

► 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 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**

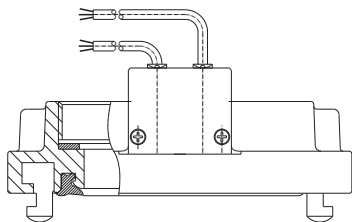
- 4.3 The limit switches can be used in areas classified as zone 22.
- 4.4 A fuse (with max. 4 A) has to be connected in series to the supply voltage.
- 4.5 Protect the signal contacts of the limit switch KE against voltage peaks when inductive loads are connected.

### for the version KN **Gas+Dust**

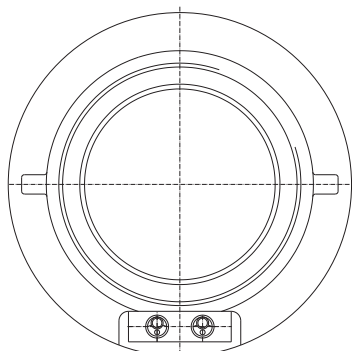
- 4.6 The limit switches can be used in areas classified as zone 1 and zone 20 or lower.
- 4.7 To keep the intrinsically reliability a certified barrier or a certified isolation amplifier with an intrinsically safe circuit according to the present category has to be connected in series for power limitation.



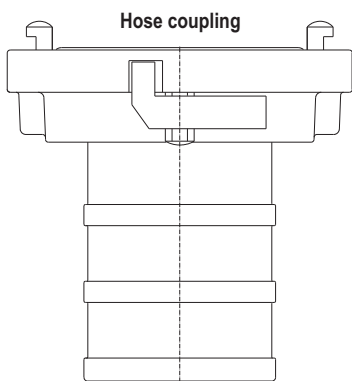
**Illustrations**



Fixed coupling

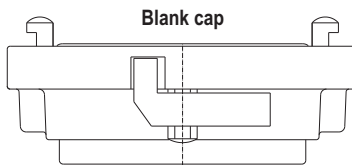


Switch 2      Switch 1



Hose coupling

Counter coupling



Blank cap

007-0242

**Versions**

Available for the coupling size 110-A  
Counter coupling (e.g. Hose coupling always with locking pawl)

The coding can be carried out resp. is available with the two limit switch varieties KI and KN.

Dimensions, technical data, ATEX options see under:

- KI inductive double limit switch      **KE-TD-06**
- KN inductive limit switch NAMUR      **on demand**

**Type selection**

**Fixed coupling** with integrated double limit switch

Type	Order code		
	NG	G	W KL
KI D SZ 110	IG3	AL	2
KI D SZ 110	IG4	AL	2
KI D SZ 110	IG4½	AL	2

NG = Nominal size  
G = Thread  
W = Material  
KL = Cable length  
2=2 m 5=5 m 0=10 m

I = inductive limit switch  
N = inductive limit switch NAMUR

**Materials** (W)      AL = Aluminium  
                                 AV = Aluminium/1.4571 / 316 Ti  
                                 VA = 1.4571 / 316 Ti  
                                 MS = Brass

**Switching system**

The coupling with inside thread has two built-in inductive limit switches as double switches beneath.

The counter coupling is coded in that way that either switch 1, switch 2 or switch 1 and 2 will be actuated.

So, in this way can be identified which counter coupling has been coupled at the moment.

**Counter coupling**

actuates switch number

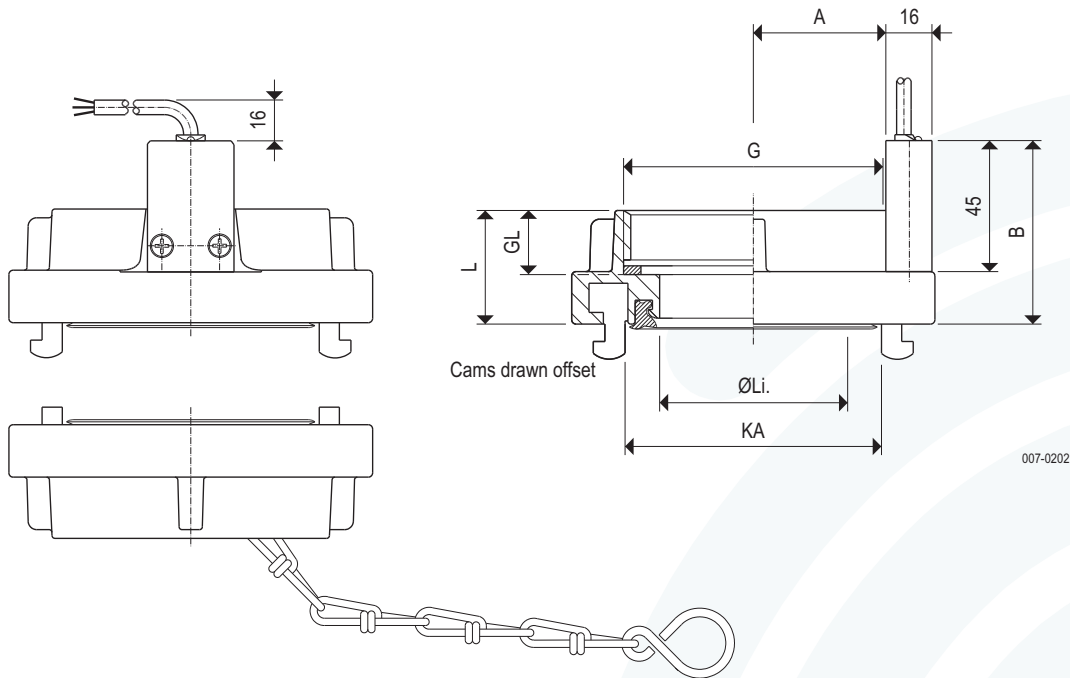
Order code	actuates switch number	
	1	2
K- . SZ110 - XXX - SP - CD - AL - 06	●	
K- . SZ110 - XXX - SP - CD - AL - 09		●
K- . SZ110 - XXX - SP - CD - AL - 15	●	●

fill out Ø of hose nozzle e.g. 080 for Ø 80 mm  
or enter thread size e.g. IG4

S = Hose coupling  
L = Blanc cap

Coding 1/3 with a double limit switch

## Dimensions



Order code										
Type	NG	G	W	KL	KA	Li.	L	GL	A	B
KI - SZ 052	IG2	AL	2	66	44.5	40	20	32	62	
KI - SZ 065	IG2	AL	2	81	45	37	20	42	62	
KI - SZ 065	IG2½	AL	2	81	58	52	20	42	62	
KI - SZ 075	IG2	AL	2	89	50	38	20	42	63	
KI - SZ 075	IG2½	AL	2	89	64.5	42	20	42	63	
KI - SZ 075	IG3	AL	2	89	64.5	39	22	45	63	
KI - SZ 090	IG3	AL	2	105	78	40	22	50	64	
KI - SZ 100	IG4	AL	2	115	89.5	47	25	50	67	
KI - SZ 110	IG4	AL	2	133	100	48	25	68	67	
KI - SZ 110	IG4½	AL	2	133	100	48	25	68	67	
KI - SZ 125	IG5	AL	2	148	115	52	28	75	70	
KI - SZ 150	IG6	AL	2	160	130	60	30	85	71	

We deliver fundamentally with white DS-Seal rings, for high pressure and low pressure. (acc. to KE-TD-11)

NG = Nominal size  
G = Thread  
W = Material  
KL = Cable length  
KA = Lug distance  
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

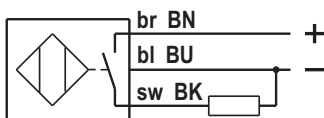
For example in pneumatic conveyor systems with combustible dusts etc.

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.

## Wiring connection

Cable 3 x 0.34 mm<sup>2</sup>  
Cable length (KL) 2 = 2 m  
5 = 5 m  
0 = 10 m



TURCK BI3U

007-AP01

## Technical data

Materials (W) AL = Aluminium  
AV = Aluminium/1.4581 / 318 or 1.457X  
MS = Brass  
VA = 1.4581 / 318 or 1.457X

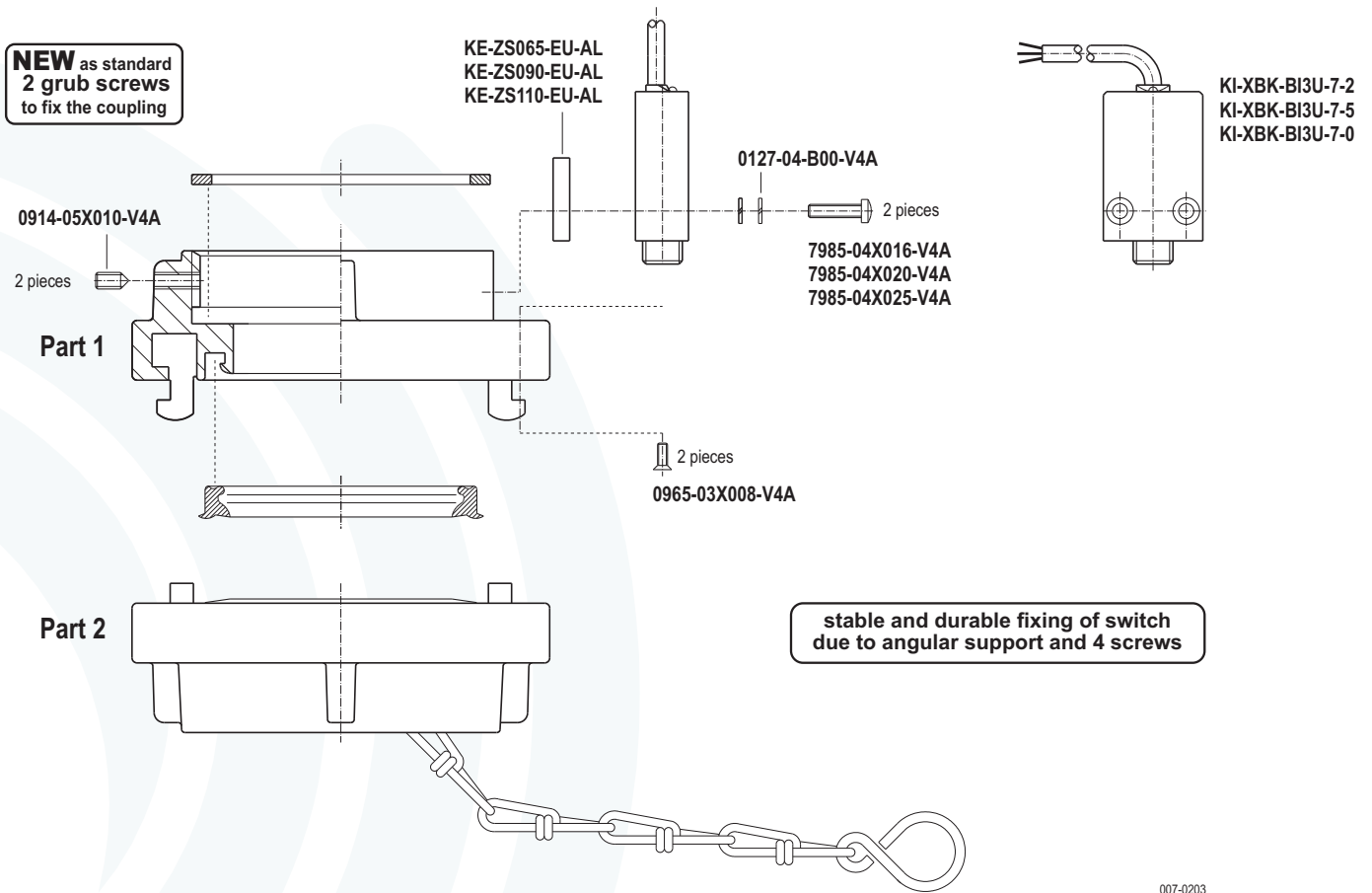
Switch active surface CuZn, chromium plated  
PA12-GF30

Mounting position any  
Ambient temperature -20 °C ... +60 °C  
Supply voltage 10 ... 30 V DC  
Load current capacity ≥ 200 mA, constant current  
Switching function PNP, Normally open  
Type of protection IP68 acc. to DIN EN 60529  
Maintenance none

ATEX-Option

B0 Dust  II 3D Ex tD A22 IP68 T95 °C

## Components



### Order code Part 1

	NG	G	W	
K - FSZ 052	IG2	AL	E	
K - FSZ 065	IG2	AL	E	
K - FSZ 065	IG2½	AL	E	
K - FSZ 075	IG2	AL	E	
K - FSZ 075	IG2½	AL	E	
K - FSZ 075	IG3	AL	E	
K - FSZ 090	IG3	AL	E	
K - FSZ 100	IG4	AL	E	
K - FSZ 110	IG4	AL	E	
K - FSZ 110	IG4½	AL	E	
K - FSZ 125	IG5	AL	E	
K - FSZ 150	IG6	AL	E	

incl. Seal rings

Seal rings and chains depending on the type and acc. to data sheet KE-TD-11

### Order code Part 2

	NG	W
K - BSZ052 - 00 - AL - M		
K - BSZ065 - 00 - AL - M		
K - BSZ065 - 00 - AL - M		
K - BSZ075 - 00 - AL - M		
K - BSZ075 - 00 - AL - M		
K - BSZ075 - 00 - AL - M		
K - BSZ075 - 00 - AL - M		
K - BSZ090 - 00 - AL - M		
K - BSZ100 - 00 - AL - M		
K - BSZ110 - 00 - AL - M		
K - BSZ110 - 00 - AL - M		
K - BSZ125 - 00 - AL - M		
K - BSZ150 - 00 - AL - M		

incl. Seal rings and chain

NG = Nominal size

G = Thread

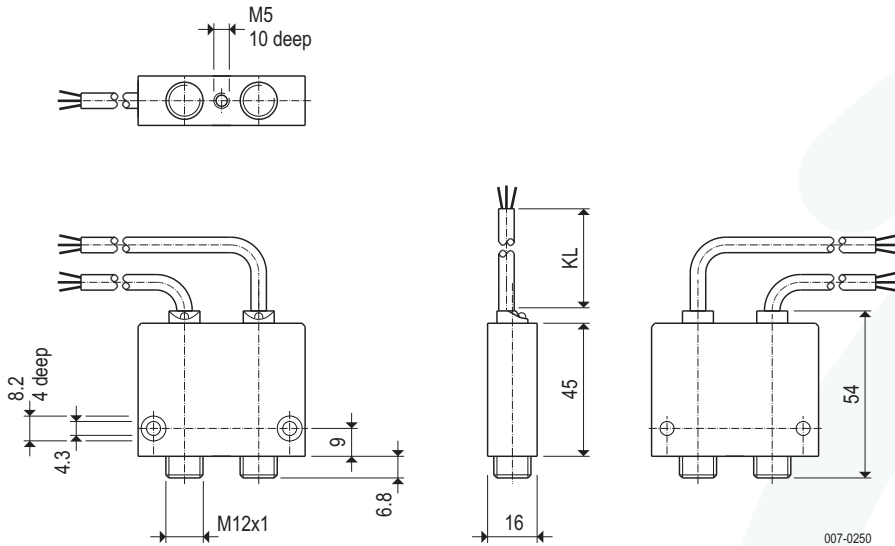
W = Material

**Materials (W)**

AL	=	Aluminium
AV	=	Aluminium/1.4581 / 318 or 1.457X
VA	=	1.4581 / 318 or 1.457X
MS	=	Brass

## Dimensions

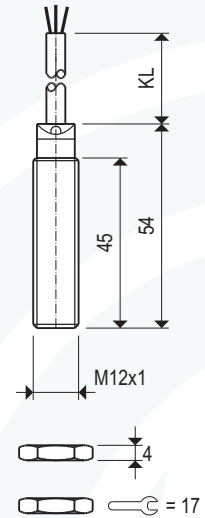
KI2-XBK-BI3U-7- .  
 KID-XBK-BI3U-7- .



Order code	
KI-XBK-BI3U-7-2	for 2 m cable
KI-XBK-BI3U-7-5	for 5 m cable
KI-XBK-BI3U-7-0	for 10 m cable

KI-BI3U-M12AP- .

Brand TURCK  
 Type Bi3U-M12-AP6X  
 Ident-no. 16 341 00



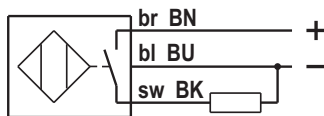
007-0245

Order code	
KI-BI3U-M12AP-2	for 2 m cable
KI-BI3U-M12AP-5	for 5 m cable
KI-BI3U-M12AP-0	for 10 m cable

further technical data you can get under  
[www.turck.de](http://www.turck.de)

## Wiring connection

Cable 3 x 0.34 mm<sup>2</sup>  
 Cable length (KL) 2 = 2 m  
 5 = 5 m  
 0 = 10 m



TURCK BI3U

007-AP01

## Technical data

Materials	Switch active surface	CuZn, chromium plated PA12-GF30
	Clamping bracket	AlMgSi1
Mounting position		any
Ambient temperature		-20 °C ... +60 °C
Supply voltage		10 ... 30 V DC
Load current capacity		≤ 200 mA, constant current
Switching function		PNP, Normally open
Type of protection		IP68 acc. to DIN EN 60529
Maintenance		none

ATEX-Option

B0 Dust  II 3D Ex tD A22 IP68 T95 °C

## Spare parts



007-0256

### Seal rings for high pressure and low pressure (DS)

PN 16 in nitril caoutchouc ( white )

Size	Article no.	Dimensions (mm)
52=C	<b>603 036 68</b>	64x47x10
65	<b>603 037 68</b>	79x60x10
75=B	<b>603 038 68</b>	87x67x10.5
90	<b>602 039 68</b>	103x93x10
100	<b>603 039 68</b>	113x93x10
110=A	<b>603 040 68</b>	130x102x12
125	<b>603 041 68</b>	144x177x12.5
150	<b>602 041 68</b>	157x132x11.5

### Seal rings for high pressure and low pressure (DS)

PN 16 in nitril caoutchouc ( green )

Size	Article no.	Dimensions (mm)
52=C	<b>602 023 52</b>	64x47x10
75=B	<b>400 736 52</b>	87x67x10.5
110=A	<b>402 573 52</b>	130x102x12



007-0257

### Seal rings for high pressure (D)

PN 16 in nitril caoutchouc ( white )

Size	Article no.	Dimensions (mm)
52=C	<b>603 045 68</b>	64x47x10.5
65	<b>602 004 68</b>	75x60x10.5
75=B	<b>603 046 68</b>	82x67x10
100	<b>603 047 68</b>	108x93x10.5

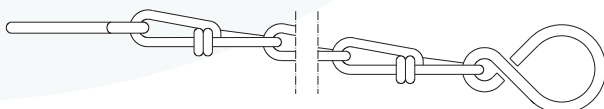


007-0258

### Thread joint ring

in nitril caoutchouc ( white )

Size	Article no.	Dimensions (mm)
G 2	<b>602 135 50</b>	47x60x3
G 2½	<b>602 137 50</b>	66x76x3
G 3	<b>602 138 68</b>	78x88x3
G 4	<b>602 139 68</b>	100x113x3
G 4½	<b>602 140 50</b>	105x126x3
G 5	<b>602 141 68</b>	118x138x3
G 6	<b>602 142 50</b>	152x164x4



007-0259

### Chain with S-hook

Size	Steel, galvanized Article no.	Stainless steel Article no.	Chain length
052-090	<b>503 123 00</b>	<b>91-006066-70</b>	280 mm
100-110	<b>503 124 00</b>	<b>91-006133-70</b>	390 mm
125-205	<b>602 267 48</b>	on request	535 mm



# 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