

General specifications

Layout



Components

Material

- Case : glass-filled polyamide (self-extinguishing version to UL 94 VO and IEC 695-2-1 850° C - available on request)
- Button : polyamide
- Contacts : nickel silver or gold alloy (dual-current)

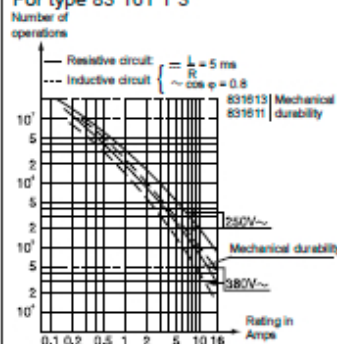
Actuators

- flat : stainless steel
- roller : stainless steel, glass-filled polyamide roller
- other types of polyamide

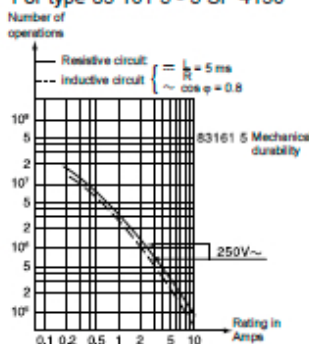
Approvals: NF - UL/cUL

Operating curve

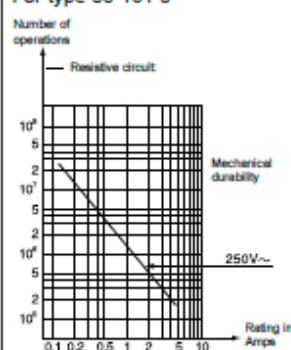
For type 83 161 1 3



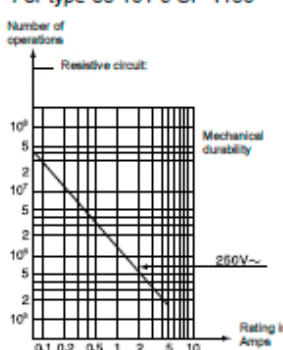
For type 83 161 5 - 5 SP 4136



For type 83 161 8



For type 83 161 9 SP 4136



For types 83 161 8 - 9 SP 4136 dual-current

Models 83 161 8 and 83 161 9 SP 4136 are designed to operate equally well on dual-current (1 mA 4 V minimum) or medium-current (5 A maximum) circuits.

However, a given product should only be used to switch one type of circuit during its working life.

Types

Part numbers for standard products with connections of type

2
3
6

Features

Electrical characteristics

Current rating at 125/250 V	Current	A
	Horsepower	HP

Mechanical characteristics

Operating force - max.	N (oz.)
Release force - min.	N (oz.)
Total travel force - max.	N (oz.)
Permitted overtravel force - max.	N (oz.)
Rest position - max.	mm (in.)
Tripping point	mm (in.)
Differential travel	mm (in.)
Overtravel - min. (OT)	mm (in.)
Ambient operating temperature	°C (°F)
Mechanical durability (for 2/3 OT)	Operations
Contact gap	mm (in.)
Weight	g (oz.)

Contact type

C (Form C) SPDT

B (Form B) SPNC

A (Form A) SPNO

Connections



2 solder



3 for 1/4" Quick Connects

Actuators and mounting positions

Part numbers for standard actuators

A 79 215 740

Actuators-Length mm (in.) Flat 161A R14.2 (.56)



Mounting positions	A	B
Coefficient	2	1
Tripping point (except 83 161 6)	15.2 ⁺¹ (.6 ^{+0.04})	15.2 ^{+0.45} (.6 ^{+0.018})
Tripping point 83 161 6	14.8 ⁺¹ (.59 ^{+0.04})	15 ^{+0.45} (.59 ^{+0.018})

Part numbers for standard actuators

H 79 218 651

Actuators-Length mm (in.) Dummy roller 161G R21.8 (.86)



Mounting positions	A	B
Coefficient	3	1.8
Tripping point (except 83 161 6)	21.7 ⁺² (.85 ^{+0.08})	21.7 ^{+0.7} (.85 ^{+0.03})
Tripping point 83 161 6	21.5 ⁺² (.85 ^{+0.08})	21.5 ^{+0.7} (.85 ^{+0.03})

Other information

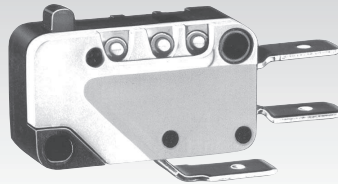
For other forces, actuators, connections and temperatures, please consult us.

Normally stocked items

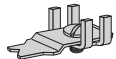
Catalog products produced to order

Products and specifications subject to change without notice.

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



1						
83161.1(10.1A)	83161.2(15.1A)	83161.3(10.1A)	83161.5(4A) 83161.9(0.1A)	83161.5SP4136 83161.9SP4136	83161.6	83161.8(0.1A)
831611C2.0 831611C3.0 831611C6.0	831612C2.0 831612C3.0 831612C6.0	831613C2.0 831613C3.0 831613C6.0	831615C2.0 831615C3.0 831615C6.0	• • •	831616C2.0 831616C3.0 831616C6.0	831618C2.0 831618C3.0 831618C6.0
High Force	High Current	Standard	Low Force	Ultra Light Force	Wide Gap	Dual Current
10.1 1/2	15.1 1/2	10.1 1/2	4 1/10	4 1/10	6.1 1/3	0.1 N/A
3 (10.5) 1 (3.5) 4.5 (15.8) 20 (70.5) 16.1 (0.63) 14.7 ^{±0.4} (.58 ^{±0.16}) 0.35 (0.014) 1.1 (0.05) -20 +125 (-4 +257) 10 ⁷ 0.4 (0.016) 5.6 (.2)	0.8 (2.8) 0.2 (0.7) 2 (7.0) 20 (70.5) 16.2 (0.64) 14.7 ^{±0.3} (.58 ^{±0.16}) 0.35 (0.014) 1.2 (0.05) -20 +125 (-4 +257) 2 x 10 ⁷ 0.4 (0.016) 5.6 (.2)	0.8 (2.8) 0.2 (0.7) 2 (7.0) 20 (70.5) 16.2 (0.64) 14.7 ^{±0.3} (.58 ^{±0.16}) 0.35 (0.014) 1.2 (0.05) -20 +125 (-4 +257) 2 x 10 ⁷ 0.4 (0.016) 5.6 (.2)	0.25 (0.9) 0.05 (0.18) 0.35 (1.2) 20 (70.5) 16.3 (0.64) 14.7 ^{±0.4} (.58 ^{±0.16}) 0.35 (0.014) 1.1 (0.05) -20 +125 (-4 +257) 5 x 10 ⁷ 0.4 (0.016) 5.6 (.2)	0.15 (0.54) 0.04 (0.14) 0.2 (0.72) 20 (70.5) 16.3 (0.64) 14.7 ^{±0.3} (.58 ^{±0.16}) 0.35 (0.014) 1.2 (0.05) -20 +125 (-4 +257) 5 x 10 ⁷ 0.4 (0.016) 5.6 (.2)	5 (18) 0.5 (1.8) 6 (21.6) 20 (70.5) 16.1 (0.63) 14.5 ^{±0.4} (.58 ^{±0.16}) 0.8 (0.03) 0.9 (0.035) -20 +125 (-4 +257) 5 x 10 ⁴ 3.2 (0.126) 5.6 (.2)	0.8 (2.8) 0.2 (0.7) 0.2 (.07) 20 (70.5) 16.2 (0.64) 14.7 ^{±0.4} (.58 ^{±0.16}) 0.35 (0.014) 1.2 (0.05) -20 +125 (-4 +257) 2 x 10 ⁷ 0.4 (0.016) 5.6 (.2)
2						
C B A	C B A	C B A	C B A	C B A	C B A	C B A
3						



5 screw



6 for 3/16" Quick Connects



7 for .11 Quick Connects

4			
B 70 507 524	E 79 215 742	G 70 507 529	F 70 507 528
Flat 161A R25.4 (1)	Roller 161E R13.6 (.54)	Roller 161E R24.1 (.95)	Dummy 161F roller R22.2 (.84)
A 4 15.2 ^{±2.5} (.6 ^{±1}) 14.4 ^{±2.5} (.56 ^{±1})	B 2 15.2 ^{±1} (.6 ^{±0.04}) 14.8 ^{±1} (.58 ^{±0.04})	C 1.5 15.2 ^{±0.8} (.6 ^{±0.03}) 14.9 ^{±0.8} (.59 ^{±0.03})	A 3 20.4 ^{±2} (.8 ^{±0.08}) 20.2 ^{±2} (.79 ^{±0.08})
B 2 15.2 ^{±1.5} (.81 ^{±0.06}) 20.1 ^{±1.5} (.79 ^{±0.06})	C 1 20.5 ^{±0.8} (.81 ^{±0.03}) 20.3 ^{±0.8} (.80 ^{±0.03})	A 4 20.5 ^{±2.9} (.81 ^{±0.11}) 19.7 ^{±2.9} (.76 ^{±0.11})	B 2 20.5 ^{±1.5} (.81 ^{±0.06}) 20.1 ^{±1.5} (.79 ^{±0.06})
C 1.5 20.5 ^{±1.2} (.81 ^{±0.06}) 20.2 ^{±1.2} (.79 ^{±0.06})	A 3 20.4 ^{±2} (.8 ^{±0.08}) 20.2 ^{±2} (.79 ^{±0.08})	C 1.5 20.5 ^{±0.7} (.81 ^{±0.03}) 20.5 ^{±0.9} (.81 ^{±0.03})	B 1.8 20.5 ^{±0.7} (.81 ^{±0.03}) 20.2 ^{±2} (.79 ^{±0.08})
4			
L	V 161V	C 70 507 526	D 79 215 835
** Telescopic plunger Manual action 161L		Flat 161A R50 (1.9)	Flat 161A R60 (2.39)
D Factory Mount only	D Factory Mount only	A 6 15.2 ^{±0.3}	A 7 15.2 ^{±0.9}
1 21.5 ^{±1} (.85 ^{±0.04}) 21.5 ^{±1} (.85 ^{±0.04})	1 18.35 ^{±0.45}	B 3 15.2 ^{±2}	B 3.5 15.2 ^{±2.5}
C 2 15.2 ^{±1.9}	C 2 15.2 ^{±1.9}	C 2 15.2 ^{±1.9}	C 2.2 15.2 ^{±2.3}
For factory mounting, specify fixing position A, B or C			
** For 83 161 1, 83 161 3, 83 161.6, 83 161 8, mounted in factory (supplied without nut)			

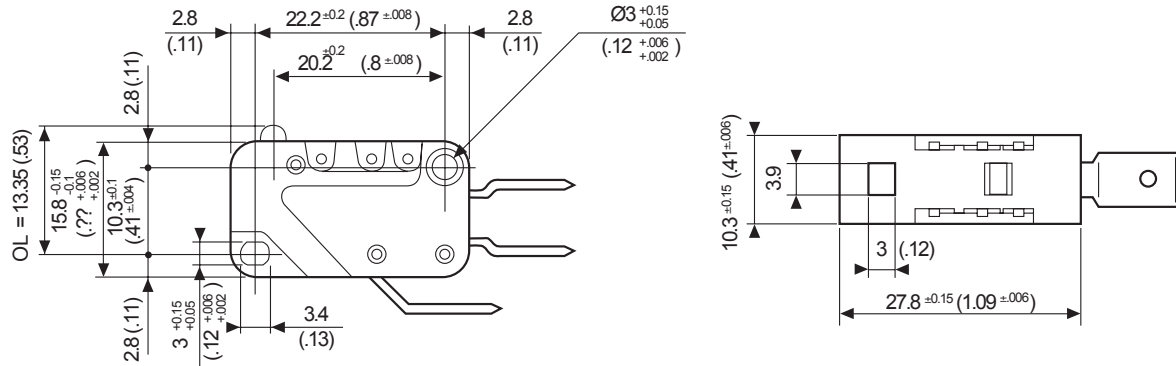
To order, please specify :

1 Switch Type	2 Contact Type	3 Connection	Example : 831612 C 3 C A	4 Actuators	5 Actuator Position
831612 831619 831613 831616 831615 831611 831618	A B C	2 3 5 6 7		Ø A B C D E	F G H L V
To order actuators separately, use the 8 digit P/N				Ø = No actuator	
Example switch is 831612, SPDT, 1/4" Q.C., C actuator mounted in A position					

Miniature Switches DIN 41635 A

Dimensions

83 161

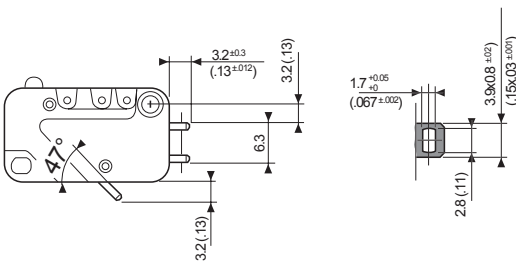


mm (in)

Connections

2 Solder

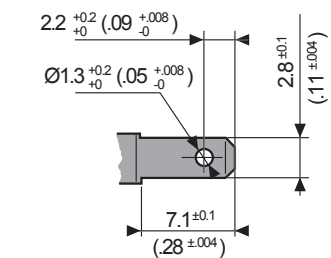
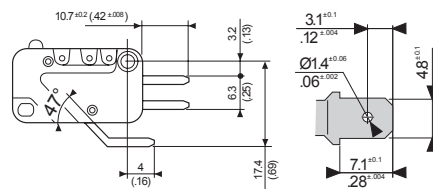
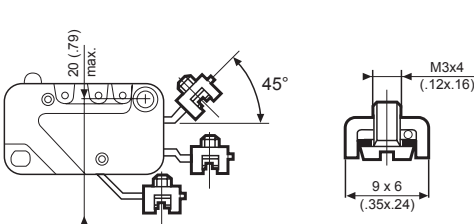
3 (6.3x0.8 (1/4x.03)) Quick Connects



5 Screw

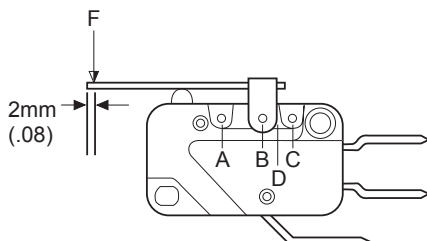
6 (4.8x0.5 (.3/16x.02)) Quick Connects

7 (2.5x0.5 (.11x.02)) Quick Connects



mm (in)

Actuators



Force calculation : divide the switch forces by the coefficient in the table.

Travel calculation : multiply the switch travel by the same coefficient.

Example :

83 161 3 with B Flat 161A actuator R 25.4 (1) position A (coef. 4)

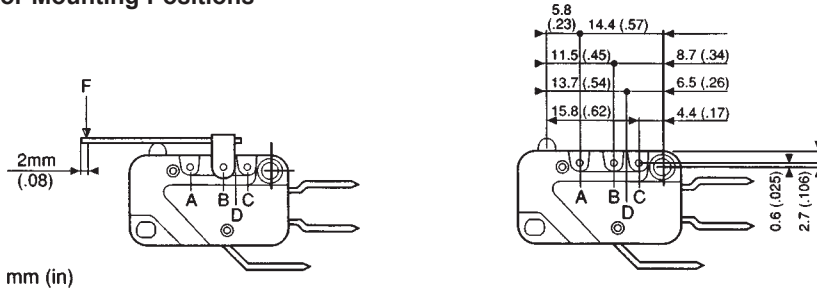
Operating force : $0.8 \div 4 = 0.2 \text{ N}$

Pre-travel: $1.4 \times 4 = 5.6 \text{ mm}$ (.055 x 4 = .22 in)

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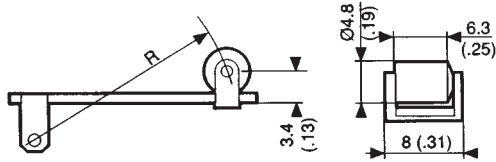
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Actuator Mounting Positions

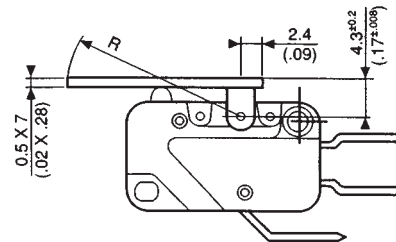


Actuators

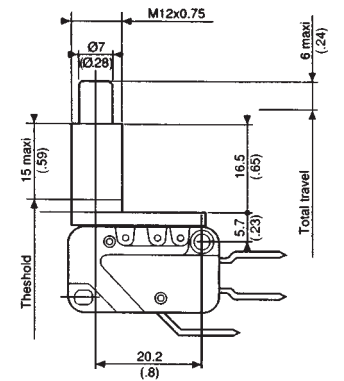
E - G



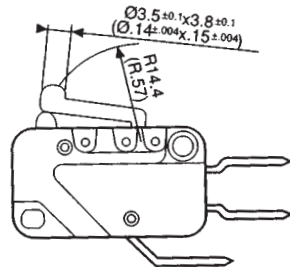
A - B - C - D



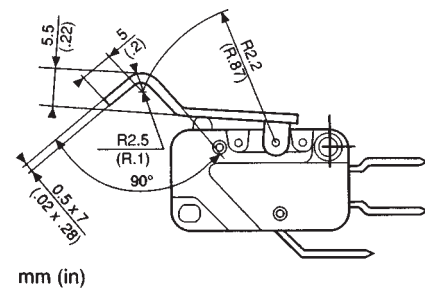
L



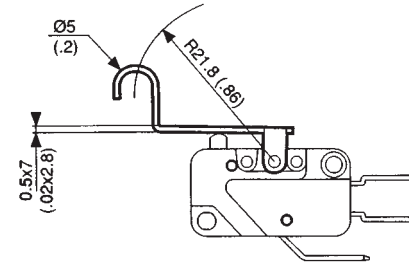
V



F



H

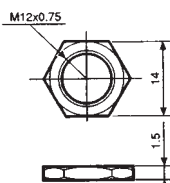


mm (in)

Nut depth	Torque max.
1.5mm (.06)	5Cm N (7 in oz.)
2mm (.08)	7Cm N (10 in. oz)
2.5mm (.1)	10Cm N (14 in. oz)

Accessories

Nuts 70 602 118 for L type actuator



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