

***CAPACITIVE
SENSORS
KAS***

Series 26

Level Control

- Food Industry
- Pharmaceutical Industry
- Semiconductor Industry
- Chemical Industry





Registrier-Nr.: 1327-01



Testing laboratory accredited according to
DIN EN 45001 Reg.-No. DAT-P-048/95-00

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With publication of this catalogue all former printed catalogues about RECHNER KAS-26... series capacitive sensors are invalid.

CAPACITIVE SENSORS - SERIES 26 WITH SEMICIRCULAR ACTIVE AREA

Capacitive sensors detect metals or non-metals, which exceed a certain capacity by approaching the active area. The higher the dielectric constant is of the material to be detected, the higher is the achievable sensing distance. A further relevant aspect for the sensing distance is the electronic circuit and the assembly of the sensor electrodes. These specific sensor or general brand type physical and electronic differences are the decisive parameters that affect quality and performance, and separate the average capacitive sensor from High Performance Sensors.

With this brochure we present you one of our high lights: the series 26 capacitive sensors.

The semicircular active area is an clear sign, that this is no common sensor. The special feature of these sensors is not only the semicircular construction, it is especially the high performance circuit and the optimal electrode form and electrode assembly.

The series 26 capacitive sensors are suitable for level control of most different products. They are used in the Semiconductor Industry, Chemical Industry and in the Food Industry. Therefore these sensors are available with different process connections, like 1", M22, Triclamp, with F30 fitting and with modified body sizes for standard plastic pipe fitting systems. There are models for 10...35 V DC and for 20...250 V AC/DC. To complete this range there are models with ATEX certificate for use in areas with danger of explosion, dust zone 20 or gas zone 1.

The versions for ambient temperature of +100°C are capable of CIP (Cleaning In Process) up to 121 °C. Cleaning or sterilization is permitted within this temperature range for parts that are in contact with the products.

HOUSING MATERIAL

PTFE (polytetrafluor ethylene) is used for the housing of the sensor, and this is suitable for applications in the food industry (FDA 21 CFR 177.1550)

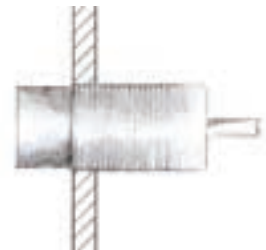
NON FLUSH MOUNTING

All sensors shown in this brochure are for non-flush mounting. That means they are designed for applications where the active area of the sensor is in contact with the material to be detected.




With this kind of level control the sensor head (active area) is completely immersed into the powder, granulate or liquid.

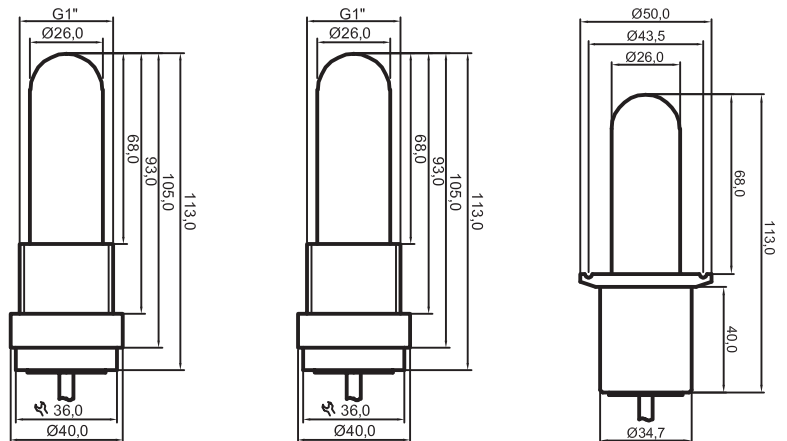
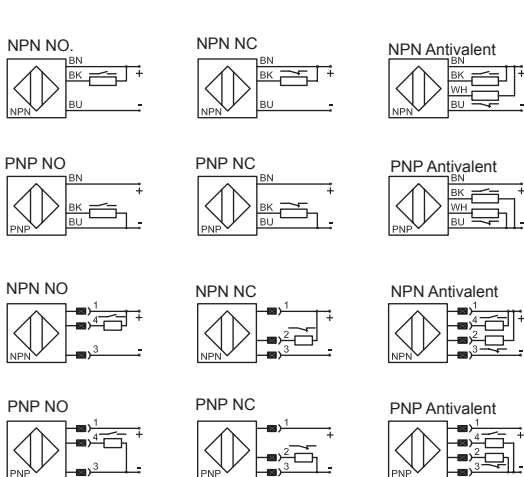
These capacitive sensors are well accepted as sensors that are reliable, and there are a large number of versions to suit many applications in the processing industry and throughout mechanical engineering. Nowadays they are indispensable.

For further information about capacitive sensors please take from our main catalogue or from our web site www.rechner-sensors.de.



CAPACITIVE SENSORS Series 26

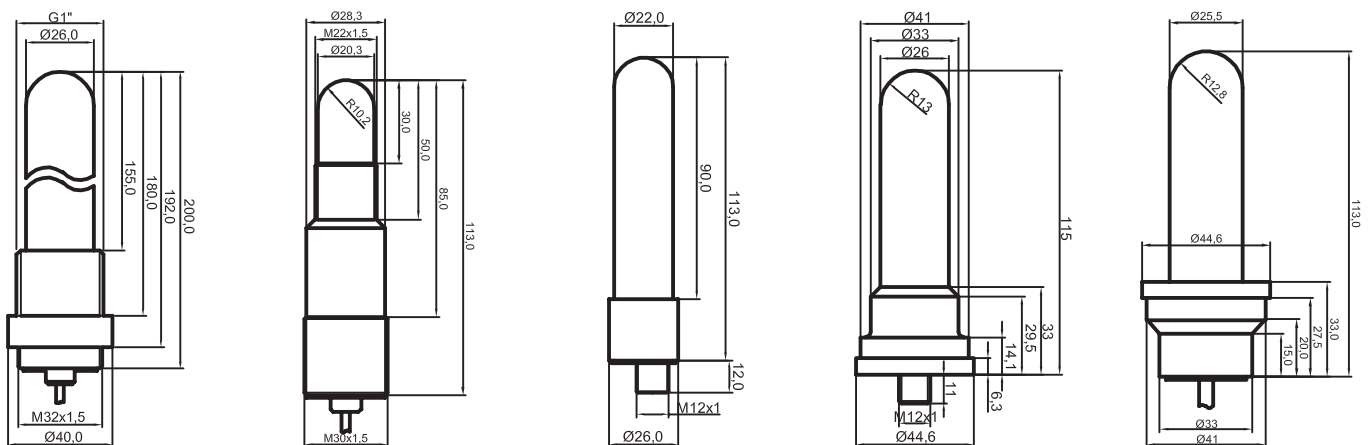
Housing	Ø 26 mm	Ø 26 mm	Ø 26 mm
			
Technical data			
Sensing distance S_n , non-flush mountable	5 mm	5 mm	5 mm
Sensing distance min./max. adjustable	0...20 mm	0...20 mm	0...20 mm
Type NPN antivalent	KAS-70-26-A-PTFE-1"	KAS-70-26-A-PTFE-1"-100°C	KAS-70-26-A-PTFE-Tri-100°C
Type PNP antivalent	KAS-80-26-A-PTFE-1"	KAS-80-26-A-PTFE-1"-100°C	KAS-80-26-A-PTFE-Tri-100°C
Type AC/DC normally open			
Type AC/DC normally closed			
Certificates	CE, RoHS, UL-CSA	CE, RoHS, UL-CSA	CE, RoHS, UL-CSA
ATEX Certificate No.			
ATEX			
Operating voltage (U_B)	10...35 V DC	10...35 V DC	10...35 V DC
Output current (I_o)	2 x 250 mA	2 x 250 mA	2 x 250 mA
No load current (I_o)	< 15 mA	< 15 mA	< 15 mA
Frequency of operating cycles max.	50 Hz	50 Hz	50 Hz
Permitted ambient temperature	-25...+70°C	-25...+100°C / CIP 121 °C	-25...+100°C / CIP 121 °C
LED display	yes	yes	yes
Protective circuit	yes	yes	yes
Norm	IEC 60947-5-2	IEC 60947-5-2	IEC 60947-5-2
Degree of protection IEC 60529*	IP 67	IP 67	IP 67
Connection	2 m Cable, PVC, 4 x 0,5 mm ²	2 m Cable, PVC, 4 x 0,5 mm ²	2 m Cable, PVC, 4 x 0,5 mm ²
Housing material	PTFE	PTFE	PTFE
Active surface	PTFE	PTFE	PTFE
Lid	PA/PPO	PA/PPO	PA/PPO
*With sealed potentiometer screw			



CAPACITIVE SENSORS Series 26





Ø 26 mm	Ø 20,3 mm	Ø 22 mm	Ø 26 mm	Ø 25,5 mm
5 mm	5 mm	5 mm	5 mm	5 mm
0...20 mm	0...20 mm	0...20 mm	0...20 mm	0...20 mm
KAS-70-26-A-200-PTFE-1"	KAS-70-26-A-M22-M30-PTFE	KAS-70-26/22-A-PTFE-100°C-Y5	KAS-70-26-A-PTFE-PFS1-Y5	KAS-70-26-A-PTFE-PFS2
KAS-80-26-A-200-PTFE-1"	KAS-80-26-A-M22-M30-PTFE	KAS-80-26/22-A-PTFE-100°C-Y5	KAS-80-26-A-PTFE-PFS1-Y5	KAS-80-26-A-PTFE-PFS2
CE, RoHS, UL-CSA	CE, RoHS, UL-CSA	CE, RoHS, UL-CSA	CE, RoHS, UL-CSA	CE, RoHS, UL-CSA
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	2 x 250 mA	2 x 250 mA	2 x 250 mA
< 15 mA	< 15 mA	< 15 mA	< 15 mA	< 15 mA
50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
-25...+70°C	-25...+70°C	-25...+100°C / CIP 121 °C	-25...+100°C / CIP 121 °C	-25...+100°C / CIP 121 °C
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
IEC 60947-5-2	IEC 60947-5-2	IEC 60947-5-2	IEC 60947-5-2	IEC 60947-5-2
IP 67**	IP 67**	IP 67	IP 67	IP 67
Cable, 5 m, PTFE, 4 x 0,34 mm ²	2 m Cable, PVC, 4 x 0,5 mm ²	Connector M 12 x 1	Connector M 12 x 1	2 m Cable, PVC, 4 x 0,5 mm ²
PTFE	PTFE	PTFE	PTFE	PTFE
PTFE	PTFE	PTFE	PTFE	PTFE
PTFE	PA/PPO	PA/PPO	PA/PPO	PA/PPO

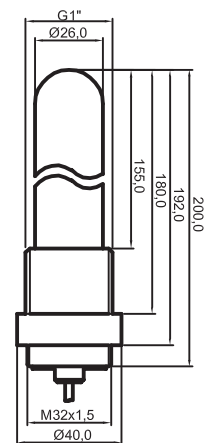
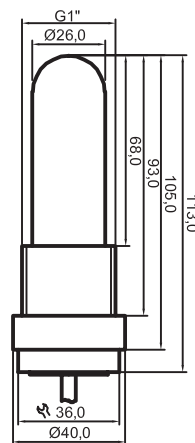
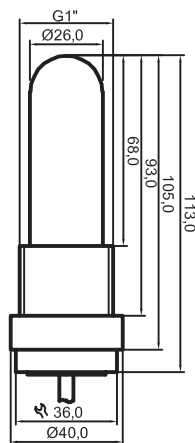
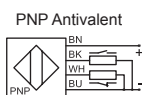
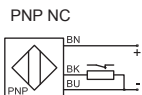
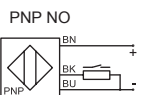
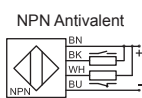
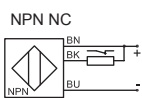
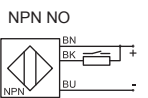
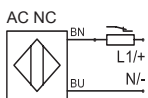
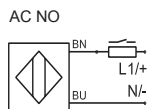
**IP 68 with use of the protection set M30 or M32, see page 7



All specifications are subject to change without notice. (04/2007)

CAPACITIVE SENSORS Series 26

Housing	Ø 26 mm	Ø 26 mm	Ø 26 mm
			
Technical data			
Sensing distance S_n , non-flush mountable	5 mm	5 mm	5 mm
Sensing distance min./max. adjustable	0...15 mm	0...20 mm	0...20 mm
Type NPN antivalent		KAS-70-26-A-PTFE-1"-StEx-N	KAS-70-26-A-200-PTFE-1"-StEx-N
Type PNP antivalent		KAS-80-26-A-PTFE-1"-StEx-N	KAS-80-26-A-200-PTFE-1"-StEx-N
Type AC/DC Normally open	KAS-90-26-S-PTFE-1"		
Type AC/DC Normally closed	KAS-90-26-Ö-PTFE-1"		
Certificates	CE, RoHS	CE, RoHS, UL-CSA	CE, RoHS, UL-CSA
ATEX Certificate No.		DMT 01 ATEX E 157	DMT 01 ATEX E 157
ATEX		Ex II 1 D IP 67 T 101 °C Ex II 2 G EEx m II T4	Ex II 1 D IP 67 T 101 °C Ex II 2 G EEx m II T4
Operating voltage (U_B)	20...250 V AC/DC	10...35 V DC	10...35 V DC
Operating current (I_B)	250 mA	2 x 250 mA	2 x 250 mA
No-load current (I_0)	< 2,5 mA	< 15 mA	< 15 mA
Frequency of operating cycles max.	25 Hz	50 Hz	50 Hz
Permitted ambient temperature	-25...+70 °C	-25...+90 °C	-25...+90 °C
LED display	yes	yes	yes
Protective circuit	yes	yes	yes
Norm	IEC 60947-5-2	IEC 60947-5-2	IEC 60947-5-2
Degree of protection IEC 60529*	IP 67	IP 67	IP 67
Connection	2 m cable, PUR, 2 x 0,75 mm ²	2 m cable, PVC, 4 x 0,5 mm ²	2 m cable, PVC, 4 x 0,5 mm ²
Housing material	PTFE	PTFE	PTFE
Active surface	PTFE	PTFE	PTFE
Lid	PA/PPO	PC	PC
*With sealed potentiometer screw.			



Accessories



Protection set M30 - Art.-Nr. 196302
M32 - Art.-Nr. 196301

The PTFE protection set M32 x 1.5 consists of an internally threaded cover, a Pg9-screwing for cable entry and a rubber gasket between the cover and the sensor. This protection cover serves as improvement to the degree of protection, against infiltration of liquids, for example in applications where the sensor is totally immersed in liquids. The resistance of the material still needs to be checked.

The thread of the sensor has to be sealed, for example with PTFE sealing-tape. The protection cover has to be screwed totally up to the end, and then the Pg9-screw has to be fixed.

Protection set, M30 suitable for KAS-70-26-A-M22-M30-PTFE or KAS-80-26-A-M22-M30-PTFE.

M32 suitable for KAS-70-26-A-200-PTFE-1", KAS-80-26-A-200-PTFE-1", KAS-70-26-A-200-PTFE-1"-SiEx-N or KAS-80-26-A-200-PTFE-1"-SiEx-N



Stainless steel welding nipple DN 25
Article No. 190 751

Sealing gasket
Article No. 190 752#

Triclamp mounting clamp
Article No. 190 750



Stainless steel welding nipple, suitable for all our capacitive sensors KAS-70- or KAS-80-26-A-PTFE-Tri, KAS-70 or KAS-80-26-A-PTFE-Tri-100°C



Plastic tube fitting systems
Order details on request



Plastic tube fitting system, suitable for Type KAS-70- or KAS-80-26-A-PTFE-PFS1-Y5



Plastic tube fitting systems
Order details on request



Plastic tube fitting system, suitable for Type KAS-70- or KAS-80-26-A-PTFE-PFS2

SENSORS FOR INDUSTRIAL AUTOMATION

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