Miniature

Limit switch



Insert switch

Description

BARTEC miniature switches are used in areas with of limited space for a flameproof switching element. They are especially suitable for applications in valves, thermostats, push switches, servo components, level metres and switching gears. The smallest EEx d miniature switch in the world is encapsulated in a plastic enclosure. The leads or cable tail are potted in at the base. PTB approvals according to the latest European regulations are available for this switch.
The standard version of the BARTEC miniature switches contains fine silver contacts. Other contact materials such as gold plated silver or solid gold are available for low currents and voltages.

Limit switch with connection cable

Switches with connector cables have already been approved by PTB with EC model test certification. The switches can therefore be mounted at any time into devices and systems which offer mechanical protection – no further testing is required. The connector cable is cast into the back of the switch. The wires are colour-coded. The (standard) cable length is 3 m; other lengths are available on request.

Insert switch with connection cores

The insert switch with wires is available as a building block for your explosion-proofing solution. These insert switches are tested and approved by PTB (the Federal Physical-Technical Institute) according to Ex Guideline 94/9/EC. After installation, the complete device is tested by an authorized institution. Thanks to its PTB approval, the microswitch itself needs not be individually tested. The leads are individually marked. The length of the cable is 50 cm (standard). Other lengths can be supplied on request. For the connection of the cores we recommend our BARTEC EEx Mini-terminals.

Explosion protection

Ex protection type

Limit switch ⟨Ex⟩ II 2G EEx d IIC T6

Insert switch ⟨Ex⟩ II 2G EEx d IIC
⟨Ex⟩ I M2 EEx d I

FM approved for Class 1. Div. 2

Certification

Limit switch with cable tail: PTB 01 ATEX 1005 X

Insert switch with cores: PTB 98 ATEX 1033 U

Ambient temperature

Typ 07-2501

up to 4 A:
-40 °C to +70 °C/T6 (LiYY)

Typ 07-1501

up to 3 A:
-55 °C to +90 °C/T5 (Radox, 4 GAF)

up to 4 A:
-20 °C to +70 °C/T6 (H05V2-K)

up to 5 A:
-20 °C to +80 °C/T5 (H05V2-K)

Technical data

Protection class
IP 54/IEC 60529

Rated voltage
AC 250 V

Rated current
AC 5 (5) A
DC 0.25 (0.03) A

Switching capacity with AC		
	ohmic load	inductive load
250 V	5 A	5 A
30 V	5 A	5 A

Switching capacity with DC		
	ohmic load	inductive load
250 V	0.25 A	0.03 A
125 V	0.5 A	0.06 A
75 V	1 A	1 A
30 V	5 A	5 A

Contact elements
see table

Tightening torque of fixing screws
max. 0.6 Nm

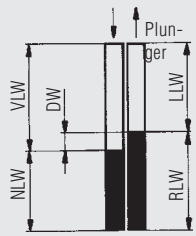
Operating force
max. 1.2 N

Release force
min. 0.2 N

Switching cycles
max. 1 000/h

Contact travels

- Pretravel (VLW)	0.4 to 0.9 mm
- Overtravel (NLW)	min. 0.2 mm
- Reset travel (RLW)	0.55 mm
- Differential value (DW)	max. 0.13 mm
- No-load travel (LLW)	0.5 mm



Mechanical life
10^7 switching cycles

Electrical life
dependent on load

Electrical connection
cast-in cores or
cable 0.75 mm²

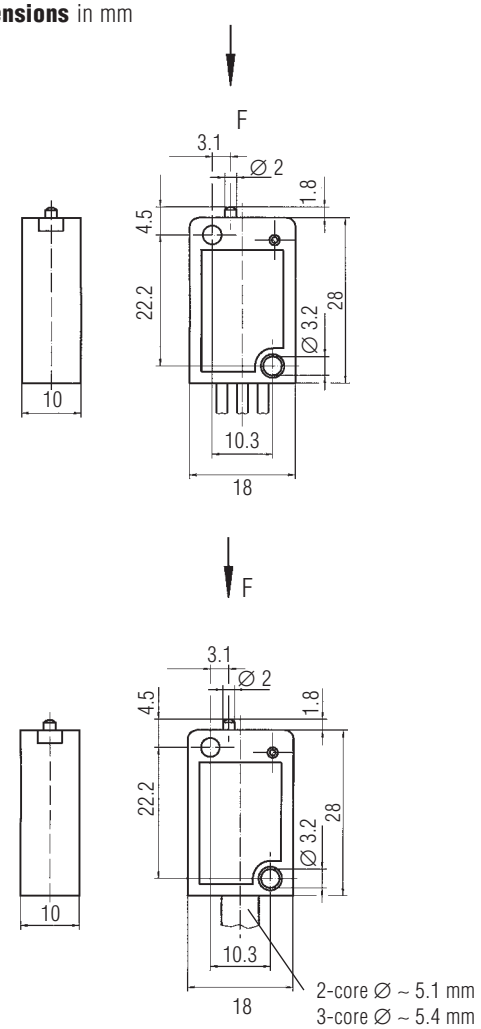
Enclosure
Duroplast

Plunger/additional actuator
stainless steel

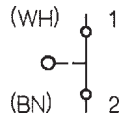
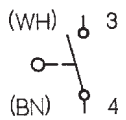
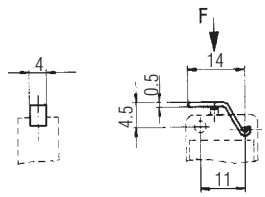
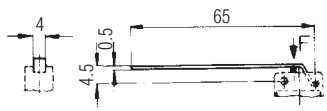
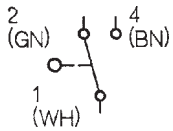
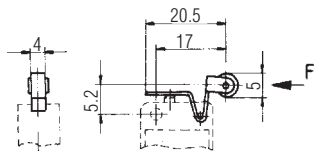
Weight
with 0.5 m cores approx. 25 g
with 1 m cable approx. 50 g

03-0330-0156-11/05-BCS-A129308E

Dimensions in mm



Selection chart

Type of contact	Code no.	Additional actuator* Options	Code no.
	**10**	without additional actuator	**00**
	**20**		**01**
			**03**
	**30**		**63**

( ) specification for connection cable

Complete order no.
Please enter code number.

07- ☐ **501-** ☐ ☐ ☐☐ / ☐☐

Insert switch with connection cores	**1**
Limit switch with connection cable	**2**

Length of connection cores in mm
e.g. code no. **5** = 500 mm

Length of connection cable in metres
e.g. code no. **3** = 3 m

Please specify greater lengths in plain text, code no. = **0**

Contact material	
6	Silver
7	Gold-coated contacts

Special versions, please specify in text

- precision switch with differential value 0.04 ± 0.02 (switching capacity 1 A), type 07-.501-5.../..
- different ambient temperature

***** Dimensions for a additional actuator are reference values

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