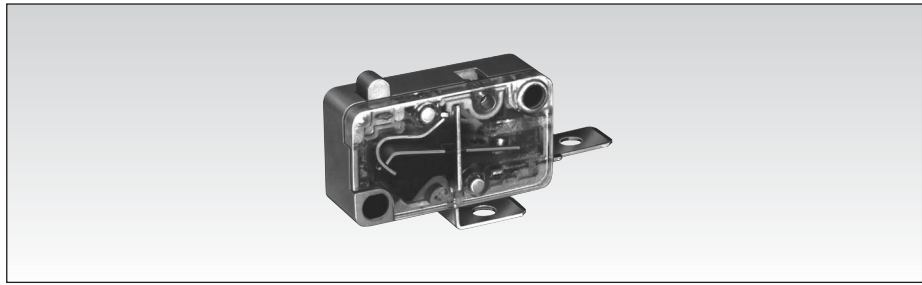


# Miniature Positive Break Switches Series 83 160 DIN 41635 A



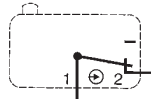
## General specifications

### 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 <math>\cos \varphi < 0.7</math>
- Short-circuit protection (SCPD) : fuse 10 A gG
- (IEC 60) (1.2/50  $\mu$ s) : 2500 V

#### Electrical life

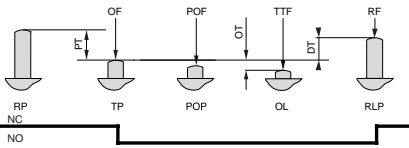
- Max. operations : 20 cycles/min
- Resistive load at 250 V ~ 16 A :  $10^5$  cycles
- Inductive load (IEC 947.5.1) : AC 15 : 250 V ~ 6A :  $0.3 \times 10^5$  operations
- DC 13 : 24 V ~ 20 W L/R = 40 ms :  $3 \times 10^5$  operations
- 120 V ~ 20 W L/R = 40 ms :  $5 \times 10^5$  operations

### 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	
	NC	SPDT*
<b>Electrical characteristics</b>		
Assigned working voltage (Ue)	V	250
Assigned working current (Ie)	A	6
Thermal current rating (Ith)	A	10
Assigned circuit voltage (Ui)	V	<b>250</b>
<b>Mechanical characteristics</b>		
Operating force - max.	N (oz.)	4 (14.1)
Release force - min.	N (oz.)	1.5 (3.5)
Min. positive opening force	N(oz.)	18 (63.5)
Permitted overtravel force - max.	N (oz.)	200 (70.5)
Maximum rest position	mm (in.)	15.7 (.62)
Tripping point	mm (in.)	14.8 <sup>+0.3</sup> (.58 <sup>+0.012</sup> )
Maximum positive opening position	mm (in.)	13.5 (.53)
Overtravel - min.	mm (in.)	1.3 (0.047)
Operating speed max.	m/s (ft/sec)	0.5 (1.64)
Operating rate max.	(operation/s)	5
Operating temperature	°C (°F)	-40+85 (-40+185)
Mechanical durability	Operations	10 <sup>7</sup>
Contact gap	mm (in.)	1.2 (0.05)
Weight	g (oz.)	7 (0.25)

### Contact Type

B (NC)

B

C (SPDT)\*

C

### Connections



2 solder



3 for 1/4" Quick Connects



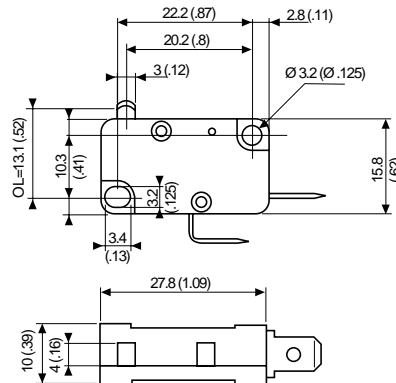
6 for 3/16" Quick Connects



X1 for printed circuit board

### Actuators and mounting positions

#### Dimensions

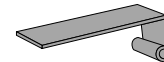


mm (in)

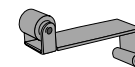
#### Actuators\*\*

Ø=no Actuator

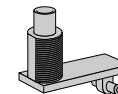
A (Flat)



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.

Order/Technical Support – Tel: (800) 677-5311 / FAX: (800) 677-3865 / www.crouzet-usa.com