

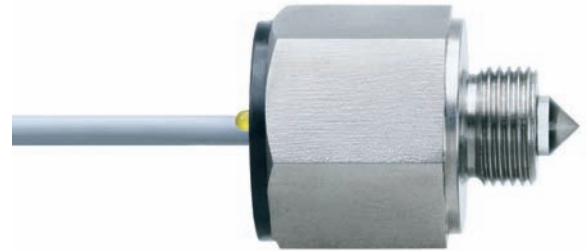
The optoelectronic Senlux Besta level switches are used for the level control of liquids. They may be installed either vertically or horizontally.

### Base model OPG 01

Product overview shown below

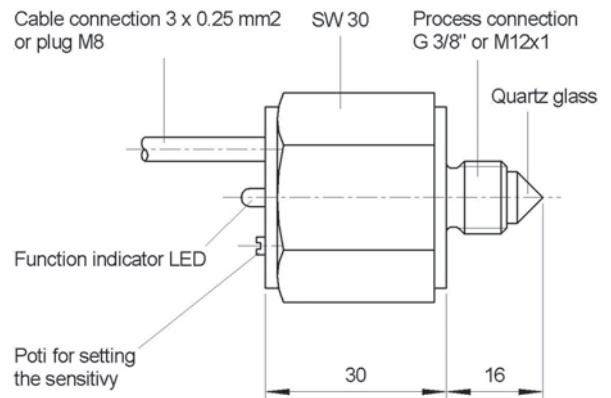
#### Technical Data

max. pressure	1 MPa
Ambient temperature	-25°C to +70°C
Liquid temperature	-30°C to +100°C; max. +150°C 15 minutes
Measuring accuracy	+/- 0,5 mm
Material housing	stainless steel 1.4305
Material prism	quartz glass
min. distance sensor tip to reflecting wall	> 10 mm
Mounting direction	any
Process connections	G 3/8", M12x1 other types on request



#### Electrical Data

Supply voltage	12...32 VDC
Supply current max.	40 mA
Switch point number	1
Output	PNP Transistor, reverse polarity protected close or open
Switch function	close or open
Protection	IP65
Indication of active output	1 LED
Electrical connection	cable PVC, PUR 3 x 0,25 mm <sup>2</sup> or plug M8, other types on request



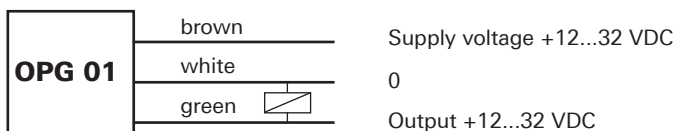
### Operating Principle

The optoelectronic 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



Pin assignment	
1	Supply voltage +12...32 VDC
3	0
4	Output +12...32 VDC

## Product overview / order table

### OPG 01

#### Process connection

- A Connection thread G3/8"
- B Connection thread M 12 x 1 mm
- 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 VDC)
- O Opener (in medium open, 0 VDC)

#### Sensitivity

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

OPG 01				
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Example: Process connection G3/8", 3m PVC cable, closer, sensitivity not adjustable, medium water: OPG 01 A 3P S A



### Characteristics

- Compact construction
- No moving parts
- Excellent price / performance ratio
- Easy to install
- Mounting direction: any
- High reliability
- Long service life
- Measuring accuracy +/- 0,5 mm
- Electrical connection: cable connection or plug
- Optical switch condition check via the LED
- Output PNP
- Close or Open
- Adjustable sensitivity for any application

### Areas of application

- Plant construction
- Machine tools
- Chemicals and Pharmaceuticals
- Hydraulics
- Machine construction
- Water treatment etc.

### 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

**The optoelectronic Senlux Besta level switches are used for the level control of liquids. They may be installed either vertically or horizontally.**

### Base model OPG 02

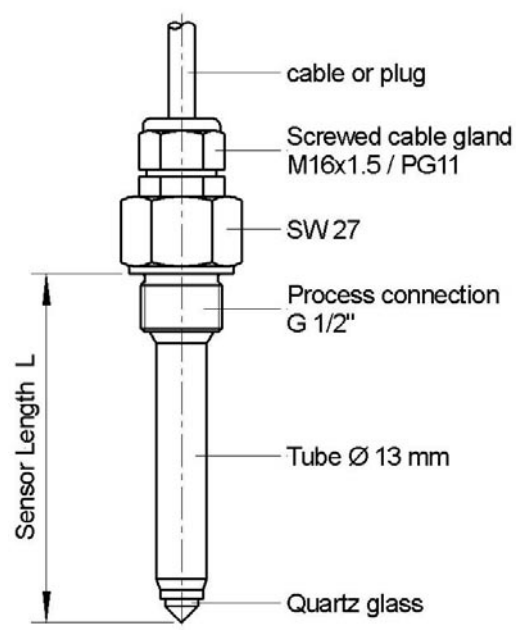
Product overview shown below

#### Technical Data

max. pressure	2.5 MPa
Ambient temperature	-25°C to +70°C
Liquid temperature	-30°C to +100°C; temporary up to max. 150°C
Measuring accuracy	+/- 0,5 mm
Material housing	stainless steel 1.4571
Material prism	quartz glass
min. distance sensor tip to reflecting wall	> 10 mm
Mounting direction	any
Process connections	G 1/2", other types on request
Sensor length L	min. 65 mm max. 3000 mm

#### Electrical Data

Supply voltage	12...32 VDC
Supply current max.	40 mA
Switch point number	1
Output	PNP Transistor, reverse polarity protected
Switch function	close or open
Protection	IP65
Indication of active output	1 LED
Electrical connection	cable PVC, PUR 3 x 0,25 mm <sup>2</sup> or coupler plug or, plug M12, other types on request



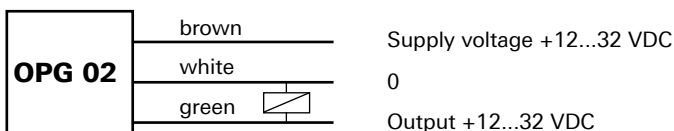
### Operating Principle

The optoelectronic 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



Pin assignment	
1	Supply voltage +12...32 VDC
3	0
4	Output +12...32 VDC

## Product overview / order table

### OPG 02

#### Process connection

- A Connection thread G1/2"
- 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
- W Coupler plug, DIN 43650
- M12 Plug M12
- X Other types on request

#### Switch function

- S Closer (in medium closed, 12 - 32 VDC)
- O Opener (in medium open, 0 VDC)

#### Sensitivity

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

#### Sensor length L

Dimensions in mm (length from sealing face of process connection, L min=65 mm, L max=3000 mm)

OPG 02					
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Example: Process connection G1/2", 3m PVC cable, closer, sensitivity not adjustable, length 500 mm: OPG 02 A 3P S A 500

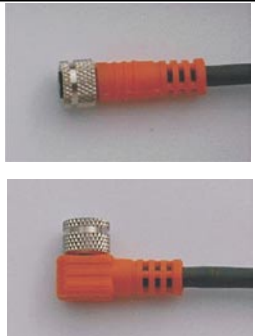
### Characteristics

- No moving parts
- Excellent price / performance ratio
- Easy to install
- Mounting direction: any
- High reliability
- Long service life
- Measuring accuracy +/- 0,5 mm
- Electrical connection: cable connection or plug
- Output PNP
- Close or Open
- Adjustable sensitivity for any application (e.g. foam detection)
- Sensor length: selectable from min. 65 mm to max. 3000 mm

### Areas of application

- Plant construction
- Machine tools
- Chemicals and Pharmaceuticals
- Hydraulics
- Machine construction
- Water treatment etc.

### Accessories: Circular plugs M12

Type		Order number	Design
Female plug M12 with	2 m PVC cable	K12PVC 2	
	5 m PVC cable	K12PVC 5	
	2 m PUR cable	K12PUR 2	
	5 m PUR cable	K12PUR 5	
Female plug M12, angle type with	2 m PVC cable	W12PVC 2	
	5 m PVC cable	W12PVC 5	
	2 m PUR cable	W12PUR 2	
	5 m PUR cable	W12PUR 5	

#### Colour

1	brown
3	blue
4	black

The optoelectronic Senlux Besta level switches are used for the level control of liquids. They may be installed either vertically or horizontally.

## Base model OPG 03

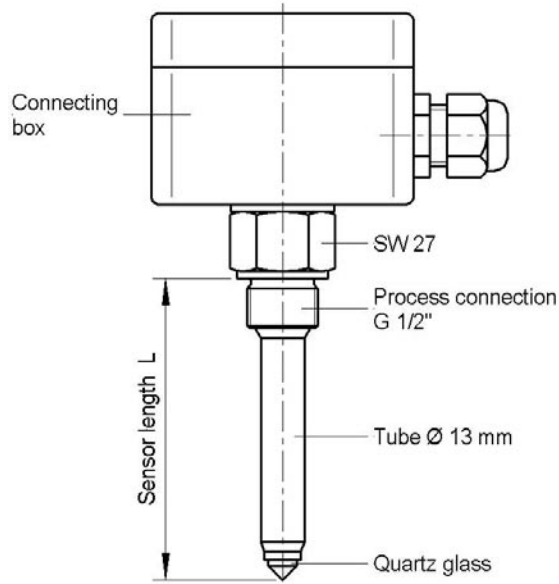
Product overview shown below

### Technical Data

max. pressure	2.5 MPa
Ambient temperature	-30°C to +70°C
Liquid temperature	-30°C to +100°C; temporarily up to max. +150°C
Accuracy	+/- 0,5 mm
Mounting direction	any
Min. distance sensor tip to any reflecting surface	> 10 mm
Prism material	quartz glass
Process connections	G 1/2", 1.4571, other types on request
Sensor tube	ø 13 mm, 1.4571
Sensor length L	min. 65 mm max. 3000 mm

### Electrical Data

Supply voltage	230 VAC
Switch points	1
Output	250 VAC / 6A
Life cycles	>10 <sup>7</sup>
Function	change-over switch
Protection rating	IP65
Connection box	Aluminium 75 x 80 x 57 mm, other types on request



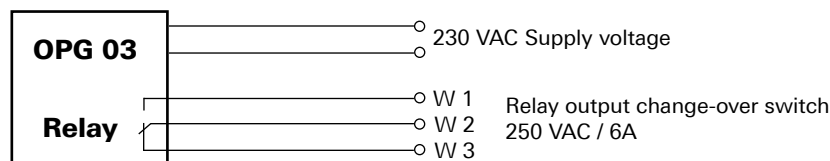
### Operating Principle

The optoelectronic 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 by the liquid, leaving little or no light reaching the receiver. Sensing this change, the receiver initiates a switching process.

### Connection diagram



## Product overview / order table

### OPG 03

#### Process connection

- A Connection thread G1/2"
- X other types on request

#### Connection box

- B Aluminium case 75 x 80 x 57 mm, IP65
- X other types on request

#### Sensitivity

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

#### Sensor length L

Dimensions in mm (length from sealing face of process connection,  
L min. = 65 mm, L max. = 3000 mm)

OPG 03				
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Example: Process connection G1/2", aluminium case, sensitivity not adjustable, length 500 mm: OPG 03 A B A 500

### Characteristics

- No moving parts
- Excellent price / performance ratio
- Easy to install
- Mounting direction: any
- High reliability
- Long service life
- Measuring accuracy +/- 0,5 mm
- Electrical connection box
- Relay output 250 VAC / 6A
- Change-over switch
- Adjustable sensitivity for any application (e.g. foam detection)
- Sensor length selectable from min. 65 mm to max. 3000 mm

### Areas of application

- Plant construction
- Machine tools
- Chemical and Pharmaceutical
- Hydraulics
- Machine construction
- Water treatment, etc.

**The optoelectronic Senlux Besta level switches are used for the level control of liquids. They may be installed either vertically or horizontally.**

## Base model OPG 04

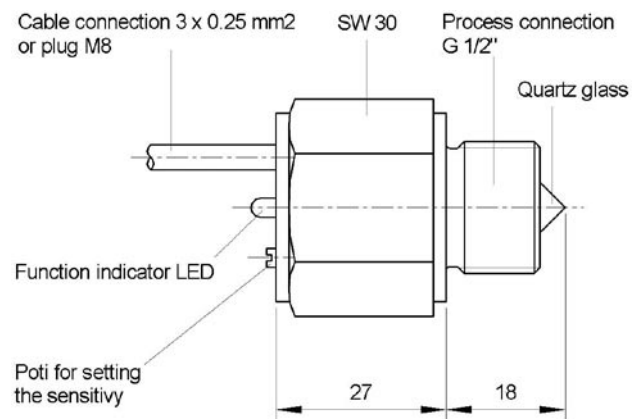
Product overview shown below

### Technical Data

max. pressure	4 MPa, optional also higher pressure
Ambient temperature	-30°C to +70°C
Liquid temperature	-40°C to +100°C
Accuracy	+/- 0,5 mm
Material housing	steel, nickel-plated
Prism material	glass, fused in the steel body (without seal)
min. distance sensor tip to any opposite wall	> 10 mm
Mounting direction	any
Process connections	G 1/2", other types on request

### Electrical Data

Supply voltage	12...32 VDC
Supply current max.	40 mA
Switch points	1
Output	PNP Transistor, reverse polarity protected close or open
Function	
Protection rating	IP65
Indication of active output	1 LED
Electrical connection	cable PVC, PUR, 3 x 0,25 mm <sup>2</sup> or plug M8, other types on request



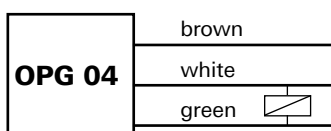
## Operating Principle

The optoelectronic 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 by the liquid, leaving little or no light reaching the receiver. Sensing this change, the receiver initiates a switching process.

## Connection diagram



Supply voltage 12...32 VDC

0

Output 12...32 VDC

Pin assignment M8	
1	Supply voltage 12...32 VDC
3	0
4	Output 12...32 VDC

## Product overview / order table

### OPG 04

#### Process connection

- A Connection thread G1/2"
- 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 VDC)
- O Opener (in medium open, 0 VDC)

#### Sensitivity

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

OPG 04				
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Example: Process connection G1/2", 3 m PVC cable, closer, sensitivity not adjustable, medium water: OPG 04 A 3P S A

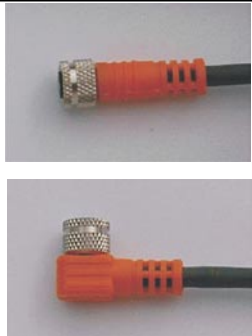
### Characteristics

- Small and compact
- No moving parts
- Excellent price / performance ratio
- Easy to install
- Mounting direction: any
- High reliability
- Long service life
- Measuring accuracy +/- 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 seal)

### Areas of application

- The optoelectronic level switch OPG 04 is used for monitoring the level of liquids in refrigeration applications.

### 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