



Miniature
Insert switch/
Limit 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 Ex d miniature switch in the world is encapsulated in a plastic enclosure. The leads or cable tail are potted in at the base.

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 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 Ex Mini-terminals.

Explosion protection

Ex protection type

Limit switch Ex II 2G Ex d IIC T6

Insert switch Ex II 2G Ex d IIC

Ex I M2 Ex d I

FM approved for Class 1, Div. 2

Certification

Limit switch

with cable tail: PTB 01 ATEX 1005 X
IECEX PTB 07.044 X

Insert switch

with cores: PTB 98 ATEX 1033 U
IECEX PTB 09.0032 U

The current carrying capacity depends on the ambient temperature.

Temperature class	Ambient temperature	Rated current at AC
T6	65 °C	5 A
T6	70 °C	4 A
T5	80 °C	5 A
T5	90 °C	3 A

Technical data

Protection class

IP 54/IEC 60529

Rated voltage

AC 250 V

Rated current

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. 1.4 N

Release force

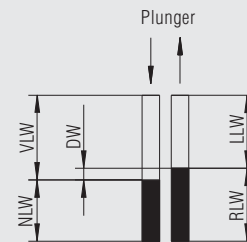
min. 0.25 N

Switching cycles

max. 1 000/h

Contact travels

- Pretravel (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
- No-load travel (LLW) ~0.5 mm



Mechanical life

10⁷ switching cycles

Electrical life

dependent on load

Electrical connection

Type 07-2501-....

LSYY 0.75 mm² (-40 °C to +70 °C)

Type 07-1501-....

Radox 0.75 mm² (-55 °C to +90 °C)

4GAF 0.75 mm² (-40 °C to +90 °C)

H05V2-K 0.75 mm² (-40 °C to +80 °C)

Enclosure

Duroplast

Plunger/additional actuator

stainless steel

Weight

with 0.5 m cores approx. 25 g

with 1 m cable approx. 50 g



Dimensions in mm		Selection chart	
		10	Type of contact without additional actuator Code no. 00
			Additional actuator* Options Code no. 01
		20	Type of contact without additional actuator Code no. 02
			Additional actuator* Options Code no. 03
		30	Type of contact without additional actuator Code no. 63
			Additional actuator* Options Code no. 63

() specification for connection cable

➔ **Complete order no.**
Please enter code number.

07- [] 501- [] [] [] / [] []

Length of connection cores
5 = 500 mm
Length of connection cable
3 = 3 m
Please specify other lengths in plain text, code no. = 0

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

Contact material	
6	Silver
7	Gold-coated contacts

Special versions, please specify in text

- * Dimensions for a additional actuator are reference values
- precision switch with differential value 0.04 ± 0.02 (switching capacity 1 A), Type 07-501-5.../..
- different ambient temperature