

► Read and follow these safety instructions first



1. Safety instructions

- 1.1 Installation, mounting (fix into hoses), putting into operation, maintenance, removal and repair may be carried out by qualified experienced specialists with knowledge in pressurized piping construction only.
- 1.2 The statutory and other applicable regulations and standards have to be noticed and kept.
- 1.3 The pressure of maximum 10 bar, temperature of maximum +120 °C, the instructions of the
 - > EC-Declaration of conformity EGKE-DG-K100
 and – if a limit switch is mounted – the instructions of the
 - > Appliance information KE-GI-... resp. the technical datas of the KE-TD-..
 have to be noticed and kept.
- 1.4 Putting into operation and pressure admission only
 - after correct building-in of the hose coupling into the delivery hose
 - after correct mounting of the coupling with thread at the tube (threaded connection) and if need by fixation with the locating screw
 - with closed coupling connection

► !!! Before pressurize the tubing make sure that the couplings are correct inserted resp. connected and

with Storz-couplings

- is pulled to the limit stop

with couplings according to DIN 28 450

- the clamping ring is tightened firmly and the safety lever is folded down

with KAMLOK – couplings

- both levers are turned down to the coupling

1.5 **Disconnect resp. open the coupling connection only when pressure-free.**



ATTENTION ! Danger of injuries

- If loosened and opened in pressurized condition the blank coupling, blank cap resp. closing cover or closing plug will accelerate like a bullet and may cause serious injuries and damages.
- If loosened in pressurized condition the hose will lay about one and may cause serious injuries.

► !!! Before loosen resp. open the coupling connection make sure that the tubing is pressure-free.

Depending on over pressure and hose diameter place suitable warning information.

e.g. **“Loosen only in pressure-free condition”**

1.6 If one of the coupling elements is damaged the pressurizing has to be shut off immediately and the tubing resp. hose line is to relieve from any pressure.

1.7 Elements of the coupling should be removed or demounted only in pressure-free condition.

► !!! For couplings with build-in limit switch take also notice of the safety instructions on the back.

► Read and follow these special conditions and safety instructions



2. General safety instructions

- 2.1 The installation, maintenance, initial operation, removal and repair have to be controlled resp. checked by an “authorized person” for explosion protection.
- 2.2 Comply with the requirements of DIN EN 60079-14, DIN EN 60079-17 and DIN EN 1127-1, especially regarding the dust deposits and temperatures and follow the pertinent rules and regulations.



3. Safety Instructions **Gas+Dust** and **hybrid mixtures** for the application of couplings in explosive hazardous areas.

- 3.1 The couplings are allowed to be mounted on tubing
 - when the internal is classified as zone 0 or zone 20 resp. zone 0+20 (hybrid mixtures) or lower
 - when the external area is classified as zone 1 or zone 21 resp. zone 1+21 (hybrid mixtures) or lower
- !!! By attached electrical devices – e.g. limit switches or RFID – systems to recognize the connection – the couplings has to be mounted in the external area just in that zone the electrical devices are classified for.
- 3.2 The coupling has to be constantly conductible connected to the electrically conductive, earthed tubing.
 - If the tubing is not electrically conductive the coupling has to be earthed.
- 3.3 If combustible gases and vapours or combustible dusts with a minimum ignition energy under 3 mJ or a minimum ignition temperature under +300 °C (BAM assessment) were carried inside the coupling resp. by an appliance within zone 0 and/or zone 20 only the stainless steel variants of the product touching parts are permissible.



4. Safety Instructions for the application of limit switches in explosive hazardous areas.

- 4.1 Comply with the electrical connection take notice of the local and statutory rules and regulations and/or the VDE 0100.
- 4.2 Before electrical connection, compare the supply voltage with the details at the data plate.

for the version KE and KI Option B0 **Dust**

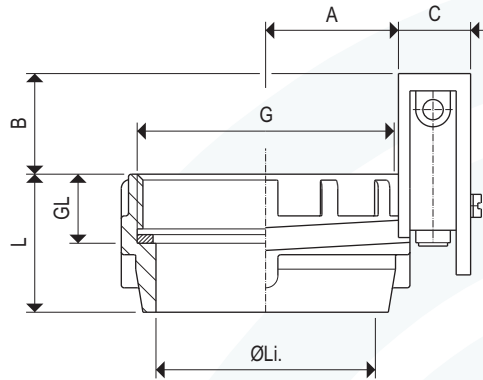
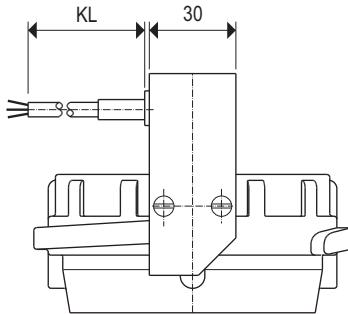
- 4.3 The limit switches can be used in areas classified as zone 22.
- 4.4 A fuse (with max. 4 A) has to be connected in series to the supply voltage.
- 4.5 Protect the signal contacts of the limit switch KE against voltage peaks when inductive loads are connected.

for the version KN **Gas+Dust**

- 4.6 The limit switches can be used in areas classified as zone 1 and zone 20 or lower.
- 4.7 To keep the intrinsically reliability a certified barrier or a certified isolation amplifier with an intrinsically safe circuit according to the present category has to be connected in series for power limitation.



Dimensions



007-0208

Order code

| Type | NG | G | W | KL | Li. | L | GL | A | B | C |
|-------------|-----|----|---|----|-----|------|------|----|----|---|
| KN - VK 080 | IG3 | AL | 2 | 76 | 47 | 24.5 | 45.7 | 35 | 25 | |
| KN - VK 100 | IG4 | AL | 2 | 95 | 47 | 24.5 | 58.5 | 35 | 30 | |

NG = Nominal size
G = Thread
W = Material
KL = Cable length
Li. = Inner diameter

According to **Directive 97/23/EC for pressure equipment:**
Usable for **hazardous gases and liquids of group 1** up to **10 bar** and up to **DN 100**

For example in pneumatic conveyor systems with combustible dusts etc.

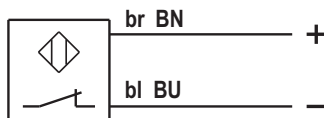
Result of the evaluation of ignition danger acc. to **DIN EN 13463-1:**

The couplings (without switches) have no potential source of ignition on their own.

Seal ring depending on type and acc. to data sheet KE-GI-13.

Wiring connection

Cable 2 x 0.34 mm²
Cable length (KL) 2 = 2 m
5 = 5 m
0 = 10 m



Pepperl+Fuchs NJ4

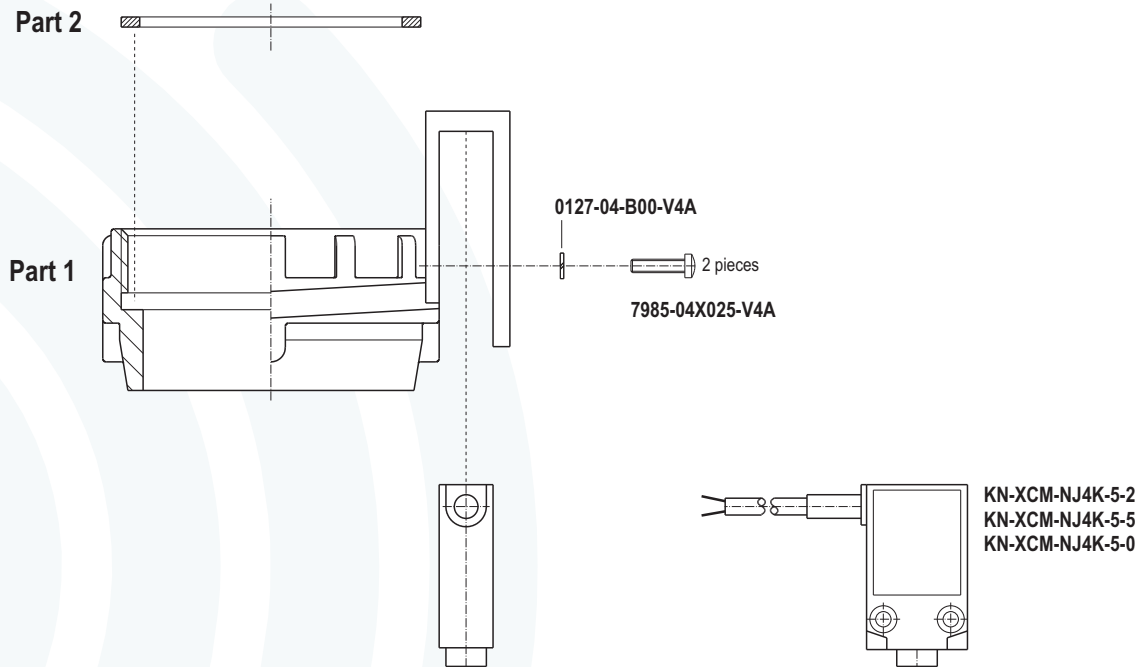
007-AP03

Technical data

| | |
|---------------------|---|
| Materials | (W) AL = Aluminium MS = Brass VA = 1.4408 / 316 |
| Switch | PBTP (Polybutylenterephthalat) |
| Mounting position | any |
| Ambient temperature | -25 °C ... +60 °C |
| Nominal voltage | 8 V DC (Ri approx. 1 kΩ) |
| Power consumption | activated: ≤ 1 mA not activated: ≥ 3 mA |
| Type of protection | IP68 acc. to DIN EN 60529 |
| Maintenance | none |

ATEX-Option **Gas** and **Dust**  II 1D Ex iaD 20 T... °C
and II 2G EEx ia IIC T6

Components



007-0210

Order code Part 1

| | NG | G | W | |
|-------------|-----|----|---|--|
| K - FVK 080 | IG3 | AL | E | |
| K - FVK 080 | IG3 | MS | E | |
| K - FVK 080 | IG3 | VA | E | |
| K - FVK 100 | IG4 | MS | E | |
| K - FVK 100 | IG4 | VA | E | |

incl. Seal ring

| Materials | (W) | |
|-----------|-----|--------------|
| AL | = | Aluminium |
| MS | = | Bress |
| VA | = | 1.4408 / 316 |

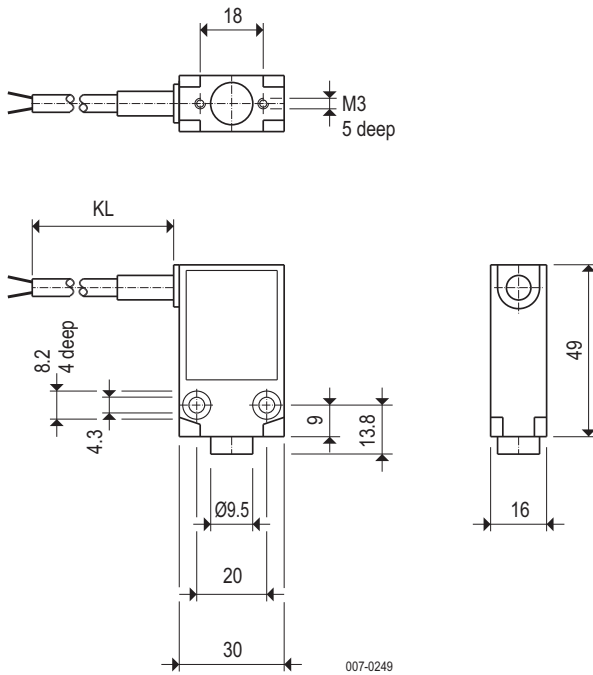
Order code Part 2

| Seal ring | |
|-----------|----------------|
| VD080/077 | Vulkolan, blue |
| VD080/077 | Vulkolan, blue |
| TD080/077 | PTFE, white |
| VD114/100 | Vulkolan, blue |
| TD114/100 | PTFE, white |

NG = Nominal size
G = Thread
W = Material

Dimensions

KN-XCM-NJ4K-5- .

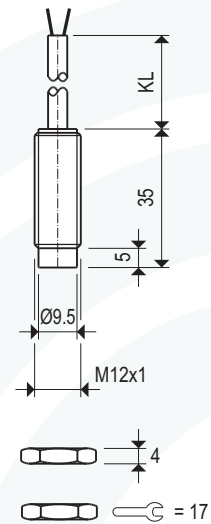


Order code

| | |
|------------------------|----------------|
| KN-XCM-NJ4K-5-2 | for 2 m cable |
| KN-XCM-NJ4K-5-5 | für 5 m cable |
| KN-XCM-NJ4K-5-0 | für 10 m cable |

KN-NJ4K-M12- .

Brand Pepperl+Fuchs
Type NJ4-12GK-N
or NJ4-12GM-N



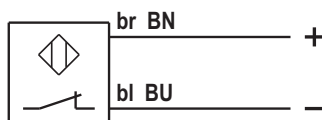
Order code

| | |
|----------------------|----------------|
| KN-NJ4K-M12-2 | for 2 m cable |
| KN-NJ4K-M12-5 | for 5 m cable |
| KN-NJ4K-M12-0 | for 10 m cable |

further technical data you can get under
www.pepperl-fuchs.de

Wiring connection

| | |
|--------------------------|--------------------------------|
| Cable | 2 x 0.34 mm ² |
| Cable length (KL) | 2 = 2 m 5 = 5 m 0 = 10 m |



Pepperl+Fuchs NJ4

007-AP03

Technical data

| | |
|----------------------------|--|
| Materials | Switch PBTP (Polybutylenterephthalat) Housing Zn-Al alloy |
| Varnish coating | red |
| Mounting position | any |
| Ambient temperature | -25 °C ... +60 °C |
| Nominal voltage | 8 V DC (Ri approx. 1 kΩ) |
| Power consumption | activated: ≤ 1 mA not activated: ≥ 3 mA |
| Type of protection | IP68 acc. DIN EN 60529 |
| Maintenance | none |

ATEX-Option **Gas** and **Dust** and **Ex** II 1D Ex iaD 20 T... °C and II 2G EEx ia IIC T6



EG-Konformitätserklärung EC-Declaration of Conformity

Wir/We

MOLLET Füllstandtechnik GmbH

Industriepark RIO 103
D-74706 Osterburken
Tel. 06291 64400 Fax 06291 9846

erklären hiermit, dass die Geräte:

declare that the devices:

Schlauch- und Rohr-Kupplungen der Typenreihen:

Hose and pipe couplings of type:

**K...SZ... , K...VK... , K...AVK... , K...AMK... ,
K-FSZ... , K-SSZ... , K-BSZ... , K-LSZ... ,
K-MK... , K-MB... , K-AVK... , K-AMK...**
aus Aluminum, Edelstahl oder Messing

**K...SZ... , K...VK... , K...AVK... , K...AMK... ,
K-FSZ... , K-SSZ... , K-BSZ... , K-LSZ... ,
K-MK... , K-MB... , K-AVK... , K-AMK...**
made of aluminum, stainless steel or brass

DN 32 bis DN 100

DN 32 to DN 100

auf die sich diese Erklärung bezieht, den folgenden Normen
oder normativen Dokumenten entsprechen:

to which this declaration relates is in accordance with
the following standards or other normative documents:

Richtlinie 97/23/EG (Druckgeräte-Richtlinie)

Directive 97/23/EC (Directive Pressure Equipment)

Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt gemäß den Bestimmungen der Richtlinie.

The Essential Health and Safety Requirements are assured by compliance with the directive.

Einstufung:
Druckhaltendes Ausrüstungsteil der Kategorie I

Categorization:
Pressure accessories of category I

Fluidgruppe (Art. 9):
1

Fluid group (Art. 9):
1

Mediumzustand:
gasförmig, flüssig und staubhaltig, wenn pD >0,5 bar

Condition of fluid:
gaseous, liquid and dusty, if pD >0,5 bar

Angewandetes Konformitätsverfahren:
Modul A

Applied conformity assessment procedures:
Modul A

Diese Konformitätserklärung ist nur gültig in Verbindung mit den aktuellen Sicherheitshinweisen KE-SH- ..

The declaration of conformity is only valid in connection with our current safety instructions KE-SH- ..

Osterburken, 07. Januar 2010

Osterburken, January 7th 2010



Wolfgang Hageleit

Diese Erklärung darf nur unverändert
weiterverbreitet werden.

This declaration is only allowed to
hand out in unchanged form.

Hersteller-Bescheinigung Manufacturer`s Certificate

Wir/We

MOLLET Füllstandtechnik GmbH

Industriepark RIO 103
D-74706 Osterburken
Tel. 06291 64400 Fax 06291 9846

bescheinigen hiermit, dass die Geräte:

declare that the devices:

Schlauch- und Rohr-Kupplungen der Typenreihen:

Hose and pipe couplings of type:

**K...SZ... , K...VK... , K...AVK... , K...AMK... ,
K-FSZ... , K-SSZ... , K-BSZ... , K-LSZ... ,
K-MK... , K-MB... , K-AVK... , K-AMK...**

aus Aluminum, Edelstahl oder Messing

**K...SZ... , K...VK... , K...AVK... , K...AMK... ,
K-FSZ... , K-SSZ... , K-BSZ... , K-LSZ... ,
K-MK... , K-MB... , K-AVK... , K-AMK...**

made of aluminum, stainless steel or brass

DN 101 bis DN 150

DN 101 to DN 150

auf die sich diese Bescheinigung bezieht, den folgenden
Normen oder normativen Dokumenten entsprechen:

to which this certificat relates is in accordance with
the following standards or other normative documents:

Richtlinie 97/23/EG (Druckgeräte-Richtlinie)

Directive 97/23/EC (Directive Pressure Equipment)

Die grundlegenden Sicherheits- und Gesundheitsan-
forderungen werden erfüllt gemäß den Bestimmungen
der Richtlinie.

The Essential Health and Safety Requirements are assured
by compliance with the directive.

Einstufung:

Druckhaltendes Ausrüstungsteil nach Art. 3 Abs. 3

Categorization:

Pressure accessories of acc. Art.3 (3)

Fluidgruppe (Art. 9):

2

Fluid group (Art. 9):

2

Mediumzustand:

gasförmig oder flüssig, wenn pD >0,5 bar

Condition of fluid:

gaseous or liquid, if pD >0,5 bar

Angewendetes Konformitätsverfahren:

keines, es gilt die gute Ingenieurspraxis

Applied conformity assesment procedures:

none, accordance with the sound engineering practice

Diese Hersteller-Bescheinigung ist nur gültig in Verbindung
mit der aktuellen Sicherheitshinweisen KE-SH- ..

The manufacturer`s certificate is only valid in connection
with our current safety instructions KE-SH- ..

Osterburken, 07. Januar 2010

Osterburken, January 7th 2010



Wolfgang Hageleit