



**Capacitive Sensors
Series 80 - PNP**

Housing M8 x 1

- Housing material: stainless steel VA
- Non-flush mountable
- Sensing distance 0...4 mm adjustable with 270° potentiometer
- With metal flange connector M8 x 1



Certificate:

Technical data

Operating distance Sn [mm], flush mounting	2, no
Operating distance min./max. [mm] adjustable	0...4
Electrical version	3-pin DC
Output	NO

Type NPN

Art.-No.

Connection diagram No.

Type PNP

KAS-80-A21-S-Y7

Art.-No.

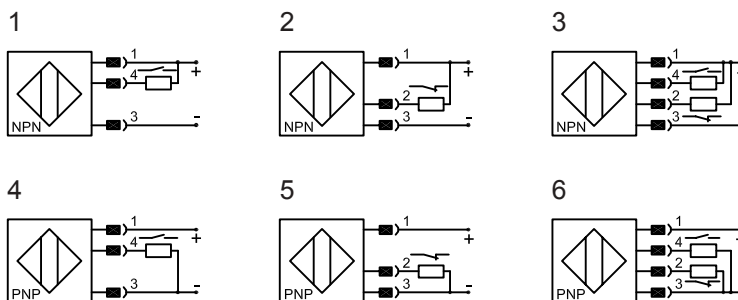
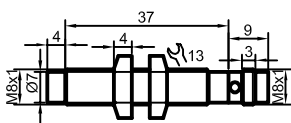
800 130

Connection diagram No.

4

Operating voltage (U _B)	10...35 V DC
Output current max. (I _O)	150 mA
Load current min.	-
Voltage drop max. (U _d)	≤ 2.0 V
Permitted residual ripple max.	10 %
No-load current (I _o)	typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-25...+70°C
LED-display	yellow
Protective circuit	built-in
Degree of protection IEC 529	IP 67 *
Connection	metal flange connector M 8 x 1
Housing material	VA No. 1.4305
Active surface	PTFE
Lid	-

* with sealed potentiometer screw



All specifications are subject to change without notice. (07/2004)



**Capacitive Sensors
Series 70 - NPN
Series 80 - PNP**

Housing Ø 11 mm

- **Housing material: brass**
- **Flush mountable**
- **Sensing distance 0.5...5 mm adjustable**

Certificate:



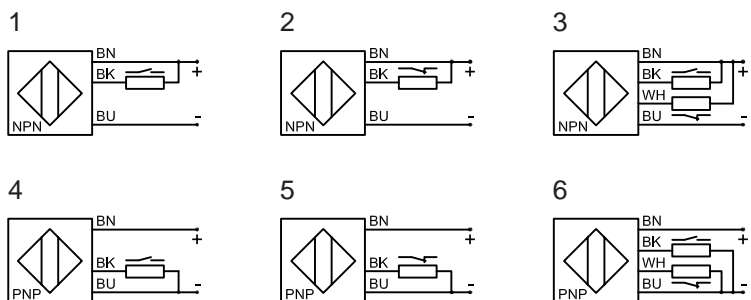
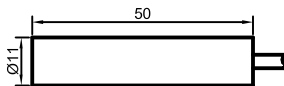
Technical data

Operating distance S_n [mm], flush mounting	2, yes
Operating distance min./max. [mm] adjustable	0.5...5
Electrical version	4-wire DC
Output	antivalent
Type NPN	KAS-70-10-A
Art.-No.	KA 0040
Connection diagram No.	3

Type PNP	KAS-80-10-A
Art.-No.	KA 0045
Connection diagram No.	6

Operating voltage (U_B)	10...35 V DC
Output current max. (I_o)	2 x 250 mA
Load current min.	-
Voltage drop max. (U_d)	≤ 2.0 V
Permitted residual ripple max.	10 %
No-load current (I_o)	typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-25...+70°C
LED-display	green/yellow
Protective circuit	built-in
Degree of protection IEC 529	IP 67
Connection cable	2 m 4 x 0.14 mm ²
Housing material	Ms
Active surface	PTFE
Lid	PA

All specifications are subject to change without notice. (05/2004)





Capacitive Sensors Series 70 - NPN Series 80 - PNP



Housing M12 x 1

- Housing material: stainless steel VA
- Flush mountable
- Sensing distance 0...6 mm adjustable

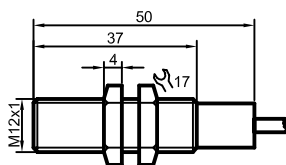
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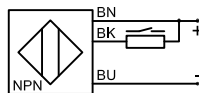
Technical data

Operating distance S_n [mm], flush mounting	2, yes	2, yes
Operating distance min./max. [mm] adjustable	0...6	0...6
Electrical version	3-wire DC	4-wire DC
Output	NO	antivalent
Type NPN		KAS-70-A12-A
Art.-No.		700 150
Connection diagram No.		3

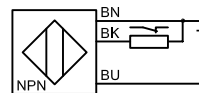
Type PNP	KAS-80-A12-S	KAS-80-A12-A
Art.-No.	800 200	800 150
Connection diagram No.	4	6
Operating voltage (U_B)	10...35 V DC	10...35 V DC
Output current max. (I_o)	250 mA	2 x 250 mA
Load current min.	-	-
Voltage drop max. (U_d)	≤ 2.0 V	≤ 2.0 V
Permitted residual ripple max.	10 %	10 %
No-load current (I_o)	typ. 15 mA	typ. 15 mA
Frequency of operating cycles max.	500 Hz	500 Hz
Permitted ambient temperature	-25...+70°C	-25...+70°C
LED-display	yellow	green/yellow
Protective circuit	built-in	built-in
Degree of protection IEC 529	IP 67	IP 67
Connection cable	2 m 3 x 0.14 mm ²	2 m 4 x 0.14 mm ²
Housing material	VA No. 1.4305	VA No. 1.4305
Active surface	PTFE	PTFE
Lid	PA	PA



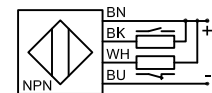
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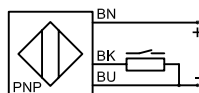
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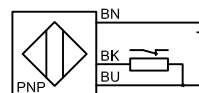
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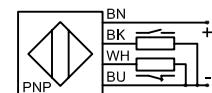
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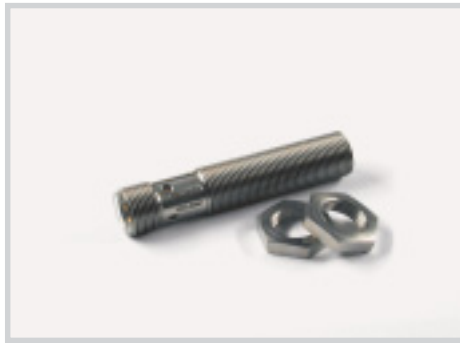
5



6



All specifications are subject to change without notice. (05/2004)



Capacitive Sensors Series 70 - NPN Series 80 - PNP

Housing M12 x 1

- Housing material: stainless steel VA
- Flush mountable
- Sensing distance 0...6 mm adjustable
- With metal flange connector M12 x 1

Certificate:

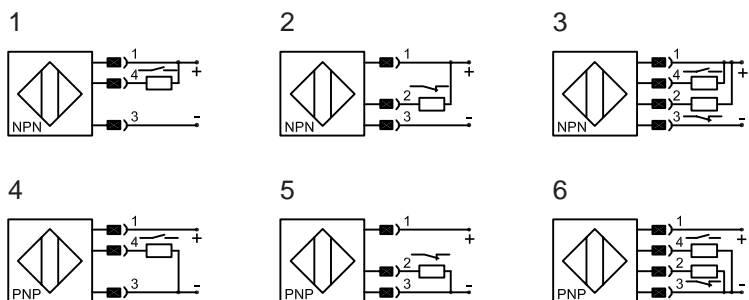
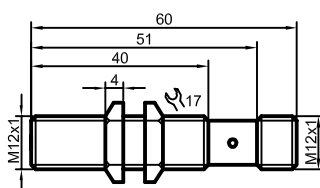


Technical data

Operating distance S_n [mm], flush mounting	2, yes
Operating distance min./max. [mm] adjustable	0...6
Electrical version	4-pin DC
Output	antivalent
Type NPN	KAS-70-A12-A-Y5
Art.-No.	700 724
Connection diagram No.	3

Type PNP	KAS-80-A12-A-Y5
Art.-No.	800 724
Connection diagram No.	6
Operating voltage (U_B)	10...35 V DC
Output current max. (I_o)	2 x 250 mA
Load current min.	-
Voltage drop max. (U_d)	≤ 2.0 V
Permitted residual ripple max.	10 %
No-load current (I_o)	typ. 15 mA
Frequency of operating cycles max.	500 Hz
Permitted ambient temperature	-25...+70°C
LED-display	yellow
Protective circuit	built-in
Degree of protection IEC 529	IP 67
Connection	metal flange connector M12 x 1
Housing material	VA No. 1.4305
Active surface	PTFE
Lid	-

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Capacitive Sensors With Analogue Output

Series 80 - IL

Housing M12 x 1

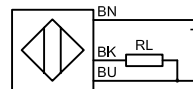
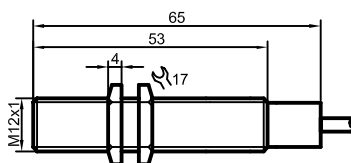
- Housing material: brass
- Flush mountable
- Operating range 0...5 mm

Certificate:



Technical data

Operating range [mm], flush mounting	0...5, yes
Linear range [mm]	0...3.5
Electrical version	3-wire DC
Output function	analogue
Type Analog	KAS-80-A12-IL
Art.-No.	800 400
Connection diagram No.	see below
Operating voltage (U_B)	15...30 V DC
Output current max. (I_o)	$\geq 20\text{mA} \dots \leq 4\text{mA}$
Permitted residual ripple max.	5 %
No-load current (I_o)	$\leq 40\text{ mA}$
Output current active surface free	$\geq 20\text{ mA}$
Output current active surface covered	$\leq 20\text{mA} \dots \leq 4\text{ mA}$
Load resistor	$R_L = 0 \dots 300\text{ Ohm}$
Permitted ambient temperature	0...+60°C
LED-display	green/yellow/green
Protective circuit	built-in
Degree of protection IEC 529	IP 67
Connection cable	2 m 3 x 0.14 mm ²
Housing material	brass
Active surface	PTFE
Lid	PA



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Capacitive Sensors

Series 80 - PNP

Housing M12 x 1

- Housing material: PTFE
- Applicable for detection of chemical aggressive media
- Also suitable for food applications
- Flush mountable
- Sensing distance 0...6 mm adjustable

Certificate:

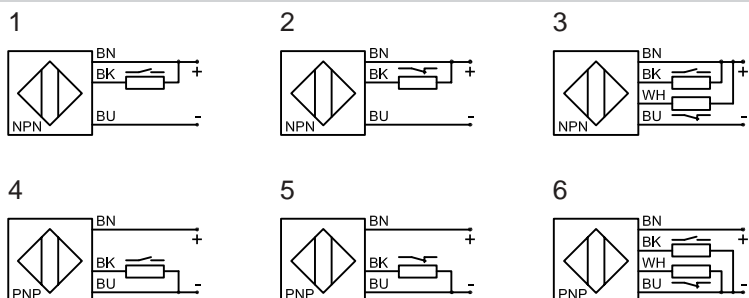
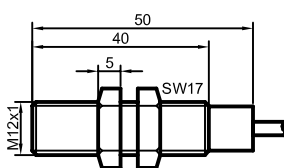


Technical data

Operating distance S_n [mm], flush mounting	2, yes
Operating distance min./max. [mm] adjustable	0...6
Electrical version	4-wire DC
Output	antivalent
Type NPN	
Art.-No.	
Connection diagram No.	

Type PNP	KAS-80-A12-A-K-PTFE
Art.-No.	KA 0142
Connection diagram No.	6
Operating voltage (U_B)	10...35 V DC
Output current max. (I_e)	2 x 250 mA
Load current min.	-
Voltage drop max. (U_d)	≤ 2.0 V
Permitted residual ripple max.	10 %
No-load current (I_b)	typ. 15 mA
Frequency of operating cycles max.	500 Hz
Permitted ambient temperature	-25...+70°C
LED-display	green/yellow
Protective circuit	built-in
Degree of protection IEC 529	IP 67
Connection cable	2 m 4 x 0.14 mm ²
Housing material	PTFE
Active surface	PTFE
Lid	PA

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Capacitive Sensors Series 70 - NPN Series 80 - PNP



Housing M12 x 1

- Housing material: stainless steel VA
- Non-flush mountable
- Sensing distance 0.5...10 mm adjustable

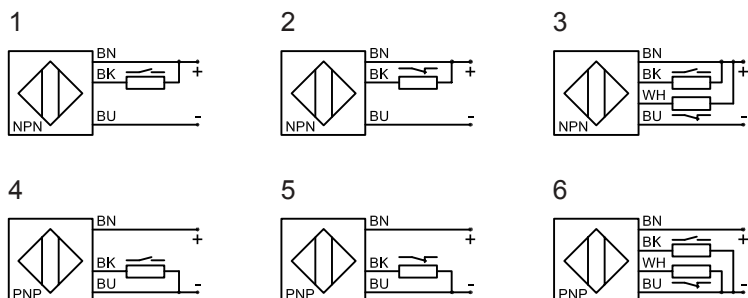
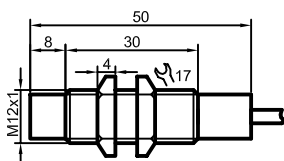
Certificate:



Technical data

Operating distance S_n [mm], flush mounting	4, no	4, no
Operating distance min./max. [mm] adjustable	0.5...10	0.5...10
Electrical version	3-wire DC	4-wire DC
Output	NO	antivalent
Type NPN		KAS-70-A22-A
Art.-No.		700 735
Connection diagram No.		3

Type PNP	KAS-80-A22-S	KAS-80-A22-A
Art.-No.	800 750	800 735
Connection diagram No.	4	6
Operating voltage (U_B)	10...35 V DC	10...35 V DC
Output current max. (I_o)	250 mA	2 x 250 mA
Load current min.	-	-
Voltage drop max. (U_d)	≤ 2.0 V	≤ 2.0 V
Permitted residual ripple max.	10 %	10 %
No-load current (I_o)	typ. 15 mA	typ. 15 mA
Frequency of operating cycles max.	50 Hz	50 Hz
Permitted ambient temperature	-25...+70°C	-25...+70°C
LED-display	yellow	green/yellow
Protective circuit	built-in	built-in
Degree of protection IEC 529	IP 67	IP 67
Connection cable	2 m, 3 x 0.14 mm ²	2 m, 4 x 0.14 mm ²
Housing material	VA No. 1.4305	VA No. 1.4305
Active surface	PTFE	PTFE
Lid	PA	PA



All specifications are subject to change without notice. (05/2004)



Capacitive Sensors

Series 80 - PNP

Housing M12 x 1

- Housing material: stainless steel VA
- Non-flush mountable
- Sensing distance 0.5...10 mm adjustable
- With metal flange connector M12 x 1

Certificate:

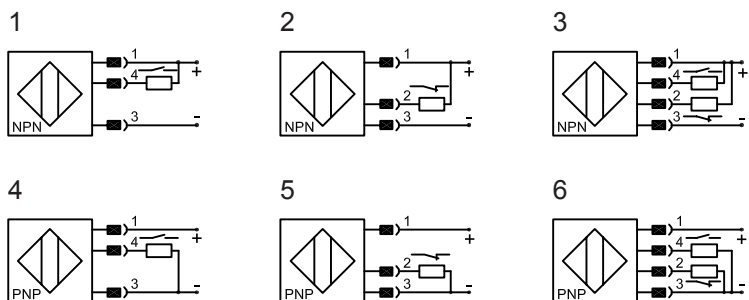
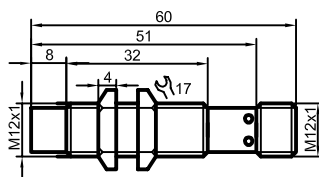


Technical data

Operating distance S_n [mm], flush mounting	4, no
Operating distance min./max. [mm] adjustable	0.5...10
Electrical version	4-pin DC
Output	antivalent
Type NPN	
Art.-No.	
Connection diagram No.	

Type PNP	KAS-80-A22-A-Y5
Art.-No.	800 736
Connection diagram No.	6
Operating voltage (U_B)	10...35 V DC
Output current max. (I_o)	2 x 250 mA
Load current min.	-
Voltage drop max. (U_d)	≤ 2.0 V
Permitted residual ripple max.	10 %
No-load current (I_o)	typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-25...+70°C
LED-display	yellow
Protective circuit	built-in
Degree of protection IEC 529	IP 67
Connection	metal flange connector M12 x 1
Housing material	VA No. 1.4305
Active surface	PTFE
Lid	-

All specifications are subject to change without notice. (05/2004)





Capacitive Sensors Series 70 - NPN Series 80 - PNP



Housing M12 x 1

- Housing material: PTFE
- Ideal for detection of chemically aggressive media
- Also suitable for food applications
- Non-flush mountable
- Sensing distance 0.5...10 mm adjustable

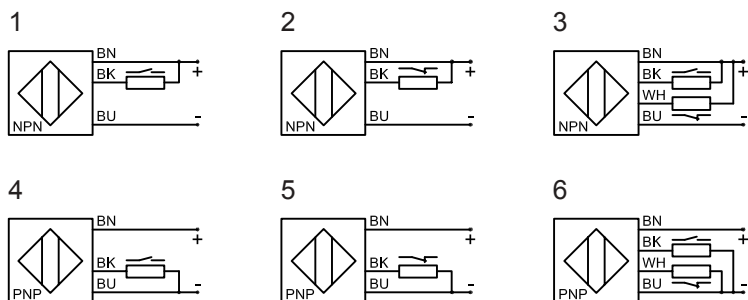
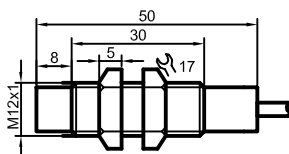
Certificate:



Technical data

Operating distance S_n [mm], flush mounting	4, no
Operating distance min./max. [mm] adjustable	0.5...10
Electrical version	4-wire DC
Output	antivalent
Type NPN	KAS-70-A22-A-K-PTFE
Art.-No.	700 745
Connection diagram No.	3

Type PNP	KAS-80-A22-A-K-PTFE
Art.-No.	800 745
Connection diagram No.	6
Operating voltage (U_B)	10...35 V DC
Output current max. (I_o)	2 x 250 mA
Load current min.	-
Voltage drop max. (U_d)	≤ 2.0 V
Permitted residual ripple max.	10 %
No-load current (I_o)	typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-25...+70°C
LED-display	green/yellow
Protective circuit	built-in
Degree of protection IEC 529	IP 67
Connection	2m 4 x 0.14 mm ²
Housing material	PTFE
Active surface	PTFE
Lid	PA



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