

Capacitive Proximity Switch

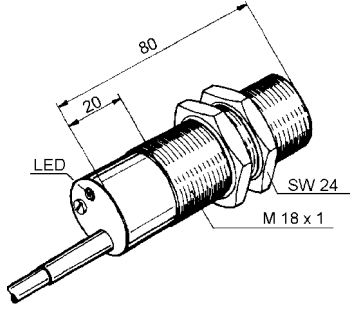
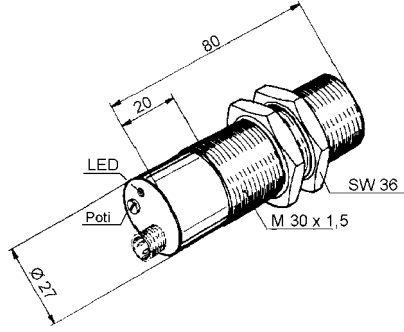
Operating Distance 15 - 70 mm

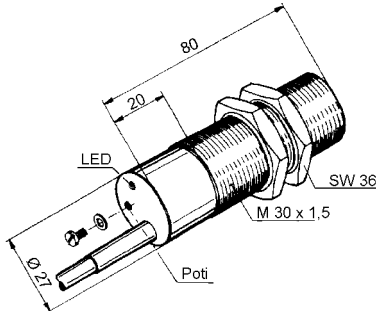
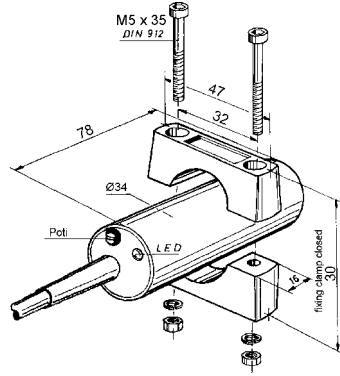
Item group 100



**Monitoring of filling levels,
convoyer belts, packages**

- Liquids
- Material to be milled
- Glass
- Wood
- Plastics
- Cardboard
- Metal

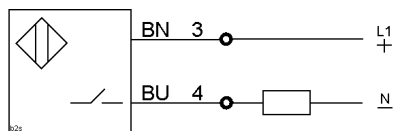
| Design: | M 18 Plastic thread | M 30 Plastic thread |
|--------------------------------|---|---|
| Operating distance (Sn): | 8 mm | 15 mm |
| |  |  |
| Operating distance adjustable: | yes | yes |
| Installation in metal: | non flush | non-flush |
| Operating frequency AC/DC: | 15 Hz / 300 Hz | 10 Hz / 100 Hz |
| Housing material: | Plastic PBT | Plastic PBT |
| Type AC/DC: | KKL 008.95 <i>only AC, no short circuit protection</i> | KKL 015.05 G |
| Art.-No.: | 1043A | 1031D |
| Supply voltage: | 20 – 250 V AC | 20 – 260 V AC/DC |
| Diagram of connection: | 2-wire normally open | ① 2-wire normally open |
| Connection: | 2 m cable | 2 m cable |
| Type DC: | KKL 008.33 G | KKL 015.38 G S4 |
| Art.-No.: | 1037A | 1032I |
| Supply voltage: | 10 – 55 V DC | 10 – 55 V DC |
| Diagram of connection: | 3-wire PNP normally open | ② 4-wire PNP normally closed + normally open |
| Connection: | 2 m cable | plug S4 (M12 x 1) |
| Notes: | | |

| Design: | M 30 Metal thread | Ø 34 mm cylindrical smooth |
|--------------------------------|---|---|
| Operating distance (Sn): | 15 mm | 20 mm |
| |  |  |
| Operating distance adjustable: | yes | yes |
| Installation in metal: | flush | non-flush |
| Operating frequency: | 15 Hz / 100 Hz | 10 Hz / 100 Hz |
| Housing material: | Plastic PBT / nickel plated brass | Plastic PBT |
| Type AC/DC: | KKZ 302.95 <i>only AC, no short circuit protection</i> | KKH 020.05 G |
| Art.-No.: | 1050C | 1010C |
| Supply voltage: | 20 – 250 V AC | 20 – 260 V AC/DC |
| Diagram of connection : | 2-wire normally open | ① 2-wire normally open |
| Connection: | 2 m cable | 2 m cable |
| Type DC: | KKZ 302.23 G | KKH 020.38 G S4 |
| Art.-No.: | 1050A | 1058A |
| Supply voltage: | 10 – 30 V DC | 10 – 55 V DC |
| Diagram of connection : | 3-wire PNP normally open | ② 4-wire PNP normally closed + normally open |
| Connection: | 2 m cable | plug S4 (M12 x 1) |
| Notes: | | |

AC/DC Type

| | | | |
|-------------------------|-------------------------------|-------------------------------|---------------------------------------|
| Supply voltage | 20 - 260 V AC/DC | Operating distance adjustable | yes |
| Supply frequency | 40 – 440 Hz | Short circuit protection | yes, pulsing |
| Ripple voltage | max. 15 % (DC) | Protection class | IP 65 |
| Voltage drop | 9 V | Switching hysteresis | 1 - 15 % |
| Load current max. | 5 - 400 mA | Ambient temperature | -25 ... +70 °C |
| short time load current | 2 A / 10 ms 0,8 A / 100 ms | Residual current | 1,7 mA / 260 V AC 1,0 mA / 24 V DC |
| Function display | LED | | |

①

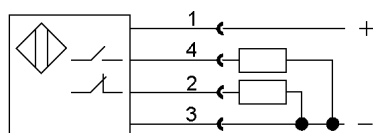


Also available as normally open.

DC- Type

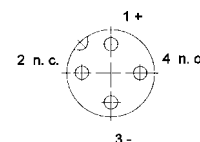
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|-------------------------|-------------------------------|-------------------------------|----------------|
| Supply voltage | 10 - 55 V DC | Operating distance adjustable | yes |
| Ripple voltage | max. 15 % | Short circuit protection | yes, pulsing |
| Voltage drop | 1,5 V / 50 mA | Protection class | IP 65 |
| No load current | < 10 mA | Switching hysteresis | 1 - 15 % |
| Load current max. | 0 - 400 mA | Ambient temperature | -25 ... +70 °C |
| short time load current | 2 A / 10 ms 0,8 A / 100 ms | Function display | LED |

②



plug S4

4 = normally open
2 = normally close



Also available as NPN.

DC- Type with remote adjustment

| | | | |
|-------------------------|-------------------------------|-------------------------------|------------------------------|
| Supply voltage | 24 V DC | Short circuit protection | yes, pulsing |
| Ripple voltage | max. 15 % | Protection class | IP 65 |
| Voltage drop | 2 V | Switching hysteresis | 1 - 15 % |
| No load current | 15 mA | Ambient temperature | -25 ... +70 °C |
| Load current max. | 0 - 400 mA | Function display | LED extern |
| short time load current | 2 A / 10 ms 0,8 A / 100 ms | Operating distance adjustable | yes, 2 external push-buttons |

③



Accessories

| Connection cable with moulded S4 angle coupling for types with plug S4. (not included in the scope of supply) | Type | Art.-No. |
|--|----------|----------|
| length 2 m | ST 041-2 | 9841D |
| length 5 m | ST 041-5 | 9841E |

Incorporated potentiometers for adjustment of operating distance are protected by a plastic screw. The 20-turn potentiometer enables precise setting of the desired switching point.

Capacitive proximity switches are suitable for detection of nearly all materials, starting with metal to plastic and with liquid to bulk material. The sensor effect is based on evaluation of a change of capacity by proximity of an object.

The operating distance (Sn) is to a large extent dependant on the material. Data sheet information refers to a grounded metal plate having an edge length of 3 x Sn. Typical correction factors are water = 1, glass = 0,5, PVC = 0,3, wood = 0,2 to 0,7.

Since 1979 Proxitron has been developing and manufacturing sensors. Robust construction and permanent quality control guarantee maximum reliability. Apart from the items described in this leaflet many designs made to the application in question are available. In cooperation with our customers new products are resulting permanently.

Proxitron sensors comply with the actually valid IEC publications, EN standards as well as DIN VDE standards and different factory standards.

Applications

Control of presence and completeness in packing installations, also through the cartons.

Level control of liquids or bulk material through glass or plastic.

Level control of ground material with compensation of different residual humidities.

Stoppage warning for sucking-off plants in wood industry.

Level control in filling plants

Feeding monitoring at the silo by means of one sensor only with integrated time relay.

Control of double glass for plate glass conveyors.

Breakage control for tapes of textile, paper and plastic.

Options: TEACH-IN function or remote adjustment with external push-buttons for faster adaption to changing kinds of operation

Survey of product groups

Inductive proximity switch

- WG 210 Sensing distance < 20 mm
- WG 220 Sensing distance 20-60 mm
- WG 230 Sensing distance 60-120 mm
- WG 240 Sensor strips
- WG 241 Surface sensors
- WG 250 Ring-sensors
- WG 260 Inductive analog-sensors and evaluation electronics

Other Sensors

- WG 100 Capacitive Sensors
- WG 510 Piros Light barriers
- WG 610 Piros Infrared-Sensors
- WG 620 Piros for fibre optics
- WG 630 Piros Infrared pyrometers
- WG 800 Flow-sensors for air
- WG 830 Flow-sensors

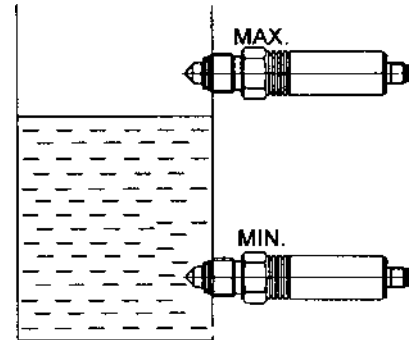


www.proxitron.de

Piros Opto liquid level sensor works as level sensor for transparent liquids.

- high switching accuracy
- robust construction
- high ambient temperature
- pressure-resistant

up to 140 °C



Technical Data

| | |
|---|---------------------------|
| Type | LTG 120.13 |
| Art.-No. | 5108B |
| Output (closed by object detection) | PNP n. o. |
| Rated operating distance (% of a dipped sensing tip) | < approx. 50 % |
| Supply voltage | 9 - 28 V DC |
| Ripple voltage | max. 15 % |
| Load current max. | 0 - 200 mA |
| Short circuit protection | yes |
| Current consumption | approx. 25 mA |
| Switching frequency | 35 Hz |
| On / off switching delay (optional) | 10 sec. |
| Ambient temperature | -25 ... +85 °C |
| Medium temperature | -40 ... +140 °C |
| Protection class | IP 67 |
| Pressure resistance | 30 bar |
| Connection | 2 m cable |
| Function display | LED |
| Housing material | stainless steel 1.4305 |

Accessories (please order separately)

Weld-on socket for LTG level sensor

| | |
|-------------|------------------------|
| Type | HG 1/2" |
| Art.-No. | 9855A |
| Material: | stainless steel G 1/2" |

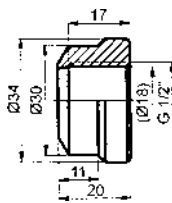
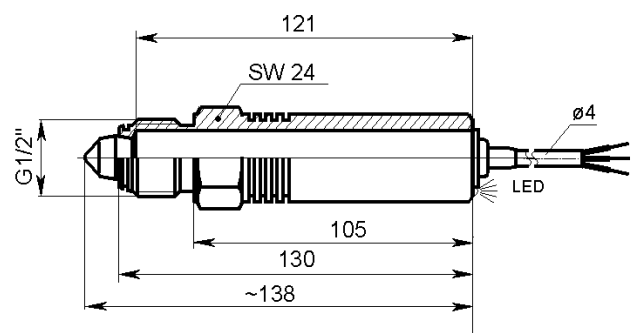
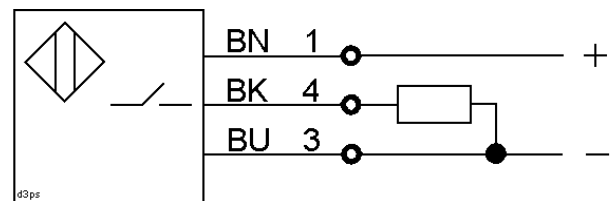


Diagram of Connections



The compact casing integrates the optic system of transmitter and receiver. The infrared radiation given from the transmitter is reflected at the outside limit surfaces of glass. The glass surfaces have a different refractive index when wet and thus avoid total reflection. The transmitter does not get a signal any longer and switches through the output.