

ComEx Ex i illuminated push button module

for panel- and railmounted installation



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Note on instructions

When working in hazardous areas, the safety of personnel, environment 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 Ex i illuminated push button module is used in almost all hazardous (potentially explosive) areas where machine functions are to be activated at the push of a button and the corresponding functional status is to be indicated visually.

The ComEx Ex i illuminated push button module is flexible and available in different colours (red, green, yellow, white and blue). The connecting cable is connected to the ComEx Ex i illuminated push button module via screw terminals. The ComEx Ex i illuminated push button module offer the option of simple and fast mounting on a rail- or a panel mounted installation per direct mounting to the ComEx actuator. The ComEx Ex i illuminated push button modules are developed and certified for globally market.

Explosion protection

Notified Body Number	C€0044
Approved Body Number	UK 2503
ATEX/UKEX Ex protection type	Ⓜ II 2G Ex db ia IIC Gb Ⓜ I M2 Ex db ia I Mb
ATEX/UKEX certificate number	CML 22 ATEX 1135 U CML 22 UKEX 1136 U
IECEX Ex protection type	Ex db ia IIC Gb Ex db ia I Mb
IECEX certificate number	IECEX CML 22.0014 U
CEC (UL Mark)	Ex db ia IIC Gb Class I, Division 2, Groups A, B, C, D
NEC (UL Mark)	Class I, Zone 1, AEx db ia IIC Gb Class I, Division 2, Groups A, B, C, D
UL certificate number	UL E184198
Service temperature	-55 °C to +85 °C (-67 °F to +185 °F)
For further approvals and certificates, see www.bartec.com	

Technical data

Max. Ambient temperature only with protection by flameproof enclosure "d"	+85 °C (+185 °F)
Degree of protection	IP20 acc. to EN 60529
Rated voltage	DC 12-30 V
Rated insulation voltage	30 V
Power consumption	< 1 W
Lamp	LED (red, green, yellow, white, blue)
Illumination	very bright, visible angle over 180°
Contacts	1 N/C or 1 N/O as snap switch element DC-13 0.25 A/24 V
Enclosure material	thermoplastic
Conection	0.75 mm² - 2.5 mm²/18 AWG - 12 AWG
Electrical life	10 ⁵ running hours
Mechanical life	10 ⁵ switching cycles
Storage and transport temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Weight	Panelmounted approx. 110 g Railmounted approx. 110 g
Mounting	Panelmounted (locked to signal device actuators 07-3400-T* by bayonet catch) Railmounted (latched on mounting rail NS 35 x 7.5)
Shock resistance	DIN EN 60068-2-27, 30 g 18 ms



Safety Instructions

The ComEx Ex i illuminated push button modules and the corresponding actuator may be used only within the specified ambient and operating temperature range.

Utilisation 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 Ex i illuminated push button modules 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:



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



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



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



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




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

Standards conformed to

Please see Attestations of Conformity


Transport, Storage



OTICE
ComEx Ex i illuminated push button module damage through incorrect transport or incorrect storage.

- Transport and storage is permissible in original packaging only.
- Store the ComEx Ex i illuminated push button module in a dry place.


Assembly, Installation



ARNING
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

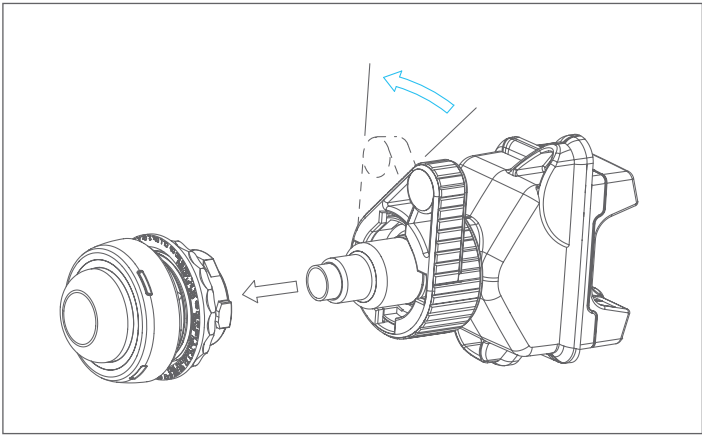


ARNING
Risk of serious accidents due to damaged parts.

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

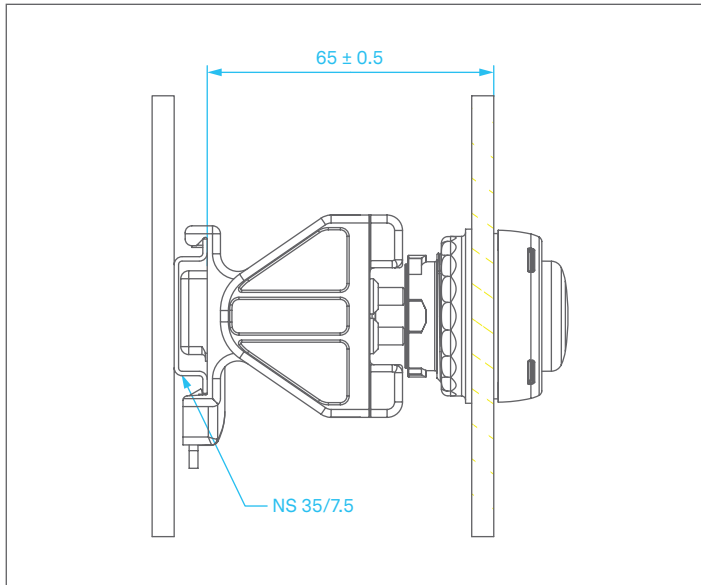
Mounting the ComEx Ex i illuminated push button module for panelmounting:

- Make sure the ComEx Ex i illuminated push button module to be fitted is intact (no cracks).
- Position the ComEx Ex i illuminated push button modules bayonet lock at the mounted lamp module actuator.
- Turn the locking bolt to connect the ComEx Ex i illuminated push button module securely to the lamp module actuator.



Mounting the ComEx illuminated push button module for railmounting:

- Make sure the Ex i illuminated button to be fitted is intact (no cracks).
- Position the Ex i illuminated button on the mounting rail NS 35/7.5.
- Align the position of the button on the mounting rail at the lamp module actuator.



- The service temperature of the modules shall be within -55 °C to +85 °C. The service temperature of the locking device for the modules type 07-33*4-4***/* shall not exceed +70 °C.
- Each terminal of the module is limited to one conductor per clamping unit.
- The modules shall be installed in accordance with manufacturers documentation.



NOTE

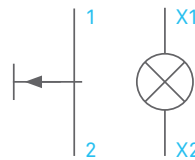
Avoid any capacitive influence from parallel conductors as well as any additional adverse heat effects on the cable.

Take care when connecting conductors:

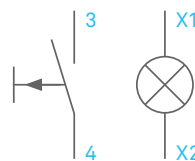
- Strip 40 mm (1.6 in) sheath off the conductor.
- Remove approx. 6 mm (0.2 in) conductor insulation from the cores.
- Prepare the ends of fine-stranded and multi-stranded conductors: Crimp wire end sleeves with suitable crimping tools. Connection cross-sections: 0.75-2.5 mm² (14-18 AWG).
- Release terminals.
- Mount the conductor in the clamp.
- Tighten the terminals with a torque of 0.4-0.7 Nm (0.3-0.5 lb.ft).

Terminal assignment:

Type 07-336*-****/* 1 N/C



Type 07-336*-****/* 1 N/O



Commissioning

Before commissioning, check that:

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



NOTE

The assembly of the illuminated button actuator is described in the operating instructions for actuating elements, type 07-3400-T*00

Installation

The ComEx Ex i illuminated push button modules must be installed as a stationary unit and with protection against the risk of mechanical damage.

The following schedule of limitation must be observed:

- The modules that complies with IEC 60079-7, shall be installed in an enclosure which meets the requirements of a recognised type of protection as specified in Section 1 of IEC 60079-0. When the modules are installed in an increased safety enclosure that complies with IEC 60079-7, the creepage and clearance distances shall comply with the standard requirements. The actual maximum rated current resp. power dissipation of the modules shall be determined in the type test of the electrical equipment concerned. When the module is used in a mine susceptible to firedamp (Group I), the maximum rated current shall not exceed 16 A.
- The modules that complies with IEC 60079-11, shall be installed in such a way that it is protected by an enclosure that complies at least with the requirements of IEC 60079-0 clause 26.4.2 and excludes the risk of mechanical damage. The separation distances to the module terminals shall be comply with the standard requirements.

Operation



DANGER

Death or serious injury through improper use.

- The ComEx Ex i illuminated push button module may be operated only within the technical limits that apply to it.

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 Ex i illuminated push button module, screw fittings and cables regularly for cracks and damage. Make sure that they are properly established.



NOTICE

ComEx Ex i illuminated push button module damage due to incorrect cleaning.

- It is not allowed to clean ComEx Ex i illuminated push button module with compressed air.

The operator of the ComEx Ex i illuminated push button module 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 Ex i illuminated push button module is defective if the switching unit does not perform switching functions any longer or the LED cannot light up any more. Defective ComEx Ex i illuminated push button modules cannot be repaired; they must be replaced considering this operational instruction.



NOTE

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

Disposal



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 Ex i illuminated push button module contain metal and plastic parts. Therefore the statutory requirements for disposing of electronic scrap must be observed.

Service-Address

BARTEC GmbH

Max-Eyth-Str. 16

97980 Bad Mergentheim

Germany

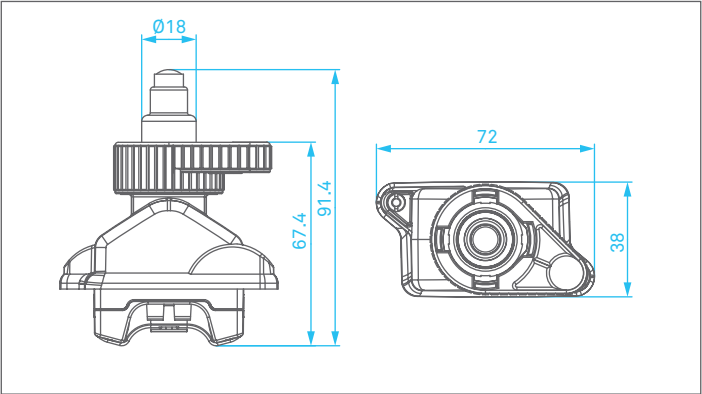
Phone: +49 7931 597-0

info@bartec.com



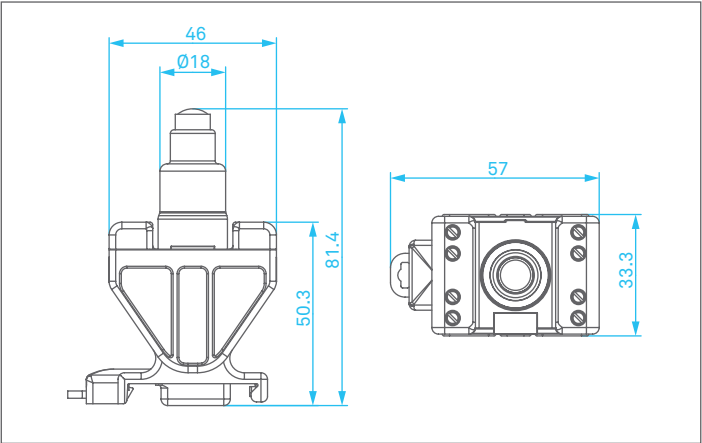
Dimensions in mm

ComEx Ex i illuminated push button for panelmounted
07-3364-4*



Dimensions in mm

ComEx Ex i illuminated push button for railmounted
07-3362-1*

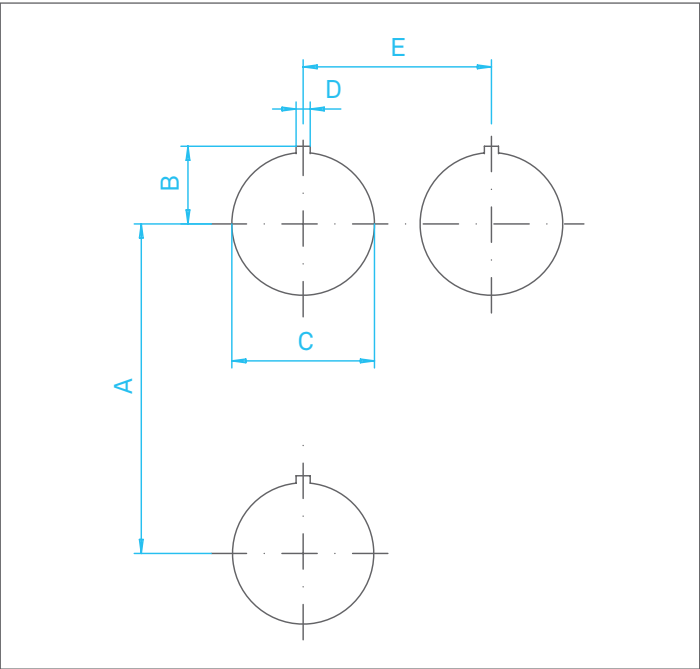


Installation dimensions

NOTICE

Damage to elements due to incorrect installation dimensions.

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



Dimensions		
	mm	in
A	70	2.8
B	16.5	0.7
C	Ø 30.3 ^{+0.3}	Ø 1.2 ^{+0.01}
D	3	0.1
E	40	1.6

If the control and signal device actuators and modules are not placed directly below each other in a grid structur, the row spacing of 75 mm must be maintained.

Konformitätsbescheinigung
Attestation of Conformity
Attestation de conformité
Nº 01-3300-7C0010-A



Wir	We	Nous
BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim Germany		
erklären in alleiniger Verantwortung, dass das Produkt Schaltmodul, Steuerschalter, Leuchtmodul, Leuchttaster, Potentiometer	declare under our sole responsibility that the product Switch Module, Control Switch Module, Illuminated Indicator Module, Illuminated Push Button Module, Potentiometer Module	attestons sous notre seule responsabilité que le produit Module de commutation, module d'interrupteur de commande, module d'indicateurs lumineux, module de bouton-poussoir lumineux, module de potentiomètre

Switch Module Type 07-332*_*0/** and Type 07-3382-****/******
Control Switch Module Type 07-3332-1*/******
Illuminated Indicator Module Type 07-335*_*0/****
Illuminated Push Button Module 07-336*_*0/****
Potentiometer Module Type 07-337*_*D0/****

auf das sich diese Erklärung bezieht den Anforderungen der folgenden Richtlinien (RL) entspricht ATEX-Richtlinie 2014/34/EU EMV-Richtlinie 2014/30/EU RoHS-Richtlinie 2011/65/EU WEEE-Richtlinie 2012/19/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 EMC-Directive 2014/30/EU RoHS-Directive 2011/65/EU WEEE-Directive 2012/19/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 CEM 2014/30/UE Directive RoHS 2011/65/UE Directive WEEE 2012/19/UE et est conforme aux normes ou documents normatifs ci-dessous
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EN IEC 60079-0:2018
EN 60079-1:2014
EN IEC 60079-7:2015/A1:2018
EN 60079-11:2012
EN 61000-6-2:2005
EN 61000-6-4:2007+A1:2011
EN IEC 63000:2018

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 22ATEX1135U(*) – Issue 0
2776, 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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0044

Bad Mergentheim, 26.01.2024

i.A. Simon Dyhringer

Product Manager Ex e

i.A. Steffen Mika

Team Leader Certification
Management R&D ESS

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