



## 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<sup>flex</sup> switch module, type 07-3323-4\*\*\*/\*, is used everywhere in almost all hazardous areas where machine functions are to be activated by pressing a button or actuating a switch.

The ComEx<sup>flex</sup> switch module is equipped with self-cleaning contacts. All N/O contacts featuring positive break operation.

The connection is established by means of terminals at the back of the ComEx<sup>flex</sup> switch module.

The ComEx<sup>flex</sup> switch module is designed for combining with different actuating elements and a junction box. It is attached without tools to the actuating element.

The actuating element is inserted into a mounting hole in an Ex e enclosure, a control console or control panel.

The easy installation of the actuator allows conformance to a high IP degree of protection.

When inserted into a control console or control panel, there is the option of mounting the junction box. This is connected to the ComEx<sup>flex</sup> switch module by means of two screws.

## Explosion protection

### ATEX

Ex type of protection

⊕ II 2G Ex db eb IIC Gb

⊕ I M2 Ex db eb I Mb

Certification

CML 17 ATEX 1105 U

### IECEX

Ex type of protection

Ex db eb IIC Gb

Ex db eb I Mb

Certification

IECEX CML 17.0045

Other approvals and certificates, see [www.bartec-group.com](http://www.bartec-group.com)

### Ambient temperature ranges

-55 °C to +60 °C  
(-67 °F to +140 °F)

or

-55 °C to +40 °C  
(-67 °F to +104 °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 actuating element and additional enclosure. Terminals: IP 20

With junction box and actuating element: up to IP 67

### Weight

Approx. 110 g (0.24 lb)

### Enclosure material

Thermoplastic

### Contact material

AgSnO<sub>2</sub>

### Rated insulation voltage

690 V

### Rated voltage

AC 230 V and 400 V  
DC 24 V and 110 V

### Contacts

1 N/C contact and 1 N/O contact or  
2 N/C contacts or 2 N/O contacts

### Switching capacity

AC-15	400 V	10 A
AC-12	400 V	16 A
DC-13	24 V	1 A
DC-13	110 V	0,5 A

### Conventional thermal current

16 A / +40 °C (+104 °F)  
11 A / +60 °C (+140 °F)

### Min. rated operating current

10 mA / 24 V

### Service life

Mechanical: > 10<sup>5</sup> switching cycles

### Mounting

Locked, by bayonet lock

### Shock resistance

DIN EN 60068-2-27: 30 g 18 ms

### Dimensions

See page 3

## Safety Instructions

The ComEx<sup>flex</sup> switch module and its actuating element may be used only within the specified ambient and operating temperature range. Incorrect installation can cause malfunctioning and the loss of explosion protection.

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.

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.

When setting up or operating explosion-resistant electrical systems, the IEC/EN 60079-14 (NEC for USA/CEC for Canada) and all relevant installation and operating regulations must be observed.

The ComEx<sup>flex</sup> switch module may be used only if it is clean and not damaged in any way. It is not permissible to modify the module in any way.

## 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.

### 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 60068-2-27:2009  
IEC 60079-0:2011  
IEC 60079-1:2014-06  
IEC 60079-7:2015  
IEC 60068-2-27:2008

## Transport, Storage

### NOTICE

Switch module damage through incorrect transport or incorrect storage.

- Transport and storage is permissible in original packaging only.
- Store the ComEx<sup>flex</sup> switch module 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

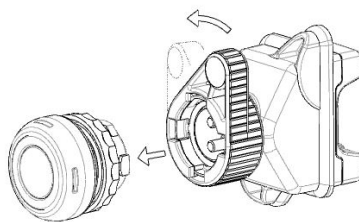
### WARNING

Risk of serious accidents due to damaged parts.

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

Mounting the ComEx<sup>flex</sup> switch module:

- Make sure the ComEx<sup>flex</sup> switch module to be attached is intact (no cracks).
- Position the ComEx<sup>flex</sup> switch module's bayonet lock at the mounted actuating element.
- Turn the closing latch to connect the ComEx<sup>flex</sup> switch module securely to the actuating element.



### Note

The assembly of the actuating element as well as the assembly of the switch module and the actuating element 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<sup>flex</sup> switch module must be used:

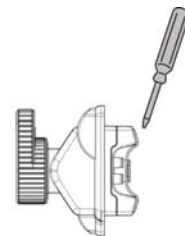
- In appropriate enclosures with “Ex e” increased safety type of protection. The clearances and creepage distances under IEC/EN 60079-7 Section 4.3, Section 4.4 and Table 1 must be observed.
- In an enclosure that corresponds to another approved type of protection specified in IEC/EN 60079-0 Section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

### With junction box

The switch module ComEx<sup>flex</sup> must be installed as a stationary unit and with protection against the risk of mechanical damage.

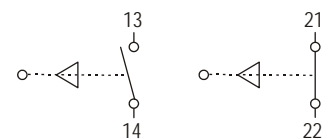
Take care when connecting conductors:

- 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 mm<sup>2</sup> (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.

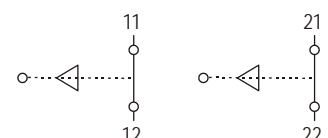


### Terminal assignment:

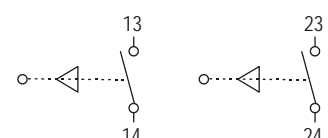
Type 07-3323-44\*\*\*/\*\*\*\*:  
1 N/O contact and 1 N/C contact



Type 07-3323-41\*\*\*/\*\*\*\*: 2 N/C contacts



Type 07-3323-42\*\*\*/\*\*\*\*: 2 N/O contacts



## Commissioning

Before commissioning, check that:

- The ComEx<sup>flex</sup> switch module has been mounted and installed in compliance with regulations.
- The ComEx<sup>flex</sup> switch module is not damaged.
- The connection has been established properly (make sure the cores are secure).
- Functional and recurring inspections must be conducted at regular intervals. The plant operator must define the test intervals for the respective application. The properties of AgSnO<sub>2</sub> contacts must be taken into account in the case of low supply voltage (DC 24V) and long periods between actuation. I.e. used in applications with low voltage/low current, such as PLC signal-switching, and in saline or other corrosive environments it is recommended to increase test interval frequency to minimum once per year.

## Operation

### **DANGER**

Death or serious injury through improper use.

- The ComEx<sup>flex</sup> switch module 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<sup>flex</sup> switch modules, actuating elements, actuators, screw fittings, sealings and cables regularly for cracks and damage. Make sure that they are properly established.
- Functional and recurring inspections must be conducted at regular intervals. The plant operator must define the test intervals for the respective application. The properties of AgSnO<sub>2</sub> contacts must be taken into account in the case of low supply voltage (DC 24V) and long periods between actuation. I.e. used in applications with low voltage/low current, such as PLC signal-switching, and in saline or other corrosive environments it is recommended to increase test interval frequency to minimum once per year.

### NOTICE

ComEx<sup>flex</sup> switch module/ actuating element damage due to incorrect cleaning.

- It is not allowed to clean ComEx<sup>flex</sup> switch modules/ actuating elements with compressed air.

The operator of the ComEx<sup>flex</sup> switch module must keep it in good condition, operate it properly, monitor it and clean it regularly.

The owner/managing 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<sup>flex</sup> switch module is defective if the switching unit does not perform switching functions any longer. Defective ComEx<sup>flex</sup> switch modules cannot be repaired; they must be replaced considering this operational instruction.

Defective actuating elements can be removed from the ComEx<sup>flex</sup> switch module and replaced by functioning actuating elements 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<sup>flex</sup> switch module 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<sup>flex</sup> switch module and the actuating element contain metal and plastic parts.

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



## Service Address

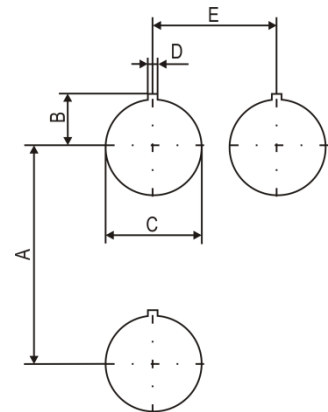
BARTEC GmbH  
Max-Eyth-Straße 16  
97980 Bad Mergentheim  
Germany  
Tel.: +49 7931 597-0  
Fax: +49 7931 597-119

## Installation dimensions

### NOTICE

Damage to elements due to incorrect installation dimensions.

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

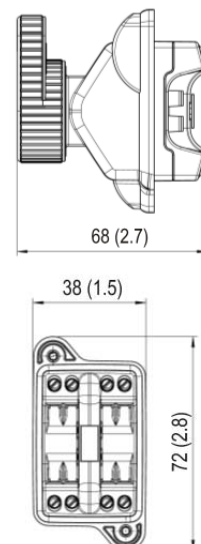


Dimensions:

	mm	in
A*	75	2.95
B	16.5	0.7
C	∅ 30.3 <sup>+0.3</sup>	∅ 1.2 <sup>+0.01</sup>
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).

## Dimensions in mm (in)



EU Konformitätsbescheinigung  
EU Attestation of Conformity  
Attestation UE de conformité**BARTEC**

N° 01-3320-7C0001\_E

Wir	We	Nous
	<b>BARTEC GmbH</b> Max-Eyth-Straße 16 97980 Bad Mergentheim Germany	
erklären in alleiniger Verantwortung, dass das Produkt <b>Schaltmodul Steuerschalter ComEx Schaltmodul, 4-polig</b>	declare under our sole responsibility that the product <b>Switch Module Control Switch ComEx Switch module, 4-pole</b>	attestons sous notre seule responsabilité que le produit <b>Elément de contact Interrupteur de commande Module de commutation, 4-polaire</b>

Typ 07-332\*-\*\*\*\*/\*\*\*\*, 07-333\*-\*\*\*\*/\*\*\*\*, 07-3381-\*\*\*\*/\*\*\*\*

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

EN 60079-0:2012 + A11:2013  
EN 60079-1:2014  
EN 60079-7:2015EN 61508-1:2010  
EN 61508-2:2010  
EN 60947-5-4:2003

Verfahren der EU-Baumusterprüfung / Benannte Stelle	Procedure of EU-Type Examination / Notified Body	Procédure d'examen UE de type / Organisme Notifié
---	--	---

CML 17 ATEX 1105 U<sup>(\*)</sup>, Issue 3

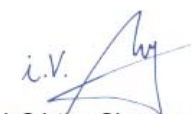
2276, CML B.V., Hoogoorddreef 15, 1101BA Amsterdam, NL

<sup>(*)</sup> 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.	<sup>(*)</sup> 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.	<sup>(*)</sup> Le composant Ex est partie de matériel électrique ou de module, marquée du symbole « 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.
--	---	--

0044

Bad Mergentheim, 23.08.2019

  
 i.A. Simon Dynringer  
 Product Manager Ex e

  
 i.V. Cristian Olareanu  
 Team Leader Certification Center