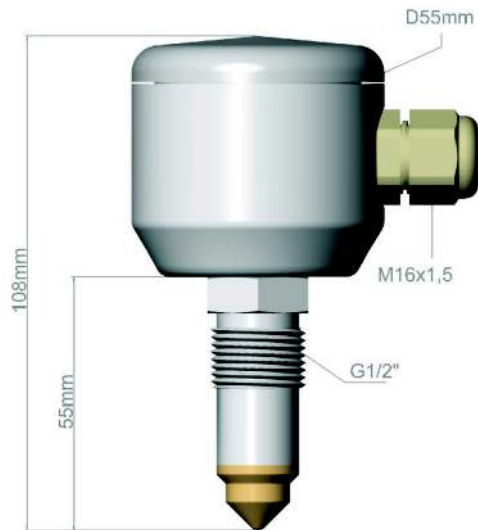
The measuring will be made by contact the smw with the medium. This happens by coupling a high frequency alternating field

This will be brought in to the process by a peek pipe end which is isolated to the process
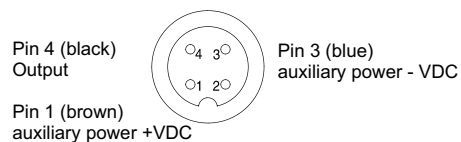.
By those dielectric characteristic of the medium (DK-Wert / ε^r), the coupled alternating field changes.
This leads to a change in the evaluation of the sensor, and thus to the desired registration of the medium by switching an output.

The integration of the equipment into the process is made by welding sleeves or modular process adaptation.

D55mm

108mm

55mm

M16x1,5

G1/2"

+   -   Out

1   2   3

Two-coloured LED
Green - device ON & OK
Red - device is operating

Configurational plug

Programming plug

M12 plug

Pin 4 (black)
Output

Pin 3 (blue)
auxiliary power - VDC

Pin 1 (brown)
auxiliary power +VDC

Notice

Suitable for media (in the appropriate configuration) with **e**r>2, so also chocolate, honey, vegetable oil etc and all watery media.

At sour and watery media faulty measurements are possible because of adhesions or film formations.

Order Code SMW

SMW - ☐ - ☐

High-grade-steel connecting head				
With screw connection M16x1,5	Protection class: IP68	5		
With M12-plug	Protection class: IP69K	6		

Execution			
standard-execution		S	
poured		V	

Accessories

PC-USB-Interface incl. Software for
reading out and parametrize the SMW-units

SMW- P A

Additional accessories see at our data sheet process connections
modular @ process

2007-10