

## CAPACITIVE SENSORS KAS

### Housing

M8 x 1

M12 x 1

M12 x 1

M12 x 1

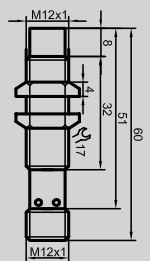
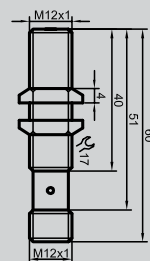
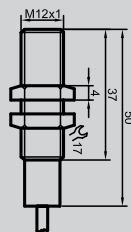
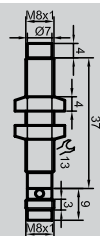


### Technical data

Operating distance $S_n$ [mm], flush mounting	2, no	2, yes	2, yes	4, no
Operating distance min./max. [mm] adjustable	0...4	0...6	0...6	0.5...10
Type NPN NO				
Type NPN NC				
Type NPN antivalent		KAS-70-A12-A	KAS-70-A12-A-Y5	
Type PNP NO	KAS-80-A21-S-Y7	KAS-80-A12-S		
Type PNP NC				
Type PNP antivalent		KAS-80-A12-A	KAS-80-A12-A-Y5	KAS-80-A22-A-Y5
Type NPN/PNP-NO/NC switchable				
Type AC/DC NO				
Type AC/DC NC				
Operating voltage ( $U_B$ )	10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC
Output current max. ( $I_e$ )	150 mA	250 mA / 2 x 250 mA	2 x 250 mA	2 x 250 mA
No-load current ( $I_o$ )	typ. 10 mA	typ. 10 mA	typ. 10 mA	typ. 10 mA
Frequency of operating cycles max.	50 Hz	500 Hz	500 Hz	50 Hz
Permitted ambient temperature	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
LED-display	yes	yes	yes	yes
Protective circuit	yes	yes	yes	yes
Degree of protection IEC 529*	IP 67	IP 67	IP 67	IP 67
Connection	metal flange connector M8 x 1	2 m cable	metal flange connector M12 x 1	metal flange connector M12 x 1
Housing material	VA No. 1.4305	VA No. 1.4305	VA No. 1.4305	VA No. 1.4305
Active surface	PTFE	PTFE	PTFE	PTFE
Lid	-	PA/PPO	-	-

### Dimension

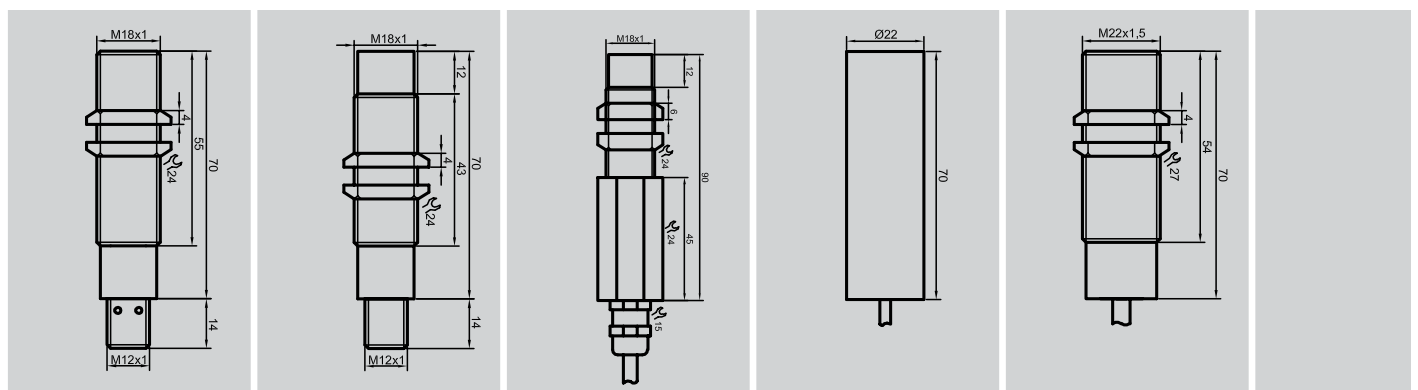
\* with sealed potentiometer screw



Connection diagram see page 7  
Female connector M12 see page 15

## CAPACITIVE SENSORS KAS

M18 x 1	M18 x 1	M18 x 1	Ø 22 mm	M22 x 1.5	
					
5, yes	8, no	8, no	8, yes	8, yes	
0.5...10	0.5...15	0.5...15	0.5...15	0.5...15	
<b>KAS-70-A13-A-Y5</b>	<b>KAS-70-A23-A-Y5</b>		<b>KAS-70-20-A</b>	<b>KAS-70-20-A-M22</b>	
		<b>KAS-80-A23-S-K-PTFE-IP68</b>	<b>KAS-80-20-S</b>		
<b>KAS-80-A13-A-Y5</b>	<b>KAS-80-A23-A-Y5</b>		<b>KAS-80-20-A</b>	<b>KAS-80-20-A-M22</b>	
10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC	
2 x 250 mA	2 x 250 mA	400 mA	400 mA / 2 x 250 mA	2 x 250 mA	
typ. 10 mA	typ. 10mA	typ. 10 mA	typ. 10 mA	typ. 10 mA	
300 Hz	50 Hz	50 Hz	300 Hz	300 Hz	
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	
yes	yes	yes	yes	yes	
yes	yes	yes	yes	yes	
IP 67	IP 67	IP 68	IP 67	IP 67	
metal flange connector M12 x 1	metal flange connector M12 x 1	2 m PTFE cable with protection set	2 m cable	2 m cable	
brass	brass	PTFE	brass	brass	
PTFE	PTFE	PTFE	PTFE	PTFE	
-	-	PTFE/PVDF	PA/PPO	PA/PPO	

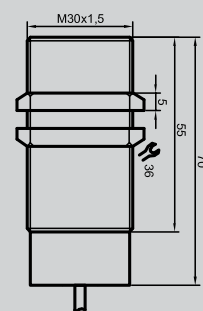
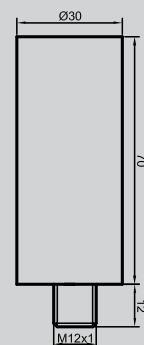
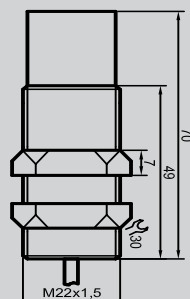


## CAPACITIVE SENSORS KAS

Housing	M22 x 1.5	Ø 30 mm	Ø 30 mm	M30 x 1.5
				
<b>Technical data</b>				
<b>Operating distance <math>S_n</math> [mm]</b> , flush mounting	12, no	20, yes	25, no	10, yes
Operating distance min./max. [mm] adjustable	0.5...20	0.5...30	1...40	0.5...25
<b>Type NPN NO</b>	KAS-70-23-S-M22			
<b>Type NPN NC</b>				
<b>Type NPN antivalent</b>	KAS-70-23-A-M22	KAS-70-30-A-Y5	KAS-70-35-A-Y5	KAS-70-A14-A
<b>Type PNP NO</b>	KAS-80-23-S-M22			KAS-80-A14-S
<b>Type PNP NC</b>				
<b>Type PNP antivalent</b>	KAS-80-23-A-M22	KAS-80-30-A-Y5	KAS-80-35-A-Y5	KAS-80-A14-A
<b>Type NPN/PNP-NO/NC switchable</b>				
<b>Type AC/DC NO</b>				
<b>Type AC/DC NC</b>				
Operating voltage ( $U_B$ )	10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC
Output current max. ( $I_e$ )	400 mA / 2 x 250 mA	2 x 250 mA	2 x 250 mA	400 mA / 2 x 250 mA
No-load current ( $I_0$ )	typ. 10 mA	typ. 10 mA	typ. 10 mA	typ. 10 mA
Frequency of operating cycles max.	50 Hz	200 Hz	50 Hz	200 Hz
Permitted ambient temperature	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
LED-display	yes	yes	yes	yes
Protective circuit	yes	yes	yes	yes
Degree of protection IEC 529*	IP 67	IP 67	IP 67	IP 67
Connection	2 m cable	metal flange connector M12 x 1	metal flange connector M12 x 1	2 m cable
Housing material	PA/PPO	brass	PA/PPO	brass
Active surface	PA/PPO	PTFE	PA/PPO	PTFE
Lid	PA/PPO	PA/PPO	PA/PPO	PA/PPO

### Dimension

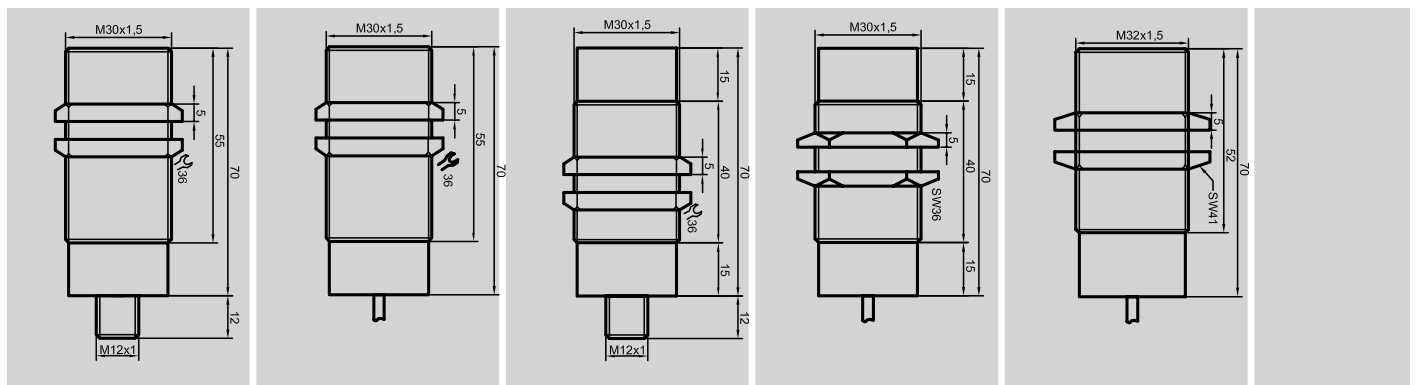
\* with sealed potentiometer screw



Connection diagram see page 7  
Female connector M12 see page 15

## CAPACITIVE SENSORS KAS

M30 x 1.5	M30 x 1.5	M30 x 1.5	M30 x 1.5	M32 x 1.5
10, yes	10, yes	15, no	15, no	20, yes
0.5...25	0.5...25	1...30	1...30	0.5...30
				KAS-70-30-S-M32
KAS-70-A14-A-Y5	KAS-70-A14-A-K	KAS-70-A24-A-Y5	KAS-70-A24-A-K	KAS-70-30-A-M32
	KAS-80-A14-S-K		KAS-80-A24-S-K	KAS-80-30-S-M32
KAS-80-A14-A-Y5	KAS-80-A14-A-K	KAS-80-A24-A-Y5	KAS-80-A24-A-K	KAS-80-30-A-M32
10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC
2 x 250 mA	400 mA / 2 x 250 mA	2 x 250 mA	400 mA / 2 x 250 mA	400 mA / 2 x 250 mA
typ. 10 mA	typ. 10 mA	typ. 10 mA	typ. 10 mA	typ. 10 mA
200 Hz	200 Hz	50 Hz	50 Hz	200 Hz
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
IP 67	IP 67	IP 67	IP 67	IP 67
metal flange connector M12 x 1	2 m cable	metal flange connector M12 x 1	2 m cable	2 m cable
brass	PA/PPO	brass	PA/PPO	brass
PTFE	PA/PPO	PTFE	PA/PPO	PTFE
PA/PPO	PA/PPO	PA/PPO	PA/PPO	PA/PPO



## CAPACITIVE SENSORS KAS

### Housing

M32 x 1.5

M32 x 1.5

M32 x 1.5

M32 x 1.5

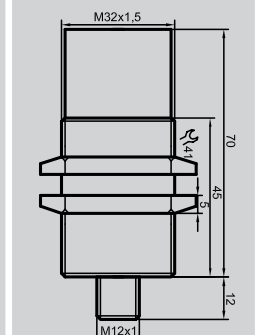
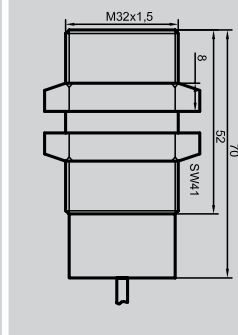
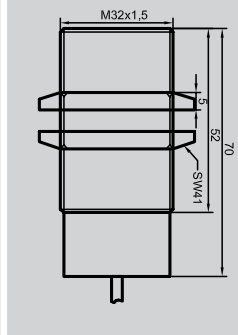
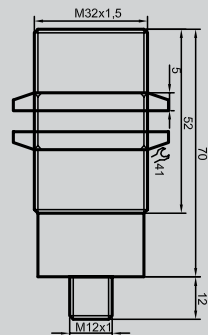


### Technical data

Operating distance $S_n$ [mm], flush mounting	20, yes	20, yes	15, yes	25, no
Operating distance min./max. [mm] adjustable	0.5...30	2...25	2...20	1...40
Type NPN NO				
Type NPN NC				
Type NPN antivalent	KAS-70-30-A-M32-Y5			KAS-70-34-A-M32-PTFE/2A-Y5
Type PNP NO				
Type PNP NC				
Type PNP antivalent	KAS-80-30-A-M32-Y5			KAS-80-34-A-M32-PTFE/2A-Y5
Type NPN/PNP-NO/NC switchable		KAS-2000-30-M32		
Type AC/DC NO			KAS-90-30-S-M32	
Type AC/DC NC			KAS-90-30-Ö-M32	
Operating voltage ( $U_B$ )	10...35 V DC	10...35 V DC	20...250 V AC/DC	10...35 V DC
Output current max. ( $I_e$ )	2 x 250 mA	400 mA	330 mA	2 x 250 mA
No-load current ( $I_o$ )	typ. 10 mA	typ. 15 mA	typ. 2.5 mA	typ. 10 mA
Frequency of operating cycles max.	200 Hz	50 Hz	25 Hz	50 Hz
Permitted ambient temperature	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
LED-display	yes	yes	yes	yes
Protective circuit	yes	yes	yes	yes
Degree of protection IEC 529*	IP 67	IP 67	IP 67	IP 67
Connection	metal flange connector M12 x 1	2 m cable	2 m cable	metal flange connector M12 x 1
Housing material	brass	brass	PA/PPO	VA No. 1.4305
Active surface	PTFE	PA/PPO	PA/PPO	PTFE
Lid	PA/PPO	PA/PPO	PA/PPO	PA/PPO






### Dimension

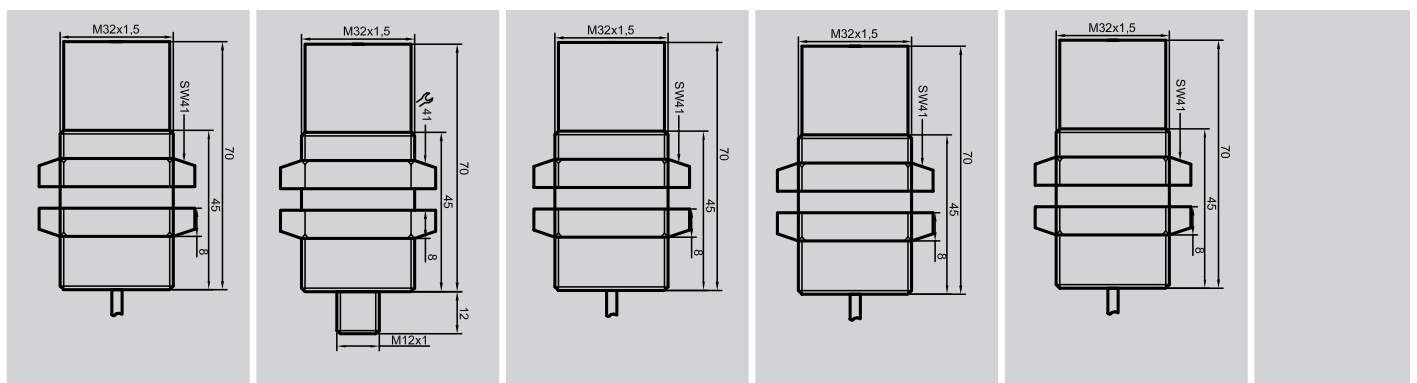
\* with sealed potentiometer screw



Connection diagram see page 7  
Female connector M12 see page 15

**CAPACITIVE SENSORS KAS**

M32 x 1.5	M32 x 1.5	M32 x 1.5	M32 x 1.5	M32 x 1.5
				
25, no 1...40	25, no 1...40	25, no 3...30	20, no 3...25	25, no 1...40
KAS-70-35-S-M32				
KAS-70-35-A-M32	KAS-70-35-A-M32-Y5			KAS-70-35-A-M32-PTFE-100°C
KAS-80-35-S-M32				
KAS-80-35-A-M32	KAS-80-35-A-M32-Y5			KAS-80-35-A-M32-PTFE-100°C
		KAS-2000-35-M32		
			KAS-90-32-S-M32 KAS-90-32-Ö-M32	
10...35 V DC	10...35 V DC	10...35 V DC	20...250 V AC/DC	10...35 V DC
400 mA / 2 x 250 mA	2 x 250 mA	400 mA	330 mA	2 x 250 mA
typ. 10 mA	typ. 10 mA	typ. 15 mA	typ. 2.5 mA	typ. 10 mA
50 Hz	50 Hz	50 Hz	25 Hz	50 Hz
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+100°C
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
IP 67	IP 67	IP 67	IP 67	IP 67
2 m cable	metal flange connector M12 x 1	2 m cable	2 m cable	2 m cable
PA/PPO	PA/PPO	PA/PPO	PA/PPO	PTFE
PA/PPO	PA/PPO	PA/PPO	PA/PPO	PTFE
PA/PPO	PA/PPO	PA/PPO	PA/PPO	PA/PPO

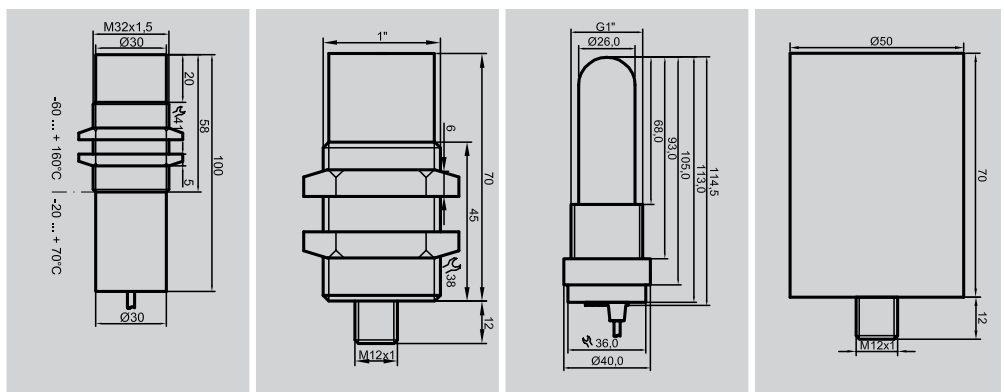


## CAPACITIVE SENSORS KAS

Housing	M32 x 1.5	1 "	Ø 26mm/1"	Ø 50 mm
 				
<b>Technical data</b>				
Operating distance $S_n$ [mm], flush mounting	15, no	25, no	5, no	30, yes
Operating distance min./max. [mm] adjustable	2...20	1...40	0...10	1...50
Type NPN NO				
Type NPN NC				
Type NPN antivalent				KAS-70-50-A-Y5
Type PNP NO				
Type PNP NC				
Type PNP antivalent		KAS-80-34-A-1"-PTFE/Ms-Y9	KAS-80-26-A-PTFE-1"-100°C	KAS-80-50-A-Y5
Type NPN/PNP-NO/NC switchable	KAS-2000-34-M32-PTFE/V2A-160°C			
Type AC/DC NO				
Type AC/DC NC				
Operating voltage ( $U_B$ )	10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC
Output current max. ( $I_e$ )	400 mA	2 x 250 mA	2 x 250 mA	2 x 250 mA
No-load current ( $I_0$ )	typ. 15 mA	typ. 10 mA	typ. 10 mA	typ. 10 mA
Frequency of operating cycles max.	50 Hz	50 Hz	50 Hz	100 Hz
Permitted ambient temperature	see below	-25...+70°C	-25...+100°C	-25...+70°C
LED-display	yes	yes	yes	yes
Protective circuit	yes	yes	yes	yes
Degree of protection IEC 529*	IP 67	IP 67	IP 67	IP 67
Connection	2 m cable	metal flange connector M12 x 1	2 m cable	metal flange connector M12 x 1
Housing material	VA No. 1.4305	brass	PTFE	PA/PPO
Active surface	PTFE	PTFE	PTFE	PA/PPO
Lid	PA/PPO	PA/PPO	PA/PPO	PA/PPO

### Dimension

\* with sealed potentiometer screw



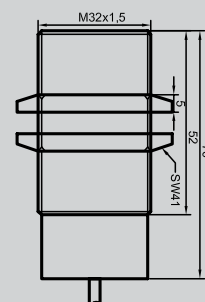
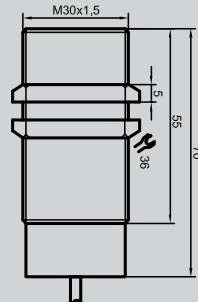
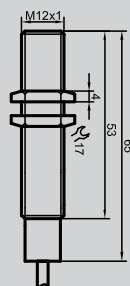
Connection diagram see page 7  
Female connector M12 see page 15

# CAPACITIVE SENSORS KAS WITH ANALOGUE OUTPUT

Housing	M12 x 1	M30 x 1.5	M32 x 1.5	Female connector M12
<b>Technical data</b>				
<b>Operating range [mm]</b> , flush mounting	0...5, yes	0...20, yes	0...30, yes	
Linear range [mm] adjustable	0...3.5	0...14	0...20	
Type analogue 2-wire				
Type analogue 3-wire	KAS-80-A12-IL	KAS-80-A14-IL	KAS-80-30-IL-M32	
				<b>Female connector No. 57</b> 4-pins for flange connector M12 x 1 Y5 NPN/PNP
Operating voltage ( $U_b$ )	15...30 V DC	15...30 V DC	15...30 V DC	
Output current ( $I_o$ )	2.5...>20 mA	2.5...>20 mA	2.5...>20 mA	
No-load current ( $I_o$ )	typ. 40 mA	typ. 40 mA	typ. 40 mA	
Load resistor	$R_L = 0...300 \text{ Ohm}$	$R_L = 0...300 \text{ Ohm}$	$R_L = 0...300 \text{ Ohm}$	
Permitted ambient temperature	0...+60°C	0...+60°C	0...+60°C	
LED-display	yes	yes	yes	
Protective circuit	yes	yes	yes	
Degree of protection IEC 529*	IP 67	IP 67	IP 67	
Connection	2 m cable	2 m cable	2 m cable	5 m cable
Housing material	brass	brass	brass	
Active surface	PTFE	PTFE	PTFE	
Lid	PA/PPO	PA/PPO	PA/PPO	

## Dimension

\* with sealed potentiometer screw



Connection diagram see page 7