Snap-action switching element PIT

When using the switching element, the application guidelines must be observed.

Switching system

The double-break, snap-action switching element is equipped with one or two independent contact systems, acting as normally open or normally closed contact. The snap-action switching element is fitted with self-cleaning contacts.

Up to three switching elements can be snapped to each actuator.

Snap-action switching elements are not permissible for emergency stop pushbuttons!

Material

Housing
The indicator lights/switches may be installed in enclosures with protection class 2 according to DIN EN 61140.
The enclosure must at least have enclosure class 2 according to UL50E.

Material of contact
Hard silver and gold-silver

Switch housing
Plastic

Mechanical characteristics

Terminals

PIT push-in terminal	
- max. wire cross section	1.0 mm²
- stripping length wire	8 mm
- max. number of wire	2
- max. strand cross section	0.75 mm²
- stripping strands	use stranded wires only with wire end ferrules of 8 mm length
- max. number of strands	2

Only one polarity is allowed on each side when wiring.

Tightening torque
Screws at the plastic mounting flange max. 0.4 – 0.5 Nm
Screws at the metal mounting flange max. 0.25 – 0.3 Nm

Actuating force
1 Normally closed 1.9 N
1 Normally open 2 N

Actuating travel
Approx. 5.8 mm ± 0.2 mm

Mechanical lifetime
(with 1 switching element)

Pushbutton maintained action	1.5 million cycles of operation
Pushbutton momentary action	3 million cycles of operation
Selector switch maintained action	1.25 million cycles of operation
Selector switch momentary action	2.5 million cycles of operation
Keylock switch maintained action	25 000 cycles of operation
Keylock switch momentary action	50 000 cycles of operation

Electrical characteristics

Standards
The switches comply with DIN EN 60947-1/DIN EN 60947-5-1

Rated Insulation Voltage U_i
500 V, as per DIN EN 60947-5-1

Rated impulse withstand voltage U_{imp}
4 kV, according to EN/IEC 60947-5-1

Electrical life
50 000 cycles of operation

Thermal current I_{th}
Max. current at continuous operation and limit temperatures which do not exceed the specified max. values.
6 A

Switching voltage and switching current
as per EN IEC 60947-5-1

voltage	DC13	AC15
24 V	2,5 A	6,0 A
48 V		6,0 A
60 V	0,8 A	
110 V	0,6 A	
120 V		6,0 A
230 V		6,0 A

Recommended minimum operational data
Gold-silver contacts:
Voltage 24 VDC
Current 5 mA

Hard silver contacts:
Voltage 24 VDC
Current 50 mA

Protection class
Indicators and switches, fit for mounting into devices with protection class II

Ambient conditions

Storage temperature
−40 °C … +85 °C

Operating temperature
−40 °C … +55 °C
(other temperatures on request)

Protection degree
IP20

Shock resistance
(single impacts, semi-sinusoidal)
300 m/s² pulse width 11 ms, as per DIN EN 60068-2-27

Vibration resistance
(sinusoidal)
100 m/s² at 10 Hz … 500 Hz, as per DIN EN 60068-2-6 and EN 61373 Increased broad band noise, class 1B

Pollution degree
3

Climatic resistance
Relative humidity
10 ... 95 % non-condensing

Approvals

Approbations
CB (IEC 60947-5-1)
DNV
EAC
NFF
cULus
VDE

Conformities
CE
CCC
UKCA