



Note on instructions

When working in hazardous areas, the safety of personnel and equipment depends on compliance with the relevant safety regulations. The people in charge of installation and maintenance bear a special responsibility. It is essential that they have an exact knowledge of the applicable rules and regulations.

The instructions provide a summary of the most important safety measures and must be read by everyone working with the product so that they will be familiar with the correct handling of the product.

The instructions have to be kept for future reference and must be available throughout the expected life of the product.

Description

The ComEx^{flex} Ex i illuminated buttons, type 07-3363-45**/**** and 07-3363-46**/****, are designed in conformance to the requirements of the "e" Increased Safety, "d" Flameproof Enclosure and "i" Intrinsically Safe types of protection. They may be activated by intrinsically safe circuits.

The ComEx^{flex} Ex i Illuminated button is used everywhere in almost all hazardous areas where machine functions are to be activated at the touch of a button and the corresponding functional status is to be visually displayed.

The ComEx^{flex} Ex i Illuminated button is designed for combining with an illuminated button actuator and a junction box. It is attached without tools to the illuminated button actuator. The connection is established by means of terminals at the back of the illuminated button.

The illuminated button actuator is inserted into a mounting hole in an Ex e enclosure, a control console or control panel.

When inserted into a control console or control panel, there is the option of mounting the junction box. This is connected to the ComEx^{flex} illuminated button by means of two screws.

Explosion protection

ATEX

Ex type of protection

⊕ II 2 G Ex db eb ia IIC Gb

⊕ I M2 Ex db eb ia I Mb

Certification

CML 17 ATEX 1106U

IECEX

Ex type of protection

Ex db eb ia IIC Gb

Ex db eb ia I Mb

Certification

IECEX CML 17.0046U

Other approvals and certificates, see www.bartec-group.com

Ambient temperature ranges

-55 °C to +60 °C

(-67 °F to +140 °F)

Operating temperature ranges

-55 °C bis +85 °C

(-67 °F bis +185 °F)

Approved for zones

1 and 2

Storage/transport temperature

-55 °C to +70 °C

(-67 °F to +158 °F)

Technical data

Protection class

Determined by illuminated button actuator and control station enclosure.

Terminals: IP 20

With junction box and illuminated button actuator: up to IP 67

Weight

Approx. 110 g (0.24 lb)

Intrinsically safe input parameters

Input voltage (U_i): 30 V

Input current (I_i): 150 mA

Input power (P_i): 1 W

Inductivity (L_i): negligible

Capacitance (C_i): negligible

Frequency range

With AC supply voltage: 30 to 100 Hz

Enclosure material

Thermoplastic

Connection

Terminal for 2.5 mm², fine-wire

Lamp

LED (red, green, yellow, white, blue)

Illumination

Very bright, visible angle up to 180°

Service life

Electrical: > 10⁵ running hours

Mechanical: > 10⁵ switching cycles

Mounting

Locked, by bayonet lock

Shock resistance

EN 60068-2-27:2009, 30 g, 18 ms

Dimensions

See page 3

Safety Instructions

The ComEx^{flex} Ex i Illuminated button and the corresponding actuator may be used only within the specified ambient and operating temperature range.

Utilization in areas other than those specified or the alteration of the product by anyone other than the manufacturer will exempt BARTEC from liability for defects or any further liability.

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

Only service technicians who are authorized to work in potentially explosive atmospheres may do any of the assembly, disassembly, installation, commissioning, maintenance, and fault clearance work.

The generally applicable statutory rules and other binding directives relating to workplace safety, accident prevention and environmental protection must be observed.

Before commissioning or restarting operation, check compliance with the applicable laws and directives.

The ComEx^{flex} Ex i Illuminated button may be used only if it is in a clean and undamaged condition. It is not permissible to modify the illuminated button in any way.

The electrical limits that are decisive for "intrinsic safety" must be adhered to. If the lamp is operated in intrinsically safe, the switching insert has to be operated intrinsically safe, too.

Marking

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

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

i Note

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

Standards conformed to

EN 60079-0:2012+A11:2013
EN 60079-1:2014
EN 60079-7:2015
EN 60079-11:2012
EN 60068-2-27: 2009

EN 61000-6-2:2005
EN 61000-6-4:2007 +A1:2011
IEC 60079-0:2011 Ed.6
IEC 60079-1:2014 Ed.7
IEC 60079-7:2015 Ed.5
IEC 60079-11:2011 Ed.6
IEC 60068-2-27:2008
IEC 61000-6-2:2005
IEC 61000-6-4:2006 + A1:2010

Transport, Storage

NOTICE

ComEx^{flex} Ex i Illuminated button damage through incorrect transport or incorrect storage.

- Transport and storage is permissible in original packaging only.
- Store the ComEx^{flex} Ex i Illuminated button in a dry place.

Assembly, Installation

⚠ WARNING

Risk of serious injury due to incorrect proceedings.

- The IEC/EN 60079-14 and further national standards and locally applicable installation regulations have to be observed.
- Ensure that the voltage supply has been isolated or take suitable protective measures.
- Pay attention to the type of mounting required (for fitting into enclosure/attachment with junction box).

Assembly

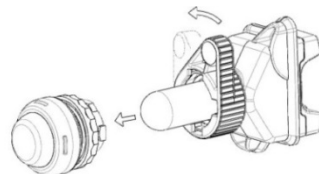
⚠ WARNING

Risk of serious accidents due to damaged components

- Before assembly, ensure the perfect condition of the components.

Mounting the ComEx^{flex} Ex i Illuminated button:

- Make sure the ComEx^{flex} Ex i Illuminated button to be fitted is intact (no cracks).
- Position the ComEx^{flex} Ex i Illuminated button's bayonet lock at the mounted lamp module actuator.
- Turn the locking bolt to connect the ComEx^{flex} Ex i Illuminated button securely to the lamp module actuator.



i Note

The assembly of the illuminated button actuator as well as the assembly of the illuminated button and the illuminated button actuator is described in the operating instructions for actuating elements, type 05-0003-00./...

Installation

For fitting into enclosure

In hazardous areas groups I and II, the ComEx^{flex} Ex i Illuminated button must be used:

- In appropriate enclosures with "Ex e" increased safety type of protection. The clearance and creepage distances under IEC/EN 60079-7 Section 4.3, Section 4.4 and Table 1 must be observed.
- In an enclosure that corresponds to another approved type of protection specified in IEC/EN 60079-0 Section 1.

With junction box

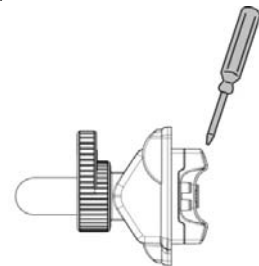
- The ComEx^{flex} Ex i Illuminated button must be installed as a stationary unit and with protection against the risk of mechanical damage.

i Note

Avoid any capacitive influence from parallel conductors as well as any additional adverse heat effects on the cable.

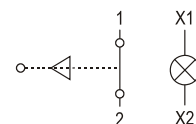
Take care when connecting conductors

- Strip 40 mm (1.6 in) sheath off the conductor.
- Remove approx. 6 mm (0.2 in) conductor insulation from the cores.
- Prepare the ends of fine-stranded and multi-stranded conductors: Crimp wire end sleeves with suitable crimping tools. Connection cross-sections: 0.75-2.5 mm² (14-18 AWG).
- Release terminals.
- Insert conductors diagonally.
- Tight the terminals with a maximum torque of 0.4-0.7 Nm (0.3-0.5 lb.ft), while holding the screwdriver slightly at an angle.

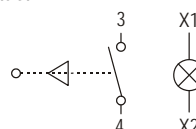


Terminal assignment

Type 07-3363-45**/****
1 N/C contact



Type 07-3363-46**/****
1 N/O contact



Commissioning

Before commissioning, check that:

- The ComEx^{flex} Ex i illuminated button has been installed in compliance with regulations.
- The ComEx^{flex} Ex i illuminated button is not damaged.
- The connection has been established properly (make sure the cores are secure).

Operation

⚠ DANGER

Death or serious injury through improper use.

- The ComEx^{flex} Ex i illuminated button may be operated only within the technical limits that apply to it (see page 1).

Maintenance and Fault Clearance

⚠ WARNING

Risk of serious injury due to incorrect proceedings.

- IEC/EN 60079-17 must be observed. It is recommended to formulate a maintenance plan according to this standard.
- Ensure that the voltage supply has been isolated or take suitable protective measures.

Maintenance

⚠ WARNING

Risk of serious accidents due to damaged parts.

- Check ComEx^{flex} Ex i illuminated button, illuminated button actuators, screw fittings, sealings and cables regularly for cracks and damage. Make sure that they are properly established.

NOTICE

ComEx^{flex} Ex i illuminated button/actuator damage due to incorrect cleaning.

- It is not allowed to clean ComEx^{flex} Ex i illuminated buttons/actuators with compressed air.

The operator of the ComEx^{flex} Ex i illuminated button must keep it in good condition, operate it properly, monitor it and clean it regularly.

The operator must schedule maintenance intervals which will suit the respective conditions of use.

Fault Clearance

⚠ WARNING

Risk of serious injury due to use of non-original spare parts.

- Use original parts only as replacements.

The ComEx^{flex} Ex i illuminated button is defective if the switching unit does not perform switching functions any longer or the LED cannot light up any more. Defective ComEx^{flex} Ex i illuminated buttons cannot be repaired; they must be replaced considering this operational instruction.

Defective actuators can be removed and replaced by functioning actuators of the same type.

i Note

For original parts, contact the firm of Bartec GmbH at the service address.

Accessories, Spare Parts

i Note

The ComEx^{flex} Ex i illuminated button can be connected to a junction box. Information on the junction box and junction box assembly is described in the Operating Instructions for the junction box, order number 05-0042-0050.

For further accessories and spare parts, see BARTEC catalogue.

Disposal

i Note

Environmental damage can be caused by incorrect waste disposal. When in doubt, local authorities or specialist disposal companies can provide information on environmentally friendly disposal.

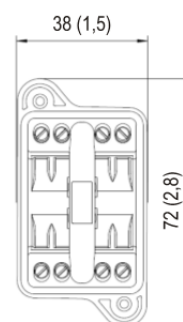
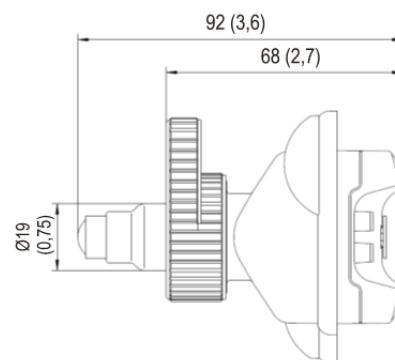
The components in the ComEx^{flex} Ex i illuminated button and the illuminated button actuator contain metal and plastic parts. Therefore the statutory requirements for disposing of electronic scrap must be observed.



Service Address

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

Dimensions in mm (in)

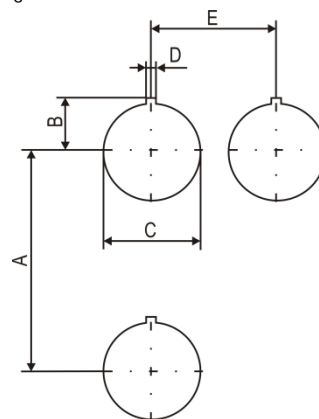


Installation dimensions

NOTICE

Damage to elements due to incorrect installation dimensions.

- The minimum spacing between the mounting holes must be observed.



Dimensions:

	mm	in
A*	75	2.95
B	16.5	0.7
C	Ø 30.3 ^{+0.3}	Ø 1.2 ^{+0.01}
D	3	0.1
E*	40	1.6

*Recommended spacing for mushroom push-button, slam button, and: position selector switches with protective shroud: 100 mm (3.9 in).

EU Konformitätsbescheinigung
EU Attestation of Conformity
Attestation UE de conformité**BARTEC**N^o 01-3300-7C0002_C

Wir	We	Nous
BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim Germany		
erklären in alleiniger Verantwortung, dass das Produkt Leuchtmodul Leuchttaster	declare under our sole responsibility that the product Lamp module Illuminated button	attestons sous notre seule responsabilité que le produit Module de signalisation, Bouton-pousoir lumineux

Typ 07-335* - ****/****, 07-336* - ****/****

auf das sich diese Erklärung bezieht den Anforderungen der folgenden Richtlinien (RL) entspricht ATEX-Richtlinie 2014/34/EU RoHS-Richtlinie 2011/65/EU RoHS-Richtlinie 2015/863/EU und mit folgenden Normen oder normativen Dokumenten übereinstimmt	to which this declaration relates is in accordance with the provision of the following directives (D) ATEX-Directive 2014/34/EU RoHS-Directive 2011/65/EU RoHS-Directive 2015/863/EU and is in conformity with the following standards or other normative documents	se référant à cette attestation correspond aux dispositions des directives (D) suivantes Directive ATEX 2014/34/UE Directive RoHS 2011/65/UE Directive RoHS 2015/863/UE et est conforme aux normes ou documents normatifs ci-dessous
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EN 60079-0:2012 + A11:2013

EN 60079-1:2014

EN 60079-7:2015

EN 60079-11:2012

EN 60068-2-27:2009

EN 61000-6-2:2005

EN 61000-6-4:2007 + A1:2011

Verfahren der EU-Baumusterprüfung / Benannte Stelle	Procedure of EU-Type Examination / Notified Body	Procédure d'examen UE de type / Organisme Notifié
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CML 17 ATEX 1106 U^(*), Issue 2

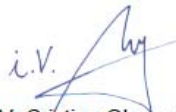
2276, CML B.V., Hoogoorddreef 15, 1101BA Amsterdam, NL

^(*) Die Ex-Komponente ist Teil eines elektrischen Betriebsmittels oder eines Moduls, gekennzeichnet mit dem Symbol „U“, das nicht für sich allein verwendet werden darf und über dessen Einbau in elektrische Betriebsmittel oder Systeme zur Verwendung in explosionsgefährdeten Bereichen gesondert entschieden werden muss. Merkmale dieser Komponente sowie die Bedingungen für ihren Einbau in Geräte und Schutzsysteme siehe Betriebsanleitung der Komponente.	^(*) The Ex-component is a part of an electrical apparatus or a module, marked with the symbol "U", which is not intended to be used alone and requires additional consideration when incorporated into electrical apparatus or systems for use in explosive atmospheres. Characteristics and how the component must be incorporated into equipment or protective systems see operation manual of the component.	^(*) Le composant Ex est partie de matériel électrique ou de module, marquée du symbol « U », ne devant pas être utilisée seule et nécessitant une certification complémentaire lorsqu'elle est incorporée à un matériel électrique ou à un système pour atmosphères explosives. Les caractéristiques du composant ainsi que les conditions d'incorporation dans des appareils ou des systèmes de protection regarde voir l'instruction d'emploi du composant.
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Bad Mergentheim, 23.08.2019


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Product Manager Ex e


i.V. Cristian Olareanu
Team Leader Certification Center