**Description**

Miniature insert switches are used wherever the space for explosion-proof elements is very confined. These switches are particularly suitable for use in valves, thermostats, pressure switches, actuators, level gauges and switchgear. The insert switches are equipped with integral cores for establishing an electrical connection.

The switch has fine silver contacts as standard. Gold-coated fine silver contacts are available for particularly low voltage.

The length of the connection cable is variable.

**Dimensions in mm** Core dia. = 2.5 mm

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>26</td>
<td>2</td>
</tr>
<tr>
<td>27</td>
<td>2</td>
</tr>
<tr>
<td>28</td>
<td></td>
</tr>
<tr>
<td>3,1</td>
<td></td>
</tr>
</tbody>
</table>

**Insert switch incl. actuator**

**Explosion protection**

- **Ex protection type**
  - II 2G Ex d IIC
  - IM2 Ex d I
  - Ex d IIC

**Certification**

- PTB 98 ATEX 1033 U
- IECEx PTB 09.0032U

**Ambient temperature**

-20 °C to +40 °C

**Approved for zones**

1 and 2

**Current carrying capacity**

Max. 5 A (depending on contact material and conductor cross-section)

**Technical data**

- **Rated voltage/current**
  - AC 250 V, 5 A
  - DC 250 V, 0.25 A

- **IP rating**
  - IP 54 (EN 60529)

- **Contact options**
  - 1 N/C contact or 1 N/O contact or
  - 1 change-over contact with equal potential

- **Tightening torques**
  - Fastening screws: max. 0.6 Nm

- **Switching rate**
  - max. 1000/h

- **Operating force**
  - max. 1.4 N

- **Release force**
  - min. 0.25 N

- **Contact travel**
  - Pre-travel VLW: 0.5 to 1.0 mm
  - Overtravel NLW: min. 0.2 mm
  - Reset travel RLW: ~ 0.55 mm
  - Differential value DW: max. 0.13 mm
  - Free travel LLW: ~ 0.5 mm

- **Service life**
  - Mechanical: > 2 x 10⁶ switching cycles
  - Electrical: depending on load

- **Enclosure material**
  - Thermosetting plastic

- **Plunger/additional actuator**
  - Stainless steel

- **Electrical connection**
  - See data sheet
Safety Instructions

The miniature insert switch may be used only within the specified temperature range. Incorrect installation without protection can cause malfunctioning and the loss of explosion protection.

The miniature insert switch may be connected and assembled/disassembled only by qualified personnel who are authorised and trained to install electric components in hazardous areas. Always disconnect the device from voltage before assembly/disassembly.

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

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

The miniature insert switch may be operated only if it is clean and not damaged in any way. Do not use the miniature insert switch as a mechanical stop.

The switch must be replaced after any short circuit that occurs because it is a piece of encapsulated equipment and it is therefore not possible to check the state of the switch contacts.

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 precautions must be taken.

⚠️ CAUTION

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

👉 ATTENTION

Important instructions and information on preventing disadvantageous behaviour.

ℹ️ NOTE

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

Standards conformed to

- EN 60079-0: 2006
- EN 60079-1: 2007
- IEC 60079-0: 2004
- IEC 60079-1: 2007
- EN 60947-1: 2007
- EN 60947-5-1: 2004

Assembly and Commissioning

👉 ATTENTION

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

⚠️ CAUTION

The relevant installation and operating regulations must be observed when setting up or operating explosion-protected electrical systems.

Check before assembly that the miniature insert switch is in perfect condition.

Assembly/disassembly

👉 ATTENTION

The miniature insert switch must be fitted in a manner that ensures that it will be protected from impact energy. When necessary, switches mounted outdoor must be fitted into outer enclosures with an adequate protection class.

Only suitable tools may be used for installation.

Installation

👉 ATTENTION

Care must be taken not to damage the cores during installation. Wire end sleeves must be crimped with suitable crimping tools.

Commissioning

Before commissioning check that:

- the device has been installed correctly
- the device is not damaged
- there is no foreign matter obstructing the actuating travel
- the junction box is clean
- the connection has been established properly
- the cores have been laid correctly
- all screws are tightened securely

ℹ️ NOTE

The types of contact, core marking and actuator variants can be found on the following page.

Operation

⚠️ DANGER

The miniature insert switch may be operated only within the technical limits that apply to it (see the Explosion protection and Technical data sections).

⚠️ CAUTION

Do not make any technical modifications to the switch.

Maintenance and Fault Clearance

The operator of the miniature insert switch must keep it in an orderly condition, operate it correctly, monitor it and clean it regularly. The insert switch enclosure must be checked regularly for cracks and other damage.

ℹ️ NOTE

Dirty switches/actuators can be cleaned with compressed air.

The miniature insert switch is defective if switching functions are no longer possible with the switching unit or if the actuator does not activate the switching unit any longer. Defective insert switches cannot be repaired; they must be replaced.

Accessories, spare parts

There are no accessories or spare parts for the miniature insert switch.

Disposal

The components in the miniature insert switch and the actuator contain metal and plastic parts.

For that reason, the statutory requirement for electronic scrap must be adhered to (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
Installation and Assembly Instructions

Miniature Insert Switch Type 07-1501...

Assembly

max. 0.6 Nm

2 x

Connection

WH

BN

Key

WH = white core
BN = brown core
GN = green core

Actuator dimensions

07-1501-xxxx/01

07-1501-xxxx/02

07-1501-xxxx/03

07-1501-xxxx/63
# Installation and Assembly Instructions

## Miniature Insert Switch

### Declaration of Conformity

**Erklärung der Konformität**
**Declaration of Conformity**
**Attestation de conformité**

**N° 01-1501-7C0001**

### Instructions

**Wir**

- erklären in alleiniger Verantwortung, dass das Produkt

**Miniatur Einbauschalter**

- Typ 07-1501-.......

**BarTEC GmbH**

- ATEX-Richtlinie 94/9/EG
- EMV-Richtlinie 2004/108/EG
- Maschinen-Richtlinie 2006/42/EG

**EN 60079-0:2006**
**EN 60079-1:2007**

**Kennzeichnung**

- II 2G Ex d IIC
- I M2 Ex d I

**Verfahren der EG-Baumusterprüfung / Benannte Stelle**

- Procedure of EC-Type Examination / Notified Body

- PTB 98 ATEX 1033 U

### Nous

- attestons sous notre seule responsabilité que le produit

**Microrupteur encastrable**

- Typ 07-1501-.......

**BarTEC GmbH**

- ATEX-Directive 94/9/EC
- EMC-Directive 2004/108/EC
- Maschinery Directive 2006/42/EC

**EN 60947-1:2007**
**EN 60947-5-1:2004**

**Marquage**

- Directive Européenne de l’Equipment 2006/42/CE


- et est conforme aux normes ou documents normatifs ci-dessous

**Reservation**

- Technical data subject to change without notice. Changes, errors and misprints may not be used as a basis for any claim for damages.