

## Product Information NCS-L-31P

## PHARMA

# Capacitive level switch Pharma NCS-L-31P

## Application/Specified usage

- Point level detection of liquid media

## Application examples

- Point level detection of liquids in vessels (e.g. overflow protection)

## Hygienic Design/Process connection

- CIP/SIP cleaning up to 143°C/max. 120 minutes
- All materials in contact with the medium are FDA-compliant
- Sensor made entirely of stainless steel, sensor tip of PEEK as per USP Class VI

## Features

- Capacitive measuring principle
- Independent of medium conductivity
- Very short response times (< 1 s)
- Defined position of M12 connector
- Switchable output (active on full/empty)
- Heated electronics to avoid condensation
- Insensitive to foam and adhesions
- Simulation of sensor status is possible

## Options/Accessories

- NPN output (open collector)
- Preassembled cable with M12 connector
- Deactivated heater for extending the temperature range

## Note



This product information is a supplement to the NCS Pharma product information.

The details specified in the NCS Pharma product information therefore also apply to this sensor variant.

## Authorizations



## NCS-L-31P with Tri-Clamp



## Shortening of the rods on-site



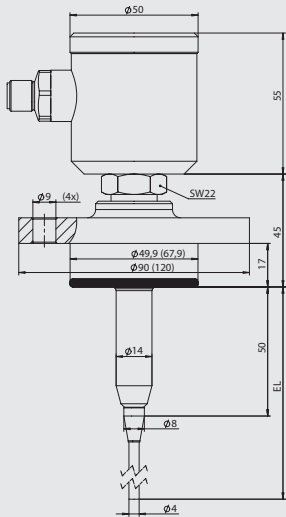
The metal rods can be shortened on-site by up to 50 mm. However, this may change the submersion depth needed for switching. This depth is approx. 5 mm for aqueous media.

## Notes

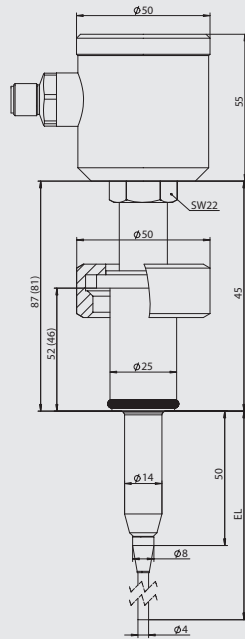


- All NCS-...P models are supplied with a window in the cover and an M12 plug-in connection.
- Varivent® is a registered trademark of GEA Tuchenhausen GmbH.
- Ingold® is a registered trademark of Mettler-Toledo GmbH.

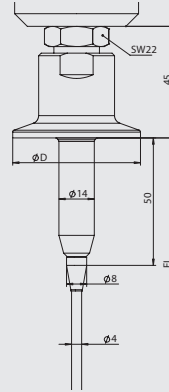
**NCS-L-31P BioControl**



**NCS-3xP Ingold®/fermenter**



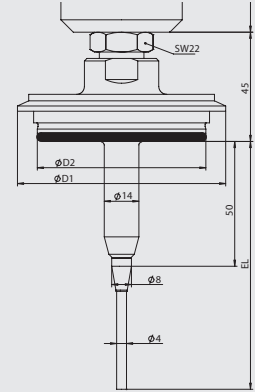
**NCS-L-31P Tri-Clamp**



**Dimension table Tri-Clamp**

Type	D [mm]
TC1	50.5
TC2	64

**NCS-L-31P Varivent®**



**Dimension table Varivent®**

Type	Vari-vent®	D1	D2
		[mm]	
V10	B	53	31
V25	F	66	50
V40	N	84	68

**Order code**

**NCS-L-31P** (Direct connection, measurement range  $D_k \geq 20$ , product-contacting parts PEEK (as per USP Class VI) and stainless steel 1.4435 (with 3.1 acceptance certificate as per EN 10204))

**Insertion length**

- 50** (insertion length 50 mm)
- 100** (insertion length 100 mm)
- 150** (insertion length 150 mm; not available for fermenter connection)
- 200** (insertion length 200 mm; not available for fermenter connection)

**Output type**

- PNP** (standard, active 16...32 V DC)
- NPN** (active 16...32 V DC)

**Temperature version**

- X** (standard version, for process temperatures up to 100 °C, CIP/SIP 143 °C/120 min)
- D** (heater deactivated at higher ambient temperatures)

**Process connection version**

- I46** (fermenter connection length 46 mm)
- I52** (fermenter connection length 52 mm)
- TC1** (Tri-Clamp 1...1½")
- TC2** (Tri-Clamp 2")
- B50** (BioControl DN 40...DN 100)
- B65** (BioControl DN 40...DN 100)
- V10** (Varivent® DN 10...DN 15)
- V25** (Varivent® DN 25)
- V40** (Varivent® DN 40)
- CP1** (Anderson-Negele CPM fitting)
- CP11** (Anderson-Negele CPM fitting, as per ASME BPE)

**Metallic finish of process connection with product-contact**

- X** (standard, 0.8 µm)
- 06** (0.6 µm)
- 04** (0.4 µm)

**NCS-L-31P / 100 / PNP / X / TC1 -06**