

## Opto Electronic Level Switch

Limit Switch for detecting the level of liquid media

Application area: Refrigeration

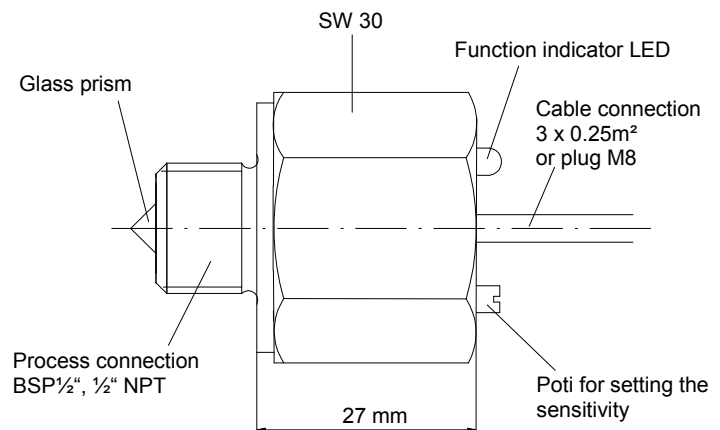
### OPG 04

#### Characteristics

- ▶ Compact construction
- ▶ No moving parts
- ▶ Reasonable prices
- ▶ Simple to install
- ▶ Mounting direction: any
- ▶ High reliability
- ▶ Long service life
- ▶ Measuring accuracy  $\pm 0,5$  mm
- ▶ Electrical connection: cable connection or plug
- ▶ Optical switch condition check via the LED
- ▶ Output PNP
- ▶ Pressure 4 MPa, optional also higher pressure
- ▶ Adjustable sensitivity for any application
- ▶ Glass fused in the steel body (without sealing)



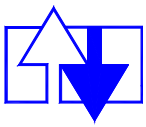
#### Dimensions



#### Areas of application

The opto electronic level switches OPG04 are used for monitoring the level of liquids, such as refrigerant medium, liquid ammoniac etc., also suitable for vacuum applications.

Applications include plants in the refrigeration.



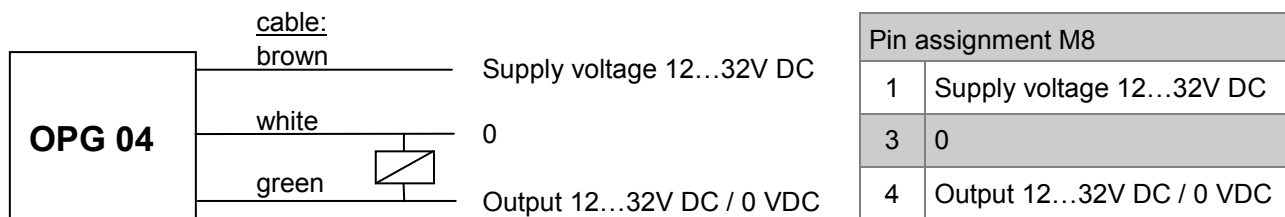
### Operating Principle

The electro-optic sensor contains an infrared LED and a light receiver.

Light from the LED is directed into a prism which forms the tip of the sensor. With no liquid present, light from the LED is reflected within the prism to the receiver.

When rising liquid immerses the prism, the light is refracted out into the liquid, leaving little or no light reach the receiver. Sensing this change, the receiver actuates electronic switching within the unit to operate an external alarm or control circuit.

### Connection diagram

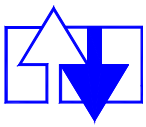


### Technical Data

<b>Max. pressure</b>	4 MPa, optional also higher pressure	<b>Min. distance sensor tip to any opposite wall</b>	> 10 mm
<b>Ambient temperature</b>	-30°C to +70°C	<b>Mounting direction</b>	any
<b>Operating temperature</b>	-40°C to +100°C	<b>Process connections</b>	BSP $\frac{1}{2}$ " , $\frac{1}{2}$ " NPT other types on request
<b>Measuring accuracy</b>	$\pm$ 0,5 mm		
<b>Material housing</b>	steel, nickel-plated		
<b>Material prism</b>	glass, fused in the steel body (without sealing)		

### Electrical Data

<b>Supply voltage</b>	12...32V DC	<b>Indication of active output</b>	1 LED
<b>Supply current max.</b>	40 mA	<b>Electrical connection</b>	cable PVC and PUR 3 x 0,25 mm <sup>2</sup> or plug M8, other types on request
<b>Switch point number</b>	1		
<b>Output</b>	PNP Transistor		
<b>Switch function</b>	closer or opener		
<b>Protection</b>	IP65		



### Product overview / order table

**OPG 04**

**Process connection**  
 A Fixing screw thread BSP 1/2"  
 B Fixing screw thread 1/2" NPT  
 X Other types on request

**Electrical connection**  
 2P Connection cable: 2 m PVC 3 x 0,25 mm<sup>2</sup>, Standard  
 └ other cable length: dimensions in m  
 2U Connection cable: 2 m PUR 3 x 0,25 mm<sup>2</sup>, Standard  
 └ other cable length: dimensions in m  
 M8 Plug M8  
 X Other types on request


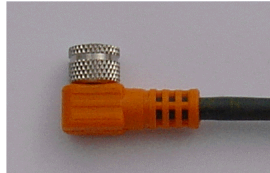
**Switch function**  
 S Closer (in medium closed, 12 – 32 V DC)  
 O Opener (in medium open, 0 V DC)

**Sensitivity**  
 A Sensitivity not adjustable (**please specify the medium**)  
 T Sensitivity adjustable (with poti)

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Example:  
 Process connection BSP 1/2", 3 m PVC cable, closer, sensitivity not adjustable, medium water: OPG 04 A 3P S A

### Accessories: Circular plugs M8

Type		Order number	Design
Female plug M8 with	2 m PVC cable	K8PVC 2	
	5 m PVC cable	K8PVC 5	
	2 m PUR cable	K8PUR 2	
	5 m PUR cable	K8PUR 5	
Female plug M8, angle type with	2 m PVC cable	W8PVC 2	
	5 m PVC cable	W8PVC 5	
	2 m PUR cable	W8PUR 2	
	5 m PUR cable	W8PUR 5	

Colour	
1	brown
3	blue
4	black

### Distributore esclusivo per l'Italia:

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