



ATEX

IECEX

Zone 20

Zone 0

**ATEX-CERTIFIED
PRODUCTS**

**RECHNER
SENSORS**

2018



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With publication of this catalogue all former printed catalogues about RECHNER ATEX certified products are invalid.

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GENERAL INFORMATION - ATEX DIRECTIVE 94/9 EG

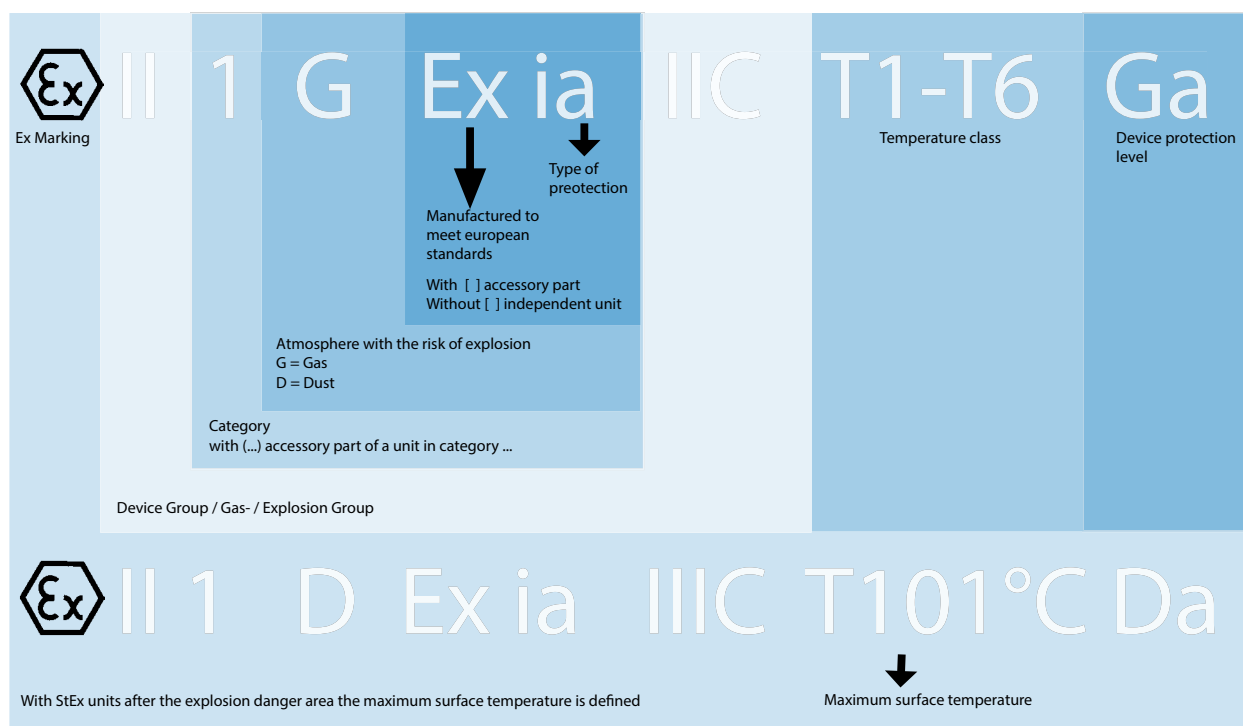
Since July 1, 2003 only units that meet the ATEX directive 94/9/EG for use in „areas with the risk of explosion“ are permitted. The term **ATEX** comes from **at**mosphere **ex**plosible.

Permitted units have the following marking:

The  marking.

CE 0158 marking with the number of the control centre (0158 = DMT) for products that conform to the norm for free trading within the EU.

Definition of the application range. These have to be permanently fixed and durable on the unit (e.g. with laser marking). For example:



Zone Definition For Flammable Dusts, Gases, Vapours And Mist		
Zones		Definition
Gas	Dust	
0	20	Areas where a potentially explosive atmosphere comprising dust / air mixture is present continuously, over extended periods, or frequently.
1	21	Areas where it is expected that a hazardous potentially explosive atmosphere comprising dust / air mixtures will occur occasionally and for short periods.
2	22	Areas where it is not to be expected that a potentially explosive atmosphere will occur. If this does occur, then in all probability only rarely and for a short period.

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DEVICES GROUP / GAS- / EXPLOSIONGROUPS

Group II (explosive gases or dusts)

Category 1 D (Dust)
G (GAS) Zone 0

Devices that provide a **very high** protection

With use in applications with the risk of an explosive atmosphere

Category 2 D (Dust)
G (GAS) Zone 1

Devices that provide **high** protection

Category 3 D (Dust)
G (GAS) Zone 2

Devices that provide **normal** protection

Device Group II for device or protection system in areas with risk of explosion

Category 3 for normal degree of protection for use in zone 2 or 22
normally there will be a manufacturer certificate from an ATEX certified company

Category 2 for high degree of protection for use in zone 1 or 21

Category 1/2 for mounting in a container wall between zone 0 and 1 (GAS) or 20 and 21 (Dust) (e.g. Sensor head in zone 20, cable exit in Zone 21 with KAS-80...-StEx...)

Category 1 for very high degree of protection for use in zone 0 or 20

TEMPERATURE CLASSES

Temperature class	Maximum surface temperature of the equipment	Ignition temperatures of combustible substances
T1	450 °C	> 450 °C
T2	300 °C	> 300 °C
T3	200 °C	> 200 °C
T4	135 °C	> 135 °C
T5	100 °C	> 100 °C
T6	85 °C	> 85 °C

Combustible materials are classified according to their ignition temperature between T1 and T6, where the lowest ignition temperature T6 is the most dangerous.

DEGREE OF PROTECTION

Degree of protection	
d	Pressure proof encapsulation
e	Increased safety
o	Oil encapsulation
p	Overpressure encapsulation
q	Sand encapsulation
m	Casting encapsulation
n	Non sparking
i	Intrinsic safety. The intrinsically safe electric circuits are not able to cause an ignition when there is a failure (ib) or two failures (ia).

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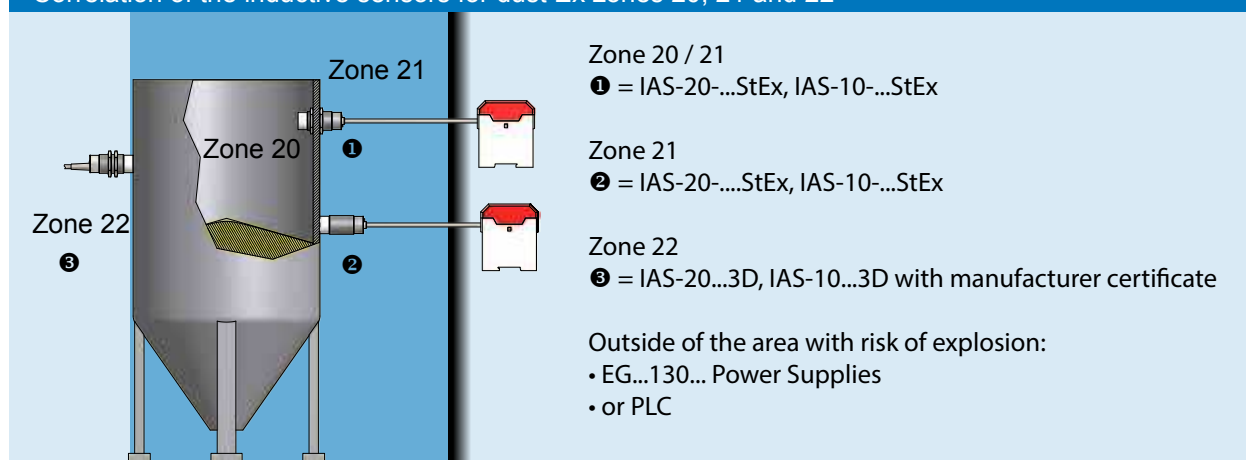
INDUCTIVE SENSORS IAS - SERIES

The series 10 contains inductive 3-wire proximity sensors with digital output pnp with NO or NC-function. Electronic circuits, PLC's, relays and our power supplies of series 130 can be directly activated. Analogue sensors with 4...20 mA output are also available. The operating range of these analogue sensors is adjustable by means of a potentiometer and they can be actuated by analogue interfaces with internal resistance $R_i \leq 300 \text{ ohm}$. The sensors are reverse polarity protected, overload protected and have electronic short-circuit protection. StEx-Sensors for use in Zone 20 with ATEX-certificate complete this series.

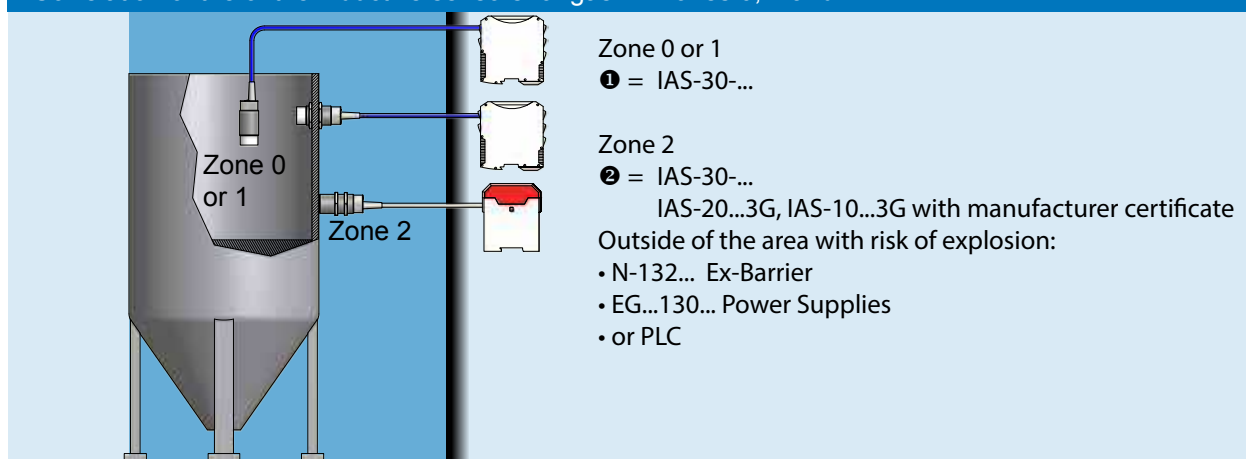
The series 20 contains inductive 3-wire proximity sensors with digital output npn with NO or NC-function. Electronic circuits, PLC's, relays and our power supplies of series 130 can be directly activated. The sensors are reverse-polarity protected, overload-protected and have electronic short-circuit protection. StEx-Sensors for use in Zone 20 with ATEX-certificate complete this series.

The series 30 contains inductive 2-wire proximity signal generators according to NAMUR DIN 60947-5-6. These sensors can be mounted in explosion hazardous areas when they are connected to approved isolating switching amplifiers with intrinsically safe control circuits. [Ex ia] or [Ex ib], our series N-132... Depending on which isolating switching amplifier is used the NAMUR-sensors of this series can be used up to zone 0. The data specified in the certificate of conformity of the isolating switching amplifier used must be taken into consideration. StEx-Sensors for use in Zone 20 with ATEX-certificate complete this series.

Correlation of the inductive sensors for dust Ex zones 20, 21 and 22



Correlation of the of the inductive sensors for gas-Ex zones 0, 1 and 2



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SERIES 10 / 20 • ATEX / IECEx

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Inductive Sensors

Series 20 - NPN - StEx - ATEX Series 10 - PNP - StEx - ATEX

Housing M 12 x 1

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Sensing distance S_n 2 mm

DMT 01 ATEX E 157

IECEX BVS 07.0015

Ex II 2 G Ex mb IIC T4 Gb

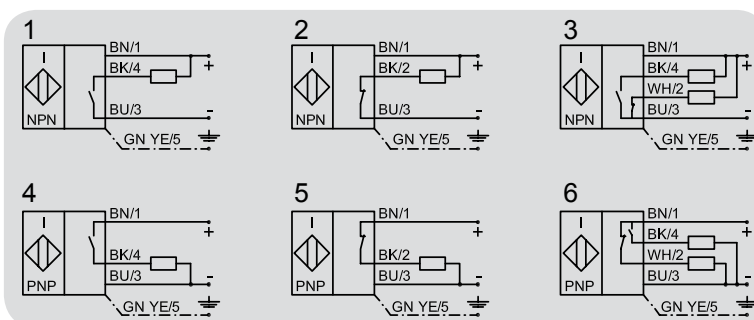
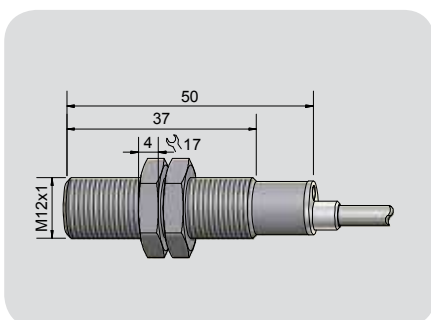
Ex mb IIC T4 Gb

Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db

Ex ta/tb IIIC T101°C Da/Db



Technical data	Flush mountable
Operating distance S_n	2 mm
Electrical version	3-wire DC
Output	Normally open
Type NPN	IAS-20-A12-S-StEx
Art.-No.	IA 0138
Connection diagram No.	1
Type PNP	IAS-10-A12-S-StEx
Art.-No.	IA 0111
Connection diagram No.	4
Operating voltage (U_B)	10...30 V DC
Voltage drop max. (U_d)	≤ 2.5 V
Permitted residual ripple max.	10 %
Operating current (I_o)	0...150 mA
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	2 kHz
Permitted ambient temperature	-20...+90 °C
LED-display	Yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67
Norm	EN 60 947-5-2
Connection cable	2 m, PVC, 4 x 0.14 mm ²
Housing material	Stainless steel VA No. 1.4305 / AISI 303
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Accessories (delivered with the sensor)	2 nuts M 12 x 1



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Inductive Sensors

Series 20 - NPN - StEx- ATEX

Series 10 - PNP - StEx - ATEX

Housing M 18 x 1

- Housing material: Brass
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Sensing distance S_n 5 mm

DMT 01 ATEX E 157

IECEx BVS 07.0015

Ex II 2 G Ex mb IIC T4 Gb

Ex mb IIC T4 Gb

Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db

Ex ta/tb IIIC T101°C Da/Db



Technical data

Flush mountable

Operating distance S_n

5 mm

Electrical version

4-wire DC

Output

Antivalent

Type NPN

IAS-20-A13-A-StEx

Art.-No.

IA 0136

Connection diagram No.

3

Type PNP

IAS-10-A13-A-StEx

Art.-No.

IA 0110

Connection diagram No.

6

Operating voltage (U_B)

10...30 V DC

Voltage drop max. (U_d)

≤ 2.5 V

Permitted residual ripple max.

10 %

Operating current (I_e)

2 x 0...150 mA

No-load current (I_o)

Typ. 15 mA

Frequency of operating cycles max.

2 kHz

Permitted ambient temperature

-20...+90 °C

LED-display

Green / yellow

Protective circuit

Built-in

Degree of protection IEC 60529

IP 67

Norm

EN 60 947-5-2

Connection cable

2 m, PVC, 5 x 0.14 mm²

Housing material

Brass

Active surface

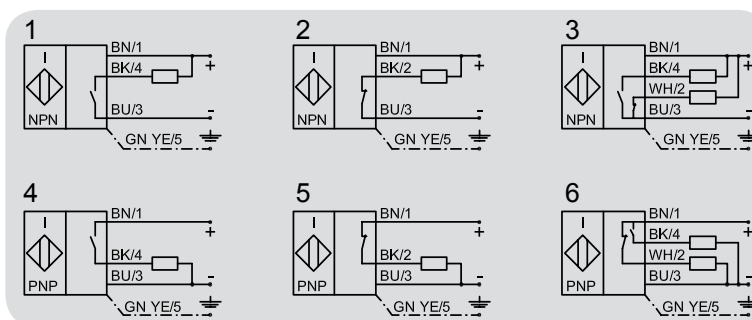
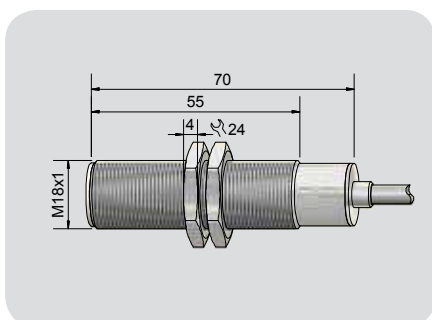
PTFE (FDA 21 CFR 177.1550)

Lid

PC (FDA 21 CFR 177.1580)

Accessories (delivered with the sensor)

2 nuts M 18 x 1



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Inductive Sensors

Series 20 - NPN - StEx - ATEX Series 10 - PNP - StEx - ATEX

Housing M 30 x 1.5

- Housing material: Brass
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Sensing distance S_n 10 mm

DMT 01 ATEX E 157

IECEX BVS 07.0015

Ex II 2 G Ex mb IIC T4 Gb

Ex mb IIC T4 Gb

Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db

Ex ta/tb IIIC T101°C Da/Db



Technical data

Flush mountable

Operating distance S_n

10 mm

Electrical version

4-wire DC

Output

Antivalent

Type NPN

IAS-20-A14-A-StEx

Art.-No.

IA 0137

Connection diagram No.

3

Type PNP

IAS-20-A14-A-StEx

Art.-No.

IA 0109

Connection diagram No.

6

Operating voltage (U_B)

10...30 V DC

Voltage drop max. (U_d)

≤ 2.5 V

Permitted residual ripple max.

10 %

Operating current (I_e)

2 x 0...150 mA

No-load current (I_o)

Typ. 15 mA

Frequency of operating cycles max.

1 kHz

Permitted ambient temperature

-20...+90 °C

LED-display

Green / yellow

Protective circuit

Built-in

Degree of protection IEC 60529

IP 67

Norm

EN 60 947-5-2

Connection cable

2 m, PVC, 5 x 0.34 mm²

Housing material

Brass

Active surface

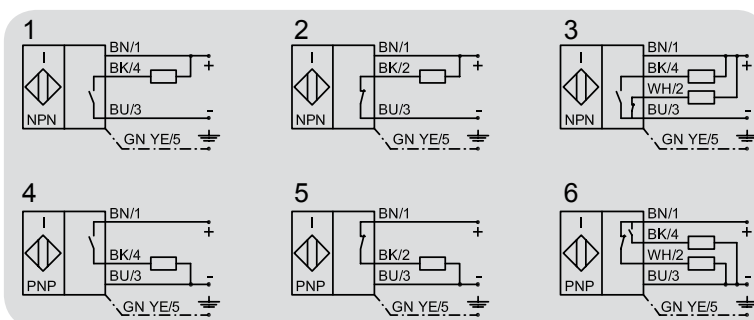
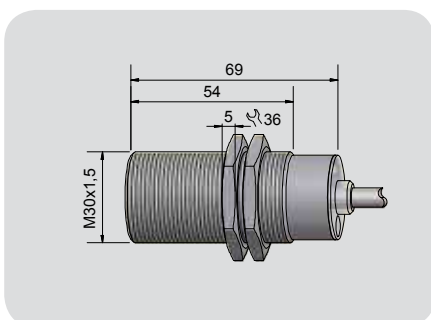
PTFE (FDA 21 CFR 177.1550)

Lid

PC (FDA 21 CFR 177.1580)

Accessories (delivered with the sensor)

2 nuts M 30 x 1.5



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Inductive Sensors Series 10 - PNP-StEx-ATEX

Housing M 30 x 1.5

- Housing material: Brass
- For use in areas with the risk of dust explosion, zone 20
- Sensing distance S_n 10 mm
- With flange connector M 12 x 1

DMT 01 ATEX E 157

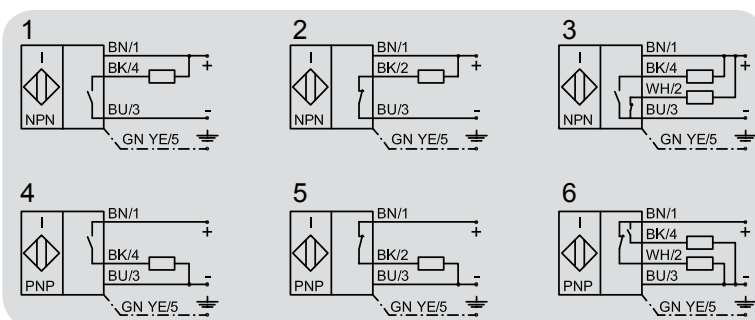
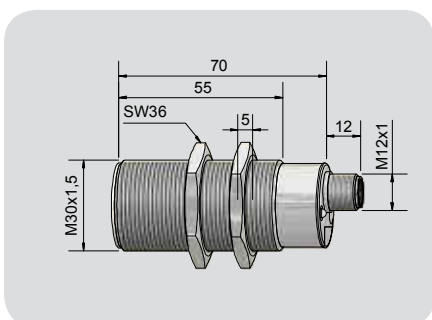
IECEX BVS 07.0015

Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db

Ex ta/tb IIIC T101°C Da/Db



Technical data	Flush mountable
Operating distance S_n	10 mm
Electrical version	4-pin DC
Output	Antivalent
Type NPN	
Art.-No.	
Connection diagram No.	
Type PNP	IAS-10-A14-A-Y10-StEx
Art.-No.	IA 0231
Connection diagram No.	6
Operating voltage (U_B)	10...30 V DC
Voltage drop max. (U_d)	≤ 2.5 V
Permitted residual ripple max.	10 %
Operating current (I_e)	2 x 0...150 mA
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	1 kHz
Permitted ambient temperature	-20...+90 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67
Norm	EN 60 947-5-2
Connection	Connector M 12 x 1
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Accessories (delivered with the sensor)	2 nuts M 30 x 1.5, protective clip
For matching connectors please see our selection of accessories.	



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SERIES 30 (NAMUR) • ATEX / IECEx

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Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing Ø 4 mm

- Housing material: Stainless steel VA
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 0.8 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

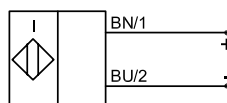
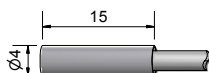
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Flush mountable

Operating distance S_n	0.8 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-04-N
Art.-No.	300 700
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	500 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67
Connection cable	2 m PVC, 2 x 0.14 mm ²
Housing material	VA No. 1.4305
Active surface	-
Lid	-



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Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 5 x 0.5

- Housing material: Stainless steel VA
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 0.8 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEX BVS 07.0031

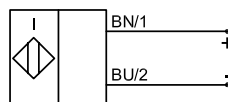
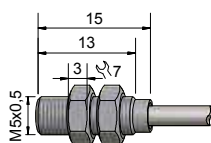
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Flush mountable

Operating distance S_n	0.8 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-M5-N
Art.-No.	300 800
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	500 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67
Connection cable	2 m PVC, 2 x 0.14 mm ²
Housing material	VA No. 1.4305
Active surface	PA / PPO
Lid	-



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Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 8 x 1

- Housing material: Stainless steel VA
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 1.5 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

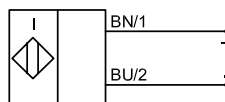
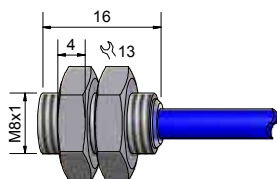
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Flush mountable

Operating distance S_n	1.5 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-M8-N
Art.-No.	301 000
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	500 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67
Connection cable	2 m PVC, 2 x 0.14 mm ²
Housing material	VA No. 1.4305
Active surface	PVC
Lid	PA / PPO



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Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing Ø 11 mm

- Housing material: PA / PPO
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 5$ mm

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

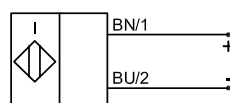
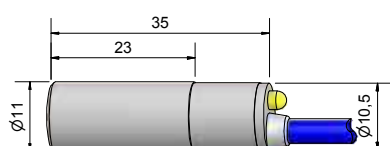
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Non-flush mountable

Operating distance S_n	5 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-14-N
Art.-No.	301 500
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PVC, 2 x 0.14 mm ²
Housing material	PA / PPO
Active surface	PA / PPO
Lid	PA / PPO



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Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 12 x 1

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 2 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

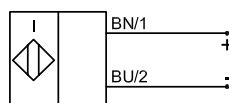
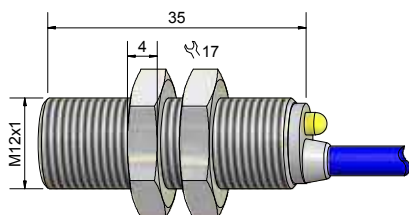
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Flush mountable

Operating distance S_n	2 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A12-N
Art.-No.	300 100
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PVC, 2 x 0.14 mm ²
Housing material	Brass
Active surface	PA / PPO
Lid	PA / PPO



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Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 12 x 1

- Housing material: Stainless steel VA
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 2$ mm
- With flange connector M 12 x 1

Certificates:



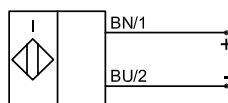
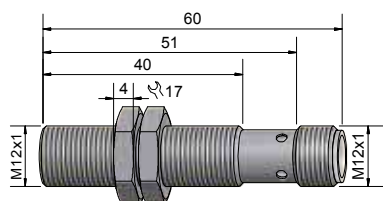
DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data	Flush mountable
Operating distance S_n	2 mm
Electrical version	2-pin DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A12-N-Y5
Art.-No.	IA 0190
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection	Flange connector M 12 x 1
Housing material	VA No. 1.4305
Active surface	PA / PPO
Lid	-



All specifications are subject to change without notice. (01/2018)

Made in Germany



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 12 x1

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 4 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

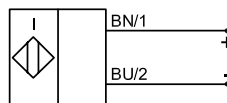
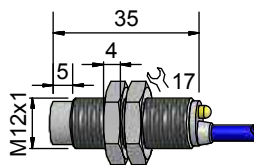
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Non-flush mountable

Operating distance S_n	4 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A22-N
Art.-No.	300 200
Operating voltage (U_b)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PVC, 2 x 0.14 mm ²
Housing material	Brass
Active surface	PA / PPO
Lid	PA / PPO



Made in Germany

All specifications are subject to change without notice. (01/2018)



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 12 x 1

- Housing material: Stainless steel VA
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 4$ mm
- With flange connector M 12 x 1

Certificates:



DMT 03 ATEX E 048

IECEX BVS 07.0031

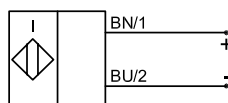
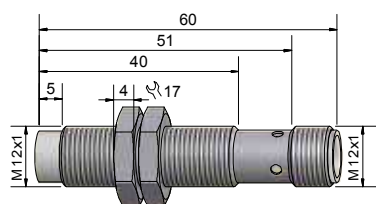
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Non-flush mountable

Operating distance S_n	4 mm
Electrical version	2-pin DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A22-N-Y5
Art.-No.	IA 0191
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection	Flange connector M 12 x 1
Housing material	VA No. 1.4305
Active surface	PA / PPO
Lid	-



All specifications are subject to change without notice. (01/2018)

Made in Germany



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 18 x 1

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 5 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

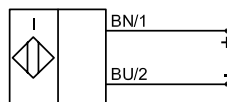
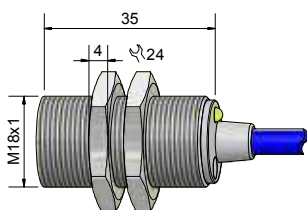
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Flush mountable

Operating distance S_n	5 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A13-N
Art.-No.	300 300
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PUR, 2 x 0.34 mm ²
Housing material	Brass
Active surface	PA / PPO
Lid	PA / PPO



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All specifications are subject to change without notice. (01/2018)



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 18 x 1

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 5$ mm
- With flange connector M 12 x 1

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

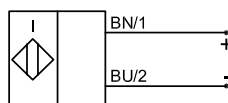
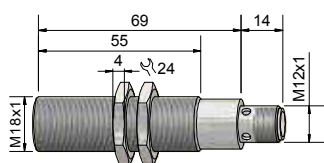
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Flush mountable

Operating distance S_n	5 mm
Electrical version	2-pin DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A13-N-Y5
Art.-No.	IA 0188
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection	Flange connector M 12 x 1
Housing material	Brass
Active surface	PA / PPO
Lid	-



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Made in Germany



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 18 x 1

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 8 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

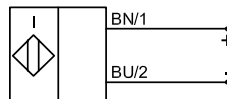
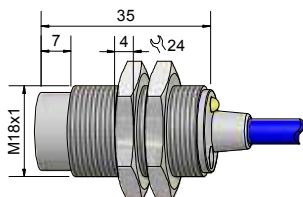
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Non-flush mountable

Operating distance S_n	8 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A23-N
Art.-No.	300 400
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PUR, 2 x 0.34 mm ²
Housing material	Brass
Active surface	PA / PPO
Lid	PA / PPO



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Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 18 x 1

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 8$ mm
- With flange connector M 12 x 1

Certificates:



DMT 03 ATEX E 048

IECEX BVS 07.0031

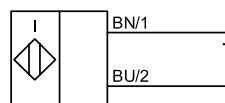
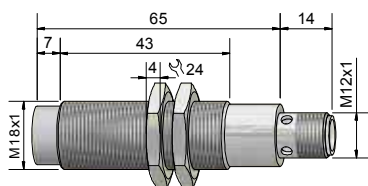
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Non-flush mountable

Operating distance S_n	8 mm
Electrical version	2-pin DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A23-N-Y5
Art.-No.	IA 0189
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection	Flange connector M 12 x 1
Housing material	Brass
Active surface	PA / PPO
Lid	-



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Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 30 x 1.5

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 10 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

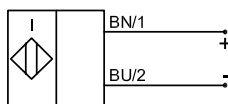
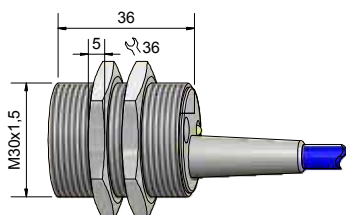
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Flush mountable

Operating distance S_n	10 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A14-N
Art.-No.	300 500
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PUR, 2 x 0.75 mm ²
Housing material	Brass
Active surface	PVC
Lid	PA / PPO



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All specifications are subject to change without notice. (01/2018)



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 30 x 1.5

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 10$ mm
- With flange connector M 12 x 1

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

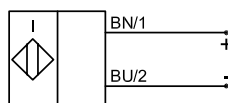
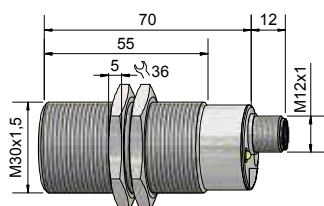
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Flush mountable

Operating distance S_n	10 mm
Electrical version	2-pin DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A14-N-Y5
Art.-No.	IA 0186
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection	Flange connector M 12 x 1
Housing material	Brass
Active surface	PVC
Lid	PA / PPO



All specifications are subject to change without notice. (01/2018)

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Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 30 x 1.5

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 15 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

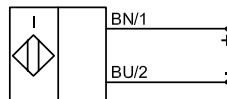
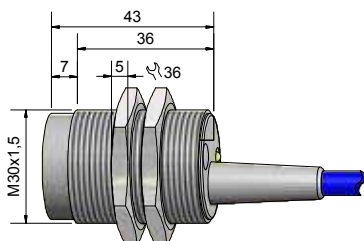
Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

Non-flush mountable

Operating distance S_n	15 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A24-N
Art.-No.	300 600
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PUR, 2 x 0.75 mm ²
Housing material	Brass
Active surface	PVC
Lid	PA / PPO



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All specifications are subject to change without notice. (01/2018)



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 30 x 1.5

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance $S_n = 15$ mm
- With flange connector M 12 x 1

Certificates:



DMT 03 ATEX E 048

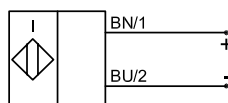
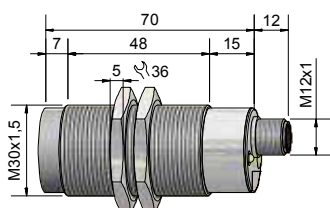
IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

Technical data

	Non-flush mountable
Operating distance S_n	15 mm
Electrical version	2-pin DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A24-N-Y5
Art.-No.	IA 0187
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1 kHz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection	Flange connector M 12 x 1
Housing material	Brass
Active surface	PVC
Lid	PA / PPO



All specifications are subject to change without notice. (01/2018)

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SERIES 30 (NAMUR) • ATEX / IEC Ex

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All specifications are subject to change without notice. (01/2018)



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 12 x 1

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- For use in areas with the risk of dust explosion, zone 20
- Sensing distance $S_n = 2 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

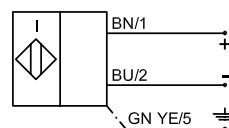
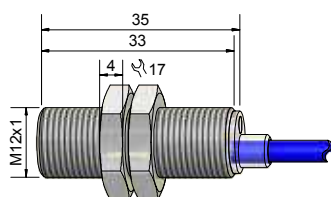
Ex II 1D Ex ia IIIC T101°C Da

Ex ia IIIC T101°C Da

Technical data

Flush mountable

Operating distance S_n	2 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A12-N-StEx
Art.-No.	IA 0091
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+90 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PVC, 3 x 0.14 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)



All specifications are subject to change without notice. (01/2018))



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 12 x1

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- For use in areas with the risk of dust explosion, zone 20
- Sensing distance $S_n = 4 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

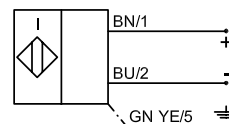
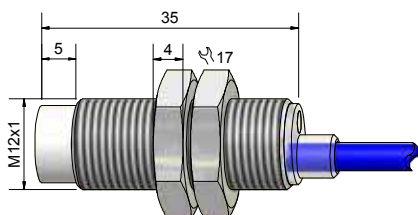
Ex II 1D Ex ia IIIC T101°C Da

Ex ia IIIC T101°C Da

Technical data

Non-flush mountable

Operating distance S_n	4 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A22-N-StEx
Art.-No.	IA 0090
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+90 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PVC, 3 x 0.14 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)



All specifications are subject to change without notice. (01/2018)



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 18 x 1

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- For use in areas with the risk of dust explosion, zone 20
- Sensing distance $S_n = 5$ mm

Certificates:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

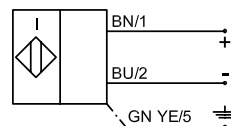
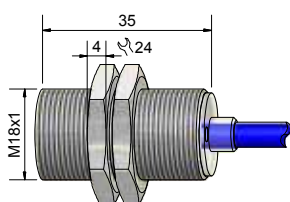
Ex II 1D Ex ia IIIC T101°C Da

Ex ia IIIC T101°C Da

Technical data

Flush mountable

Operating distance S_n	5 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-M13-N-StEx
Art.-No.	IA 0092
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+90 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PVC, 3 x 0.34 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)



All specifications are subject to change without notice. (01/2018))



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 18 x 1

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- For use in areas with the risk of dust explosion, zone 20
- Sensing distance $S_n = 8$ mm

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

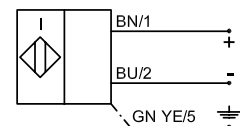
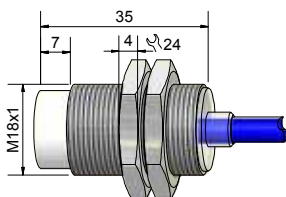
Ex II 1D Ex ia IIIC T101°C Da

Ex ia IIIC T101°C Da

Technical data

Non-flush mountable

Operating distance S_n	8 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A23-N-StEx
Art.-No.	IA 0094
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1.5 kHz
Permitted ambient temperature	-20...+90 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PVC, 3 x 0.34 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)



All specifications are subject to change without notice. (01/2018)



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 30 x 1.5

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- For use in areas with the risk of dust explosion, zone 20
- Sensing distance $S_n = 10 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

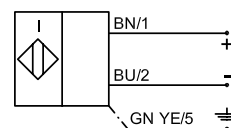
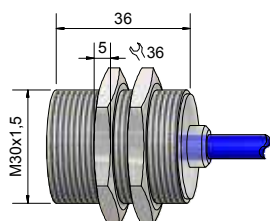
Ex II 1D Ex ia IIIC T101°C Da

Ex ia IIIC T101°C Da

Technical data

Flush mountable

Operating distance S_n	10 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A14-N-StEx
Art.-No.	IA 0095
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1 kHz
Permitted ambient temperature	-20...+90 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PUR, 3 x 0.75 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)



All specifications are subject to change without notice. (01/2018))



Inductive Sensors Series 30 - NAMUR EN 60947-5-6

Housing M 30 x 1.5

- Housing material: Brass
- For use in areas with the risk of gas explosion, zone 0
- For use in areas with the risk of dust explosion, zone 20
- Sensing distance $S_n = 15 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

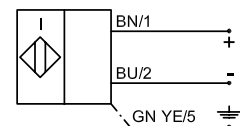
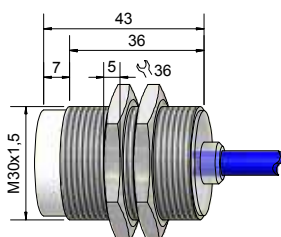
Ex II 1D Ex ia IIIC T101°C Da

Ex ia IIIC T101°C Da

Technical data

Non-flush mountable

Operating distance S_n	15 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-A24-N-StEx
Art.-No.	IA 0096
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1 kHz
Permitted ambient temperature	-20...+90 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PUR, 3 x 0.75 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)



All specifications are subject to change without notice. (01/2018)



Inductive Sensors Serie 30 - NAMUR EN 60947-5-6

Housing M 32 x 1.5

- Housing material: PA / PPO
- For use in areas with the risk of gas explosion, zone 0
- For use in areas with the risk of dust explosion, zone 20
- Sensing distance $S_n = 15 \text{ mm}$

Certificates:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

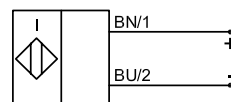
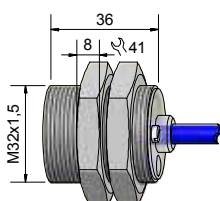
Ex II 1D Ex ia IIIC T101°C Da

Ex ia IIIC T101°C Da

Technical data

Non-Flush mountable

Operating distance S_n	15 mm
Electrical version	2-wire DC
Output	NAMUR EN 60947-5-6
Type	IAS-30-35-N-M32-StEx
Art.-No.	IA 0098
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15 \text{ V DC}$
Output current active surface free	> typ. 2 mA
Output current active surface covered	< typ. 1.5 mA
Self-inductance (L)	2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	1 kHz
Permitted ambient temperature	-20...+90 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67
Connection cable	2 m PUR, 2 x 0.75 mm ²
Housing material	PA / PPO
Active surface	PA / PPO
Lid	PC (FDA 21 CFR 177.1580)



All specifications are subject to change without notice. (01/2018))

CAPACITIVE SENSORS KAS - SERIES

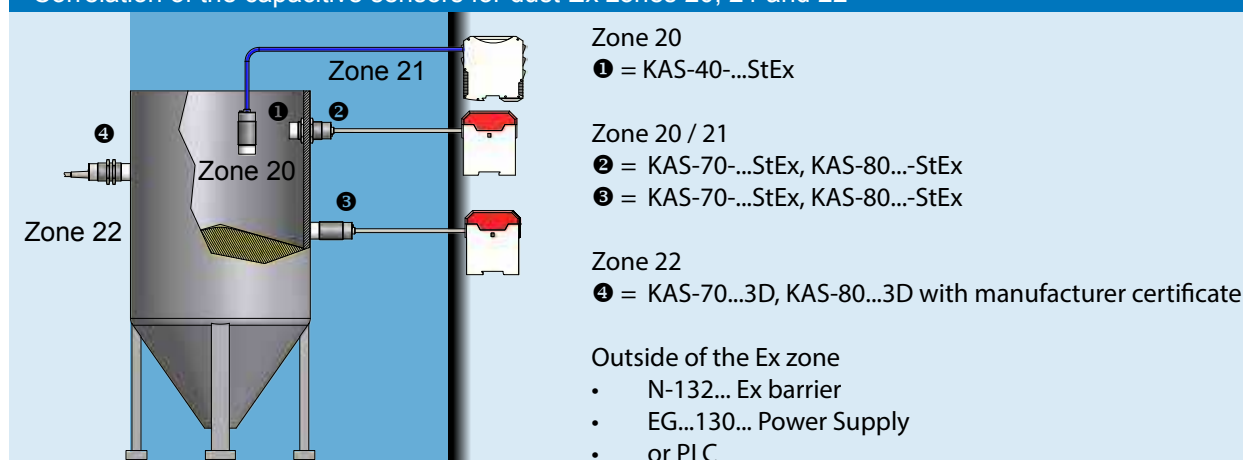
The series 40 contains capacitive 2-wire proximity signal generators according to NAMUR DIN 60947-5-6, also StEx-Versions for use in zone 20 (dust explosion protection). These sensors can be mounted in explosion hazardous areas when they are connected to approved isolating switching amplifiers with intrinsically safe control circuit [Ex ia] or [Ex ib], our series N-132. Depending on the isolating switching amplifier selected the NAMUR-sensors of this series can be used up to zone 0 (StEx-Versions also for zone 20). The data specified in the certificate of conformity of the selected isolating switching amplifier must be taken into consideration. The 2-wire analogue sensors of this series can also be used in zone 1 if they are connected to an ATEX-certificated amplifier, such as our series N-132-...

The series 70 contains capacitive 3-wire or 4-wire proximity sensors with NPN digital output with NO, NC or antivalent function (NO and NC). Electronic circuits, PLC's, relays and our power supplies of series 130 can be directly activated. The sensors are reverse-polarity protected, overload-protected and have electronic short-circuit protection. StEx-versions for applications in zone 20, sensors for ambient temperatures up to +100°C or for products with very high static charge complete the scope of the standard versions.

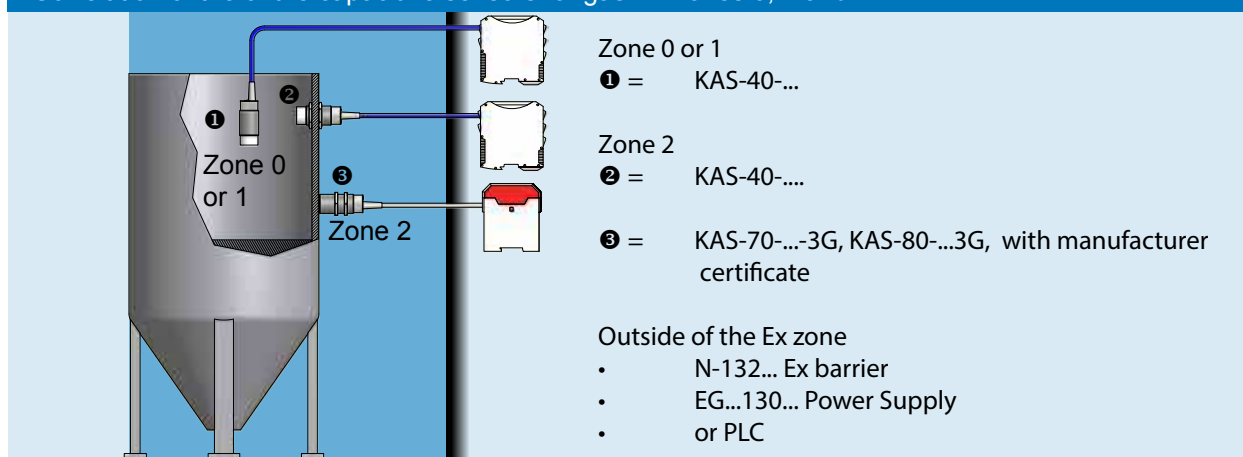
The series 80 contains capacitive 3-wire or 4-wire proximity sensors with PNP digital output with NO, NC or antivalent function (NO and NC). Electronic circuits, PLC's, relays and our power supplies of series 130 can be directly activated. The sensors are reverse-polarity protected, overload-protected and have electronic short-circuit protection. StEx-versions for applications in zone 20, sensors for ambient temperatures up to +100°C or for products with very high static charge complete the scope of the standard versions.

The series 95 contains capacitive proximity sensors with a wide supply voltage range of 20...250 V AC / DC (alternating current and direct current) and a potential-free relay output. The sensors can be connected to PLC's or directly by the consumer for control purposes to a max. 1 A. The range includes variants with manufacturer certificate for use in ATEX zone 22.

Correlation of the capacitive sensors for dust Ex zones 20, 21 and 22



Correlation of the capacitive sensors for gas-Ex zones 0, 1 and 2



All specifications are subject to change without notice. (01/2018)

NAMUR MINI ATEX SENSORS FOR EVALUATION UNIT N-132...

Pages:

Capacitive sensors MINI, NAMUR, ATEX Zone 0, M 8	104
Capacitive sensors MINI, NAMUR, ATEX Zone 0, Ø 22 mm	105 - 106

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 40 - NAMUR EN 60947-5-6

Housing M 8 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Brass
- Sensing distance $S_n = 0.5$ mm

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

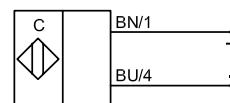
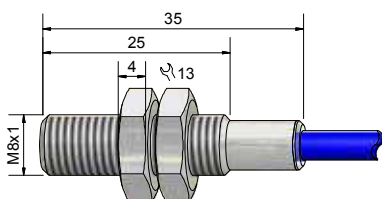


Technical data

Flush mountable

Operating distance S_n	0.5 mm
Electrical version	2-wire DC
Output function	NAMUR EN 60947-5-6
Type	KAS-40-A11-N
Art. No.	400 100
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67
Connection cable	2 m, PVC, 2 x 0.14 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)

Accessories (is delivered with the unit)	2 pieces nuts M 8
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Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 40 - NAMUR EN 60947-5-6

Housing Ø 22 mm

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Stainless steel
- Sensing distance 1...10 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

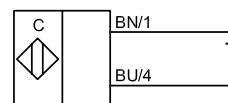
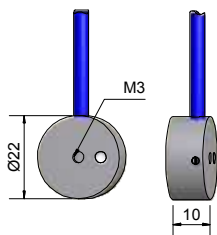


Technical data

Flush mountable

Operating distance S_n	6 mm
Operating distance min. / max. adjustable	1...10 mm
Electrical version	2-wire DC
Output function	NAMUR EN 60947-5-6
Type	KAS-40-22/10-N
Art.-No.	406 120
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5%
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-25...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PVC, 2 x 0.14 mm ²
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	-

* With sealed potentiometer screw



All specifications are subject to change without notice. (01/2018)

Made in Germany



Capacitive Sensors Series 40 - NAMUR EN 60947-5-6

Housing Ø 22 mm

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PTFE
- Sensing distance 2...10 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

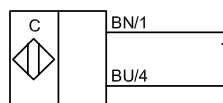
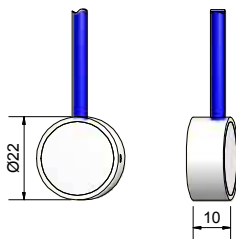


Technical data

Flush mountable

Operating distance S_n	6 mm
Operating distance min. / max. adjustable	2...10 mm
Electrical version	2-wire DC
Output function	NAMUR EN 60947-5-6
Type	KAS-40-22/10-N-PTFE
Art.-No.	406 110
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5%
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-25...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PVC, 2 x 0.14 mm ²
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	-

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)

ATEX SERIES 40 (NAMUR) • ATEX / IECEx

Pages:

Capacitive sensors NAMUR, ATEX Zone 0, M 12	108 - 113
Capacitive sensors NAMUR, ATEX Zone 0, M 18 to M 22	114 - 119
Capacitive sensors NAMUR, ATEX Zone 0, Ø 30 mm to 26 mm / G 1"	120 - 131

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 12 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Stainless steel VA
- Sensing distance 1...4 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

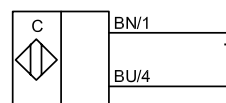
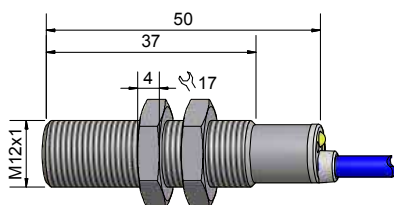
Flush mountable

Operating distance S_n	2 mm
Operating distance min. / max. adjustable	1...4 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A12-N
Art. No.	400 200
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PVC, 2 x 0.14 mm ²
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO

Accessories (is delivered with the unit)

2 pieces nuts M 12

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Serie 40 - NAMUR EN 60947-5-6



Housing M 12 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Stainless steel VA
- Sensing distance 1...5 mm adjustable
- With flange connector M 12 x 1

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

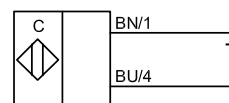
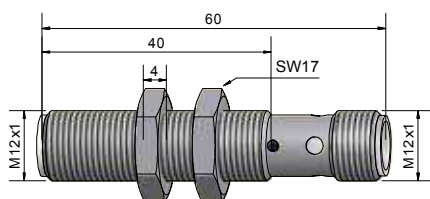
Flush mountable

Operating distance S_n	2 mm
Operating distance min. / max. adjustable	1...5 mm
Electrical version	2-pin DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A12-N-Y5
Art. No.	KA 0561
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection	Flange connector M 12 x 1
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	-

Accessories (is delivered with the unit) 2 pieces nuts M 12, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



All specifications are subject to change without notice. (01/2018)

Made in Germany





Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 12 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Stainless steel VA
- Sensing distance 1...6 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

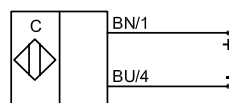
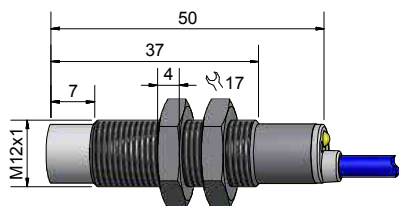


Technical data

Non-flush mountable

Operating distance S_n	4 mm
Operating distance min. / max. adjustable	1...6 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A22-N
Art. No.	400 250
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PVC, 2 x 0.14 mm ²
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO
Accessories (is delivered with the unit)	2 pieces nuts M 12

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 12 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Stainless steel VA
- Sensing distance 1...6 mm adjustable
- With flange connector M 12 x 1

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

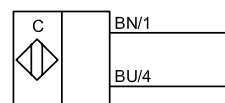
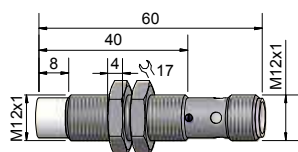
Non-flush mounting

Operating distance S_n	4 mm
Operating distance min./max. adjustable	1...6 mm
Electrical version	2-pin DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A22-N-Y5
Art. No.	KA 0562
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection	Flange connector M 12 x 1
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	-

Accessories (is delivered with the unit) 2 pieces nuts M 12, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)





Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 12 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PVC
- Sensing distance 1...6 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

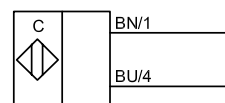
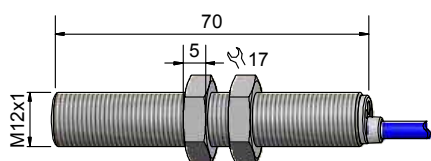
Non-flush mountable

Operating distance S_n	4 mm
Operating distance min. / max. adjustable	1...6 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-14-N-M12
Art. No.	400 705
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	5 m, PVC, 2 x 0.14 mm ²
Housing material	PVC
Active surface	PVC
Lid	PA / PPO

Accessories (is delivered with the unit)

2 pieces nuts M 12

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 12 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PTFE
- Ideal for detection of chemically aggressive media
- Suitable for food applications
- Sensing distance 1...6 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

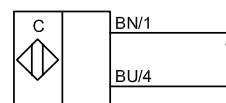
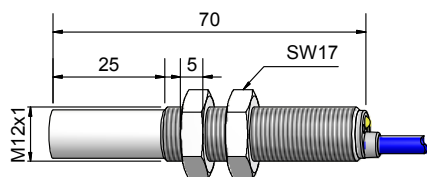


Technical data

Non-flush mountable

Operating distance S_n	4 mm
Operating distance min./max. adjustable	1...6 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-14-N-M12-PTFE
Art. No.	400 900
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PVC, 2 x 0.34 mm ²
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO
Accessories (is delivered with the unit)	2 pieces nuts M 12

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 18 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Brass
- Sensing distance 1...8 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

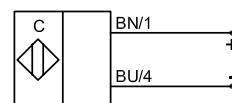
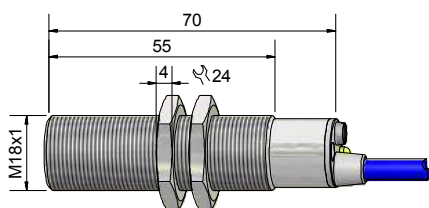
Flush mountable

Operating distance S_n	5 mm
Operating distance min. / max. adjustable	1...8 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A13-N
Art. No.	400 300
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.34 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO

Accessories (is delivered with the unit)

2 pieces nuts M 18

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 18 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Brass
- Sensing distance 1...8 mm adjustable
- With flange connector M 12 x 1

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

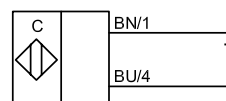
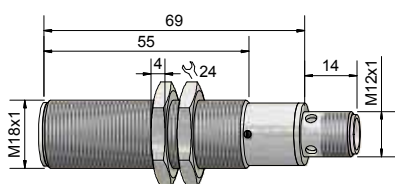
Flush mounting

Operating distance S_n	5 mm
Operating distance min. / max. adjustable	1...8 mm
Electrical version	2-pin DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A13-N-Y5
Art. No.	KA 0559
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection	Flange connector M 12 x 1
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	-

Accessories (is delivered with the unit) 2 pieces nuts M 18, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 18 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Brass
- Sensing distance 2...10 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

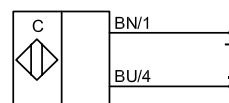
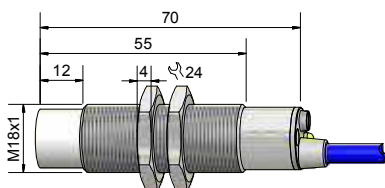
Non-flush mountable

Operating distance S_n	8 mm
Operating distance min. / max. adjustable	2...10 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A23-N
Art. No.	400 350
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.34 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO

Accessories (is delivered with the unit)

2 pieces nuts M 18

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 18 x 1

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Brass
- Sensing distance 2...10 mm adjustable
- With flange connector M 12 x 1

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

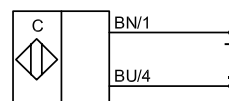
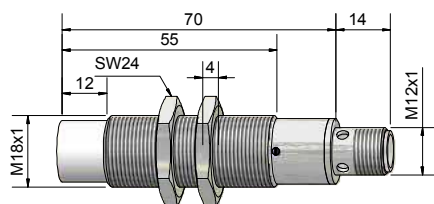
Non-flush mountable

Operating distance S_n	8 mm
Operating distance min. / max. adjustable	2...10 mm
Electrical version	2-pin DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A23-N-Y5
Art. No.	KA 0560
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection	Flange connector M 12 x 1
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	-

Accessories (is delivered with the unit) 2 pieces nuts M 18, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



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Made in Germany





Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing Ø 22 mm

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PA / PPO
- Sensing distance 2...8 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



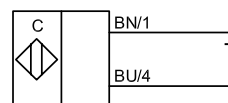
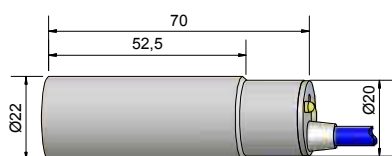
Technical data

Flush mountable

Operating distance S_n	6 mm
Operating distance min. / max. adjustable	2...8 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-20-N
Art. No.	401 000
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.34 mm ²
Housing material	PA / PPO
Active surface	PA / PPO
Lid	PA / PPO

Assessors for mounting (is not delivered with the sensor) please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6

Housing M 22 x 1.5

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PTFE
- Ideal for detection of chemically aggressive media
- Suitable for food applications
- Sensing distance 3...10 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

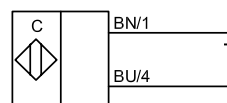
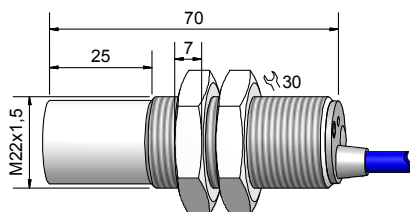


Technical data

Non-flush mountable

Operating distance S_n	8 mm
Operating distance min. / max. adjustable	3...10 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-24-N-M22-PTFE
Art. No.	401 500
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.34 mm ²
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO
Accessories (is delivered with the unit)	2 pieces nuts M 22

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing Ø 30 mm

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PA / PPO
- Sensing distance 3...20 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



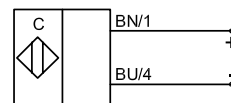
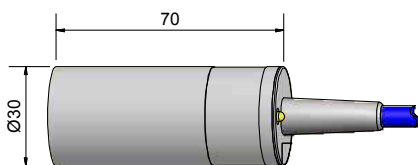
Technical data

Non-flush mountable

Operating distance S_n	15 mm
Operating distance min. / max. adjustable	3...20 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-35-N
Art. No.	402 000
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.75 mm ²
Housing material	PA / PPO
Active surface	PA / PPO
Lid	PA / PPO

Assessors for mounting (is not delivered with the sensor) please see our selection of accessories.

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 30 x 1.5

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Brass
- Sensing distance 2...15 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

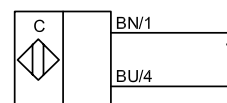
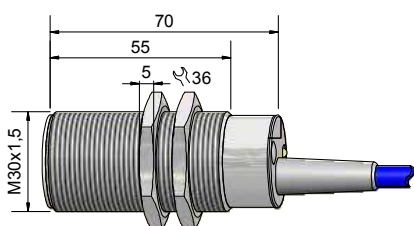


Technical data

Flush mountable

Operating distance S_n	10 mm
Operating distance min. / max. adjustable	2...15 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A14-N
Art. No.	400 400
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.75 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO
Accessories (is delivered with the unit)	2 pieces nuts M 30

* With sealed potentiometer screw



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Capacitive Sensors Serie 40 - NAMUR EN 60947-5-6



Housing M 30 x 1.5

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Brass
- Sensing distance 2...15 mm adjustable
- With flange connector M 12 x 1

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

Flush mounting

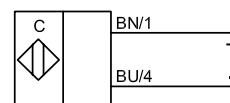
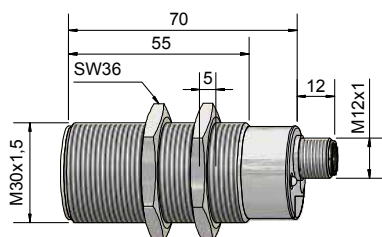
Operating distance S_n	10 mm
Operating distance min. / max. adjustable	2...15 mm
Electrical version	2-pin DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A14-N-Y5
Art. No.	KA 0557
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection	Flange connector M 12 x 1
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO

Accessories (is delivered with the unit)

2 pieces nuts M 30, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 30 x 1.5

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Brass
- Sensing distance 2...20 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

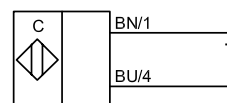
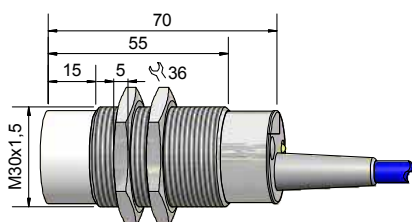


Technical data

Non-flush mountable

Operating distance S_n	15 mm
Operating distance min. / max. adjustable	2...20 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A24-N
Art. No.	400 450
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR 2 x 0.75 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO
Accessories (is delivered with the unit)	2 pieces nuts M 30

* With sealed potentiometer screw



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Capacitive Sensors Serie 40 - NAMUR EN 60947-5-6



Housing M 30 x 1.5

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Brass
- Operating range 2...20 mm
- With flange connector M 12 x 1

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

Non-flush mountable

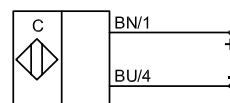
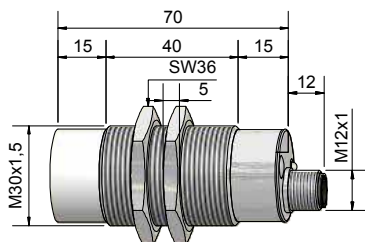
Operating distance S_n	15 mm
Operating distance min. / max. adjustable	2...20 mm
Electrical version	2-pin DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-A24-N-Y5
Art. No.	KA 0558
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection	Flange connector M 12 x 1
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO

Accessories (is delivered with the unit)

2 pieces nuts M 30, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



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Capacitive Sensors with analogue output Series 40 - NAMUR EN 60947-5-6 Output current 20...4 mA



Housing M 30 x 1.5

- For use in areas with the risk of gas explosion, zone 1
- Housing material: Brass
- Operating range 0...25 mm

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

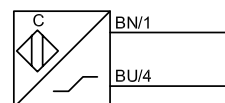
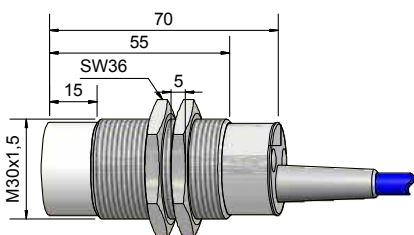


Technical data

Non-flush mountable

Operating range	0...25 mm
Linear range	2...20 mm
Electrical version	2-wire DC
Output function	Analogue
Type Analogue	KAS-40-A24-IL
Art. No.	403 600
Operating voltage (U_B)	10 - 15 V DC, $U_i = 15$ V DC
Power consumption active surface free	≤ 4 mA
Power consumption active surface covered	≥ 20 mA
Load resistor	R: 0...500 Ohm
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	0...+60 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-6
Connection cable	2 m, PUR, 2 x 0.75 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO
Accessories (is delivered with the unit)	2 pieces nuts M 30

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 32 x 1.5

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PA / PPO
- Sensing distance 3...15 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



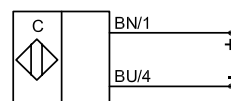
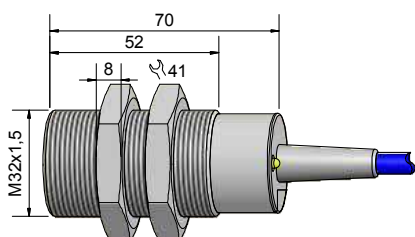
Technical data

Flush mountable

Operating distance S_n	12 mm
Operating distance min. / max. adjustable	3...15 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-30-N-M32
Art. No.	401 700
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.75 mm ²
Housing material	PA / PPO
Active surface	PA / PPO
Lid	PA / PPO

Accessories (is delivered with the unit)	2 pieces nuts M 32
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* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 32 x 1.5

- For use in areas with the risk of gas explosion, zone 0
- Housing material: Stainless steel VA
- Sensing distance 3...20 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



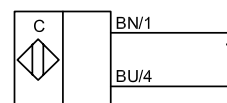
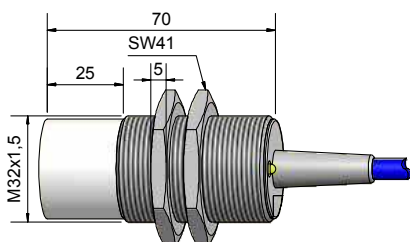
Technical data

Non-flush mountable

Operating distance S_n	18 mm
Operating distance min. / max. adjustable	3...20 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-34-N-M32-PTFE/V2A
Art. No.	402 400
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.75 mm ²
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO

Accessories (is delivered with the unit) 2 pieces nuts M 32

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 32 x 1.5

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PA / PPO
- Sensing distance 3...20 mm adjustable

Certificate:



DMT 03 ATEX E 048

IECEx BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga



Technical data

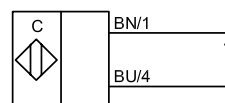
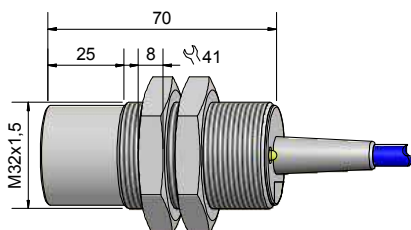
Non-flush mountable

Operating distance S_n	18 mm
Operating distance min. / max. adjustable	3...20 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-35-N-M32
Art. No.	402 100
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.75 mm ²
Housing material	PA / PPO
Active surface	PA / PPO
Lid	PA / PPO

Accessories (is delivered with the unit)

2 pieces nuts M 32

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing M 32 x 1.5

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PTFE
- Ideal for detection of chemically aggressive media
- Suitable for food applications
- Sensing distance 3...20 mm adjustable
- Option: Total chemical resistance is given when ordering the sensor with PTFE cable and PTFE- protection set Art.-No. 196301

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

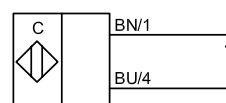
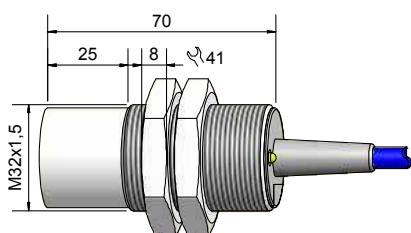


Technical data

Non-flush mountable

Operating distance S_n	18 mm
Operating distance min. / max. adjustable	3...20 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-35-N-M32-PTFE
Art. No.	402 300
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.75 mm ²
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO
Accessories (is delivered with the unit)	2 pieces nuts M 32

* With sealed potentiometer screw



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Certificate:



Capacitive Sensors Serie 40 - NAMUR EN 60947-5-6

Housing Ø 26 mm / G1" / 40 mm

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PTFE
- Sensing distance 0...15 mm adjustable
- Special version with flange. Sealing can be made with a gasket or PTFE-tape (not supplied with the sensor)



DMT 03 ATEX E 048	IECEx BVS 07.0031
Ex II 1G Ex ia IIC T1-T6 Ga	Ex ia IIC T1-T6 Ga

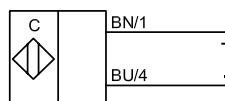
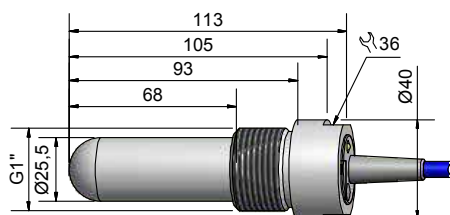


Technical data

Non-flush mountable

Operating distance S_n	5 mm
Operating distance min. / max. adjustable	0...15 mm
Electrical version	2-wire DC
Output	NAMUR DIN 60947-5-6
Type	KAS-40-26-N-PTFE-1"
Art. No.	KA 0740
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 3 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	0...+70 °C / CIP 121 °C (zero-current)
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.75 mm ²
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO

* With sealed potentiometer screw



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Capacitive Sensors Series 40 - NAMUR EN 60947-5-6



Housing Ø 26 mm / G1" / 40 mm

- For use in areas with the risk of gas explosion, zone 0
- Housing material: PTFE
- Sensing distance 0...15 mm adjustable
- Special version with flange. Sealing can be made with a gasket or PTFE-tape (not supplied with the sensor)

Certificate:



DMT 03 ATEX E 048

IECEX BVS 07.0031

Ex II 1G Ex ia IIC T1-T6 Ga

Ex ia IIC T1-T6 Ga

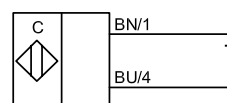
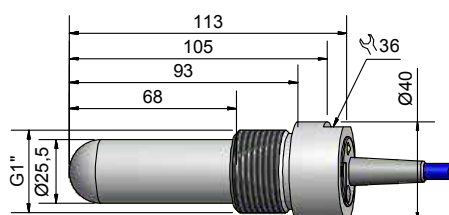


Technical data

Non-flush mountable

Operating distance S_n	5 mm
Operating distance min. / max. adjustable	0...15 mm
Electrical version	2-wire DC
Output	NAMUR DIN 60947-5-6
Type	KAS-40-26-N-PTFE-1"-100°C
Art. No.	KA 1230
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 3 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	0...+100 °C / CIP 121 °C (zero-current)
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.75 mm ²
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO

* With sealed potentiometer screw



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SERIES 40 (NAMUR) • 70 / 80 • ATEX / IECEx

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All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 40 NAMUR- StEx- ATEX

Housing M 30 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance 2...20 mm adjustable

DMT 03 ATEX E 048	IECEX BVS 07.0031
Ex II 1G Ex ia IIC T1-T6 Ga	Ex ia IIC T1-T6 Ga
Ex II 1D Ex ia IIIC T101°C Da	Ex ia IIIC T101°C Da

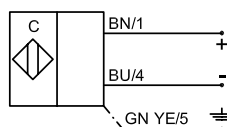
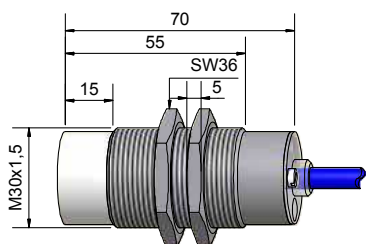


Technical data

Non-flush mountable

Operating distance S_n	15 mm
Operating distance min. / max. adjustable	2...20 mm
Electrical version	2-wire DC
Output function	NAMUR EN 60947-5-6
Type	KAS-40-A24-N-StEx
Art.-No.	KA 0095
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5%
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67*
Connection cable	3 m, PUR, 3 x 0.75 mm ²
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Accessories (is delivered with the unit)	2 pieces nuts M 30

* With sealed potentiometer screw



Made in Germany

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Capacitive Sensors Series 40 NAMUR- StEx- ATEX

Housing M 30 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance 2...20 mm adjustable
- With flange connector M 12 x 1, 3-pin incl. protective wire pin

DMT 03 ATEX E 048	IECEx BVS 07.0031
Ex II 1G Ex ia IIC T1-T6 Ga	Ex ia IIC T1-T6 Ga
Ex II 1D Ex ia IIIC T101°C Da	Ex ia IIIC T101°C Da

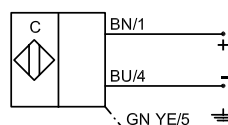
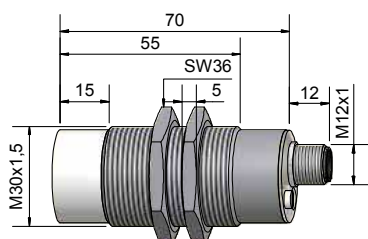


Technical data

Non-flush mountable

Operating distance S_n	15 mm
Operating distance min. / max. adjustable	2...20 mm
Electrical version	2-pin DC
Output function	NAMUR EN 60947-5-6
Type	KAS-40-A24-N-Y10-StEx
Art.-No.	KA 0870
Operating voltage (U_b)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5%
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67*
Connection	Flange connector M 12 x 1
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Accessories (is delivered with the unit)	2 pieces nuts M 30, Protective clip
For matching connectors please see our selection of accessories.	

* With sealed potentiometer screw



All specifications are subject to change without notice. (01/2018)

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Capacitive Sensors Series 40 NAMUR- StEx- ATEX

Housing M 32 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance 3...20 mm adjustable

DMT 03 ATEX E 048	IECEx BVS 07.0031
Ex II 1G Ex ia IIC T1-T6 Ga	Ex ia IIC T1-T6 Ga
Ex II 1D Ex ia IIIC T101°C Da	Ex ia IIIC T101°C Da

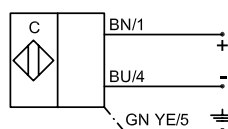
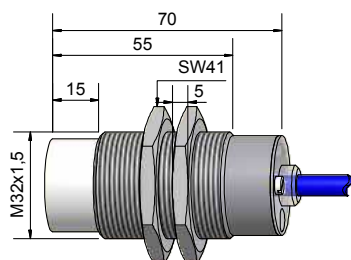


Technical data

Non-flush mountable

Operating distance S_n	18 mm
Operating distance min. / max. adjustable	3...20 mm
Electrical version	2-wire DC
Output function	NAMUR EN 60947-5-6
Type	KAS-40-34-N-M32-StEx
Art.-No.	KA 0094
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5%
Frequency of operating cycles max	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67*
Connection cable	3 m, PUR, 3 x 0.75 mm ²
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Accessories (is delivered with the unit)	2 pieces nuts M 32

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 40 NAMUR- StEx- ATEX

Housing M 32 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0
- Sensing distance 3...20 mm adjustable
- With flange connector M 12 x 1, 3-pin incl. protective wire pin

DMT 03 ATEX E 048	IECEX BVS 07.0031
Ex II 1G Ex ia IIC T1-T6 Ga	Ex ia IIC T1-T6 Ga
Ex II 1D Ex ia IIIC T101°C Da	Ex ia IIIC T101°C Da



Technical data

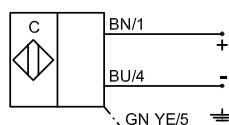
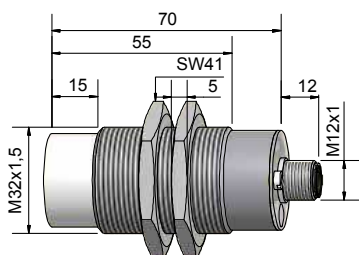
Non-flush mountable

Operating distance S_n	18 mm
Operating distance min. / max. adjustable	3...20 mm
Electrical version	2-pin DC
Output function	NAMUR EN 60947-5-6
Type	KAS-40-34-N-M32-Y10-StEx
Art.-No.	KA 0871
Operating voltage (U_b)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 2.5 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	-
Degree of protection IEC 60529	IP 67*
Connection	Flange connector M 12 x 1
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)

Accessories (is delivered with the unit) 2 pieces nuts M 32, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



All specifications are subject to change without notice. (01/2018)

Made in Germany



Capacitive Sensors Serie 40 - NAMUR - StEx - ATEX

Housing Ø 26 mm / G 1" / 40 mm

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0
- Housing material: PTFE
- Sensing distance 0...15 mm adjustable
- Special version with flange. Sealing can be made with a gasket or PTFE-tape (not supplied with the sensor)

DMT 03 ATEX E 048	IECEx BVS 07.0031
Ex II 1G Ex ia IIC T1-T6 Ga	Ex ia IIC T1-T6 Ga
Ex II 1D Ex ia IIIC T101°C Da	Ex ia IIIC T101°C Da

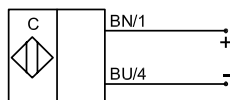
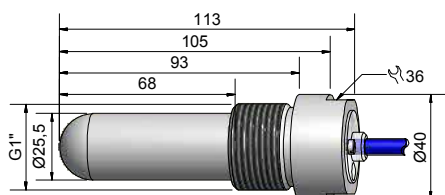


Technical data

Non-flush mountable

Operating distance S_n	5 mm
Operating distance min. / max. adjustable	0...15 mm
Electrical version	2-wire DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-26-N-K-G1"-PTFE-StEx
Art. No.	KA 0933
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ. 1.5 mA
Output current active surface covered	> typ. 3 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	0...+70 °C / CIP 121 °C (zero-current)
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection cable	2 m, PUR, 2 x 0.75 mm ²
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)

* With sealed potentiometer screw



Made in Germany



Capacitive Sensors Serie 40 - NAMUR - StEx - ATEX

Housing Ø 26 mm / G 1" / 40 mm

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0
- Housing material: PTFE
- Sensing distance 0...15 mm adjustable
- With flange, sealing can be made with a gasket or PTFE-tape (not supplied with the sensor).
- With flange connector M 12 x 1

DMT 03 ATEX E 048	IECEx BVS 07.0031
Ex II 1G Ex ia IIC T1-T6 Ga	Ex ia IIC T1-T6 Ga
Ex II 1D Ex ia IIIC T101°C Da	Ex ia IIIC T101°C Da



Technical data

Non-flush mountable

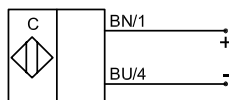
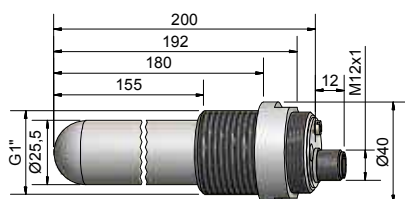
Operating distance S_n	5 mm
Operating distance min. / max. adjustable	0...15 mm
Electrical version	2-pin DC
Output function	NAMUR DIN 60947-5-6
Type	KAS-40-26-N-K-G1"-200-PTFE-Y5-StEx
Art. No.	KA 1231
Operating voltage (U_B)	5 - 15 V DC, $U_i = 15$ V DC
Output current active surface free	< typ 1.5 mA
Output current active surface covered	> typ. 3 mA
Self-inductance (L)	0.2 mH
Self-capacitance (C)	250 nF
Permitted residual ripple max.	5 %
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	0...+70 °C / CIP 121 °C (zero-current)
LED-display	Yellow
Degree of protection IEC 60529	IP 67*
Connection	Flange connector M 12 x 1
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)

Accessories (is delivered with the unit)

Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



All specifications are subject to change without notice. (01/2018)

Made in Germany



Capacitive Sensors

Series 70 - NPN - StEx- ATEX

Series 80 - PNP - StEx - ATEX

Housing M 30 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Sensing distance 3...25 mm adjustable

DMT 01 ATEX E 157	IECEx BVS 07.0015
Ex II 2 G Ex mb IIC T4 Gb	Ex mb IIC T4 Gb
Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db	Ex ta/tb IIIC T101°C Da/Db



Quattro^{EX}Protect™

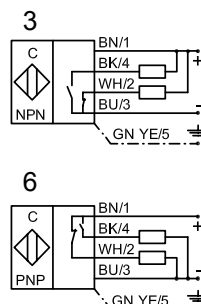
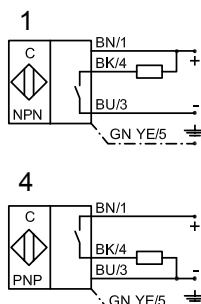
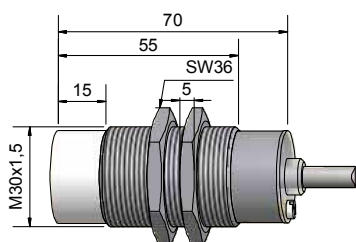
Technical data

Operating distance S_n	15 mm
Operating distance min. / max. adjustable	3...25 mm
Electrical version	4-wire DC
Output function	Antivalent
Type NPN	KAS-70-A24-A-StEx
Art.-No.	KA 0085
Connection diagram No.	3
Type PNP	KAS-80-A24-A-StEx
Art.-No.	KA 0084
Connection diagram No.	6
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 150 mA
Voltage drop max. (U_o)	≤ 2.0 V
Permitted residual ripple max.	5 %
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection cable	3 m, PVC, 5 x 0.34 mm ²
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts M 30

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors

Series 70 - NPN - StEx- ATEX

Series 80 - PNP - StEx - ATEX

Housing M 30 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- Sensing distance 3...25 mm adjustable
- With flange connector M 12 x 1, 5-pin incl. protective wire pin

DMT 01 ATEX E 157	IECEx BVS 07.0015
Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db	Ex ta/tb IIIC T101°C Da/Db



QuattroProtect™

Technical data

Non-flush mountable

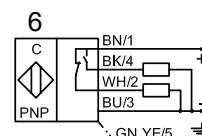
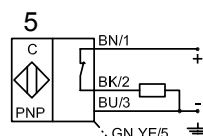
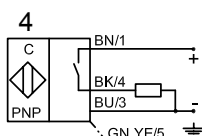
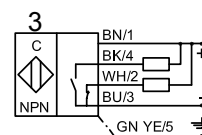
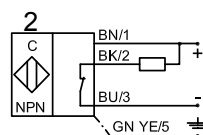
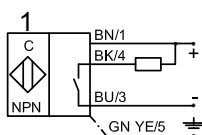
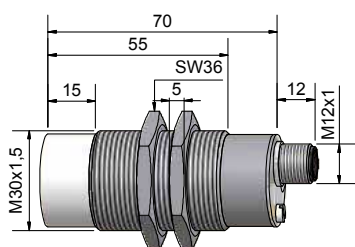
Operating distance S_n	15 mm
Operating distance min. / max. adjustable	3...25 mm
Electrical version	4-pin DC
Output function	Antivalent
Type NPN	KAS-70-A24-A-Y10-StEx
Art.-No.	KA 0863
Connection diagram No.	3
Type PNP	KAS-80-A24-A-Y10-StEx
Art.-No.	KA 0864
Connection diagram No.	6
Operating voltage (U_o)	10...30 V DC
Output current max. (I_o)	2 x 150 mA
Voltage drop max. (U_d)	≤ 2.0 V
Permitted residual ripple max.	5 %
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection	Flange connector M 12 x 1
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts M 30, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors

Series 70 - NPN - StEx- ATEX

Series 80 - PNP - StEx - ATEX

Housing M 32 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Sensing distance 3...30 mm adjustable

DMT 01 ATEX E 157	IECEx BVS 07.0015
Ex II 2 G Ex mb IIC T4 Gb	Ex mb IIC T4 Gb
Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db	Ex ta/tb IIIC T101°C Da/Db



Quattro^{EX}Protect™

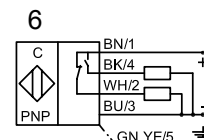
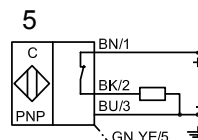
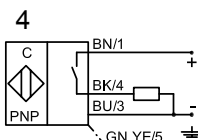
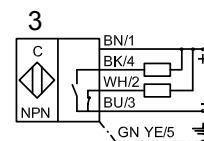
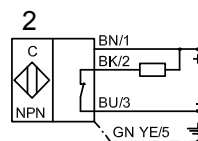
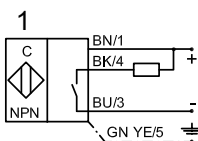
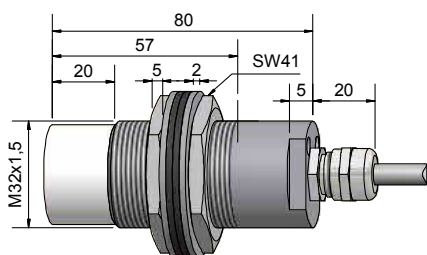
Technical data

	Non-flush mountable	Non-flush mountable
Operating distance S_n	20 mm	20 mm
Operating distance min./max. adjustable	3...30 mm	3...30 mm
Electrical version	3-wire DC	4-wire DC
Output function	Normally open	Antivalent
Type NPN	KAS-70-35-S-M32-StEx	KAS-70-35-A-M32-StEx
Art.-No.	KA 0090	KA 0089
Connection diagram No.	1	3
Type PNP	KAS-80-35-S-M32-StEx	KAS-80-35-A-M32-StEx
Art.-No.	KA 0087	KA 0086
Connection diagram No.	4	6
Operating voltage (U_B)	10...30 V DC	10...30 V DC
Output current max. (I_o)	150 mA	2 x 150 mA
Voltage drop max. (U_o)	≤ 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	-20...+90 °C	-20...+90 °C
LED-display	Yellow	Green / yellow
Protective circuit	Built-in	Built-in
Degree of protection IEC 60529	IP 67*	IP 67*
Norm	EN 60947-5-2	EN 60947-5-2
Connection cable	3 m PVC, 4 x 0.75 mm ²	3 m, PVC, 5 x 0.34 mm ²
Housing material	VA No. 1.4305	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)	PTFE (FDA 21 CFR 177.1550)
Lid	VA No. 1.4305	VA No. 1.4305
Media optimized	Yes	

Accessories (is delivered with the unit)

2 pieces nuts M 32, 2 pieces grommets, 2 pieces o-rings

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 80 - PNP - StEx - ATEX

Housing M 32 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Sensing distance 3...30 mm adjustable

DMT 01 ATEX E 157	IECEx BVS 07.0015
Ex II 2 G Ex mb IIC T4 Gb	Ex mb IIC T4 Gb
Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db	Ex ta/tb IIIC T101°C Da/Db



QuattroProtect™

Technical data

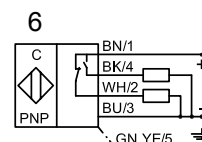
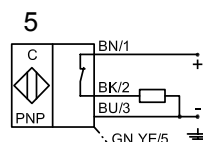
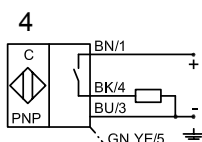
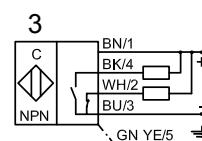
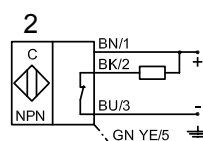
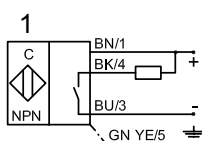
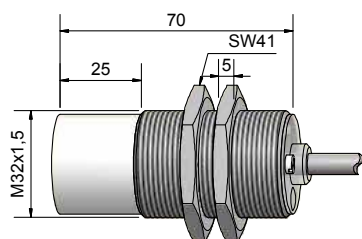
Non-flush mountable

Operating distance S_n	20 mm
Operating distance min. / max. adjustable	3...30 mm
Electrical version	4-wire DC
Output function	Antivalent
Type NPN	
Art.-No.	
Connection diagram No.	
Type PNP	
Art.-No.	
Connection diagram No.	
KA 0356	
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 150 mA
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	-20...+70 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection cable	3 m, PVC, 5 x 0.34 mm ²
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts M 32

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 80 - PNP - StEx - ATEX

Housing M 32 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- Sensing distance 3...30 mm adjustable
- With flange connector M 12 x 1, 5-pin incl. protective wire pin

DMT 01 ATEX E 157

IECEx BVS 07.0015

Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db

Ex ta/tb IIIC T101°C Da/Db



Quattro^{EX}Protect™

Technical data

Non-flush mountable

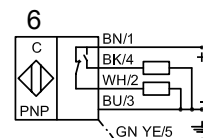
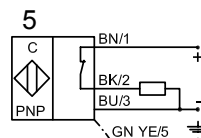
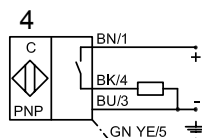
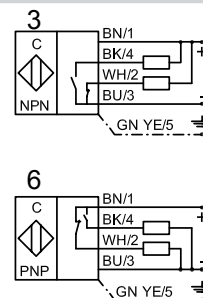
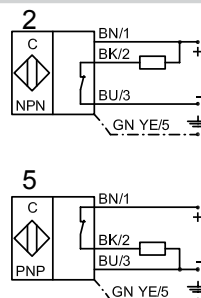
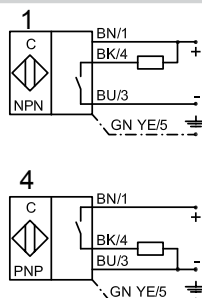
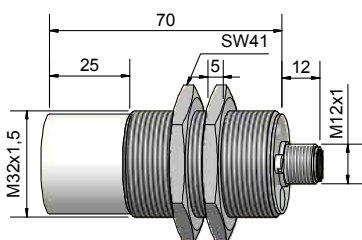
Operating distance S_n	20 mm
Operating distance min./max. adjustable	3...30 mm
Electrical version	4-pin DC
Output function	Antivalent
Type NPN	
Art.-No.	
Connection diagram No.	
Type PNP	
Art.-No.	
Connection diagram No.	
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 150 mA
Voltage drop max. (U_o)	≤ 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	-20...+70 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection	Flange connector M 12 x 1
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts M 32, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 80 - PNP - StEx - ATEX

Housing M 32 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Housing material: PTFE
- Sensing distance 3...30 mm adjustable

DMT 01 ATEX E 157	IECEX BVS 07.0015
Ex II 2 G Ex mb IIC T4 Gb	Ex mb IIC T4 Gb
Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db	Ex ta/tb IIIC T101°C Da/Db



Quattro[®]Protect™

Technical data

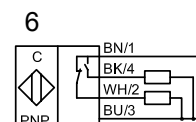
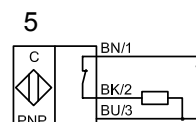
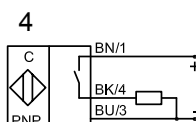
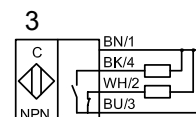
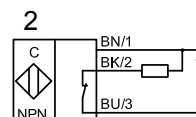
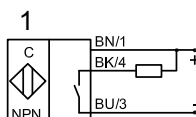
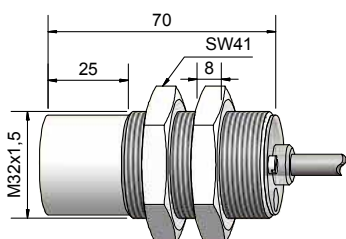
Non-flush mountable

Operating distance S_n	20 mm
Operating distance min. / max. adjustable	3...30 mm
Electrical version	4-wire DC
Output function	Antivalent
Type NPN	
Art.-No.	
Connection diagram No.	
Type PNP	
KAS-80-35-A-K-M32-PTFE-StEx	
Art.-No.	
KA 0093	
Connection diagram No.	
6	
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 150 mA
Voltage drop max. (U_d)	≤ 2.0 V
Permitted residual ripple max.	5 %
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection cable	3 m, PVC, 4 x 0.5 mm ²
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts M 32

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 80 - PNP - StEx - ATEX

Housing M 32 x 1.5

- For use in areas with the risk of dust explosion, zone 20
- Housing material: PTFE
- Sensing distance 3...30 mm adjustable
- With flange connector M 12 x 1

DMT 01 ATEX E 157

IECEX BVS 07.0015

Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db

Ex ta/tb IIIC T101°C Da/Db



Quattro^{Exc}Protect™

Technical data

Non-flush mountable

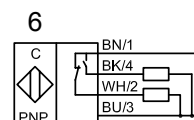
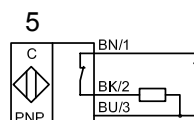
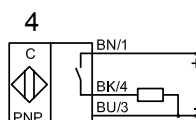
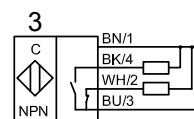
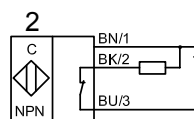
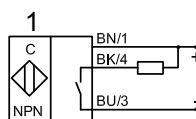
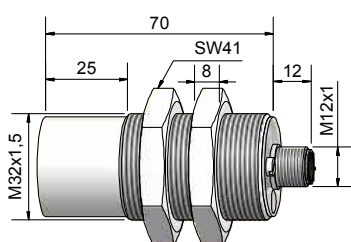
Operating distance S_n	20 mm
Operating distance min. / max. adjustable	3...30 mm
Electrical version	4-pin DC
Output function	Antivalent
Type NPN	
Art.-No.	
Connection diagram No.	
Type PNP	
KAS-80-35-A-K-M32-PTFE-Y5-StEx	
Art.-No.	
KA 0867	
Connection diagram No.	
6	
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 150 mA
Voltage drop max. (U_o)	≤ 2.0 V
Permitted residual ripple max.	5 %
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection	Flange connector M 12 x 1
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts M 32, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 80 - PNP - StEx - ATEX

Housing G 1"

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Sensing distance 3...30 mm adjustable

DMT 01 ATEX E 157	IECEx BVS 07.0015
Ex II 2 G Ex mb IIC T4 Gb	Ex mb IIC T4 Gb
Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db	Ex ta/tb IIIC T101°C Da/Db



QuattroProtect™

Technical data

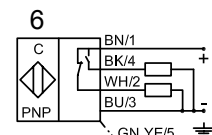
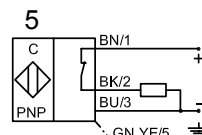
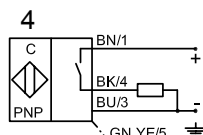
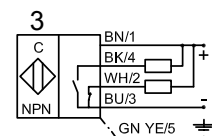
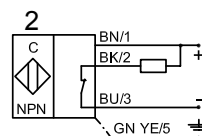
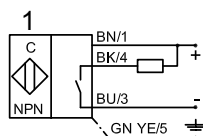
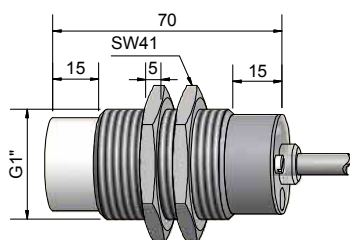
Non-flush mountable

Operating distance S_n	20 mm
Operating distance min. / max. adjustable	3...30 mm
Electrical version	4-wire DC
Output function	Antivalent
Type NPN	
Art.-No.	
Connection diagram No.	
Type PNP	
Art.-No.	
KAS-80-34-A-G1"-StEx	
KA 0092	
Connection diagram No.	
6	
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 150 mA
Voltage drop max. (U_d)	≤ 2.0 V
Permitted residual ripple max.	5 %
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection cable	3 m, PVC, 5 x 0.34 mm ²
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts G 1"

* With sealed potentiometer screw



Made in Germany

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Capacitive Sensors Series 80 - PNP - StEx - ATEX

Housing G 1"

- For use in areas with the risk of dust explosion, zone 20
- Sensing distance 3...30 mm adjustable
- With flange connector M 12 x 1, 5-pin incl. protective wire pin

DMT 01 ATEX E 157

IECEX BVS 07.0015

Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db

Ex ta/tb IIIC T101°C Da/Db



Quattro^{EX}Protect™

Technical data

Non-flush mountable

Operating distance S_n	20 mm
Operating distance min. / max. adjustable	3...30 mm
Electrical version	4-pin DC
Output function	Antivalent

Type NPN

Art.-No.

Connection diagram No.

Type PNP

KAS-80-34-A-G1"-Y10-StEx

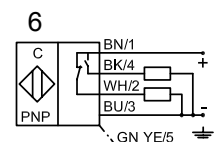
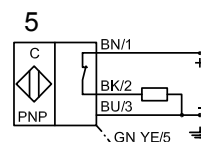
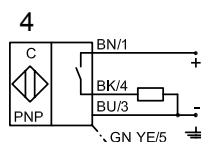
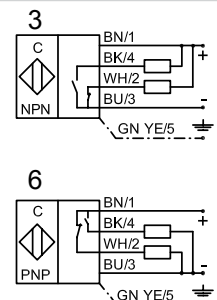
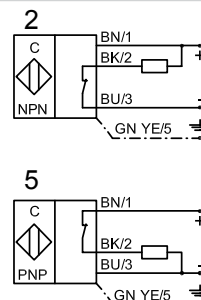
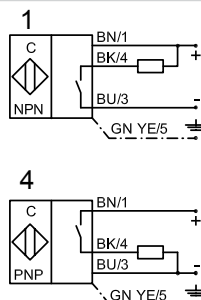
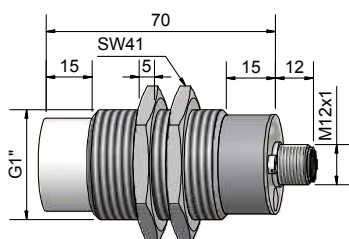
Art.-No.	KA 0868
Connection diagram No.	6
Operating voltage (U_B)	10...30 V DC
Output current max. (I_e)	2 x 150 mA
Voltage drop max. (U_o)	≤ 2.0 V
Permitted residual ripple max.	5 %
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection	Flange connector M 12 x 1
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts G 1", Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

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Capacitive Sensors Series 80 - PNP

Housing Tri-Clamp

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Housing material: Stainless steel VA No. 1.4404 / AISI 316L
- Sensing distance 3...30 mm adjustable

DMT 01 ATEX E 157

IECEX BVS 07.0015

Ex II 2 G Ex mb IIC T4 Gb

Ex mb IIC T4 Gb

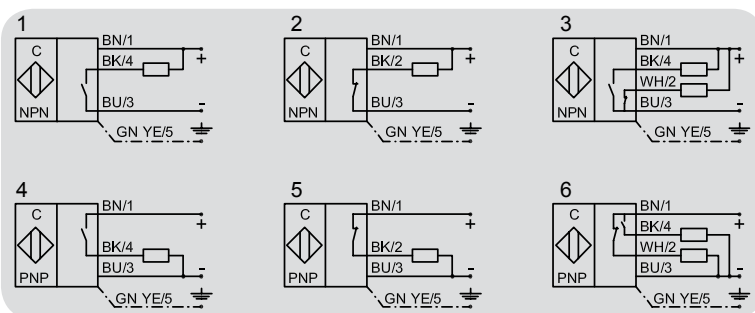
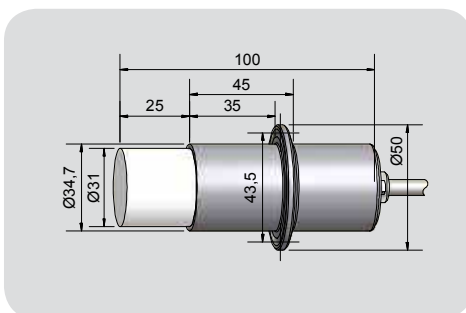
Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db

Ex ta/tb IIIC T101°C Da/Db



Technical data	Non-flush mountable
Operating distance S_n	20 mm
Operating distance min. / max. adjustable	3...30 mm
Electrical version	4-wire DC
Output function	Antivalent (NO + NC)
Type PNP	KAS-80-35/100-A-Tri-PTFE/VA-StEx
Art.-No.	KA 0377
Connection diagram No.	6
Operating voltage (U_B)	10...35 V DC
Voltage drop max. (U_d)	≤ 2.0 V
Permitted residual ripple max.	10 %
Operating current (I_o)	2 x 0...150 mA
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-25...+90 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67
Norm	EN 60947-5-2
Connection cable	3 m, PVC, 5 x 0,34 mm ²
Housing material	Stainless steel VA No. 1.4404 / AISI 316L
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes
Accessories (not delivered with the sensor): Stainless steel welding nipple DN 25 # 190751, Sealing gasket # 190752, Triclamp mounting clamp # 190750 please see our selection of accessories.	

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 80 - PNP

Housing Tri-Clamp

- For use in areas with the risk of dust explosion, zone 20
- Housing material: Stainless steel VA No. 1.4404 / AISI 316L
- Sensing distance 3...30 mm adjustable
- With flange connector M 12 x 1, 5-pin incl. protective wire pin

DMT 01 ATEX E 157

IECEX BVS 07.0015

Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db

Ex ta/tb IIIC T101°C Da/Db



Technical data

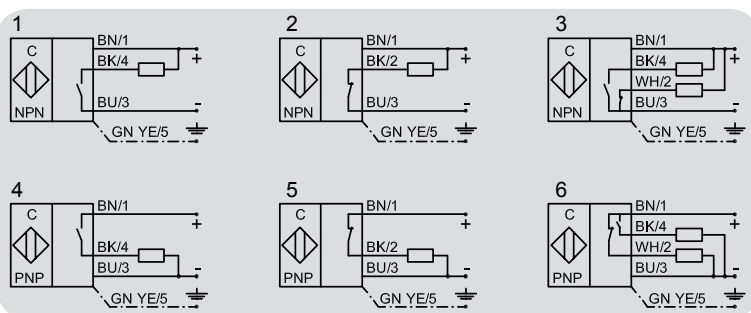
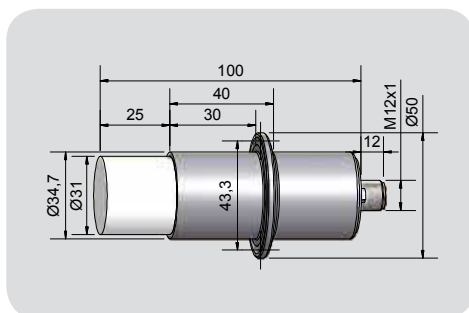
Non-flush mountable

Operating distance S_n	20 mm
Operating distance min. / max. adjustable	3...30 mm
Electrical version	4-pin DC
Output function	Antivalent (NO + NC)
Type PNP	KAS-80-35/100-A-Tri-PTFE/VA-Y10-StEx
Art.-No.	KA 0869
Connection diagram No.	6
Operating voltage (U_B)	10...35 V DC
Voltage drop max. (U_d)	≤ 2.0 V
Permitted residual ripple max.	10 %
Operating current (I_a)	2 x 0...150 mA
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-25...+90 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection	Flange connector M 12 x 1
Housing material	Stainless steel VA No. 1.4404 / AISI 316L
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

Accessories (delivered with the sensor) Protective clip

Accessories (not delivered with the sensor): Stainless steel welding nipple DN 25 # 190751, Sealing gasket # 190752, Triclamp mounting clamp # 190750 and matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive sensors Series 70 - NPN - StEx - ATEX

Series 80 - PNP - StEx - ATEX

Housing Ø 26 mm / G 1" / 40 mm

- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Housing material PTFE
- Sensing distance 0...20 mm adjustable
- Suitable for food and pharmaceutical applications
- With flange, sealing can be made with a gasket or PTFE-tape (not supplied with the sensor).

DMT 01 ATEX E 157	IECEX BVS 07.0015
Ex II 2 G Ex mb IIC T4 Gb	Ex mb IIC T4 Gb
Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db	Ex ta/tb IIIC T101°C Da/Db



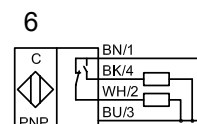
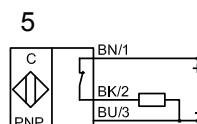
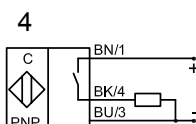
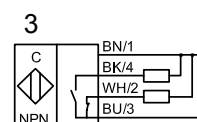
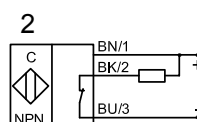
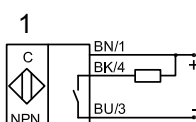
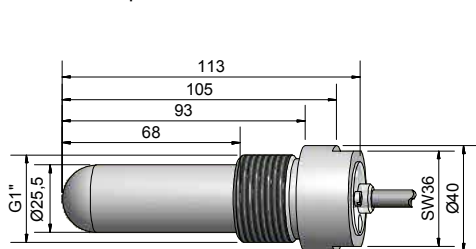
Quattro^{EC}Protect™

Technical data

Non-flush mountable

Operating distance S_n	5 mm
Operating distance min. / max. adjustable	0...20 mm
Electrical version	4-wire DC
Output function	Antivalent
Type NPN	KAS-70-26-A-K-G1"-PTFE-StEx
Art.-No.	KA 0824
Connection diagram No.	3
Type PNP	KAS-80-26-A-K-G1"-PTFE-StEx
Art.-No.	KA 0264
Connection diagram No.	6
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 150 mA
Voltage drop max. (U_o)	≤ 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	-20...+90 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection cable	2 m, PVC, 4 x 0.5 mm ²
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive sensors Series 80 - PNP - StEx - ATEX

Housing Ø 26 mm / G 1" / 40 mm

- For use in areas with the risk of dust explosion, zone 20
- Housing material PTFE
- Sensing distance 0...20 mm adjustable
- Suitable for food and pharmaceutical applications
- Special version with flange. Sealing can be made with a gasket or PTFE-tape (not supplied with the sensor)
- With flange connector m 12 x 1

DMT 01 ATEX E 157

IECEX BVS 07.0015

Ex II 1/2 D Ex ta/tb IIIC T101°C Da/Db

Ex ta/tb IIIC T101°C Da/Db



Quattro^{EX}Protect™

Technical data

Non-flush mountable

Operating distance S_n	5 mm
Operating distance min. / max. adjustable	0...20 mm
Electrical version	4-pin DC
Output function	Antivalent

Type NPN

Art.-No.

Connection diagram No.

Type PNP

KAS-80-26-A-K-G1"-PTFE-Y5-StEx

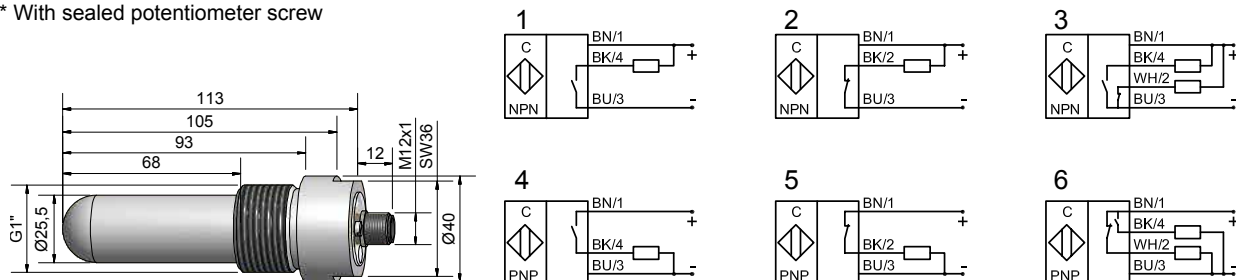
Art.-No.	KA 0655
Connection diagram No.	6
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 150 mA
Voltage drop max. (U_o)	≤ 2.0 V
Permitted residual ripple max.	10 %
No-load current (I_o)	Typ. 15 mA
Frequency of operating cycles max.	50 Hz
Permitted ambient temperature	-20...+90 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection	Flange connector M 12 x 1
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PC (FDA 21 CFR 177.1580)
Media optimized	Yes

Accessories (is delivered with the unit)

Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)

SENSORS / ATEX WITH MANUFACTURER DECLARATION

Pages:

Capacitive sensors, ATEX Zone 2, Zone 22, M 18	98 - 99
Capacitive sensors, ATEX Zone 2, Zone 22, M 32	100 - 101

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors

Series 80 - PNP

Housing M 18 x 1

- Housing material: PTFE
- Ideal of detection of chemically aggressive media
- Suitable for food applications
- Sensing distance 0,5...10 mm adjustable
- II 3G EEx nA II T6 X, for use in zone 2
- II 3D IP67 T101° C X, for use in zone 22
- With flange connector M 12 x 1



Certificate:



Technical data

Flush mountable

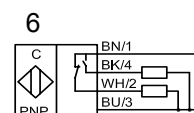
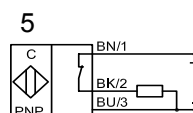
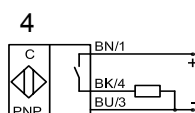
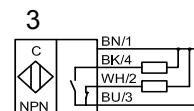
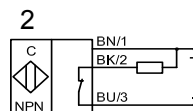
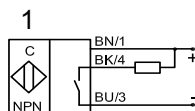
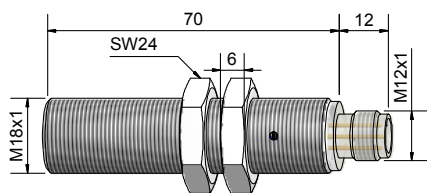
Operating distance S_n	5 mm
Operating distance min. / max. adjustable	0.5...10 mm
Electrical version	4-pin DC
Output function	Antivalent
Type NPN	
Art.-No.	
Connection diagram No.	
Type PNP	
KAS-80-A13-A-K-PTFE-Y3-3G-3D	
Art.-No.	
KA 0799	
Connection diagram No.	
6	
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 200 mA
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.	300 Hz
Permitted ambient temperature	-25...+70 °C
LED-display	Yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection	Flange connector M 12 x 1
Housing material	PTFE (FDA 21 CFR 177.1550)
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	-
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts M 18, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors

Series 80 - NPN

Housing M 18 x 1

- Housing material: Brass
- Sensing distance 0.5...15 mm adjustable
- II 3G EEx nA II T6 X, for use in zone 2
- II 3D IP67 T101° C X, for use in zone 22
- With flange connector M 12 x 1



Certificate:



Technical data

Non-flush mountable

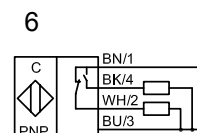
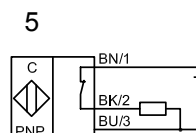
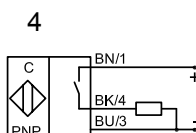
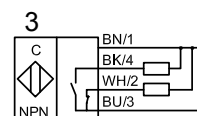
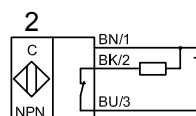
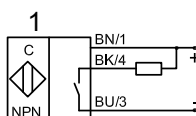
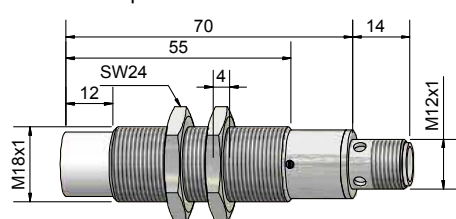
Operating distance S_n	8 mm
Operating distance min. / max. adjustable	0.5...15 mm
Electrical version	4-pin DC
Output function	Antivalent
Type NPN	
Art.-No.	
Connection diagram No.	
Type PNP	
KAS-80-A23-A-Y5-3G-3D	
Art.-No.	
KA 0527	
Connection diagram No.	
6	
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 200 mA
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 60529	IP 67*
Norm	EN 60947-5-2
Connection	Flange connector M 12 x 1
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	-
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts M 18, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors

Series 80 - PNP

Housing M 32 x 1.5

- Housing material: Stainless steel
- Sensing distance 1...40 mm adjustable
- II 3G EEx nA II T6 X, for use in zone 2
- II 3D IP67 T101° C X, for use in zone 22
- With flange connector M 12 x 1



Certificate:



Quattro^{EX}Protect™

Technical data

Non-flush mountable

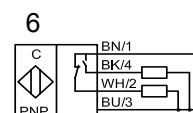
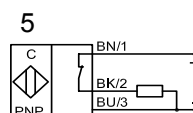
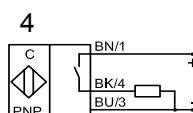
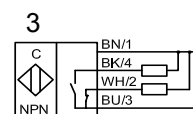
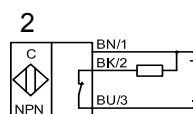
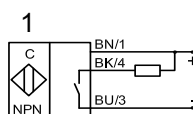
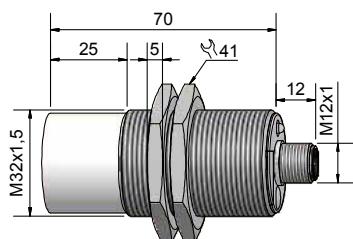
Operating distance S_n	25 mm
Operating distance min. / max. adjustable	1...40 mm
Electrical version	4-pin DC
Output function	Antivalent
Type NPN	
Art.-No.	
Connection diagram No.	
Type PNP	
KAS-80-34-A-M32-PTFE/V2A-Y5-3G-3D	
Art.-No.	
KA 0849	
Connection diagram No.	
6	
Operating voltage (U_B)	10...30 V DC
Output current max. (I_o)	2 x 200 mA
Voltage drop max. (U_o)	≤ 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 60529	IP 67*
Norm	EN 60947-5-2
Connection	Flange connector M 12 x 1
Housing material	VA No. 1.4305
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA / PPO
Media optimized	Yes

Accessories (is delivered with the unit)

2 pieces nuts M 32, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors

Series 80 - PNP

Housing M 32 x 1.5

- Housing material PPO
- Sensing distance 1...40 mm adjustable
- II 3G EEx nA II T6 X, for use in zone 2
- II 3D IP67 T101° C X, for use in zone 22
- With flange connector M 12 x 1

Certificate:

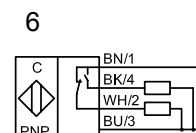
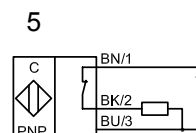
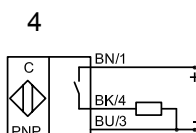
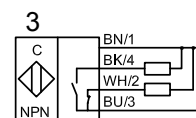
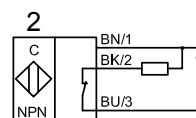
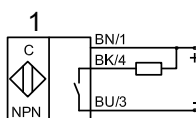
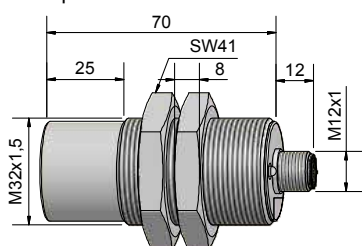


Technical data	Non-flush mountable
Operating distance S_n	25 mm
Operating distance min. / max. adjustable	1...40 mm
Electrical version	4-pin DC
Output function	Antivalent
Type NPN	
Art.-No.	
Connection diagram No.	
Type PNP	
KAS-80-35-A-M32-Y5-3G-3D	
Art.-No.	
KA 0610	
Connection diagram No.	
6	
Operating voltage (U_b)	10...30 V DC
Output current max. (I_o)	2 x 200 mA
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 60529	IP 67*
Norm	EN 60947-5-2
Connection	Flange connector M 12 x 1
Housing material	PPO
Active surface	PPO
Lid	PA / PPO
Media optimized	Yes

Accessories (is delivered with the unit) 2 pieces nuts M 32, Protective clip

For matching connectors please see our selection of accessories.

* With sealed potentiometer screw



Made in Germany

All specifications are subject to change without notice. (01/2018)



SENSORS / ATEX WITH MANUFACTURER DECLARATION

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Capacitive sensors, Series 95, ATEX Zone 22, M 32	104 - 105
Capacitive sensors, Series 95, ATEX Zone 22, Ø 32 mm	106 - 107

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 95 - AC / DC



Housing M 30 x 1.5

- Housing material: Brass
- Sensing distance 2...20 mm adjustable
- Potential-free change-over contact
- II 3D IP67 T101°C X
- For use in zone 22

Certificate:

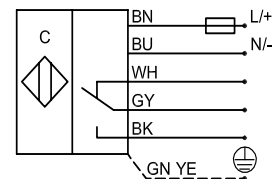
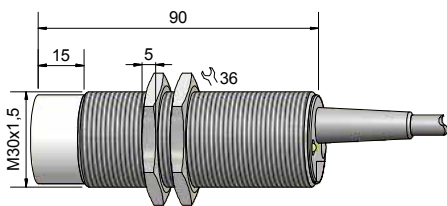


Technical data

Non-flush mountable

Operating distance S_n	15 mm
Operating distance min. / max. adjustable	2...20 mm
Electrical version	5-wire AC / DC
Output	Relay, 1 CO
Type	KAS-95-A24-1CO-PTFE/MS-3D
Art.-No.	KA 1010
Operating voltage (U_o)	20...250 AC / DC
Load max. AC (I, U)	1 A, 250 V
Load max. DC (I, U, P)	1 A, 220 V, 60 W
No-load current (I_o)	2,1 mA
Frequency of operating cycles max.	2 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection cable	2 m, PVC, 6 x 0.34 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA
Media optimized	Yes

*With sealed potentiometer



Made in Germany



Capacitive Sensors Series 95 - AC / DC

Housing M 30 x 1.5

- Housing material: Brass
- Sensing distance 2...20 mm adjustable
- Normally open and normally closed function
- Potential-free change-over contact
- Switch-on and switch-off delay changeable
- Adjustable timer 1 sec - 10 min.
- II 3D IP67 T101°C X
- For use in zone 22

Certificate:

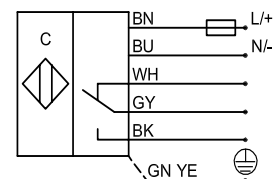
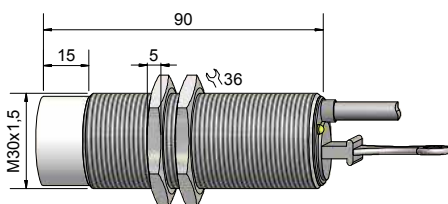
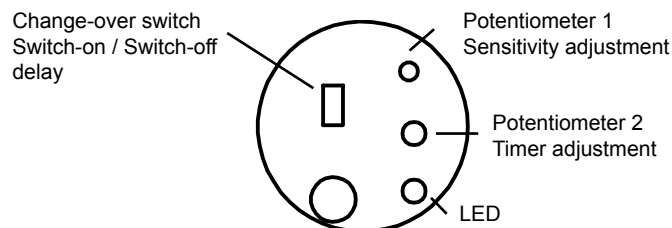


Technical data

Non-flush mountable

Operating distance S_n	15 mm
Operating distance min. / max. adjustable	2...20 mm
Electrical version	5-wire AC / DC
Output	Relay, 1 CO
Type	KAS-95-A24-1CO-PTFE/MS-TD-3D
Art.-No.	KA 1008
Operating voltage (U_B)	20...250 AC / DC
Load max. AC (I, U)	1 A, 250 V
Load max. DC (I, U, P)	1 A, 220 V, 60 W
No-load current (I_o)	2,1 mA
Frequency of operating cycles max.	2 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection cable	2 m, PVC, 6 x 0,34 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PBT
Media optimized	Yes

*With sealed potentiometer



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All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 95 - AC / DC



Housing M 32 x 1.5

- Housing material: Brass
- Sensing distance 2...25 mm adjustable
- Potential-free change-over contact
- II 3D IP67 T101°C X
- For use in zone 22

Certificate:

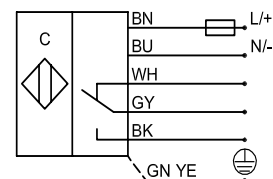
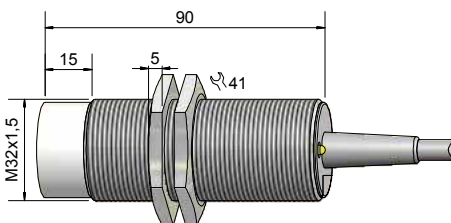


Technical data

Non-flush mountable

Operating distance S_n	20 mm
Operating distance min. / max. adjustable	2...25 mm
Electrical version	5-wire AC / DC
Output	Relay, 1 CO
Type	KAS-95-32-1CO-M32-PTFE/MS-3D
Art.-No.	KA 1007
Operating voltage (U_B)	20...250 V AC / DC
Load max. AC (I, U)	1 A, 250 V
Load max. DC (I, U, P)	1 A, 220 V, 60 W
No-load current (I_o)	2,1 mA
Frequency of operating cycles max.	2 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67
Norm	EN 60947-5-2
Connection cable	2 m, PVC, 6 x 0.34 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA
Media optimized	Yes

*With sealed potentiometer



Made in Germany



Capacitive Sensors Series 95 - AC / DC

Housing M 32 x 1.5

- Housing material: Brass
- Sensing distance 2...25 mm adjustable
- Normally open and normally closed function
- Potential-free change-over contact
- Switch-on and switch-off delay changeable
- Adjustable timer 1 sec - 10 min.
- II 3D IP67 T101°C X
- For use in zone 22

Certificate:



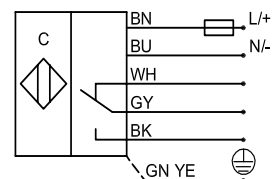
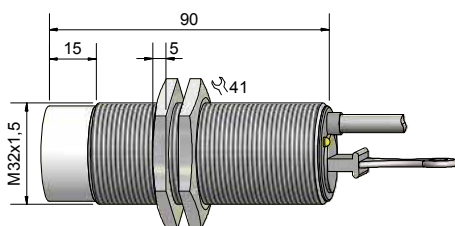
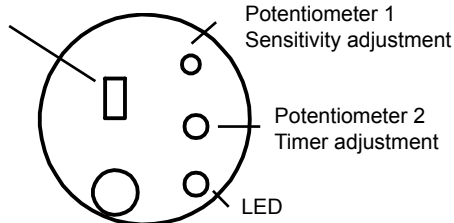
Technical data

Non-flush mountable

Operating distance S_n	20 mm
Operating distance min. / max. adjustable	2...25 mm
Electrical version	5-wire AC / DC
Output	Relay, 1 CO
Type	KAS-95-32-1CO-M32-PTFE/MS-TD-3D
Art.-No.	KA 1009
Operating voltage (U_B)	20...250 V AC / DC
Load max. AC (I, U)	1 A, 250 V
Load max. DC (I, U, P)	1 A, 220 V, 60 W
No-load current (I_0)	2,1 mA
Frequency of operating cycles max.	2 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection cable	2 m, PVC, 6 x 0.34 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PBT
Media optimized	Yes

*With sealed potentiometer

Change-over switch
Switch-on / Switch-off
delay



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 95 - AC / DC



Housing Ø 32 mm

- Housing material: Brass
- Sensing distance 2...25 mm adjustable
- Potential-free change-over contact
- II 3D IP67 T101°C X
- For use in zone 22

Certificate:

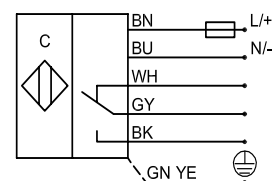
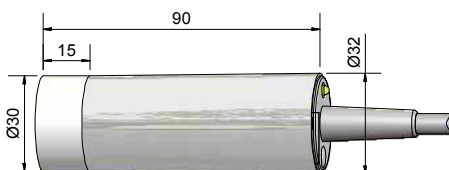


Technical data

Non-flush mountable

Operating distance S_n	20 mm
Operating distance min. / max. adjustable	2...25 mm
Electrical version	5-wire AC / DC
Output	Relay, 1 CO
Type	KAS-95-32-1CO-PTFE/MS-3D
Art.-No.	KA 1005
Operating voltage (U_B)	20...250 V AC / DC
Load max. AC (I, U)	1 A, 250 V
Load max. DC (I, U, P)	1 A, 220 V, 60 W
No-load current (I_o)	2,1 mA
Frequency of operating cycles max.	2 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67
Norm	EN 60947-5-2
Connection cable	2 m, PVC, 6 x 0.34 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PA
Media optimized	Yes

*With sealed potentiometer



Made in Germany

All specifications are subject to change without notice. (01/2018)



Capacitive Sensors Series 95 - AC / DC

Housing Ø 32 mm

- Housing material: Brass
- Sensing distance 2...25 mm adjustable
- Normally open and normally closed function
- Potential-free change-over contact
- Switch-on and switch-off delay changeable
- Adjustable timer 1 sec - 10 min.
- II 3D IP67 T101°C X
- For use in zone 22

Certificate:



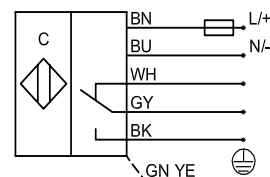
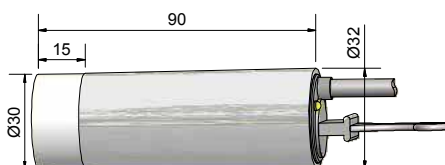
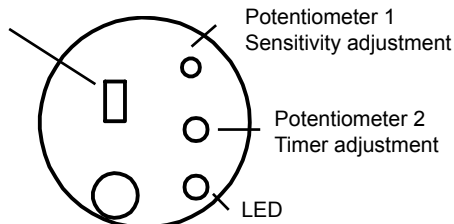
Technical data

Non-flush mountable

Operating distance S_n	20 mm
Operating distance min. / max. adjustable	2...25 mm
Electrical version	5-wire AC / DC
Output	Relay, 1 CO
Type	KAS-95-32-1CO-PTFE/MS-TD-3D
Art.-No.	KA 1006
Operating voltage (U_B)	20...250 V AC / DC
Load max. AC (I, U)	1 A, 250 V
Load max. DC (I, U, P)	1 A, 220 V, 60 W
No-load current (I_0)	2,1 mA
Frequency of operating cycles max.	2 Hz
Permitted ambient temperature	-20...+70 °C
LED-display	Yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection cable	2 m, PVC, 6 x 0.34 mm ²
Housing material	Brass
Active surface	PTFE (FDA 21 CFR 177.1550)
Lid	PBT
Media optimized	Yes

*With sealed potentiometer

Change-over switch
Switch-on / Switch-off
delay



Made in Germany

All specifications are subject to change without notice. (01/2018)

DESCRIPTION: CONDUCTIVE SENSORS RCS

The conductivity sensors or conductivity guard are designed for detection of electrically conductive liquids. They are certified for use in potentially explosive areas Zone 0 and Zone 20.

Technology

The technology of these conductive sensors is based on the conductivity measuring principle. They are designed as a 2 wire version according to NAMUR DIN 60947-5-6 and are ATEX certified. The sensor has two measuring electrodes. When they are in contact with a conductive liquid a measuring current runs between these two measuring electrodes, which is evaluated by the sensor and a switching signal is given.

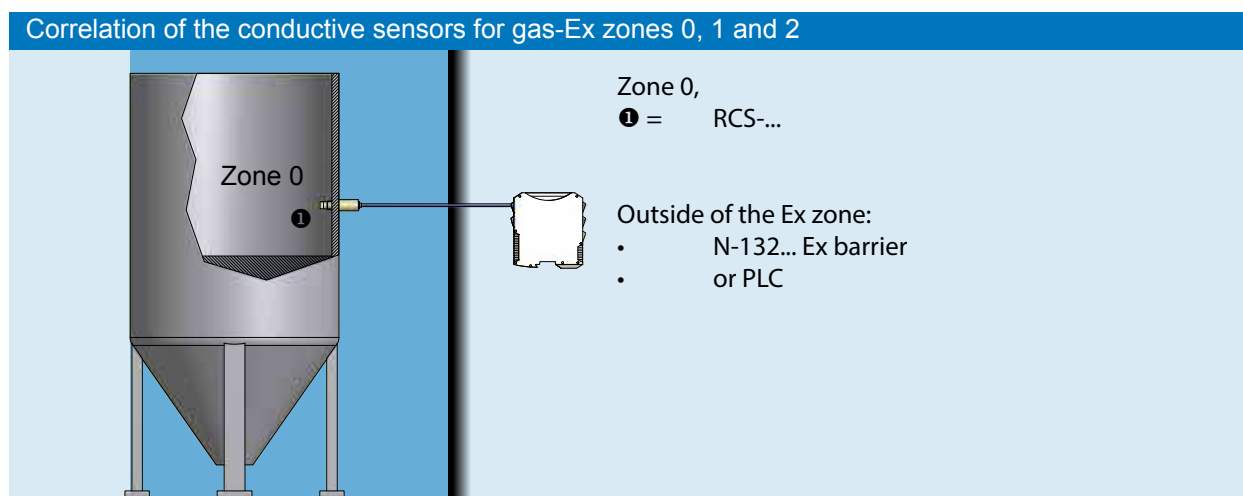
The sensors have a 12-turn potentiometer for sensitivity adjustment. This allows an optimum adjustment for the liquid to be detected.

Mechanical Construction

The conductive sensors are available with different body sizes, like for instance M 10 x 1, M 12 x 1 or G 1/4 " or 1/4" NPT. For the sensor bodies, this means parts that touch the product, high quality materials are used. Therefore the sensors can be used for applications in the Chemical Industry and Food Industry.

- Housing materials used are:
- Sensor body: PEEK (FDA 21 CFR 177.2415)
- Electrodes: VA Nr. 1.4305

For more information about conductivity sensors see our catalogue about conductivity sensors or visit our website under www.rechner-sensors.com.



All specifications are subject to change without notice. (01/2018)

CONDUCTIVITY SENSORS RCS

Pages:

Conductivity sensors, Series RCS, StEx - ATEX Zone 0, Zone 20

110 - 114

All specifications are subject to change without notice. (01/2018)



Conductivity sensors Series 02 - NAMUR EN 60947-5-6

Housing M 12 x 1

- Housing material: PEEK
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0

BVS 10 ATEX E 049

Ex II 1G Ex ia IIC T4 Ga

Ex II 1D Ex ia IIIC T130°C Da



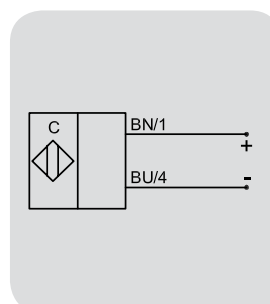
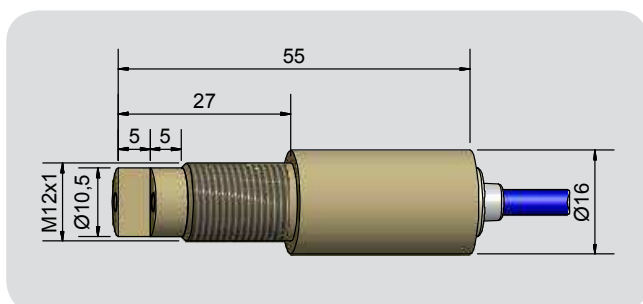
Technical data

Electrical version	2-wire DC
Output function	NAMUR EN 60947-5-6
Type	RCS-02-M12/55-N-27-VA/PEEK-StEx
Art.-No.	RC 0002
Operating voltage (U _B)	8 - 15 V AC / DC U _i = 15 V DC
Power consumption	I _i = 30 mA
Sensitivity min.	100 µS / cm*
Sensitivity max.	0.1 µS / cm*
Permitted ambient temperature	-20...+90 °C
Degree of protection IEC 60529	IP 67**
Norm	EN 60947-5-2
Connection cable	5 m, PVC, 2 x 0.14 mm ²
Housing material	PEEK (FDA 21 CFR 177.2415)
Material	VA No. 1.4305
Pressure	5 bar

* Other sensitivity ranges are possible on customer request

** With sealed potentiometer screw

All specifications are subject to change without notice. (04.01.2018)



Made in Germany



Conductivity sensors Series 02 - NAMUR EN 60947-5-6

Housing M 12 x 1

- Housing material: PEEK
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0

Certificate:



BVS 10 ATEX E 049

Ex II 1G Ex ia IIC T4 Ga

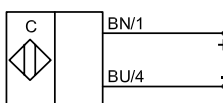
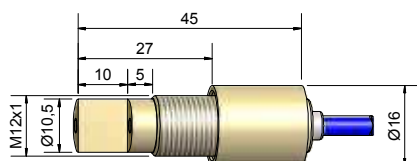
Ex II 1D Ex ia IIC T130°C Da

Technical data

Electrical version	2-wire DC
Output function	NAMUR EN 60947-5-6
Type	RCS-02-M12/45-N-27-VA/PEEK-StEx
Art.-No.	RC 0003
Operating voltage (U_B)	$U_i = 15 \text{ V DC}$
Power consumption	$I_i = 30 \text{ mA}$
Sensitivity min.	$200 \mu\text{S} / \text{cm}^*$
Sensitivity max.	$0.2 \mu\text{S} / \text{cm}^*$
Permitted ambient temperature	$-20 \dots +90 \text{ }^\circ\text{C}$
Degree of protection IEC 60529	IP 67**
Norm	EN 60947-5-2
Connection cable	2 m, PVC, $2 \times 0.14 \text{ mm}^2$
Housing material	PEEK (FDA 21 CFR 177.2415)
Material	VA No. 1.4305
Pressure	5 bar

* Other sensitivity ranges are possible on customer request

** With sealed potentiometer screw



Made in Germany



Conductivity sensors Series 02 - NAMUR EN 60947-5-6

Housing 1/4" NPT

- Housing material: PEEK
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0

Certificate:



BVS 10 ATEX E 049

Ex II 1G Ex ia IIC T4 Ga

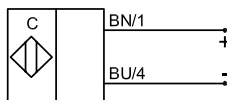
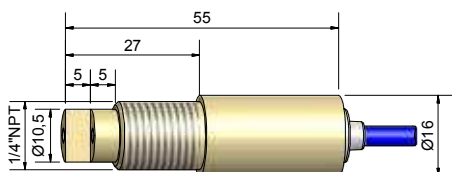
Ex II 1D Ex ia IIIC T130°C Da

Technical data

Electrical version	2-wire DC
Output function	NAMUR EN 60947-5-6
Type	RCS-02-1/4"NPT/55-N-27-VA/PEEK-StEx
Art.-No.	RC 0004
Operating voltage (U _B)	U _I = 15 V DC
Power consumption	I _I = 30 mA
Sensitivity min.	100 µS / cm*
Sensitivity max.	0.1 µS / cm*
Permitted ambient temperature	-20...+90 °C
Degree of protection IEC 60529	IP 67**
Norm	EN 60947-5-2
Connection cable	2 m, PVC, 2 x 0.14 mm ²
Housing material	PEEK (FDA 21 CFR 177.2415)
Material	VA No. 1.4305
Pressure	5 bar

* Other sensitivity ranges are possible on customer request

** With sealed potentiometer screw



Made in Germany



Conductivity sensors Series 02 - NAMUR EN 60947-5-6

Housing 1/4" NPT

- Housing material: PEEK
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0

Certificate:



BVS 10 ATEX E 049

Ex II 1G Ex ia IIC T4 Ga

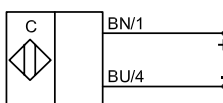
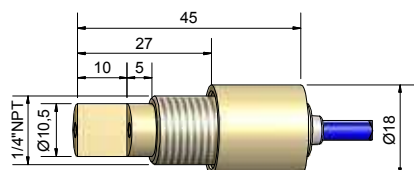
Ex II 1D Ex ia IIC T130°C Da

Technical data

Electrical version	2-wire DC
Output function	NAMUR EN 60947-5-6
Type	RCS-02-1/4"NPT/45-N-27-VA/PEEK-StEx
Art.-No.	RC 0005
Operating voltage (U_B)	$U_i = 15 \text{ V DC}$
Power consumption	$I_i = 30 \text{ mA}$
Sensitivity min.	$200 \mu\text{S} / \text{cm}^*$
Sensitivity max.	$0.2 \mu\text{S} / \text{cm}^*$
Permitted ambient temperature	$-20 \dots +90 \text{ }^\circ\text{C}$
Degree of protection IEC 60529	IP 67**
Norm	EN 60947-5-2
Connection cable	2 m, PVC, $2 \times 0.14 \text{ mm}^2$
Housing material	PEEK (FDA 21 CFR 177.2415)
Material	VA No. 1.4305
Pressure	5 bar

* Other sensitivity ranges are possible on customer request

** With sealed potentiometer screw



Made in Germany



Conductivity sensors Series 02 - NAMUR EN 60947-5-6

Housing M 10 x 1

- Housing material: PEEK
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 0

Certificate:



BVS 10 ATEX E 049

Ex II 1G Ex ia IIC T4 Ga

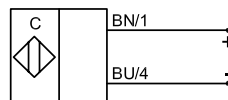
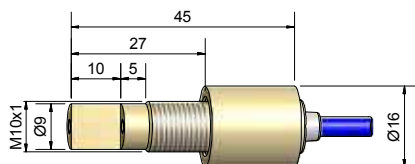
Ex II 1D Ex ia IIIC T130°C Da

Technical data

Electrical version	2-wire DC
Output function	NAMUR EN 60947-5-6
Type	RCS-02-M10/45-N-27-VA/PEEK-StEx
Art.-No.	RC 0006
Operating voltage (U_B)	$U_i = 15\text{ V DC}$
Power consumption	$I_i = 30\text{ mA}$
Sensitivity min.	$200\text{ }\mu\text{S / cm}^*$
Sensitivity max.	$0.2\text{ }\mu\text{S / cm}^*$
Permitted ambient temperature	$-20\ldots+90\text{ }^\circ\text{C}$
Degree of protection IEC 60529	IP 67**
Norm	EN 60947-5-2
Connection cable	2 m, PVC, $2 \times 0.14\text{ mm}^2$
Housing material	PEEK (FDA 21 CFR 177.2415)
Material	VA No. 1.4305
Pressure	5 bar

* Other sensitivity ranges are possible on customer request

** With sealed potentiometer screw



Made in Germany

ISOLATING SWITCHING AMPLIFIER SERIES N-132...



The *Series N-132...* isolating switching amplifiers (Ex Barrier) transmit switching operations from an intrinsically safe control circuit to a non-intrinsically safe active current circuit. The control units are designed according to NAMUR-DIN 19234 or EN 60947-5-6 intrinsically safe and according to IEC 60079 [Ex ia] II C. The conformity is certified in Germany by DEKRA EXAM GmbH.

Power pack, switching amplifier, electronic evaluation unit and output relay are all integrated in the 17.6 mm sized housing. The units are EMC-approved according to IEC 61000-4-2 to 5. Quick mounting is possible on profile according to NS35/15 or NS35/7,5. LED displays are integrated in the front plate for stand-by (green), state of output (yellow) and wire-break / shortcircuit of the sensor cable (red).

The isolating switching amplifiers can be actuated by NAMUR sensors, e.g. our series *IAS-30...and KAS-40...* or by mechanical contacts.

All specifications are subject to change without notice. (2018)

ISOLATING SWITCHING AMPLIFIERS SERIES N-132...

Pages:

ISOLATING SWITCHING AMPLIFIERS SERIES N-132...	6 - 12
TRANSMITTER POWER SUPPLY SERIES N-132...	13 - 14

All specifications are subject to change without notice. (2018)



Isolating Switching Amplifier

N-132/1-01 120...230 V AC

- To connect **one NAMUR-Sensor** or potential-free mechanical contact, which is mounted in the zones 0, 1, 2 (Gas) or 20, 21, 22 (dust)
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via LED display

Certificate:



DMT 09 ATEX E 087X

IECEx BVS 10.0088X



Ex II (1) G [Ex ia] IIC

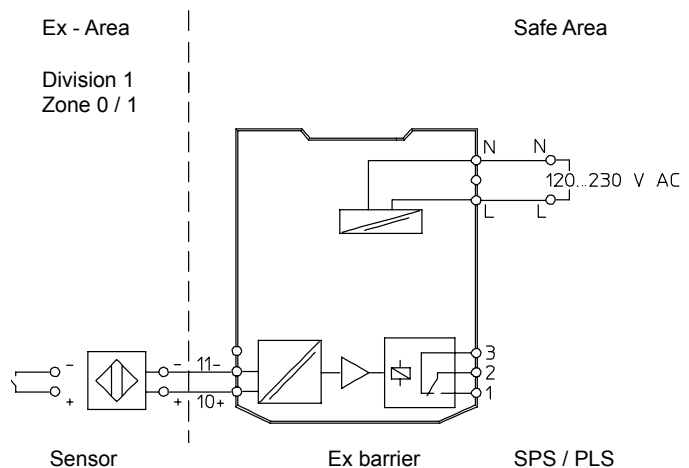
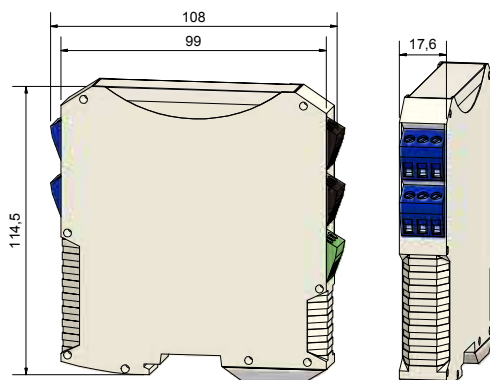
[Ex ia] IIC

Ex II (1) D [Ex ia] IIIC

[Ex ia] IIIC

Technical data

Operating voltage (U_B)	120...230 V AC
Output function	1 x change-over contact potential-free
Contact rating each relay AC max.	250 V AC / 4 A
Contact rating each relay DC max.	250 V DC / 2 A
Type	N-132/1-01
Art.-No.	N 00012
No-load current (I_o)	Typ. 12 mA
No-load voltage max. (U_o)	9.6 V DC
Short-circuit current max. (I_K)	10 mA
Outer inductance max. (L_o)	[Ex ia] IIC 350 mH / IIB 1000 mH
Outer capacitance max. (C_o)	[Ex ia] IIC 3.6 μ F / IIB 26 μ F
Actuating signal	NAMUR EN 60547-5-6
Permitted ambient temperature	-20...+70 °C
Display	Red / yellow and green
Degree of protection IC 60529	Housing: IP 30 Terminals: IP 20
Norm	EN 60947-5-6
Connection	Screw terminals



Made in Germany

All specifications are subject to change without notice. (2018)



Isolating Switching Amplifier

N-132/1-10 24 V DC

- To connect **one NAMUR-Sensor** or potential-free mechanical contact, which is mounted in the zones 0, 1, 2 (Gas) or 20, 21, 22 (dust)
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via relay contact

Certificate:

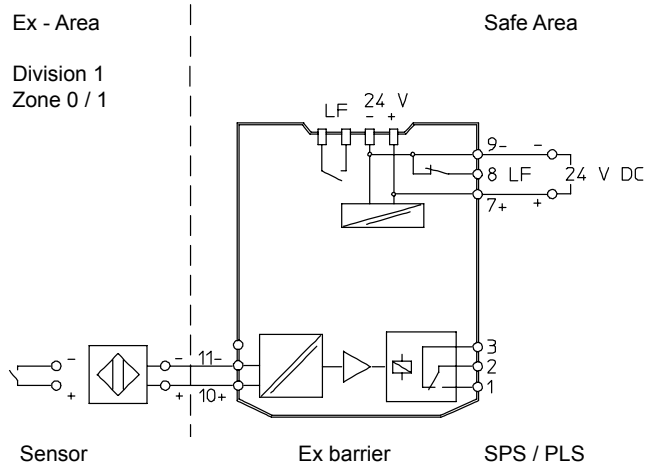
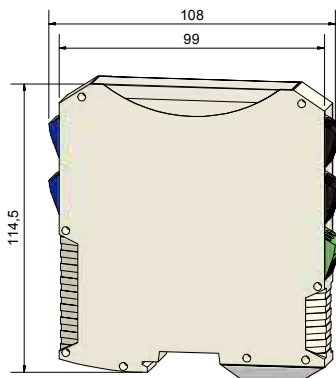


DMT 09 ATEX E 087X	IECEX BVS 10.0088X
Ex II (1) G [Ex ia] IIC	[Ex ia] IIC
Ex II (1) D [Ex ia] IIIC	[Ex ia] IIIC



Technical data

Operating voltage (U_b)	18...31.2 V DC
Output function	1 x change-over contact potential-free
Contact rating each relay AC max.	250 V AC / 4 A
Contact rating each relay DC max.	250 V DC / 2 A
Type	N-132/1-10
Art.-No.	N 00014
No-load current (I_o)	Typ. 33 mA
No-load voltage max. (U_o)	9.6 V DC
Short-circuit current max. (I_K)	10 mA
Outer inductance max. (L_o)	[Ex ia] IIC 350 mH / IIB 1000 mH
Outer capacitance max. (C_o)	[Ex ia] IIC 3.6 μ F / IIB 26 μ F
Actuating signal	NAMUR EN 60547-5-6
Permitted ambient temperature	-20...+70 °C
Display	Red / yellow and green
Degree of protection IC 60529	Housing: IP 30 Terminals: IP 20
Norm	EN 60947-5-6
Connection	Screw terminals



Made in Germany

All specifications are subject to change without notice. (2018)



Isolating Switching Amplifier

N-132/1(2)-01 120...230 V AC

- To connect **one NAMUR-Sensor** or potential-free mechanical contact, which is mounted in the zones 0, 1, 2 (Gas) or 20, 21, 22 (dust)
- With 2 relay outputs.
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via LED display

Certificate:



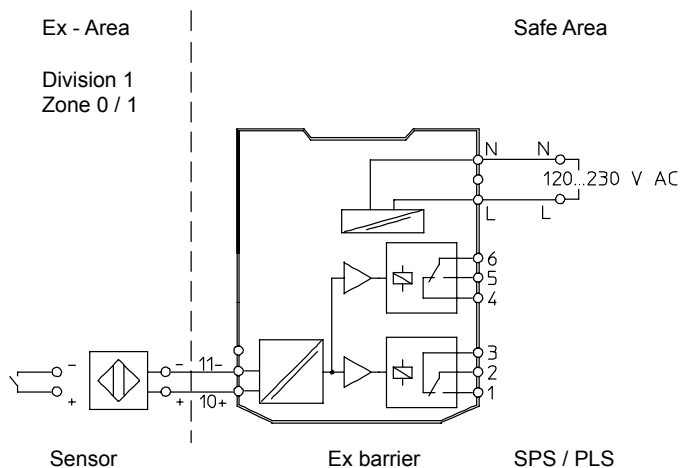
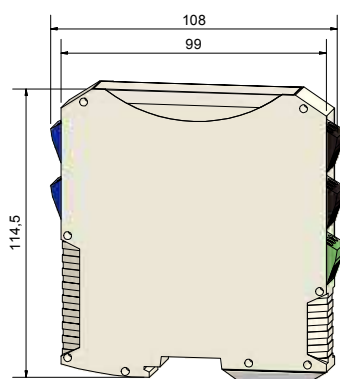
DMT 09 ATEX E 087X	IECEx BVS 10.0088X
Ex II (1) G [Ex ia] IIC	[Ex ia] IIC
Ex II (1) D [Ex ia] IIIC	[Ex ia] IIIC



Technical data

Operating voltage (U_B)	120...230 V AC
Output function	2 x change-over contact potential-free
Contact rating each relay AC max.	250 V AC / 4 A
Contact rating each relay DC max.	250 V DC / 2 A
Type	N-132/1(2)-01
Art.-No.	N 00021
No-load current (I_o)	Typ. 12 mA
No-load voltage max. (U_o)	9.6 V DC
Short-circuit current max. (I_K)	10 mA
Outer inductance max. (L_o)	[Ex ia] IIC 350 mH / IIB 1000 mH
Outer capacitance max. (C_o)	[Ex ia] IIC 3.6 μ F / IIB 26 μ F
Actuating signal	NAMUR EN 60547-5-6
Permitted ambient temperature	-20...+70 °C
Display	Red / yellow and green
Degree of protection IC 60529	Housing: IP 30 Terminals: IP 20
Norm	EN 60947-5-6
Connection	Screw terminals

All specifications are subject to change without notice. (2018)



Made in Germany



Isolating Switching Amplifier

N-132/2-01 120...230 V AC

- To connect **two NAMUR-Sensors** or potential-free mechanical contacts, which are mounted in the zones 0, 1, 2 (Gas) or 20, 21, 22 (dust)
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via LED display

Certificate:

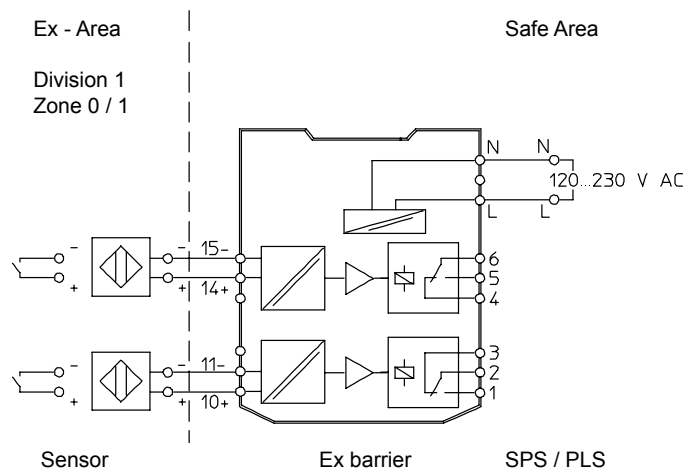
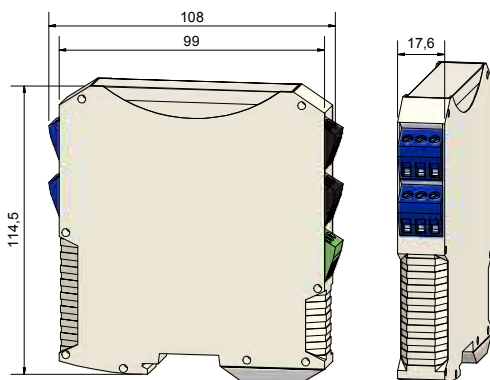


DMT 09 ATEX E 087X	IECEX BVS 10.0088X
Ex II (1) G [Ex ia] IIC	[Ex ia] IIC
Ex II (1) D [Ex ia] IIC	[Ex ia] IIC



Technical data

Operating voltage (U_B)	120...230 V AC
Output function	2 x change-over contact potential-free
Contact rating each relay AC max.	250 V AC / 4 A
Contact rating each relay DC max.	250 V DC / 2 A
Type	N-132/2-01
Art.-No.	N 00015
No-load current (I_o)	Typ. 18 mA
No-load voltage max. (U_o)	9.6 V DC
Short-circuit current max. (I_k)	20 mA
Outer inductance max. (L_o)	[Ex ia] IIC 90 mH / IIB 340 mH
Outer capacitance max. (C_o)	[Ex ia] IIC 3.6 μ F / IIB 26 μ F
Actuating signal	NAMUR EN 60547-5-6
Permitted ambient temperature	-20...+70 °C
Display	Red / yellow and green
Degree of protection IC 60529	Housing: IP 30 Terminals: IP 20
Norm	EN 60947-5-6
Connection	Screw terminals



Made in Germany

All specifications are subject to change without notice. (2018)



Isolating Switching Amplifier

N-132/2-10 24 V DC

- To connect **two NAMUR-Sensors** or potential-free mechanical contacts which are mounted in the zones 0, 1, 2 (Gas) or 20, 21, 22 (dust)
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via relay contact

Certificate:

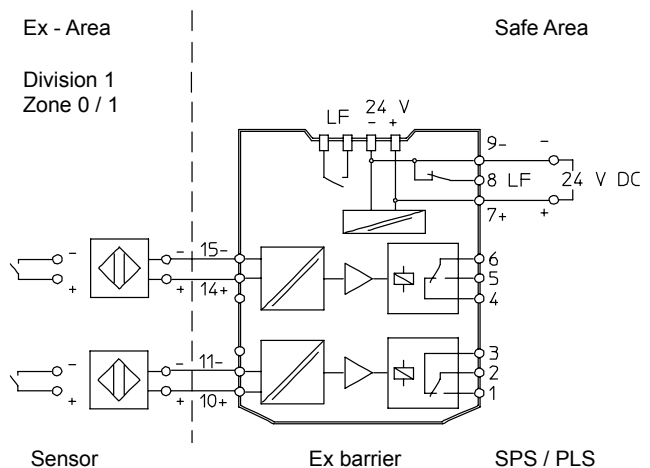
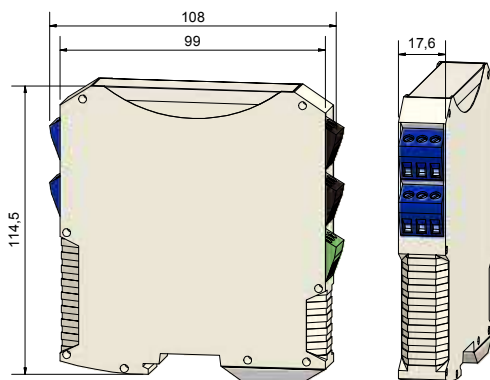


DMT 09 ATEX E 087X	IECEx BVS 10.0088X
Ex II (1) G [Ex ia] IIC	[Ex ia] IIC
Ex II (1) D [Ex ia] IIIC	[Ex ia] IIIC



Technical data

Operating voltage (U_B)	18...31.2 V DC
Output function	2 x change-over contact potential-free
Contact rating each relay AC max.	250 V AC / 4 A
Contact rating each relay DC max.	250 V DC / 2 A
Type	N-132/2-10
Art.-No.	N 00017
No-load current (I_o)	Typ. 55 mA
No-load voltage max. (U_o)	9.6 V DC
Short-circuit current max. (I_K)	20 mA
Outer inductance max. (L_o)	[Ex ia] IIC 90 mH / IIB 340 mH
Outer capacitance max. (C_o)	[Ex ia] IIC 3.6 μ F / IIB 26 μ F
Actuating signal	NAMUR EN 60547-5-6
Permitted ambient temperature	-20...+70 °C
Display	Red / yellow and green
Degree of protection IC 60529	Housing: IP 30 Terminals: IP 20
Norm	EN 60947-5-6
Connection	Screw terminals



Made in Germany

All specifications are subject to change without notice. (2018)



Isolating Switching Amplifier

N-132/1-E-10 24 V DC

- To connect **one NAMUR-Sensor** or potential-free mechanical contact, which is mounted in the zones 0, 1, 2 (Gas) or 20, 21, 22 (dust)
- Amplifier for use in areas with the risk of gas explosion, zone 2
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via relay contact

Certificate:

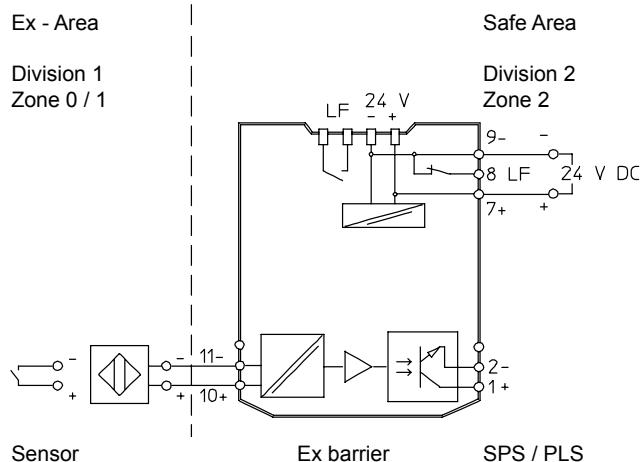
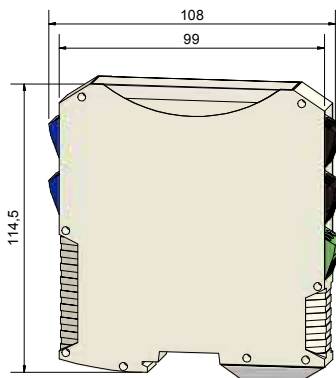


DMT 09 ATEX E 087X	IECEx BVS 10.0088X
Ex II (1) G [Ex ia] IIC	Ex nAc nCc [ia] IIC T4
Ex II (1) D [Ex ia] IIC	[Ex ia] IIC



Technical data

Operating voltage (U_B)	18...31.2 V DC
Output function	1 x transistor output / open collector
Contact rating each DC output max.	35 V DC / 50 mA
Type	N-132/1-E-10
Art.-No.	N 00022
No-load current (I_o)	Typ. 26 mA
No-load voltage max. (U_o)	9.6 V DC
Short-circuit current max. (I_k)	10 mA
Outer inductance max. (L_o)	[Ex ia] IIC 350 mH / IIB 1000 mH
Outer capacitance max. (C_o)	[Ex ia] IIC 3.6 μ F / IIB 26 μ F
Actuating signal	NAMUR EN 60547-5-6
Permitted ambient temperature	-20...+70 °C
Display	Red / yellow and green
Degree of protection IC 60529	Housing: IP 30 Terminals: IP 20
Norm	EN 60947-5-6
Connection	Screw terminals



Made in Germany

All specifications are subject to change without notice. (2018)



Isolating Switching Amplifier

N-132/2-E-10 24 V DC

- To connect **two NAMUR-Sensors** or potential-free mechanical contacts which are mounted in the zones 0, 1, 2 (Gas) or 20, 21, 22 (dust).
- Amplifier for use in areas with the risk of gas explosion, zone 2
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or short-circuit via relay contact

Certificate:



DMT 09 ATEX E 087X

IECEx BVS 10.0088X



Ex II (1) G [Ex ia] IIC

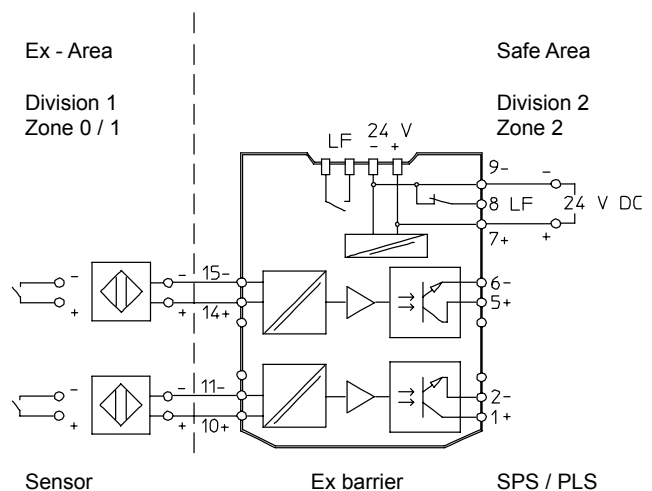
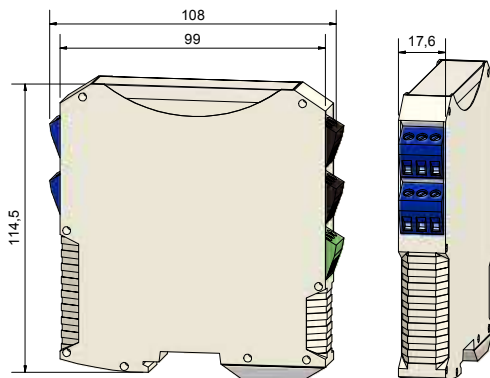
Ex nAc nCc [ia] IIC T4

Ex II (1) D [Ex ia] IIIC

[Ex ia] IIIC

Technical data

Operating voltage (U_B)	18...31.2 V DC
Output function	2 x transistor output / open collector
Contact rating each DC output max.	35 V DC / 50 mA
Type	N-132/2-E-10
Art.-No.	N 00018
No-load current (I_o)	Typ. 36 mA
No-load voltage max. (U_o)	9.6 V DC
Short-circuit current max. (I_k)	20 mA
Outer inductance max. (L_o)	[Ex ia] IIC 90 mH / IIB 340 mH
Outer capacitance max. (C_o)	[Ex ia] IIC 3.6 μ F / IIB 26 μ F
Actuating signal	NAMUR EN 60547-5-6
Permitted ambient temperature	-20...+70 °C
Display	Red / yellow and green
Degree of protection IC 60529	Housing: IP 30 Terminals: IP 20
Norm	EN 60947-5-6
Connection	Screw terminals



Made in Germany

All specifications are subject to change without notice. (2018)



Transmitter Power Supply

N-132/1/4-20-IL - Analogue Output 4...20 mA

- For connection of 1 ATEX certified 2-wire analogue sensor e. g. our KAS-40...IL with 4...20 mA output signal
- Transmitter for use in areas with the risk of gas explosion, zone 2
- Galvanic isolation between input, output and power supply
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via relay contact

Certificate:



DMT 09 ATEX E 129X

IECEx BVS 10.0087X



Ex II 3 (1) G Ex nA nC [ia] IIC T4

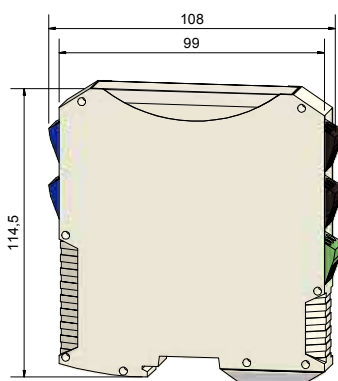
Ex nA nC [ia Ga] IIC T4 Gc

Ex II (1) D [Ex iaD]

[Ex ia Da] IIIC

Technical data

Type		N-132/1/4-20-IL
Art. No.		N 00020
Safety Data (CENELEC)	Max. voltage U_0	27 V
	Max. current I_0	88 mA
	Max. power P_0	576 mW
	Internal capacitance C_i and inductance L_i	Negligible
	Max. connectable capacitance C_0 IIC / IIB	90 nF / 705 nF
	Max. connectable inductance L_0 IIC / IIB	2.3 mH / 14 mH
Power supply	Insulation voltage U_m	253 V
	Nominal voltage U_N	24 V DC
	Voltage range	18...31.2 V DC
	Nominal current (with U_N and I_{Amax})	70 mA
Ex i Input	Power consumption (with U_N and I_{Amax})	1.7 W
	Transmitter supply voltage	16 V
Output	Input signal	0/4...20 mA
	Resistance range (load)	600 Ω
Ambient conditions	Output range	0/4...20 mA
	Ambient temperature	-20...+70 °C
	Storage temperature	-40...+80 °C
Relative humidity (no condensation)		< 95 %
LED-Display		Red / yellow and green
Degree of protection IEC 60529		Housing: IP30 Terminals: IP20
Norm		EN 60947-5-6
Connection		Screw terminals

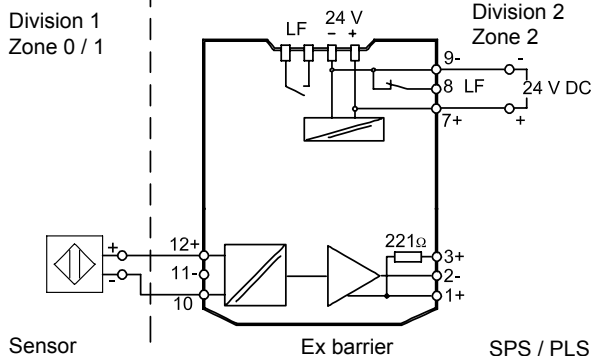


Ex - Area

Division 1
Zone 0 / 1

Safe Area

Division 2
Zone 2



Made in Germany

All specifications are subject to change without notice. (2018)



Transmitter Power Supply

N-132/2/4-20-IL - Analogue Output 4...20 mA

- For connection of 2 ATEX certified 2-wire analogue sensors e. g. our KAS-40...IL with 4...20 mA output signal
- Transmitter for use in areas with the risk of gas explosion, zone 2
- Galvanic isolation between input, output and power supply
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via relay contact

Certificate:



DMT 09 ATEX E 129X

IECEx BVS 10.0087X



Ex II 3 (1) G Ex nA nC [ia] IIC T4

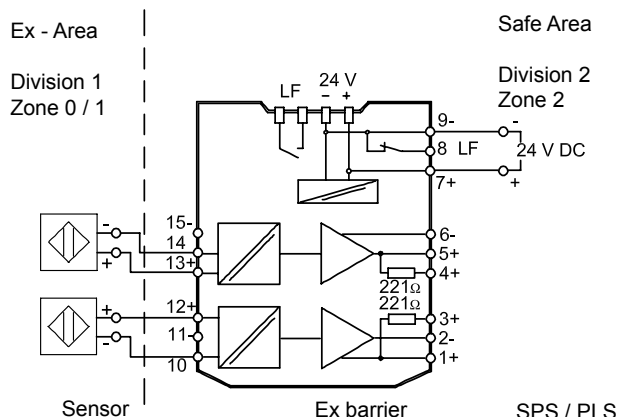
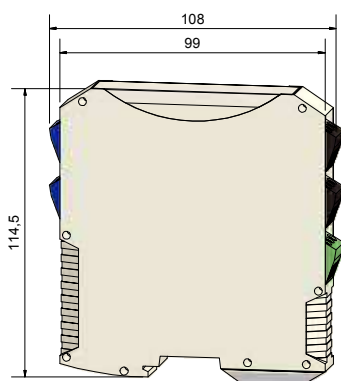
Ex nA nC [ia Ga] IIC T4 Gc

Ex II (1) D [Ex iaD]

[Ex ia Da] IIIC

Technical data

Type	N-132/2/4-20-IL	
Art. No.	N 00023	
Safety Data (CENELEC)	Max. voltage U_0	27 V
	Max. current I_0	88 mA
	Max. power P_0	576 mW
	Internal capacitance C_i and inductance L_i	Negligible
	Max. connectable capacitance C_0 IIC / IIB	90 nF / 705 nF
	Max. connectable inductance L_0 IIC / IIB	2.3 mH / 14 mH
Power supply	Insulation voltage U_m	253 V
	Nominal voltage U_N	24 V DC
	Voltage range	18...31.2 V DC
	Nominal current (with U_N and I_{Amax})	125 mA
Ex i Input	Power consumption (with U_N and I_{Amax})	3 W
	Transmitter supply voltage	16 V
Output	Input signal	0/4...20 mA
	Resistance range (load)	600 Ω
Ambient conditions	Output range	0/4...20 mA
	Ambient temperature	-20...+70 °C
	Storage temperature	-40...+80 °C
LED-Display	Relative humidity (no condensation)	< 95 %
		Red / yellow and green
Degree of protection IEC 60529	Housing: IP30 Terminals: IP20	
Norm	EN 60947-5-6	
Connection	Screw terminals	



SPS / PLS

Made in Germany

All specifications are subject to change without notice. (2018)

CAPACITIVE, BINARY LEVEL MEASUREMENT SYSTEM

PER **LeVeL**®



Pages:

General Description	84
Probes with 1 or 2 switching points (KFS-5-...-STEX)	85 - 86
Probes compact with 1 or 2 switching points (KFX-5-...-STEX)	87 - 89

All specifications are subject to change without notice. (01/2018)

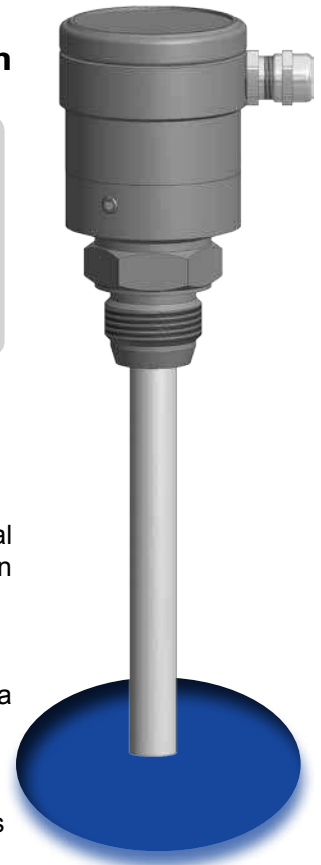
GENERAL DESCRIPTION - ATEX

PERLeVEL®

This capacitive measurement is based on the generation of an electric field between Container and probe. Herewith a "measuring capacitor" is formed. Within this measuring capacitor the filling material works as a dielectric that changes its capacity. These capacity changes are electronically evaluated and are converted into the desired output signals.

Basic configuration of the Limit Value Measuring System

- **System with separate Evaluation Unit**
Probe + Connection cable + Electronic Evaluation Unit
- **Probe with evaluation electronics integrated in the connection head**



System with separate Evaluation Unit:

Probe

The probe is a passive component. With the ATEX certified version the housing material of the probe must be PTFE and stainless steel for the connection head. The connection head provides a 1" process connection.

Electronic Evaluation Unit

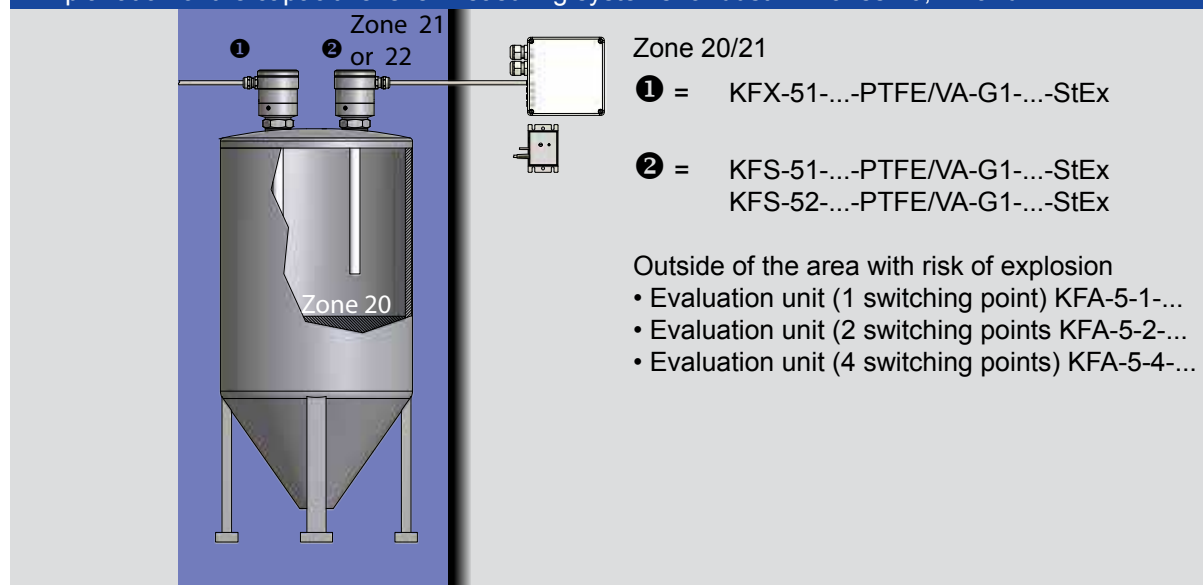
The Electronic Evaluation Unit is separate and must be installed outside of the area with risk of explosion.

Compact version

Probe with evaluation unit integrated in the connection head for 1 or 2 measuring points

Schematic illustration of how to mount the system:

Explanation of the capacitive level measuring systems for dust Ex zones 20, 21 and 22



All specifications are subject to change without notice. (01/2018)



PER LeVeL® Capacitive Filling Level Probe - KFX - ATEX

NPN Output - Antivalent (NO + NC)

PNP Output - Antivalent (NO + NC)

1 Limit value switching point

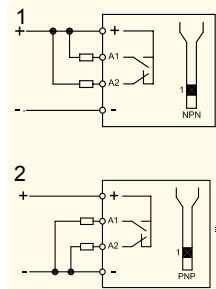
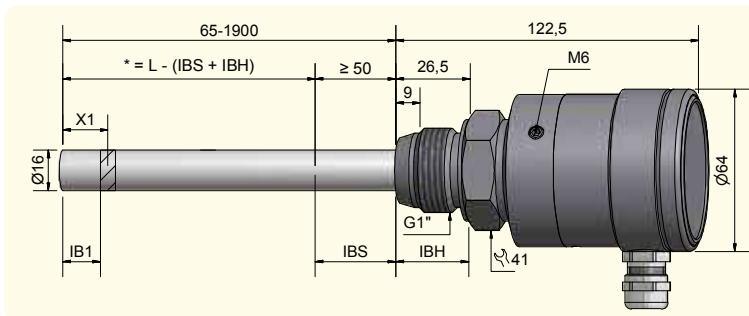
- Integrated evaluation electronics
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Housing material (active zone): PTFE, Ø 16 mm
- Connection head and process connection stainless steel VA
- Process connection G 1"
- Probe length max. 1900 mm

BVS 05 ATEX E 185	IECEX BVS 07.0032
II 2G Ex mb II T4	Ex mb II T4
II 1/2 D IP 67 T 110 °C	Ex tD A20/21 IP 67 T 110 °C



Technical data

Active zone, related to probe tip	10...25 mm
Electrical version	4 connections DC
Output function	Antivalent
Type	KFX-5-1-"L"-15-N-A-PTFE/VA-1"-StEx
Connection diagram No.	1
Type	KFX-5-1-"L"-15-P-A-PTFE/VA-1"-StEx
Connection diagram No.	2
Operating voltage (U _B)	18...30 V DC
Voltage drop max. (U _d)	≤ 2,5 V
Permitted residual ripple max.	25 %
No-load current (I _o)	Typ. 50 mA
Switching frequency max.	4 Hz
Operating current (I _e)	2 x 0...100 mA
Permitted ambient temperature	-20...+55 °C
Permitted ambient temperature (for active zone)	-20...+100 °C
LED-display	Green / yellow
Protective circuit	Build-in
Degree of protection IEC 60529	IP 67
Norm	EN 60947-5-2
Connection cable	10 m, PVC, 4 x 0.5 mm ²
Housing material	VA No. 1.4404
Housing material (active zone)	PTFE (FDA 21 CFR 177.1550)
For matching accessories please see our selection of accessories.	



Please determine the total length "L" when ordering.

Made in Germany

All specifications are subject to change without notice. (01/2018)

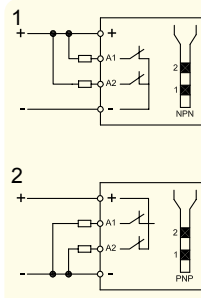
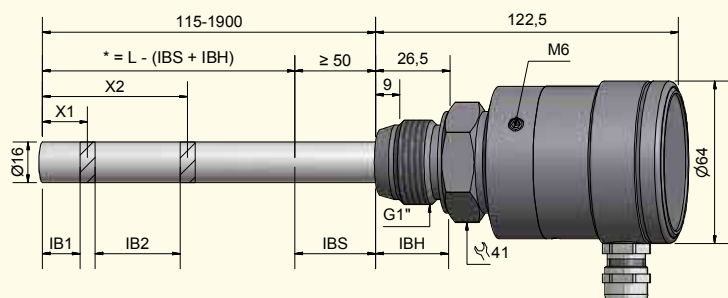
2 Limit value switching points

- Integrated evaluation electronics
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Housing material (active zone): PTFE, Ø 16 mm
- Connection head and process connection stainless steel VA
- Process connection G 1"
- Probe length max. 1900 mm

BVS 05 ATEX E 185	IECEx BVS 07.0032
II 2G Ex mb II T4	Ex mb II T4
II 1/2 D IP 67 T 110°C	Ex tD A20/21 IP 67 T 110°C



For matching accessories please see our selection of accessories.



Please determine the total length „L“ and the position of the second switching point „X2“ when ordering.

Made in Germany



PERLeVEL® Capacitive Filling Level Probe - KFX - ATEX

NPN Output - Normally Open (NO)

PNP Output - Normally Open (NO)

2 Limit value switching points

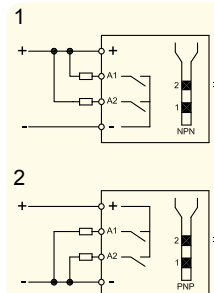
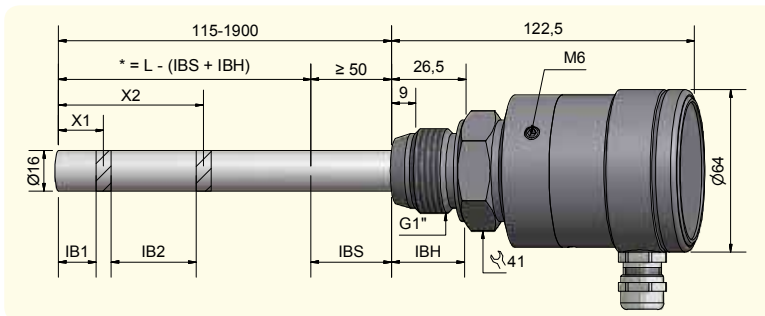
- Integrated evaluation electronics
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Housing material (active zone): PTFE, Ø 16 mm
- Connection head and process connection stainless steel VA
- Process connection G 1"
- Probe length max. 1900 mm

BVS 05 ATEX E 185	IECEX BVS 07.0032
II 2G Ex mb II T4	Ex mb II T4
II 1/2 D IP 67 T 110°C	Ex tD A20/21 IP 67 T 110°C



Technical data

Active zone, related to probe tip	10...25 mm + 1 x type specific X2
Electrical version	4 connections DC
Output function	Normally open
Type	KFX-5-2-"L"-15/X2-N-S-PTFE/VA-1"-StEx
Connection diagram No.	1
Type	KFX-5-2-"L"-15/X2-P-S-PTFE/VA-1"-StEx
Connection diagram No.	2
Operating voltage (U _B)	18...30 V DC
Voltage drop max. (U _d)	≤ 2,5 V
Permitted residual ripple max.	25 %
Operating current (I _a)	2 x 0...100 mA
No-load current (I _o)	Typ. 50 mA
Switching frequency max.	4 Hz
Permitted ambient temperature	-20...+55 °C
Permitted ambient temperature (for active zone)	-20...+100 °C
LED-display	Green / yellow
Protective circuit	Build-in
Degree of protection IEC 60529	IP 67
Norm	EN 60947-5-2
Connection cable	10 m, PVC, 4 x 0.5 mm ²
Housing material	VA No. 1.4404
Housing material (active zone)	PTFE (FDA 21 CFR 177.1550)
For matching accessories please see our selection of accessories.	



Please determine the total length „L“ and the position of the second switching point „X2“ when ordering.

Made in Germany

All specifications are subject to change without notice. (01/2018)

- For connection to the capacitive amplifier KFA-5-...
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Housing material (active zone): PTFE, Ø 16 mm
- Connection head and process connection stainless steel VA
- Process connection G 1"
- Probe length max. 1900 mm

BVS 05 ATEX E 185	IECEx BVS 07.0032
Ex II 2G Ex mb II T4	Ex mb II T4
Ex II 1/2 D IP 67 T 110°C	Ex tD A20/21 IP 67 T 110°C

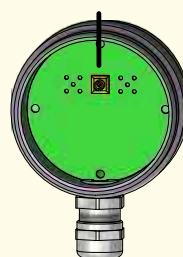
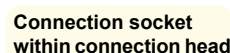


Technical data	
Active zone	10...25 mm, related to the probe tip
Type	KFS-5-1-“L“-15-PTFE/VA-1”-StEx
Permitted ambient temperature	-20...+100 °C
Permitted ambient temperature (active zone)	-20...+100 °C
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection to the evaluation unit KFA-5-...	Sockets within the connection head
Housing material	VA No. 1.4404 / AISI 316 L (FDA conform)
Housing material (active zone)	PTFE (FDA 21 CFR 177.1550)
Accessories:	
For evaluation unit KFA-5-...-Y50:	Plug connection Y75 / Y55, 2 m cable length, # 66101213, is not delivered with the probe
For evaluation unit KFA-5-...-Y70:	Plug connection Y75 / Y75, 2 m cable length, # 66101203, is not delivered with the probe
For matching accessories please see our selection of accessories.	

* The degree of protection may be increased by means of special measures at mounting (e. g. injection of silicone mixture).

Technical drawing of a 1/2" G1" female threaded connection. The drawing shows a side view of the component with the following dimensions and labels:

- Overall length: 65-1900
- Threaded section length: $* = L - (IBS + IBH)$
- Minimum distance from end to thread start: ≥ 50
- Threaded section diameter: $\varnothing 16$
- Thread specification: G1"
- Distance from end to thread start: IB1
- Distance from end to thread start: X1
- Distance from end to thread start: IBS
- Distance from end to thread start: IBH
- Distance from end to thread start: 26,5
- Distance from end to thread start: 9
- Overall diameter: $\varnothing 64$
- Thread specification: M6
- Distance from end to thread start: 41



Please determine the total length „L“ when ordering.

Made in Germany

- For connection to the capacitive amplifier KFA-5-....
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Housing material (active zone): PTFE, Ø 16 mm
- Connection head and process connection stainless steel VA
- Process connection G 1"
- Probe length max. 1900 mm

BVS 05 ATEX E 185	IECEx BVS 07.0032
Ex II 2G Ex mb II T4	Ex mb II T4
Ex II 1/2 D IP 67 T 110°C	Ex tD A20/21 IP 67 T 110°C



Active zone

10...25 mm, related to the probe tip
+ 1 x type specific X2

KFS-5-2-“L”-15/X2-PTFE/VA-1”-StEx

Permitted ambient temperature

-20...+100 °C

Permitted ambient temperature (active zone)

-20...+100 °C

Degree of protection IEC 60529

IP 67*

Norm

EN 60947-5-2

Connection to the evaluation unit KFA-5-...

Sockets within the connection head

Housing material

VA No. 1.4404 / AISI 316 L (FDA conform)

Housing material (active zone)

PTFE (FDA 21 CFR 177.1550)

Accessories:

For evaluation unit KFA-5-...-Y50:

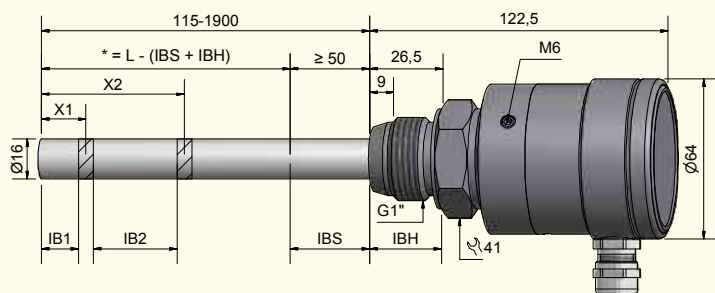
Plug connection Y75 / Y55, 2 m cable length, # 66101242,
is not delivered with the probe

For evaluation unit KFA-5-...-Y70:

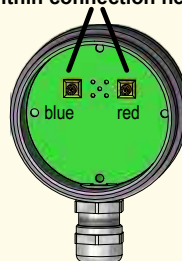
Plug connection Y75 / Y75, 2 m cable length, # 66101204,
is not delivered with the probe

For matching accessories please see our selection of accessories.

* The degree of protection may be increased by means of special measures at mounting (e. g. injection of silicone mixture).



**Connection sockets
within connection head**



Please determine the total length „L“ and the position of the second switching point “X2” when ordering.

Made in Germany

**CAPACITIVE, ANALOGUE
LEVEL MEASUREMENT SYSTEM**

TRUE LεVεL®



Pages

General information - ATEX

36

Probes analogue, with ATEX-certification

37

All specifications are subject to change without notice. (01/2018)

GENERAL DESCRIPTION - ATEX

TRUE **LeVeL**®

This capacitive measurement is based on the generation of an electric field between Container and probe. Herewith a "measuring capacitor" is formed. Within this measuring capacitor the filling material works as a dielectric that changes its capacity. These capacity changes are electronically evaluated and are converted into the desired output signals.

Basic configuration of the Analogue Measuring System:

- Probe + Connection Cable + Electronic Evaluation Unit

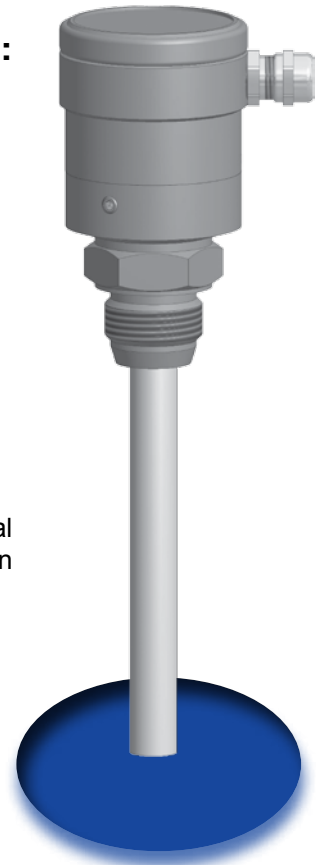
System with separate evaluation unit:

Probe

The probe is a passive component. With the ATEX certified version the housing material of the probe must be PTFE and stainless steel for the connection head. The connection head provides a 1" process connection.

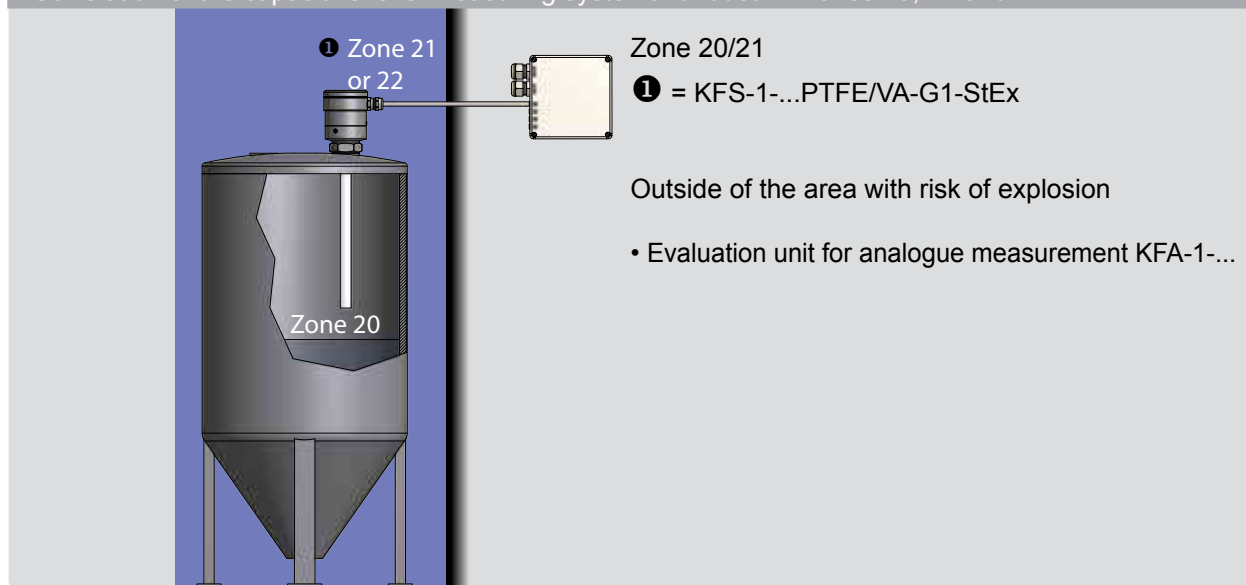
Electronic Evaluation Unit

The Electronic Evaluation Unit is separate and must be installed outside of the area with risk of explosion.



Schematic illustration of how to mount the system:

Correlation of the capacitive level measuring systems for dust Ex zones 20, 21 and 22



All specifications are subject to change without notice. (01/2018)



TRUE LeVeL® Capacitive Filling Level Probe - KFS - ATEX With analogue measuring range

- For connection to the capacitive amplifier KFA-1-...-Y70
- For use in areas with the risk of dust explosion, zone 20
- For use in areas with the risk of gas explosion, zone 1
- Housing material (active zone): PTFE, Ø 16 mm
- Connection head and process connection stainless steel VA
- Process connection G 1"
- Probe length max. 1900 mm
- Automatic compensation of changes of the dielectric constant

BVS 05 ATEX E 185	IECEx BVS 07.0032
Ex II 2G Ex mb II T4	Ex mb II T4
Ex II 1/2 D IP 67 T 110°C	Ex tD A20/21 IP 67 T 110°C



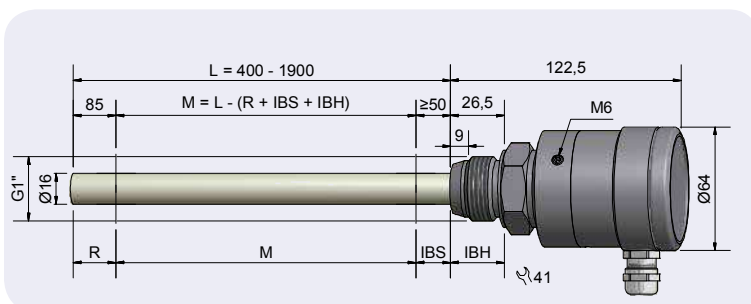
Technical data

Active zone [M]	Type dependent
Type	KFS-1-“L”-“M”-PTFE/VA-1”-StEx
Permitted ambient temperature	-20...+100 °C
Degree of protection IEC 60529	IP 67*
Norm	EN 60947-5-2
Connection to the evaluation unit KFA-1-...-Y70	Sockets within the connection head
Housing material	VA No. 1.4404 / AISI 316L (FDA conform)
Housing material (active Zone)	PTFE (FDA 21 CFR 177.1550)
Pressure	3 bar

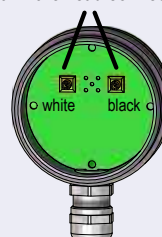
Accessories:

For evaluation unit KFA-1-...-Y70:	Plug connection Y75 / Y75, 2 m cable length, # 66101201, is not delivered with the probe
For evaluation unit KFA-1-...-Y70:	Plug connection Y75 / Y75, 5 m cable length, # 66101202, is not delivered with the probe
For matching accessories please see our selection of accessories.	

* The degree of protection may be increased by means of special measures at mounting (e. g. injection of silicone mixture).



Connection sockets within the head connection



Please determine the total length „L“ and the measuring range „M“ when ordering.

Made in Germany

All specifications are subject to change without notice. (01/2018)



ACCESSORIES

FEMALE CONNECTORS

Sensor	Female connector		Article No.	LED	IP	Connection	Cable-length	Sensor + Length	Version
Type	No.	Fig.		Green/ yellow		[mm ²]	[m]	[mm]	Connector
NAMUR	58a		193386	-	67	2 x 0,34	5	18	Y3, Y5
NAMUR	62		193390	-	67	3 x 0,34	5	18	Y10
pnp/npn	57a		193385	-	67	4 x 0,34	5	18	Y3, Y5 antivalent
pnp/npn	49a		193345	-	68	5 x 0,25	2	20	Y10

All specifications are subject to change without notice. (01/2018)

TYPE SELECTION IN ARTICLE NUMBER ORDER

Art.-No.	Description	Page	Art.-No.	Description	Page
193345	Female connector M 12, 5-pin	142	AF0126	KFA-1-500-FL-Y70	131
193385	Female connector M 12, 4-pin	142	AF0127	KFA-1-1000-FL-Y70	131
193386	Female connector M 12, 2-pin	142	AF0128	KFA-1-2000-FL-Y70	131
193390	Female connector M 12, 3-pin	142	AF0129	KFA-1-200-IL4-Y70	132
300100	IAS-30-A12-N	19	AF0130	KFA-1-500-IL4-Y70	132
300200	IAS-30-A22-N	21	AF0131	KFA-1-1000-IL4-Y70	132
300300	IAS-30-A13-N	23	AF0132	KFA-1-2000-IL4-Y70	132
300400	IAS-30-A23-N	25	AF0133	KFA-1-200-UL-Y70	133
300500	IAS-30-A14-N	27	AF0134	KFA-1-500-UL-Y70	133
300600	IAS-30-A24-N	29	AF0135	KFA-1-1000-UL-Y70	133
300700	IAS-30-03-N	14	AF0136	KFA-1-2000-UL-Y70	133
300800	IAS-30-M5-N	15	IA0090	IAS-30-A22-N-StEx	35
300900	IAS-30-6.5-N	16	IA0091	IAS-30-A12-N-StEx	34
301000	IAS-30-M8-N	17	IA0092	IAS-30-A13-N-StEx	36
301500	IAS-30-14-N	18	IA0094	IAS-30-A23-N-StEx	37
302800	IAS-30-35-N-M32	31	IA0095	IAS-30-A14-N-StEx	38
400100	KAS-40-A11-N	44	IA0096	IAS-30-A24-N-StEx	39
400200	KAS-40-A12-N	49	IA0098	IAS-30-35-N-M32-StEx	40
400250	KAS-40-A22-N	51	IA0109	IAS-10-A14-S-StEx	10
400300	KAS-40-A13-N	55	IA0110	IAS-10-A13-S-StEx	9
400350	KAS-40-A23-N	57	IA0111	IAS-10-A12-S-StEx	8
400400	KAS-40-A14-N	63	IA0136	IAS-20-A13-S-StEx	9
400450	KAS-40-A24-N	65	IA0137	IAS-20-A14-S-StEx	10
400600	KAS-40-14-N	48	IA0138	IAS-20-A12-S-StEx	8
400705	KAS-40-14-N-M12	53	IA0186	IAS-30-A14-N-Y5	28
400900	KAS-40-14-N-M12-PTFE	54	IA0187	IAS-30-A24-N-Y5	30
401000	KAS-40-20-N	59	IA0188	IAS-30-A13-N-Y5	24
401500	KAS-40-24-N-M22-PTFE	60	IA0189	IAS-30-A23-N-Y5	26
401600	KAS-40-30-N	61	IA0190	IAS-30-A12-N-Y5	20
401700	KAS-40-30-N-M32	68	IA0191	IAS-30_A22-N-Y5	22
402000	KAS-40-35-N	62	IA0231	IAS-10-A14-A-Y5-StEx	11
402100	KAS-40-35-N-M32	70	KA0084	KAS-80-A24-A-StEx-N	82
402300	KAS-40-35-N-M32-PTFE	71	KA0085	KAS-70-A24-A-StEx-N	82
402400	KAS-40-34-N-M32-PTFE-V2A	69	KA0086	KAS-80-35-A-M32-StEx-N	84
403600	KAS-40-A24-IL	67	KA0087	KAS-80-35-S-M32-StEx-N	84
406110	KAS-40-22/10-N-PTFE	46	KA0089	KAS-70-35-A-M32-StEx-N	84
406120	KAS-40-22/10-N	45	KA0090	KAS-70-35-S-M32-StEx-N	84
AF0062	KFA-5-2-L-P-Ö-Y50	137	KA0092	KAS-80-34-A-G1"-StEx-N	89
AF0064	KFA-5-1-L-P-A-Y50	136	KA0093	KAS-80-35-A-K-M32-PTFE-StEx-N	87
AF0065	KFA-5-2-L-P-S-Y50	137	KA0094	KAS-40-34-N-M32-StEx-N	78
AF0066	KFA-5-2-L-N-S-Y50	137	KA0095	KAS-40-A24-N-StEx-N	76
AF0067	KFA-5-2-L-N-Ö-Y50	137	KA0264	KAS-80-26-A-PTFE-1"-StEx-N	93
AF0068	KFA-5-1-L-N-A-Y50	136	KA0356	KAS-80-34-A-M32-StEx-N	85
AF0125	KFA-1-200-FL-Y70	131	KA0377	KAS-80-34-35/100-PTFE/VA-StEx-N	91

All specifications are subject to change without notice. (01/2018)

TYPE SELECTION IN ARTICLE NUMBER ORDER

Art.-No.	Description	Page	Art.-No.	Description	Page
KA0527	KAS-80-A23-A-Y5-3G-3D	97	RC0005	RCS-02-1/4"NPT/45-N-27-VA/PEEK-StEx	113
KA0557	KAS-40-A14-N-Y5	64	RC0006	RCS-02-M10/45-N-27-VA/PEEK-StEX	114
KA0558	KAS-40-A24-N-Y5	66		KFS-1-"L"-M"-PTFE/VA-G1"-StEx	130
KA0559	KAS-40-A13-N-Y5	56		KFS-5-1-"L"-15-PTFE/VA-G1"-StEx	134
KA0560	KAS-40-A23-N-Y5	58		KFS-5-2-"L"-15/X2-PTFE/VA-G1"-StEx	135
KA0561	KAS-40-A12-N-Y5	50		KFX-5-1-"L"-15-N-A-PTFE/VA-G1"-StEx	138
KA0562	KAS-40-A22-N-Y5	52		KFX-5-1-"L"-15-P-A-PTFE/VA-G1"-StEx	138
KA0610	KAS-80-35-A-M32-Y5-3G-3D	99		KFX-5-2-"L"-15/X2-N-Ö-PTFE/VA-G1"-StEx	139
KA0655	KAS-80-26-A-PTFE-1"-Y5-StEx-N	94		KFX-5-2-"L"-15/X2-N-S-PTFE/VA-G1"-StEx	140
KA0740	KAS-40-26-N-PTFE-1"	72		KFX-5-2-"L"-15/X2-P-Ö-PTFE/VA-G1"-StEx	139
KA0799	KAS-80-A13-A-K-PTFE-Y3-3G-3D	96		KFX-5-2-"L"-15/X2-P-S-PTFE/VA-G1"-StEx	140
KA0819	KAS-80-34-A-M32-Y5-StEx-N	86			
KA0824	KAS-70-26-A-PTFE-1"-StEx-N	93			
KA0849	KAS-80-34-A-M32-PTFE/V2A-Y5-3G-3D	98			
KA0863	KAS-70-A24-A-Y5-StEx-N	83			
KA0864	KAS-80-A24-A-Y5-StEx-N	83			
KA0867	KAS-80-35-A-K-M32-PTFE-Y5-StEx-N	88			
KA0868	KAS-80-34-A-G1"-Y5-StEx-N	90			
KA0869	KAS-80-34-35/100-PTFE/VA-Y5-StEx-N	92			
KA0870	KAS-40-A24-N-Y5-StEx-N	77			
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KA0933	KAS-40-26-N-PTFE-1"-StEx	80			
KA1005	KAS-95-32-1CO-PTFE/MS-3D	106			
KA1006	KAS-95-32-1CO-PTFE/MS-TD-3D	107			
KA1007	KAS-95-32-1CO-M32-PTFE/MS-3D	104			
KA1008	KAS-95-A24-1CO-PTFE/MS-TD-3D	103			
KA1009	KAS-95-32-1CO-M32-PTFE/MS-TD-3D	105			
KA1010	KAS-95-A24-1CO-PTFE/MS-3D	102			
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IA0137	IAS-20-A14-S-StEx	10	402100	KAS-40-35-N-M32	70
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302800	IAS-30-35-N-M32	31	KA0561	KAS-40-A12-N-Y5	50
IA0098	IAS-30-35-N-M32-StEx	40	400300	KAS-40-A13-N	55
300900	IAS-30-6.5-N	16	KA0559	KAS-40-A13-N-Y5	56
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IA0092	IAS-30-A13-N-StEx	36	400350	KAS-40-A23-N	57
IA0188	IAS-30-A13-N-Y5	24	KA0560	KAS-40-A23-N-Y5	58
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KA0527	KAS-80-A23-A-Y5-3G-3D	97	N00014	N-132/1-10	119
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