

► 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 

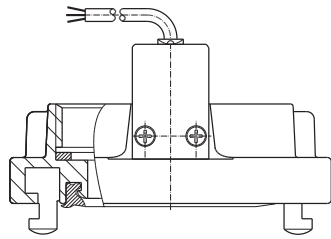
- 4.3 The limit switches can be used in areas classified as zone 22.
- 4.4 A fuse (with max. 4 A) has to be connected in series to the supply voltage.
- 4.5 Protect the signal contacts of the limit switch KE against voltage peaks when inductive loads are connected.

for the version KN Gas+Dust 

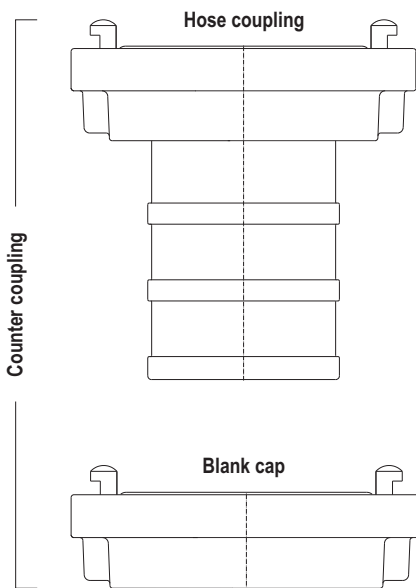
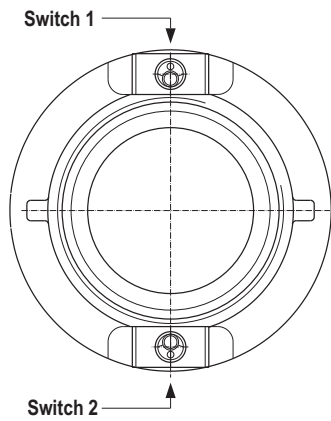
- 4.6 The limit switches can be used in areas classified as zone 1 and zone 20 or lower.
- 4.7 To keep the intrinsically reliability a certified barrier or a certified isolation amplifier with an intrinsically safe circuit according to the present category has to be connected in series for power limitation.



Illustration



Fixed coupling



007-0234

The coupling with inside thread has two built-in limit switches.

During the coupling of a counter coupling either one or two limit switches will be actuated.

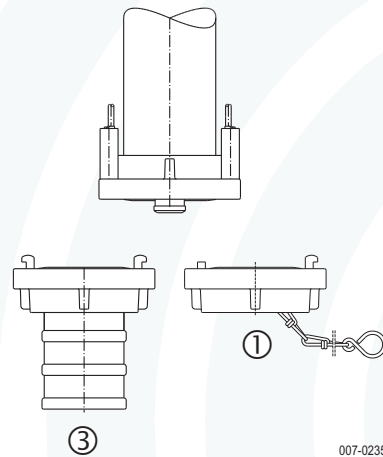
So, in this way can be identified which counter coupling has been coupled at the moment.

Example of application

Silo filling process 1

Sensing whether silo trailer ③ or blanc cap ① has been coupled.

- Coupling ③ of the silo trailer is actuating two switches
- Blank cap ① actuates one switch.



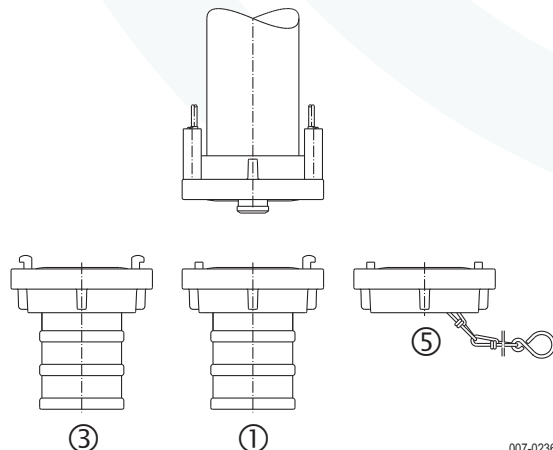
007-0235

Silo filling process 1

Sensing whether silo trailer ③ or coupling ① has been coupled.

E.g. coupling ① is interoffice production inert gas - or dry air overlay

- Silo trailer ③ actuates two switches
- Coupling ① actuates one switch
- The blanc cap ⑤ actuates no switch



007-0236

Versions

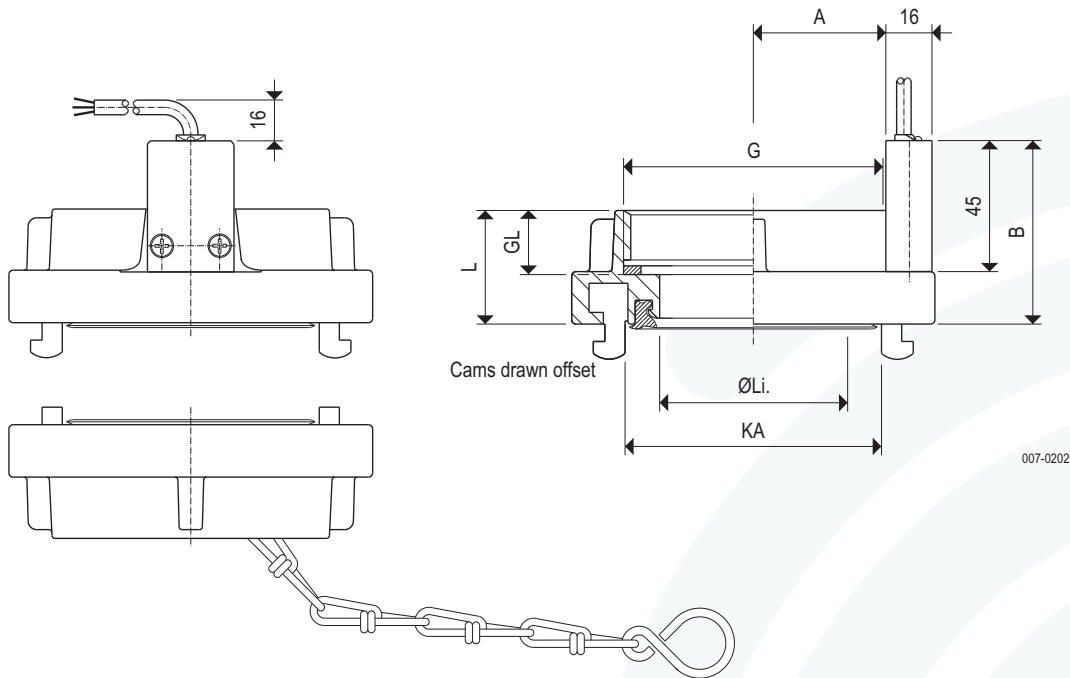
The coding can be carried out with all three limit switch variants KE, KI and KN and can be mounted at couplings of all sizes.

Dimensions, technical data, ATEX options and connections see under:

- KE mechanical limit switch KE-GI-02
- KI inductive limit switch KE-GI-04
- KN inductive limit switch NAMUR KE-GI-06

2 inductive limit switches can also be mounted at VK and AVK couplings.

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

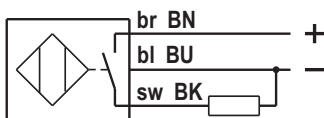
For example in pneumatic conveyor systems with combustible dusts etc.

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 mm²
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

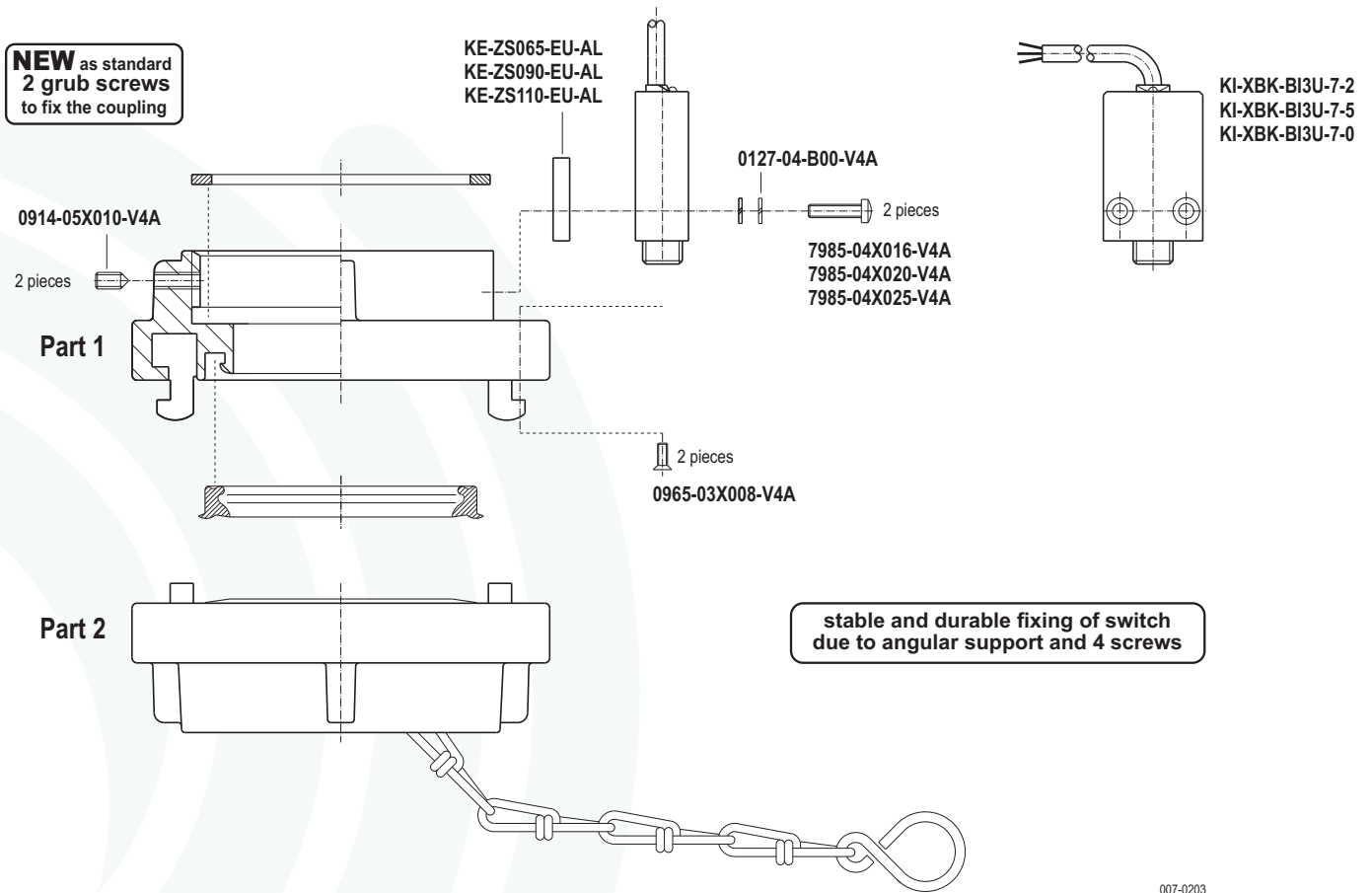
Switch active surface CuZn, chromium plated
PA12-GF30

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

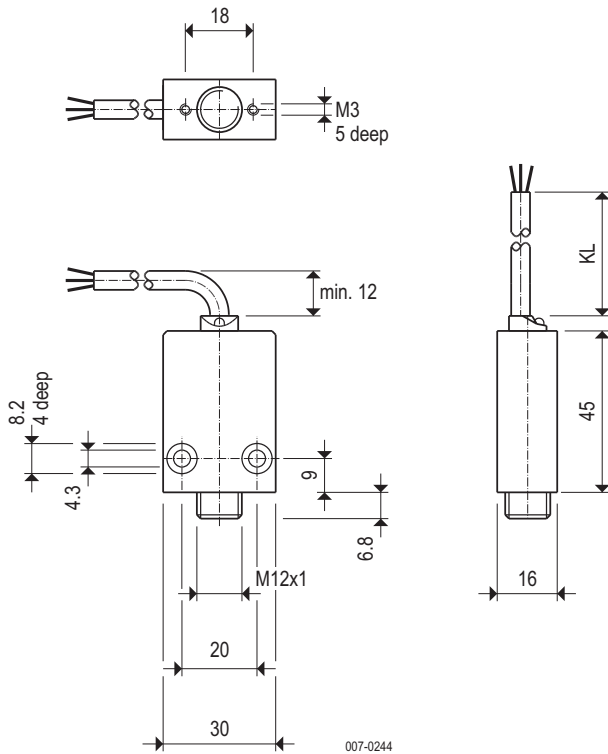
W = Material

Materials (W)

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

Dimensions

KI-XBK-BI3U-7- .



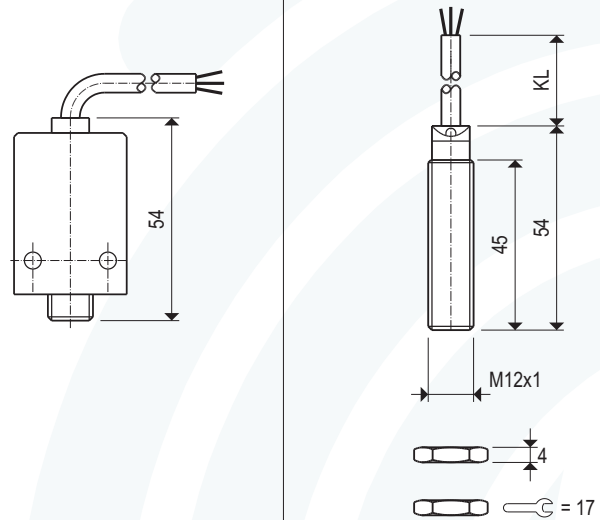
007-0244

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

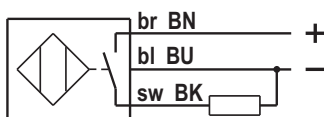
Order code

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

Wiring connection

Cable 3 x 0.34 mm²
 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	603 036 68	64x47x10
65	603 037 68	79x60x10
75=B	603 038 68	87x67x10.5
90	602 039 68	103x93x10
100	603 039 68	113x93x10
110=A	603 040 68	130x102x12
125	603 041 68	144x177x12.5
150	602 041 68	157x132x11.5

Seal rings for high pressure and low pressure (DS)

PN 16 in nitril caoutchouc (green)

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



007-0257

Seal rings for high pressure (D)

PN 16 in nitril caoutchouc (white)

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

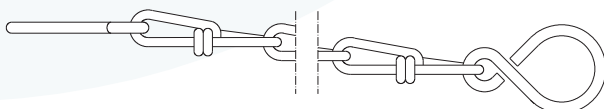


007-0258

Thread joint ring

in nitril caoutchouc (white)

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



007-0259

Chain with S-hook

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

**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

DN 101 bis DN 150

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

Richtlinie 97/23/EG (Druckgeräte-Richtlinie)

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

Einstufung:

Druckhaltendes Ausrüstungsteil nach Art. 3 Abs. 3

Fluidgruppe (Art. 9):

2

Mediumzustand:

gasförmig oder flüssig, wenn pD >0,5 bar

Angewendetes Konformitätsverfahren:

keines, es gilt die gute Ingenieurspraxis

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

Osterburken, 07. Januar 2010



Diese Bescheinigung darf nur
unverändert weiterverbreitet werden.

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...**

made of aluminum, stainless steel or brass

DN 101 to DN 150

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

Directive 97/23/EC (Directive Pressure Equipment)

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

Categorization:

Pressure accessories of acc. Art.3 (3)

Fluid group (Art. 9):

2

Condition of fluid:

gaseous or liquid, if pD >0,5 bar

Applied conformity assesment procedures:

none, accordance with the sound engineering practice

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

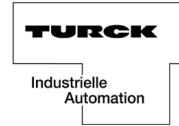
Osterburken, January 7th 2010

Wolfgang Hageleit

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

Konformitätserklärung Nr. 3120 M

Declaration of Conformity



Diese Konformitätserklärung entspricht der Europäischen Norm EN 45014 "Allgemeine Kriterien für Konformitätserklärungen von Anbietern". Die Grundlage der Kriterien sind internationale Dokumente, insbesondere ISO/IEC Leitfaden 22, 1982: "Information on manufacturer's declaration of conformity with standards or other technical specifications".

This "Declaration of Conformity" complies with the European Standard EN 45014 "General criteria for a supplier's declaration of conformity". These criteria are based on the relevant international documentation, particularly the ISO/IEC Guide 22, 1982: "Information on the manufacturer's declaration of conformity with standards or other technical specifications".

Wir/ We **HANS TURCK GMBH & CO KG**
WITZLEBENSTR. 7, D - 45472 MÜLHEIM A.D. RUHR

erklären in alleiniger Verantwortung, dass die Produkte
declare under our sole responsibility that the products

Sensoren Typ Bi..U... , Ni..U.../3D und Bi..U... , Ni..U... /3GD

auf die sich die Erklärung bezieht, mit den folgenden Normen übereinstimmen
to which this declaration relates are in conformity with the following standards

und wo anwendbar
and where applicable

EN 60947-5-2 / 1997
EN 50281-1-1 / 1999 EN 50021 / 2000 EN50014 / 2000

Gemäß den Bestimmungen der Richtlinie (falls zutreffend)
Following the provisions of Directive (if applicable)

EMV - Richtlinie	/ EMC Directive	89 / 336 / EWG	3. Mai 1989
Richtlinie ATEX 100a	/ Directive ATEX 100a	94 / 9 / EG	23. März 1994

Weitere Normen
additional standards

Die Sensoren sind unter Berücksichtigung der elektrischen Daten zum Einsatz in Zone 2 oder Zone 22 geeignet. Der Einsatzort ist der ATEX Klassifizierung des Betriebsmittels zu entnehmen.

Die Ergebnisse der Prüfungen sind in dem Prüfprotokoll 03022H-... festgelegt.


Ui 10...30 VDC; Ia ≤ 200mA

Der zulässige Umgebungstemperaturbereich ist -30°C ... +70°C.

Besondere Bedingungen:

3D, 3GD: Sensoren mit Steckanschluss müssen mit der Schraubverbindung gesichert werden und dürfen nicht unter Spannung gesteckt oder getrennt werden.

3G: Der Sensor muß vor jeglicher mechanischer Beschädigung geschützt werden.

Das Betriebsmittel erhält folgende Kennzeichnung:  II 3 D IP68 T 95°C oder



II 3 GD EEx nA IIC T4 X IP68 T 95°C

Mülheim, den 23.05.05

(i.V. W. Stoll)

Ort und Datum der Ausstellung /
Place and date of issue

Name und Unterschrift des Befugten /
Name and signature of authorized person

Rev.2 23.05.05