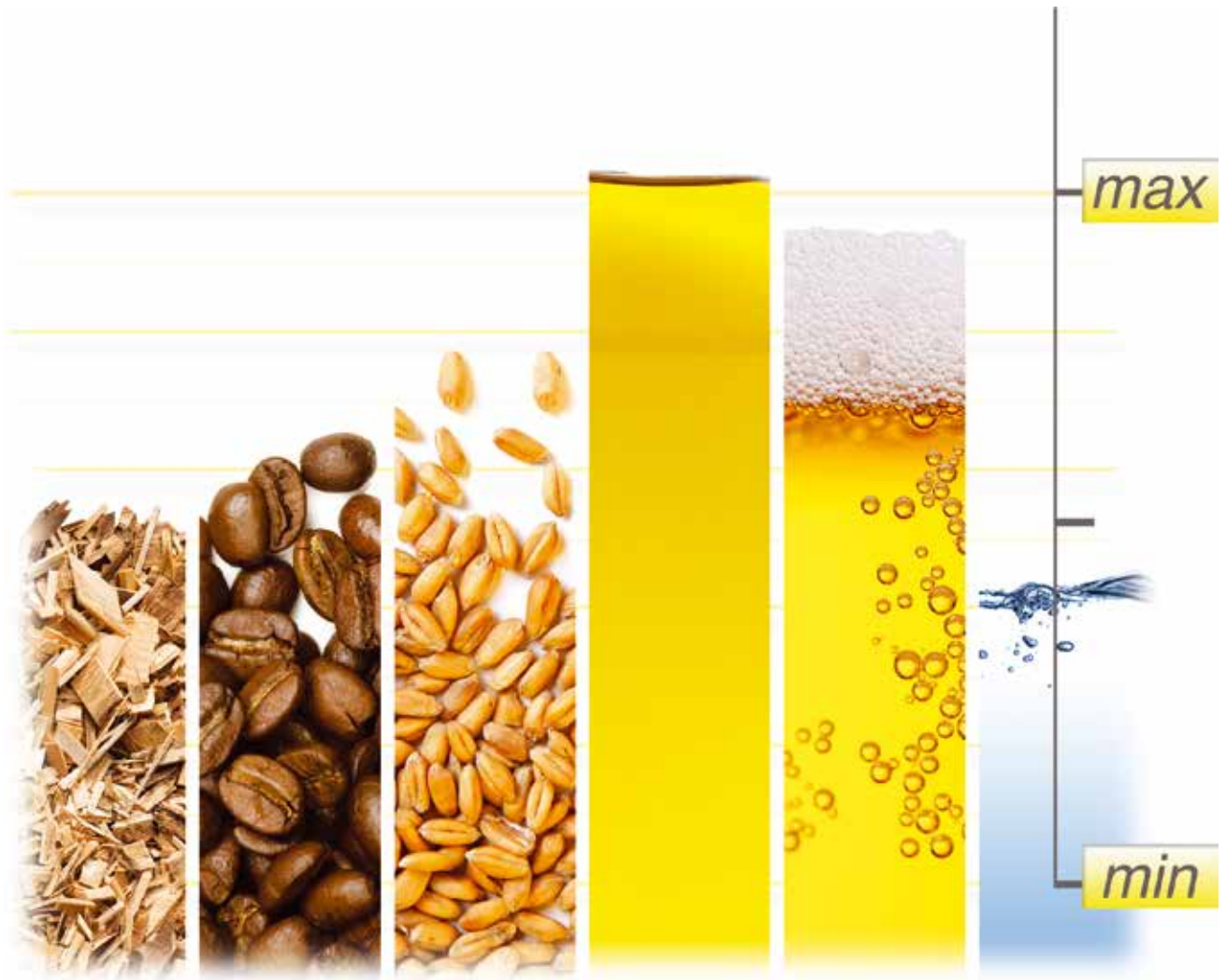


Capacitive sensors



- Plastics
- Ceramics
- Wood
- Liquids
- Foods
- Powder
- Granulates
- Pallets
- Pastes

Object detection, Filling level control binary, analogue, high temperature, ATEX

Design	M18	M18	M30	M30
Operating distance Sn	5 mm	8 mm	10 mm	15 mm
Installation	flush	non-flush	flush	non-flush
Protection class	IP67	IP67	IP67	IP67



Ambient temperature	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C
Adjustable operating dist.	1 ... 8 mm	1 ... 10 mm	2 ... 20 mm	2 ... 25 mm
Housing material	Brass, nickel-plated	Plastics	Brass, nickel-plated	Plastics
DC PNP antivalent	KKZ 182.28 G S4	KKL 008.28 G S4	KKZ 302.28 G S4	KKL 015.28 G S4
Operating voltage	12 - 30 V DC	12 - 30 V DC	12 - 30 V DC	12 - 30 V DC
Load current max	200 mA	200 mA	200 mA	200 mA
Connection	Plug S4 (M12x1)	Plug S4 (M12x1)	Plug S4 (M12x1)	Plug S4 (M12x1)

AC/DC 2 Wire normally closed	KKZ 182.04 G	KKL 008.04 G	KKZ 302.04 G	KKL 015.04 G
AC/DC 2 Wire normally open	KKZ 182.05 G	KKL 008.05 G	KKZ 302.05 G	KKL 015.05 G
Operating voltage	20 - 250 V AC/DC	20 - 250 V AC/DC	20 - 250 V AC/DC	20 - 250 V AC/DC
Load current max	250 mA	250 mA	330 mA	330 mA
Connection	2 m cable	2 m cable	2 m cable	2 m cable

Ambient temperature		-25 ... +100 °C	-25 ... +100 °C	-25 ... +100 °C
Adjustable operating dist.		1 ... 10 mm	2 ... 20 mm	2 ... 25 mm
Housing material		PTFE	PTFE	PTFE
DC PNP antivalent		KKLT 008.28 GH	KKLT 010.28 GH	KKLT 015.28 GH
Operating voltage		12 - 30 V DC	12 - 30 V DC	12 - 30 V DC
Load current max		200 mA	200 mA	200 mA
Connection		2 m cable	2 m cable	2 m cable

More high-temperature sensors up to +250 °C on request.

A setter is for adjusting the operating distance.
The screw plug used secures the indicated type of enclosure.

Capacitive sensors Thread M18 - M32

M32		Ø34 mm cyl. smooth	80 x 120 mm	Ø80 mm	Ø 100 mm
20 mm	25 mm	50 mm	60 mm	70 mm	
non-flush	non-flush	non-flush	non-flush	non-flush	
IP67	IP67	IP67	IP67	IP67	
					
-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C	
2 ... 30 mm	1 ... 40 mm	5 ... 75 mm	6 ... 90 mm	7 ... 110 mm	
Plastics	Plastics	Plastics	Plastics	Plastics	
KKL 020.28 G S4	KKH 025.28 G S4	KKRD 050.38 G S4	KKK 060.38 G S4	KKN 070.38 G S4	
12 - 30 V DC	12 - 30 V DC	10 - 55 V DC	10 - 55 V DC	10 - 55 V DC	
200 mA	200 mA	400 mA	400 mA	400 mA	
Plug S4 (M12x1)	Plug S4 (M12x1)	Plug S4 (M12x1)	Plug S4 (M12x1)	Plug S4 (M12x1)	
KKL 020.04 G	KKH 020.04 G	KKRD 050.04 G	KKK 060.04 G	KKN 070.04 G	
KKL 020.05 G	KKH 020.05 G	KKRD 050.05 G	KKK 060.05 G	KKN 070.05 G	
20 - 250 V AC/DC	20 - 250 V AC/DC	20 - 250 V AC/DC	20 - 250 V AC/DC	20 - 250 V AC/DC	
330 mA	330 mA	400 mA	400 mA	400 mA	
2 m cable	2 m cable	2 m cable	2 m cable	2 m cable	
-25 ... +100 °C	-25 ... +100 °C	LTG 120 filling level sensor - for fluids up to 140 °C - pressure-resistant up to 30 bar - suitable as well for foaming fluids - optical measuring principle.			
1 ... 40 mm	3 ... 40 mm				
PTFE	PTFE				
KKLT 025.28 GH	KKHT 025.28 GH				
10 - 35 V DC	12 - 30 V DC				
250 mA	200 mA				
2 m cable	2 m cable				

The Sn operating distance refers to an earthed, square steel measurement plate with an edge length equal to the triple Sn rated operating distance. (Correction factors Page 4)

	Integr. time sequence control	Teach-In	Analogue
Design	Relay - Output Ø32 mm cylindrical smooth conically	Remote adjustment 54 x 54 mm	Teach-In 310 x 28 mm
Operating distance Sn	20 mm	35 mm	10 mm
Adjustable operating dist.	2 ... 25 mm	3 ... 40 mm Teach-In	0 ... 20 mm Teach-In
Installation	non-flush	non-flush	non-flush
Analogue measuring sect.			0 - 300 mm



Housing material	Plastics	Plastics	Plastic / aluminium
Ambient temperature	-25 ... +70 °C	-25 ... +70 °C	-25 ... +70 °C
Protection class	IP67	IP67	IP67
Operating voltage	20 - 250 V AC/DC	24 V DC	24 V DC
Connection	2 m cable	5 m cable	1.5 m cable
PNP normally open		KKRH 035.23 G	
PNP - normally open ATEX		KKRH 035.23 G Ex	
Analogue 0 -10 V DC			KKU 003.19
Load current max		200 mA	
Relay changeover switch	KKH 020.0 RT2		
Relay contact load max	1A, 220 V DC / 250 V AC, 60 W		

The material determines the attainable operating distance which can be calculated via the correction factor:
Operating distance = Sn x Correction factor

Material	Metal	Water	Wheat	Wood	Glass	Oil	PVC	PE	Ceramics
Correction factor	1	1	0.8	0.7	0.4 ... 0.6	0.4	0.4	0.37	0.2 ... 0.5