

Capacitive Proximity Switch

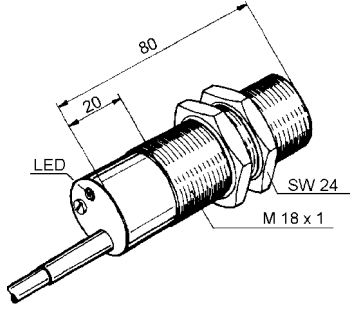
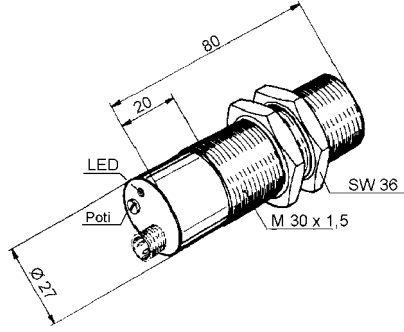
Operating Distance 15 - 70 mm

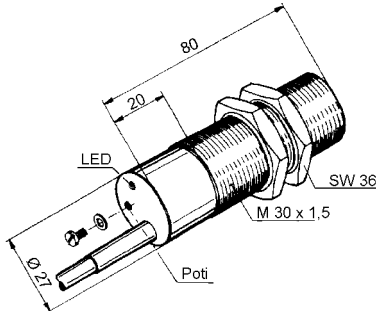
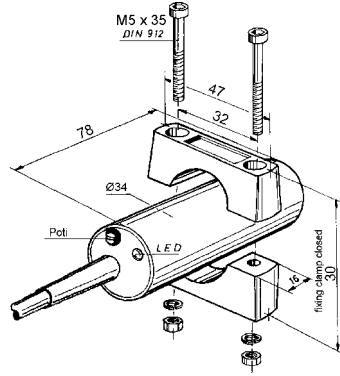
Item group 100

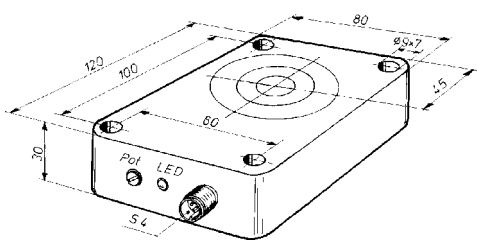
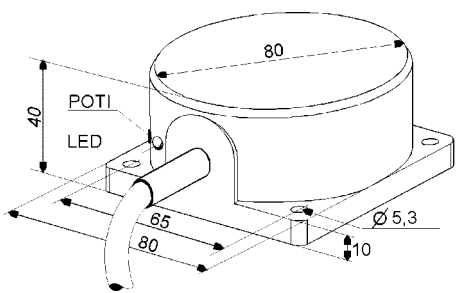


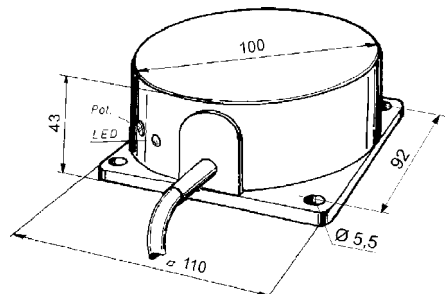
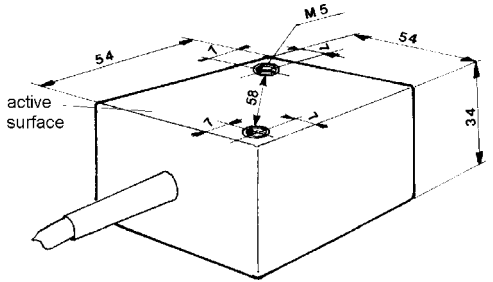
**Monitoring of filling levels,
convoyer belts, packages**

- 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:		

Design:	80 x 120 mm	Ø 80 mm
Operating distance (Sn):	50 mm	60 mm
		
Operating distance adjustable:	yes	yes
Installation in metal:	non-flush	non-flush
Operating frequency AC/DC:	10 Hz / 100 Hz	10 Hz / 15 Hz
Housing material:	Plastic PBT	Plastic PBT
Type AC/DC:	KKRD 050.05 G	KKK 060.05 G
Art.-No.:	1041B	1016D
Supply voltage:	20 – 260 V AC/DC	20 – 260 V AC/DC
Diagram of connection:	① 2-wire normally open	① 2-wire normally open
Connection:	2 m cable	2 m cable
Type DC:	KKRD 050.38 G S4	KKK 060.38 G S4
Art.-No.:	1057A	1015C
Supply voltage:	10 – 55 V DC	10 – 55 V DC
Diagram of connection:	② 4-wire PNP normally closed + normally open	② 4-wire PNP normally closed + normally open
Connection:	plug S4 (M12 x 1)	plug S4 (M12 x 1)
Notes:		

Design:	Ø 100 mm	54 x 54 mm
Operating distance (Sn):	70 mm	35 mm
		
Operating distance adjustable:	yes	by 2 external push-buttons (TEACH-IN)
Installation in metal:	non-flush	non-flush
Operating frequency:	10 Hz / 15 Hz	2 Hz
Housing material:	Plastic PBT	Plastic PBT
Type AC/DC:	KKN 070.05 G	
Art.-No.:	1021F	
Supply voltage:	20 – 260 V AC/DC	
Diagram of connection:	① 2-wire normally open	
Connection:	2 m cable	
Type DC:	KKN 070.38 G S4	KKRH 035.23 G
Art.-No.:	1020D	1056B
Supply voltage:	10 – 55 V DC	24 V DC
Diagram of connection:	② 4-wire PNP normally closed + normally open	③ 3-wire PNP normally open
Connection:	plug S4 (M12 x 1)	2 m cable
Notes:		automatic adjustment of operating distance TEACH-IN

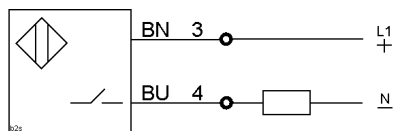
Further variations available:

NPN output, normally closed output, complementary output, various cable and connector versions, customer-specific solutions.

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

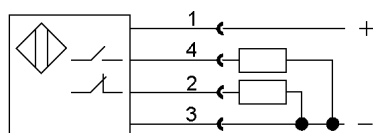


Also available as normally open.

DC- Type

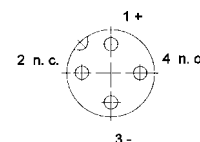
Supply voltage	10 - 55 V DC	Operating distance adjustable	yes
Ripple voltage	max. 15 %	Short circuit protection	yes, pulsing
Voltage drop	1,5 V / 50 mA	Protection class	IP 65
No load current	< 10 mA	Switching hysteresis	1 - 15 %
Load current max.	0 - 400 mA	Ambient temperature	-25 ... +70 °C
short time 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 (S_n) is to a large extent dependant on the material. Data sheet information refers to a grounded metal plate having an edge length of $3 \times S_n$. 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



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Piros Opto liquid level sensor works as level sensor for transparent liquids. Safety reconnaissance of the medium since foam on the surface will not be detected.

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

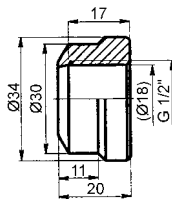
Technical Data

Type	LTG 120.13 G
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 PUR 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 G1/2"



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.

optimized for
transparent
liquids

up to 140 °C

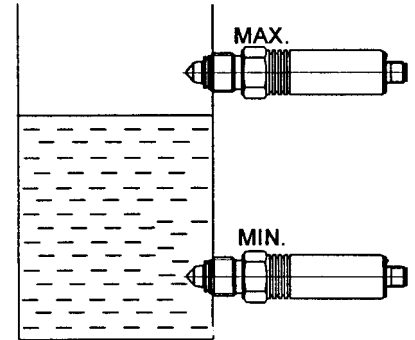


Diagram of Connections

