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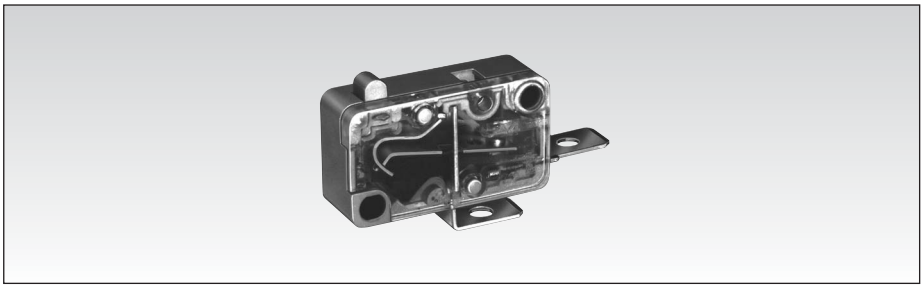
Miniature Positive Break Switches Series 83 160 DIN 41635 A



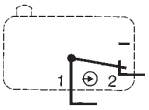
General specifications

Layout

The contact conforms to NFC 63 143 and IEC 947.5.1

*The SPDT version conforms to standard IEC 947.5.1 if only the normally closed contact is used.

The switch operating principle forces the contacts open even in the event of welding (positive break operation).



Components

Material

- Case : glass-filled polyamide
- Cover : transparent polycarbonate
- Contacts : nickel silver
- Positive rocker : high temperature thermoplastic

Actuators : stainless steel

- polyamide roller

Electrical characteristics

Short-circuit test

(from IEC 947-5-1 § 8.34)

- Current peak 1000 A at 250 V ~ 0.5 < cos φ < 0.7
- Short-circuit protection (SCPD) : fuse 10 A gG
- (IEC 60) (1.2/50 µs) : 2500 V

Electrical life

Max. operations : 20 cycles/min

Resistive load at 250 V~ 16 A : 10^5 cycles

Inductive load (IEC 947.5.1) :

AC 15 : 250 V~ 6A : 0.3 x 10^5 operations

DC 13 : 24 V ⎓ 20 W L/R = 40 ms : 3 x 10^5 operations

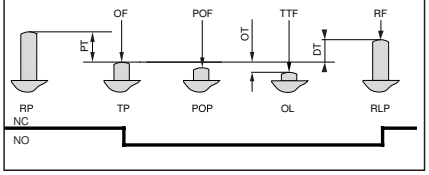
120 V ⎓ 20 W L/R = 40 ms : 5 x 10^5 operations

Definitions

P.O.F. Minimum Positive Opening Force. The operating force that has to be applied to the operating device to produce the positive opening action.

P.O.P. Maximum Positive Opening Position. The position of the operating device at the moment when positive opening of the contacts occurs.

For other definitions, see "Basic concepts".



Types

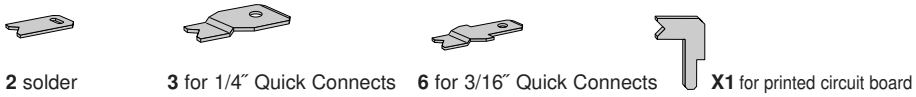
83 160 7

Features		With positive break operation	
Electrical characteristics		NC	SPDT*
Assigned working voltage (Ue)	V	250	250
Assigned working current (Ie)	A	6	6
Thermal current rating (Ith)	A	10	10
Assigned circuit voltage (Ui)	V	**250**	**250**
Mechanical characteristics			
Operating force - max.	N (oz.)	4 (14.1)	4 (14.1)
Release force - min.	N (oz.)	1.5 (3.5)	1.5 (3.5)
Min. positive opening force	N(oz.)	18 (63.5)	18 (63.5)
Permitted overtravel force - max.	N (oz.)	200 (70.5)	200 (70.5)
Maximum rest position	mm (in.)	15.7 (.62)	15.7 (.62)
Tripping point	mm (in.)	$14.8^{\pm0.3}$ ($.58^{\pm0.012}$)	$14.8^{\pm0.3}$ ($.58^{\pm0.012}$)
Maximum positive opening position	mm (in.)	13.5 (.53)	13.5 (.53)
Overtravel - min.	mm (in.)	1.3 (0.047)	1.3 (0.047)
Operating speed max.	m/s (ft/sec)	0.5 (1.64)	0.5 (1.64)
Operating rate max.	(operation/s)	5	5
Operating temperature	°C (°F)	-40+85 (-40+185)	-40+85(-40+185)
Mechanical durability	Operations	10^7	10^7
Contact gap	mm (in.)	1.2 (0.05)	1.2 (0.05)
Weight	g (oz.)	7 (0.25)	7 (0.25)

Contact Type

B (NC)	**B**
C (SPDT)*	**C**

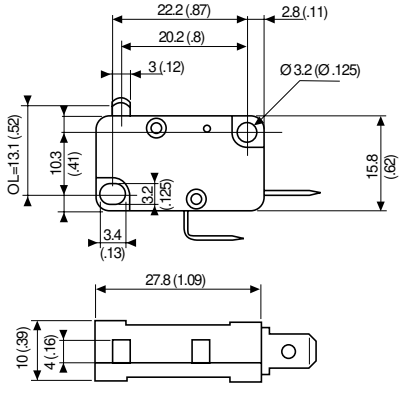
Connections



2 solder **3** for 1/4″ Quick Connects **6** for 3/16″ Quick Connects **X1** for printed circuit board

Actuators and mounting positions

Dimensions

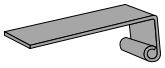


mm (in)

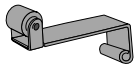
Actuators**

Ø=no Actuator

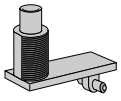
A (Flat)



E (Roller)



L (Pushbutton)



Other information

For other accessories, connections : please consult us

*NO – contact is not positive break

** Consult us for actuator length, forces and positions

To order, specify :

Example : 831607 B 3 • Ø

1 Switch Type	2 Contact Type	3 Connection	4 Actuator Type
831607	B C	2 3 6 X1	A L E Ø = No Actuator

Products and specifications subject to change without notice.