






Description

A large number of variants and versions of actuating elements are available for the ComEx control and indicator units. All actuating elements are made of high-quality thermoplastic and conform to the IP 65/IP 66/IP 67 type of protection.

To complete the actuating elements, there are useful accessories such as e.g. label holders, marking tags, metal shroud or nut wrench.

Actuating elements with NBR sealing for increased resistance to oil are available too.

The actuating elements are mounted quickly and easily onto the ComEx control and indicating devices.

Use in Zones 1 and 21 is certified.

NOTE

For actuating element dimensions, see page 3 onward.

Actuating elements for ComEx

Explosion protection

Ex protection type

Ⓔx II 2G Ex e II
Ⓔx II 2D Ex tD A21 IP 65, IP 66, or IP 67
PTB 00 ATEX 3114 U

Ex e II
Ex tD A21 IP 65, IP 66, IP 67
IECEx PTB 08.0037U

Class I, Div. 2, Groups A, B, C, D
Class I, Zone 1, AEx e IIC, Ex e IIC
UL E184198

0044

Ambient and operating temperature range

-55 °C to +70 °C (Zone 1)
-20 °C to +70 °C (Zone 21)

permitted for zones

Zone 1
Zone 21 (Min. requis IP6X, Temperature range -20 °C)

Technical data

Storage and transport temperature

-55 °C to +70 °C

Protection class

See table

Impact resistance

7 Nm
(Lamp actuators 4 Nm)

Material

Enclosure	thermoplastic/injection moulding
Sealings	EPDM, NBR for increased resistance to oil

Weight

See table

Fastening

Installation in enclosures with wall thickness of 1 mm up to 6 mm (threading M30 x 1.5). Suitable for through-holes $30.3^{+0.3}$ mm

Protection class of the actuating elements

Description	Order no.	Temperature **-55 °C to +70 °C**	Temperature **-20 °C to +70 °C**
Position selector switch	05-0003-007 ***	IP 54	IP 66, IP 67
Double pushbutton actuator	05-0003-0074 **** (*BN) 05-0003-0075 **** (*BN)	IP 54	IP 6X
Pushbutton	05-0003-000700 (*BN)	IP 54	IP 66, IP 67
Mushroom pushbutton	05-0003-001800 (*BN)	IP 54	IP 66, IP 67
Emergency Stop	05-0003-000800 (*BN)	IP 54	IP 66, IP 67
Locking mushroom pushbutton	05-0003-001203 (*BN)	IP 54	IP 66, IP 67
Lock (DOM)	05-0003-0012 ** (*BN)	IP 54	IP 66, IP 67
Lock (RONIS)	05-0003-006100 (*BN)	IP 54	IP 66, IP 67
Position selector switch BS 2-position	05-0003-00090 **	IP 54	IP 66, IP 67
Position selector switch BS 3-position	05-0003-001 ****	IP 54	IP 66, IP 67
Key switch, 2-position	05-0003-007 **** (*BN)	IP 54	IP 65
Key switch, 3-position	05-0003-0079 ** (*BN) 05-0003-0080 ** (*BN)	IP 54	IP 65
Position selector switch, 2-position	05-0003-0009 *** (*BN)	IP 54	IP 66, IP 67
Position selector switch, 3-position	05-0003-001 **** (*BN)	IP 54	IP 66, IP 67
Lamp	05-0003-001 **** (*BN)	IP 54	IP 66, IP 67
Illuminated button actuator	05-0003-006 **** (*BN)	IP 54	IP 66, IP 67
Potentiometer actuator	05-0003-007600 (*BN)	IP 54	IP 66, IP 67
Blanking plug	05-0003-001900 (*BN)	IP 54	IP 66, IP 67

*BN for increased resistance to oil (with NBR seal)

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Safety Instructions

The actuating elements may be used only within the specified ambient and operating temperature range.

Utilisation in areas other than those specified and the modification of the product by anyone other than the manufacturer are not permitted and will exempt BARTEC from liability for defects and any further liability.

Incorrect installation can cause malfunctioning and the loss of explosion protection.

The actuating element may be connected and assembled only by qualified personnel who are authorised and trained to assemble electrical components in hazardous (potentially explosive) areas.

The generally applicable statutory rules and other binding directives relating to workplace safety, accident prevention and environmental protection must be adhered to.
The actuating element may be operated only if it is in a clean and undamaged condition.

Marking

Particularly important points in these instructions are marked with a symbol:

⚠ DANGER

Non-observance leads to death or serious physical injury. The necessary safety measures must be taken.

⚠ CAUTION

Warning of damage to property and financial and penal disadvantages (e.g. loss of guarantee rights, liability etc.).

☞ ATTENTION

Important instructions and information on preventing disadvantageous behaviour.

ℹ NOTE

Important instructions and information on effective, economical and environmentally compatible handling.

Standards conformed to

EN 60079-0: 2006
EN 60079-7: 2007
EN 61241-0: 2006
EN 61241-1: 2004
IEC 60079-0: 2004
IEC 60079-7: 2006-07
IEC 61241-0: 2004
IEC 61241-1: 2004

Assembly and Commissioning

ℹ NOTE

The description of the assembly of the actuating elements starts on page 8.

Assembly/disassembly

☞ ATTENTION

Only authorised and qualified personnel may do any of the assembly, disassembly, installation and commissioning work.

The minimum centre-to-centre spacing between two mounting holes must be observed.

Make sure the actuating element being fitted is intact (no cracks).

Installation

Only suitable tools may be used for installation work. It is not permissible to modify the actuating element in any way.

Commissioning

Before commissioning check that:

- the device has been installed correctly
- the device is not damaged

Operation, Maintenance and Fault Clearance

The operator of the actuating element must keep it in good condition, operate it properly, monitor it and clean it regularly. Actuating elements, seals, glands must be checked regularly for cracks and damage.

ℹ NOTE

Dirty actuating elements can be cleaned with compressed air.

The actuating element is defective if it no longer actuates the attached command equipment or if the illuminated disc becomes damaged or dull. Defective actuating elements cannot be repaired; they must be replaced.

Defective actuating elements can be taken off and replaced by functioning actuators of the same type.

Accessories, spare parts

see BARTEC catalogue

Disposal

The components in the actuating element contain metal and plastic parts.

The statutory requirements for disposing of electronic scrap must be observed therefore (e.g. disposal by an approved disposal company).

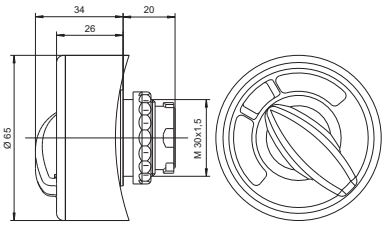
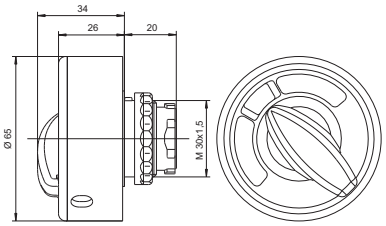
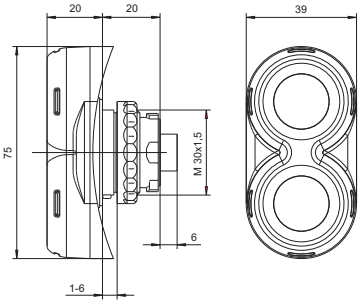
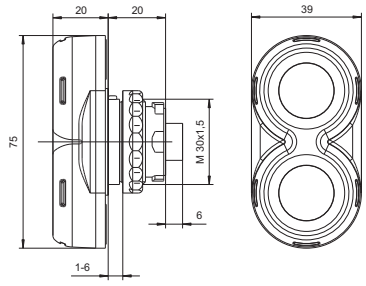
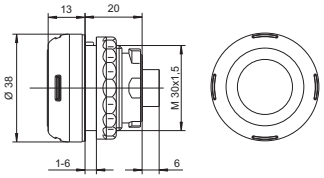
Service address

BARTEC GmbH
Max-Eyth-Straße 16
D-97980 Bad Mergentheim
Tel.: +49 7931 597-0
Fax: +49 7931 597-119

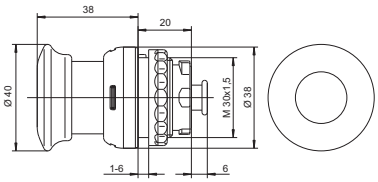
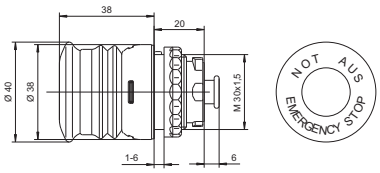
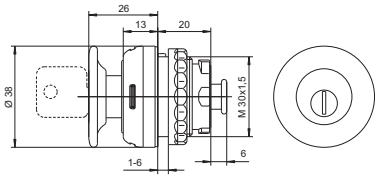
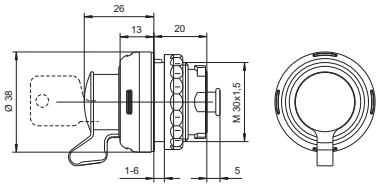
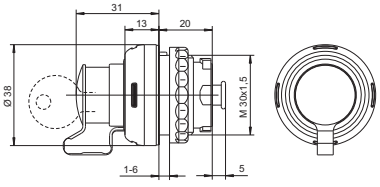
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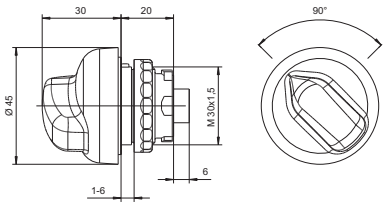
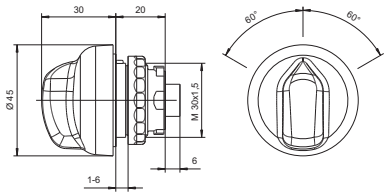
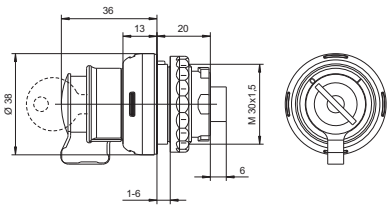
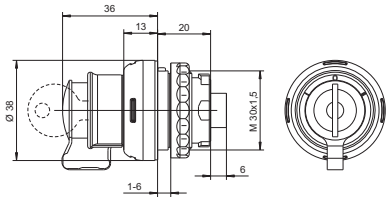
Selection chart

Illustration	Dimensions	Description and order number
	for ComEx enclosures  for control units/ComEx 316L  	**Position selector switch** black, with 2 or 3 switching positions, with protective shroud, lockable*, only for switch modules (2-pole) 0 - I — for control units (flat): 05-0003-007001; for ComEx enclosures: 05-0003-007101 I - II — for control units (flat): 05-0003-007002; for ComEx enclosures: 05-0003-007102 I - 0 II — for control units (flat): 05-0003-007203; for ComEx enclosures: 05-0003-007303 HAND - 0 - AUTO — for control units (flat): 05-0003-007224; for ComEx enclosures: 05-0003-007324 MAN - 0 - AUTO — for control units (flat): 05-0003-007225; for ComEx enclosures: 05-0003-007325 Weight: 74 g • 3 boreholes at the protective shroud for fitting padlocks in switching position 0 (I) or to customer's specifications.
	for ComEx enclosures  for control units/ComEx 316L  	**Double pushbutton actuator** with EPDM rubber membrane or with NBR sealing, 5 labels red, green, yellow, white, black, supplied loose for ComEx enclosures with EPDM sealing: 05-0003-007500 for ComEx enclosures with NBR sealing: 05-0003-007500BN for control units with EPDM sealing: 05-0003-007400 for control units with NBR sealing: 05-0003-007400BN Weight: 52 g
	 	**Pushbutton** with EPDM rubber membrane or with NBR sealing, 5 labels red, green, yellow, white, black, supplied loose with EPDM sealing: 05-0003-007000 with NBR sealing: 05-0003-007000BN Weight: 24 g

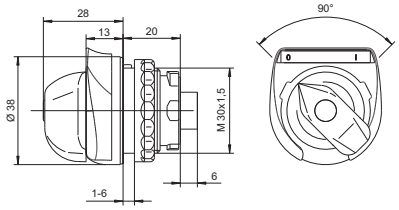
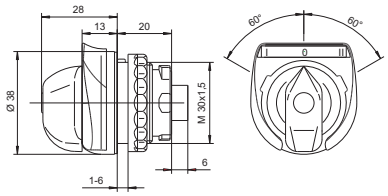
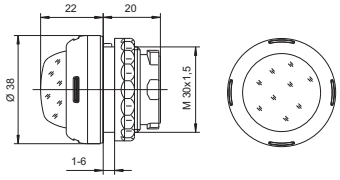
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Illustration	Dimensions	Description and order number
		**Mushroom pushbutton** with EPDM rubber membrane or with NBR sealing, black with EPDM sealing: 05-0003-001800 with NBR sealing: 05-0003-001800BN Weight: 24 g
		**EMERGENCY STOP slam button** with EPDM rubber membrane or with NBR sealing, pushbutton marked "NOT-AUS EMERGENCY STOP - Pull to Release" DIN EN 60204-1: 2007 DIN EN 60947-5-1: 2005 (VDE 0660 Part 200) with EPDM sealing: 05-0003-000800 with NBR sealing: 05-0003-000800BN Weight: 46 g
		**Locking mushroom pushbutton,** push in without key, unlock with key DOM lock 4 A 185 with EPDM sealing: 05-0003-001203 with NBR sealing: 05-0003-001203BN Weight: 70 g
		**Lock** DOM lock 4 A 185 Lockable in both positions, Key retractable in both positions: with EPDM sealing: 05-0003-001200 with NBR sealing: 05-0003-001200BN Lockable in the depressed position, Key retractable in the depressed position: with EPDM sealing: 05-0003-001201 with NBR sealing: 05-0003-001201BN Tip lock lockable in the initial positions, Key retractable in the initial positions: with EPDM sealing: 05-0003-001202 with NBR sealing: 05-0003-001202BN Weight: 69 g
		**Lock RONIS** lock 455 Lockable in both positions, Key retractable in both positions with EPDM sealing: 05-0003-006100 with NBR sealing: 05-0003-006100BN Weight: 75 g

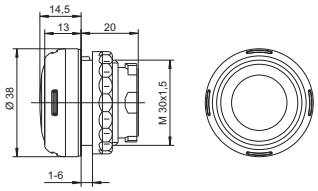
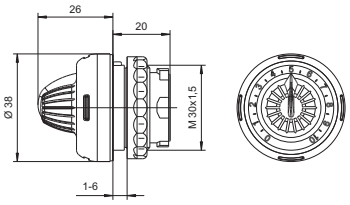
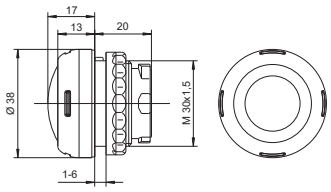
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Illustration	Dimensions	Description and order number
	2 switching positions  3 switching positions 	**Position selector switch BS,** black, with 2 or 3 switching positions, turned 90° for ComEx enclosures 0 - I — for control units: 05-0003-000900BS; for ComEx enclosures: 05-0003-000901BS I - 0 - II (I + II latching) — for control units: 05-0003-001000BS; for ComEx enclosures: 05-0003-001100BS I - 0 - II (I + II momentary contact) — for control units: 05-0003-001001BS; for ComEx enclosures: 05-0003-001101BS I - 0 - II (I latching, II momentary) — for control units: 05-0003-001002BS; for ComEx enclosures: 05-0003-001102BS I - 0 - II (I momentary, II latching) — for control units: 05-0003-001003BS; for ComEx enclosures: 05-0003-001103BS Weight: 33 g
 	2 switching positions  3 switching positions 	**Key-operated switch,** RONIS lock 456, with 2 or 3 switching positions, turned 90° for ComEx enclosures 0 - I latching, key retractable — for control units: 05-0003-007700; for ComEx enclosures: 05-0003-007800 0 - I momentary contact, Position I key not retractable — for control units: 05-0003-007701; for ComEx enclosures: 05-0003-007801 I - 0 - II (I + II latching), Key retractable — for control units: 05-0003-007900; for ComEx enclosures: 05-0003-008000 Weight: 49 g

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Illustration	Dimensions	Description and order number
	2 switching positions  3 switching positions  	**Position selector switch,** black, with 2 or 3 switching positions 0 - I for control units with EPDM sealing: 05-0003-000900 with NBR sealing: 05-0003-000900BN turned 90° for ComEx enclosures with EPDM sealing: 05-0003-000901 with NBR sealing: 05-0003-000901BN I - 0 - II (I + II latching) for control units with EPDM sealing: 05-0003-001000 with NBR sealing: 05-0003-001000BN turned 90° for ComEx enclosures with EPDM sealing: 05-0003-001100 with NBR sealing: 05-0003-001100BN I - 0 - II (I + II momentary) for control units with EPDM sealing: 05-0003-001001 with NBR sealing 05-0003-001001BN turned 90° for ComEx enclosures with EPDM sealing: 05-0003-001101 with NBR sealing: 05-0003-001101BN I - 0 - II (I latching, II momentary contact) for control units with EPDM sealing: 05-0003-001002 with NBR sealing 05-0003-001002BN turned 90° for ComEx enclosures with EPDM sealing: 05-0003-001102 with NBR sealing: 05-0003-001102BN I - 0 - II (I momentary contact, II latching) for control units with EPDM sealing: 05-0003-001003 with NBR sealing 05-0003-001003BN turned 90° for ComEx enclosures with EPDM sealing: 05-0003-001103 with NBR sealing: 05-0003-001103BN Weight: 33 g
	 	**Lamp module actuator** red with EPDM sealing: 05-0003-001300 red with NBR sealing: 05-0003-001300BN green with EPDM sealing: 05-0003-001400 green with NBR sealing: 05-0003-001400BN yellow with EPDM sealing: 05-0003-001500 yellow with NBR sealing: 05-0003-001500BN white with EPDM sealing: 05-0003-001600 white with NBR sealing: 05-0003-001600BN blue with EPDM sealing: 05-0003-001700 blue with NBR sealing: 05-0003-001700BN Weight: 19 g

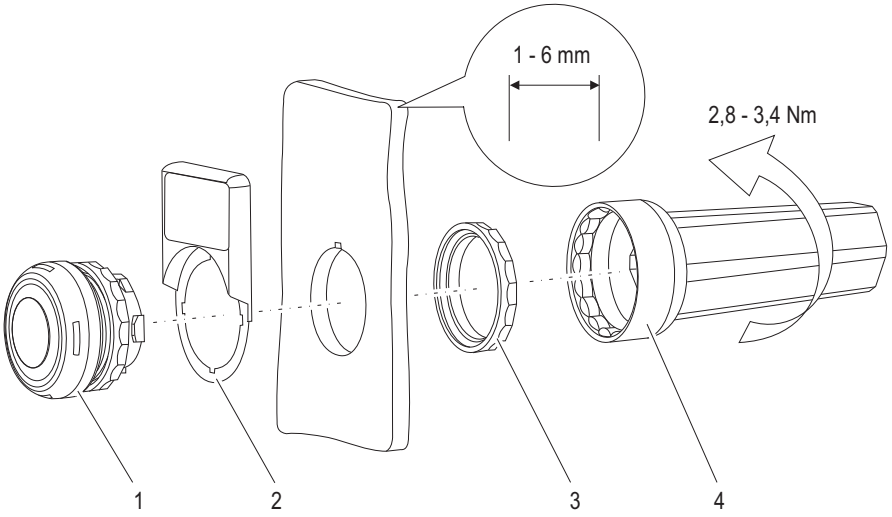
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Illustration	Dimensions	Description and order number
		**Illuminated button actuator** red with EPDM sealing: 05-0003-006500 red with NBR sealing: 05-0003-006500BN green with EPDM sealing: 05-0003-006600 green with NBR sealing: 05-0003-006600BN yellow with EPDM sealing: 05-0003-006700 yellow with NBR sealing: 05-0003-006700BN white with EPDM sealing: 05-0003-006800 white with NBR sealing: 05-0003-006800BN blue with EPDM sealing: 05-0003-006900 blue with NBR sealing: 05-0003-006900BN Weight: 19 g
		**Potentiometer actuator,** black, durable and abrasion-resistant Scale gradation from 0 to 10 with EPDM sealing: 05-0003-007600 with NBR sealing: 05-0003-007600BN Weight: 28 g
		**Blanking plug,** to cover unused holes in the cover with EPDM sealing: 05-0003-001900 with NBR sealing: 05-0003-001900BN Weight: 20 g

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Assembly drawing

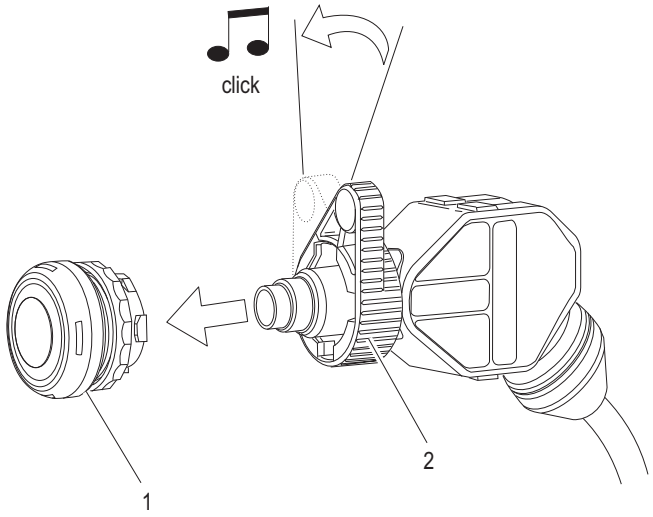


1 Example of an actuating element

2 Optional accessories (e.g. label holders
Article number 05-0044-0001
for an additional inscription)

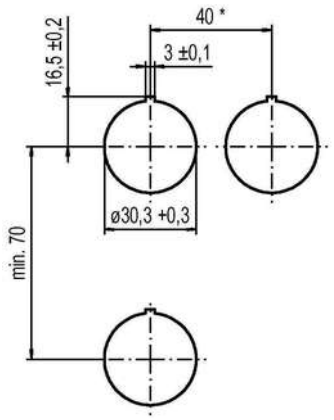
3 Fixing nut
Article number 05-1138-0009

4 Nut wrench
Article number 05-1191-0001



1 Illuminated button actuator
Article numbers 05-0003-006500, -006600, -006700,
-006800 or -006900

2 Illuminated button
Article number 07-3363-3…



Mounting hole for size dia. 30.3mm
with cut-out for anti-twist protection,
typical position: top (12 o'clock position).
Minimum spacing for the mounting boreholes:
horizontal 40 mm, vertical 70 mm

* - recommended spacing for mushroom pushbutton and slam button 100mm
- required spacing for position selector switches with protective shroud min. 60 mm

05-0003-7D0001-A.01-BARTECAdvertisingAgency-301744E

Erklärung der Konformität
Declaration of Conformity
Attestation de conformité

Nº **01-0003-7C0001**

BARTEC GmbH
Max-Eyth-Straße 16
97980 Bad Mergentheim
Germany

Wir	We	Nous
BARTEC GmbH,		
erklären in alleiniger Verantwortung, dass das Produkt	declare under our sole responsibility that the product	attestons sous notre seule responsabilité que le produit
Betätigungsvorsätze	**Actuating elements**	**Têtes de commande**
	Typ 05-0003-00../....	
auf das sich diese Erklärung bezieht den Anforderungen der folgenden **Richtlinien (RL)** entspricht	to which this declaration relates is in accordance with the provision of the following **directives (D)**	se référant à cette attestation correspond aux dispositions des **directives (D)** suivantes
ATEX-Richtlinie 94/9/EG	**ATEX-Directive 94/9/EC**	**ATEX-Directive 94/9/CE**
Maschinen-Richtlinie 2006/42/EG	**Maschinery Directive 2006/42/EC**	**Directive Européenne de l'Equipment 2006/42/CE**
und mit folgenden Normen oder normativen Dokumenten übereinstimmt	and is in conformity with the following standards or other normative documents	et est conforme aux normes ou documents normatifs ci-dessous
EN 60079-0:2006 **EN 60079-7 :2007**	**EN 61241-0:2006** **EN 61241-1 :2004**	
Kennzeichnung	**Marking**	**Marquage**
II 2 G Ex e II **II 2 D Ex tD A21 IP65, IP66, bzw. IP67**		
Verfahren der EG-Baumusterprüfung / Benannte Stelle	**Procedure of EC-Type Examination / Notified Body**	**Procédure d'examen CE de type / Organisme Notifé**
PTB 00 ATEX 3114 U		
0102 PTB, Bundesallee 100, 38116 Braunschweig, D		
0044		

Bad Mergentheim, den 10.03.2010

ppa. Ewald Warmuth
Geschäftsleitung / General Manager

03-0383-0289

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