



# Fill level measurement



Type:

Capcont LL / LS

for capacitive filling level supervision in liquids and solids

## Description

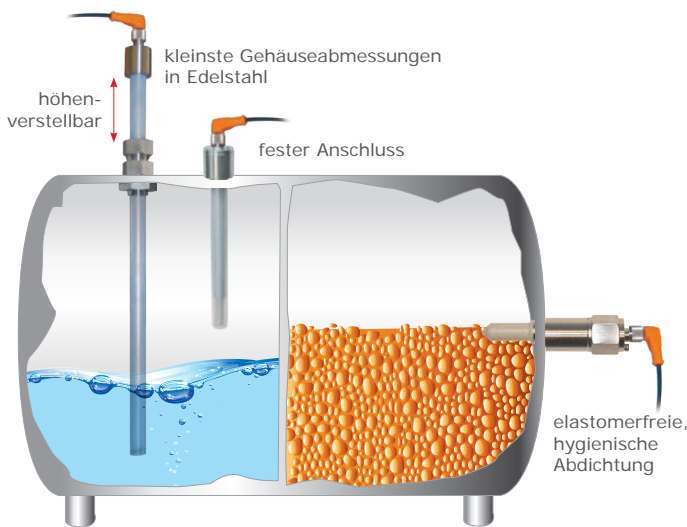
The device is suitable for limit value detection of also as dry run protection in liquids and viscous substances and also in powdery and fine granular substances, like e.g. grain, flour, powdered milk, mixing food, cement, chalk or gypsum.

container or pipes, also in explosive hazardous areas, at process temperatures from - 40°C to +140°C and process pressures from -1 up to 10 bar. Capcont LL with metallic gasket and rod isolation in PEEK is especially suitable for the use in hygienic applications

It can be used in electrically conductive as well as in non-conductive materials.

The device is certificated for the use as overflow protection acc. to WHG.

Capcont L with integrated evaluation electronic is a compact filling level limit switch for supervision of filling levels in liquids and solids within



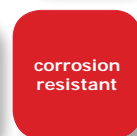
## Application

- Fill level resp. limit value detection in container
- Dry run protection for pumps
- Useable in liquids, viscous substances, granular materials or powders
- Useable for electrically conductive and non-conductive substances
- Use in hygienic applications

## Your benefits

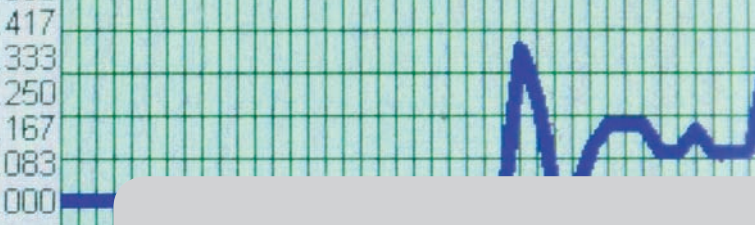
- Easy commissioning
- Suitable for a wide process temperature range from - 40°C to +140 °C
- Useable at process pressures from -1 to 10 bar
- Fully isolated electrode rod with isolation 1mm in PTFE
- Integrated evaluation electronic with PNP switching output - invertable
- Probe rod at 750 mm length
- By sliding sleeve a simple switch point adjustment is possible

## Specials



Order code . . . . . page |04|

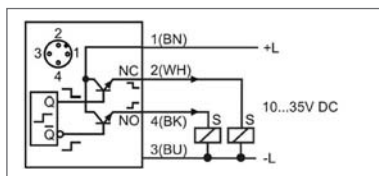




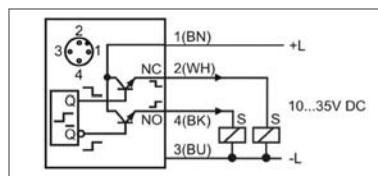
# Technical data

Power supply	
Voltage supply:	10 V up to 35 V DC reverse polarity protected
Supply current:	≤ 10mA Switching outputs in idle mode
Output	
Function:	PNP transistor output, contact + L
Output current:	≤ 500 mA current limited, short circuit predicted
Reverse current:	≤ 100 µA current limited, short circuit predicted
Step response time:	≤ 200 ms / ≥ 5 Hz
Switching cycles:	≥ 100.000.000
Switching hysteresis:	depends on the media
Sensitivity adjustment:	Multi-start trimmer
Material	
Electrode rod insulation:	Capcont LS PTFE – Polytetrafluoroethylene (Teflon®) Capcont LL PEEK
Process connection:	Steel 1.4404 (AISI 316L) / 1.4571 (AISI 316Ti)
Device connector M12x1:	frame CrNi-steel, insert PUR, contacts gold plated
Gaskets:	medium contacte (LS) FPM – Fluoroelastomer (Viton®) EPDM – ethylene-propylene-diene monomer andere FPM – Fluoroelastomer (Viton®)
Environmental conditions	
Ambient temperature:	– 40°C...+100°C, Restriction at Ex-version
Process temperature:	Capcont LS – 40°C...+100°C, Restriction at Ex-version Capcont LL – 40°C...+140°C, Restriction at Ex-version
Process pressure: :	Capcont LS – 1 bar ... 1 bar Capcont LL – 1 bar ... 10 bar
Protection:	IP68 / 3mH2O for 1h DIN EN 60529

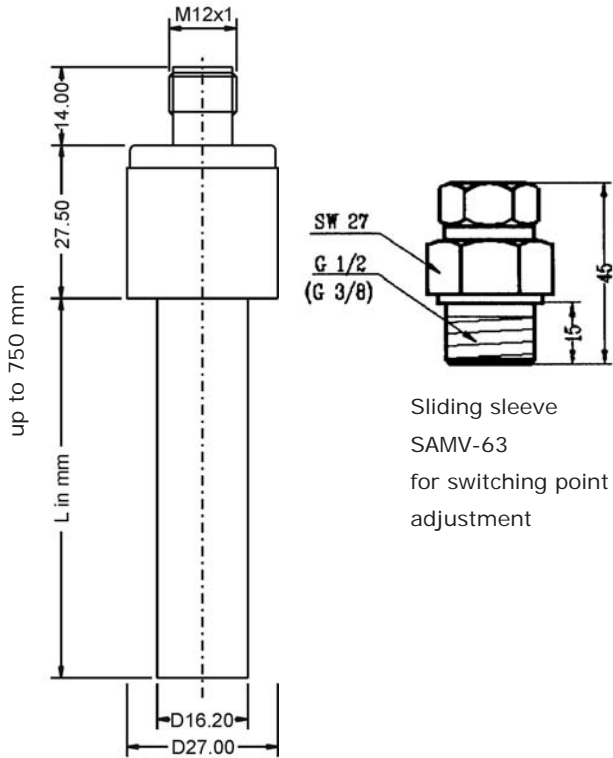
## Connection LL



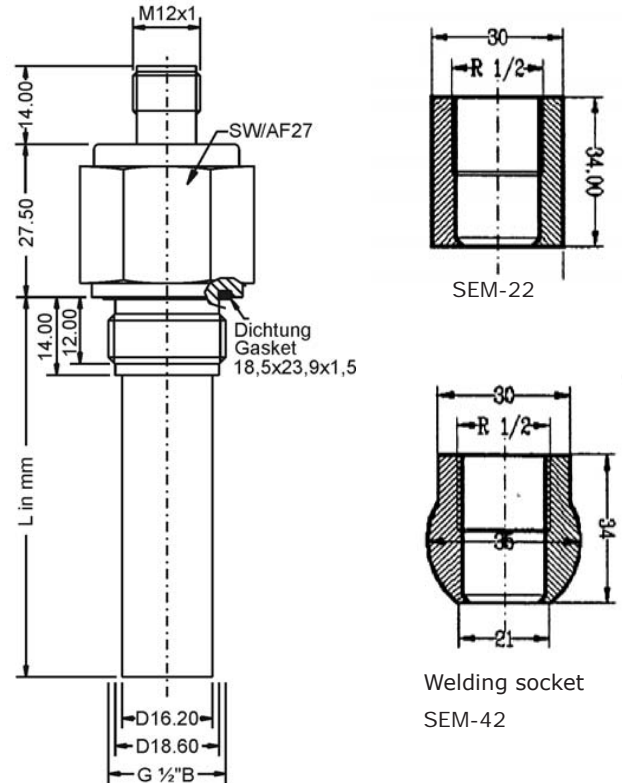
## Connection LS



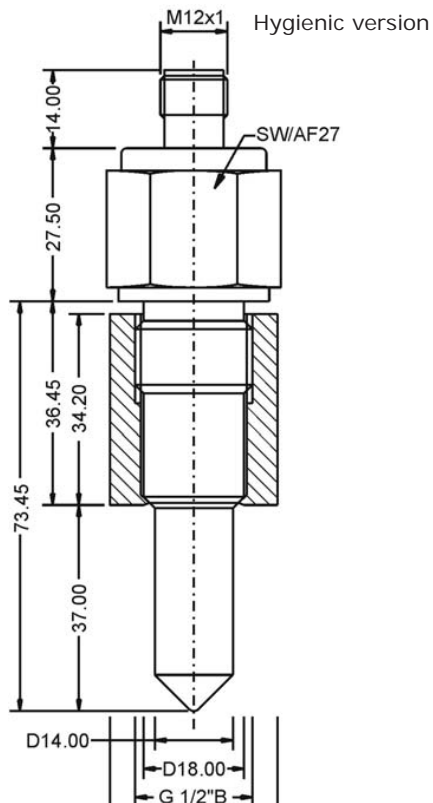
## Capcont LS0



## Capcont LS1



## Capcont LL2



# Order code

**Model**  
 L Standard  
 X2L ATEX II 3G Ex ic IIC T6 ...T1 Gc / ATEX II 3D Ex ic IIIC T98°C Dc)

**Material electrode rod isolation (medium contact)**  
 S PTFE Polytetrafluoroethylene (Teflon®)

**Process connection**  
 0 Without – mounting with sliding sleeve SAMV-63  
 1 G½" B; DIN EN ISO228-1; DIN 3852-11-E  
 Y Others

**Material gaskets (medium contact)**  
 1 FPM Fluoroelastomer (Viton®)  
 3 EPDM Etylen-Propylen-Dienmonomer - for food applications

**Material process connection (medium contact)**  
 V Steel 1.4404/316L or 1.4571/316Ti

**Material Connection housing**  
 C CrNi-Steel

**Electronic - output**  
 A DC voltage 24V<sub>DC</sub>; 1x PNP switch output

**Process temperature**  
 0 Standard, -40°C ... +100°C

**Electrical connection**  
 S Plug M12x1

**Length L**  
 A Length L = 150 mm  
 B Length L = 300 mm  
 C Length L = 500 mm  
 D Length L = 750 mm

Order code

Capcont- S V C A O S

**Model**  
 L Standard  
 X2L ATEX II 3G Ex ic IIC T6 ...T1 Gc / ATEX II 3D Ex ic IIIC T98°C Dc

**Material electrode rod isolation (medium contact)**  
 L PEEK

**Process connection**  
 2 G ½" B, DIN EN ISO228-1 – mounting with welding socket SEM-22 / SEM-42

**Material gaskets**  
 0 Without

**Material process connection (medium contact)**  
 V Steel 1.4404/316L or 1.4571/316Ti

**Material Connection housing**  
 C CrNi-Steel

**Electronic - output**  
 A DC voltage 24V<sub>DC</sub>; 1x PNP switch output

**Process temperature**  
 1 Advanced, -40°C ... +140°C

**Electrical connection**  
 S Plug M12x1  
 0

Order code

Capcont- L 2 O V C A 1 S O

## Equipment

**Order information**  
 LKZ0405PUR-AS  
 LKZ0410PUR-AS  
 BKZ0412-VA  
 SAMV-63

SEM-22  
 SEM-42

**Model**  
 Connection cable 5 m, 4-pole, shielded  
 Connection cable 10 m, 4-pole, shielded  
 Matching cable socket, VA-nut  
 Sliding sleeve G½" DIN EN ISO228-1 / ø 16 mm, for Capcont LS-  
 Steel 1.4404 / 1.4571 / gasket PTFE  
 Welding socket metal-seated G½"  
 Ball welding sleeve metal-seated G½"

Stand 10/2016