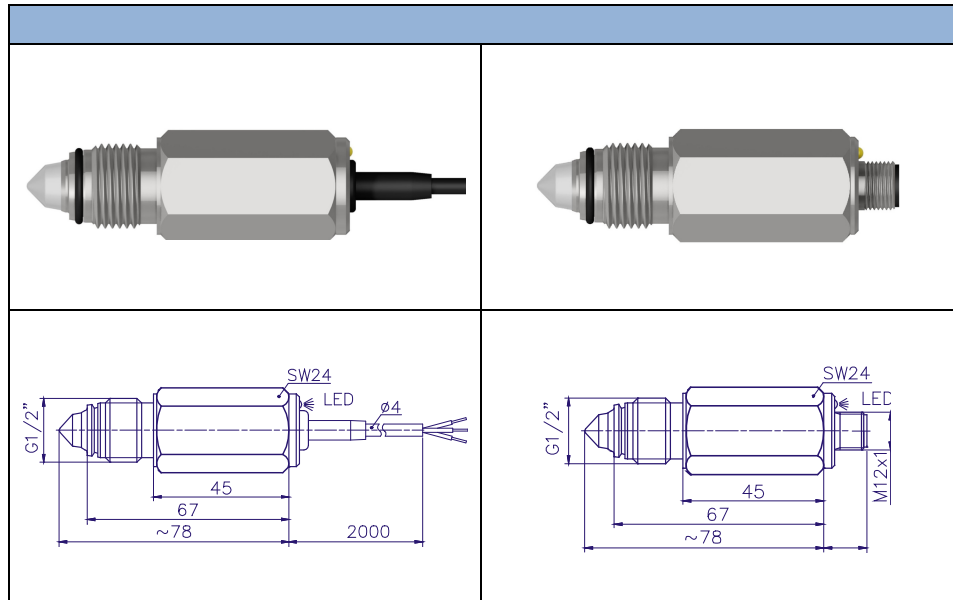




**OPTICAL LIQUID
LEVEL SENSORS**

for standard temperatures

**SERIES POS 187 P
WITH PROCESSOR**

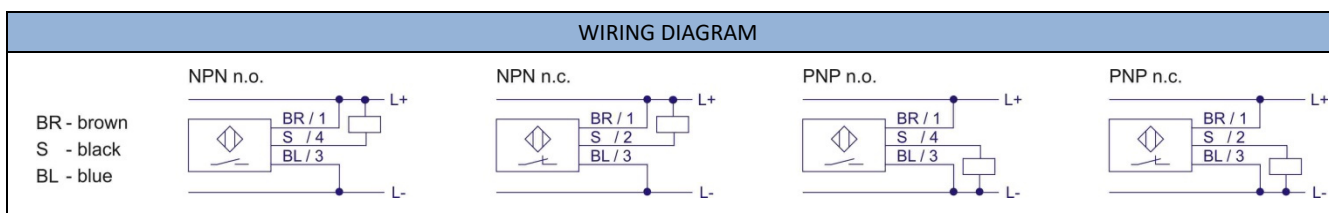


		TECHNICAL PARAMETERS			
NOMINAL VOLTAGE	Un	24 VDC		24 VDC	
SUPPLY VOLTAGE	Uc	12 – 30 VDC		12 – 30 VDC	
SUPPLY CURRENT	Ic	< 25 mA		< 25 mA	
OUTPUT CURRENT	Iz	≤ 200 mA		≤ 200 mA	
OUTPUT INDICATOR		LED		LED	
REVERSE POLARITY PROTECTION		yes		yes	
SWITCHING DISTANCE (% OF A DIPPED SENSING TIP)		< cca 50%		< cca 50%	
SWITCHING FREQUENCY		35 Hz		35 Hz	
AMBIENT TEMPERATURE RANGE	T	-25°C...+100°C - process	-25°C...+80°C - ambient	-25°C...+100°C - process	-25°C...+80°C - ambient
MATERIAL OF THE HOUSING/SENSING TIP		Stainless Steel/Borosilicate Glass		Stainless Steel/Borosilicate Glass	
MAXIMUM OPERATING PRESSURE		2MPa		2MPa	
PROTECTION STANDARD		IP 68		IP 67	
CONNECTION TYPE		Cable PVC 3 x 0,25 mm ² ; 2 m		Connector M12	

		ORDER REFERENCE NUMBER			
HOUSING STAINLESS STEEL TYPE	OUTPUT	CABLE VERSION		CONNECTOR VERSION	
			n.o.	POS 187 3 311 Pxyyy	POS 187 3 411 Pxyyy
DIN 1.4305	NPN	n.c.	POS 187 3 312 Pxyyy	POS 187 3 412 Pxyyy	
		n.o.	POS 187 6 311 Pxyyy	POS 187 6 411 Pxyyy	
DIN 1.4404	NPN	n.c.	POS 187 6 312 Pxyyy	POS 187 6 412 Pxyyy	

TYPE „Pxyyy“

TYP „Pxyyy“: An optical liquid level sensor with a processor allows for customer-specific settings in demanding applications where the conventional type is not sufficient, e.g. foamy oil. The designation, "xyyy" represents specific values, e.g. POS 187 312 P2327. Please consult the manufacturer to specify settings for your application.



SENSOR APPLICATION

The sensors are suitable for sensing various water and oil based liquids, e.g. water, oil, paraffin, etc., but also emulsions or foamy liquids. The sensors have high temperature resistance. The version made of steel type DIN 1.4404 also has high chemical resistance. The optical part of the sensor contains two pairs of optical elements that are rotated by 90° relative to each other. This ensures that the sensor will function correctly even with higher viscosity liquids. The use of more concentrated acids and bases or other non-specified liquids must be consulted with the sensor manufacturer.

Housing of the sensor is made of the stainless steel DIN 1.4305 (suitable for food and beverage industry) or DIN 1.4404 (higher resistance to chemicals). Sensing tip is made of borosilicate glass. Sensor is suitable for use in applications e.g. in food and beverage industry or medical and pharmaceutical industries.

A DIFFERENCE BETWEEN ANALOG AND PROCESSOR SENSOR

All mechanical, electrical and dimensional properties of the processor sensor are the same as in the analog sensor. The main difference is in electrical part. The processor version contains processor in it, which provides for much more possibilities in setting of the sensor as well as in precision of setting. The sensitivity of this sensor type can be set with much greater accuracy to suit the environment in the device. Also, parametric variation (e.g. sensitivity) is appr. 5 times lower. Its use is particularly suitable in demanding applications where the properties of a standard sensor are not sufficient, e.g. foamed oil sensing. The sensing parameters of the sensor will be set according to the needs of the application (it is not a user function).

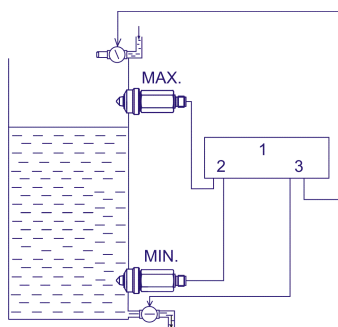
HANDLING INSTRUCTIONS

Optical liquid level sensors can be used only according to the manufacturer's mounting and operation principles as well as handling instructions. On the mounting and manipulation of the optical liquid level sensors it is essential to make sure the glass tip is not damaged. Protection cap delivered with sensors is not able to protect the glass tip from damage when hit on the hard surface. Damage of the sensing tip will cause permanent failure of the sensor that can become evident later. Sensing tip protection cap is to be removed just prior to the assembly of the sensor only!

For faultless operation it is necessary to keep the glass tip clean from grease, dirt and sediments. It is also sensitive to human touch. Clean gently and carefully with soft fabric using isopropyl alcohol.

ASSEMBLY INSTRUCTIONS AND LIMITATIONS

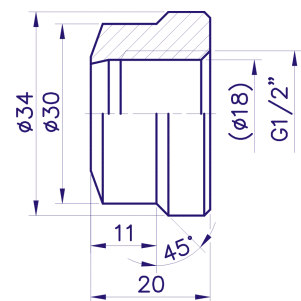
The most suitable way of sensor assembly is horizontal position through the tank wall as introduced in the picture on the left. Temperature of the medium can be up to 100°C, however, the ambient temperature mustn't exceed 80°C.



horizontal assembly

Optical part of the sensor contains two pairs of the optical elements that are positioned in a 90° angle towards each other. This feature guarantees higher reliability of the sensing, i.e. it is not necessary to follow the rotation position of the sensor during the assembly.

Sensor assembly by the help of mounting nut pictured on the right allows for tightness without additional sealing material, which is significant for use in food and beverage industry.

mounting nut
for POS sensors

The mounting nut welded into the tank combined with the sensor without additional sealing will provide for a reliable sealing up to 0,2 MPa. To obtain a reliable sealing, the mounting nut has to be welded up very precisely to prevent its deformity. Sensor itself is able to withstand pressure up to 2 MPa.

During the design process, sensor(s) have to be positioned in a way, sensing tip is placed minimum 50 mm from the glossy (mirror) surfaces, e.g. tank wall background made from stainless steel. Proximity of a glossy surface can influence sensor reliability adversely. If a shorter distance is required, consult the manufacturer.

STANDARDS AND LICENSES / ELECTROMAGNETIC COMPATIBILITY / ROHS

Optical liquid level sensors POS type of the company PLOSKON AT are developed, manufactured and tested in accordance with the valid standards and regulations. They conform to the currently valid IEC regulations, EN standards and DIN VDE regulations:

- European Standard No. EN 609 47-5-2:2007/A1:2012 and EMC Directive No. 2014/30/EU (relating to the electromagnetic compatibility);

- Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment 2015/863/EC (commonly referred to as RoHS III).

Sensors are being manufactured also in accordance with safety and health provisions related to the design and construction of electrical devices.



INTERFERENCE VOLTAGE / SHORT-CIRCUIT / OVERPOLING

Sensors conform to the standards IEC 61000-3-3, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4 and IEC 61000-4-6. All sensors are permanently short-circuit and over-poling proof.