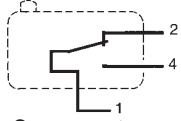


Miniature Switches Series 83 161 DIN 41635 A

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)

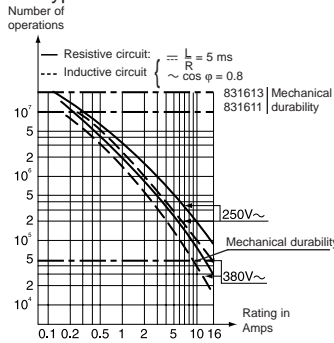
Actuators

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

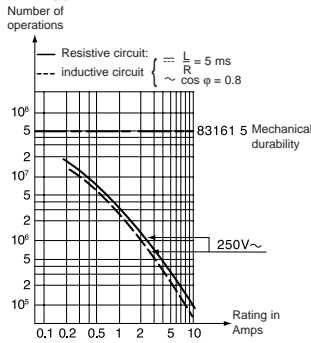
Approvals: NF - UL/cUL

Operating curve

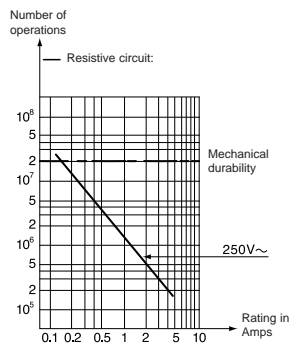
For type 83 161 1 3



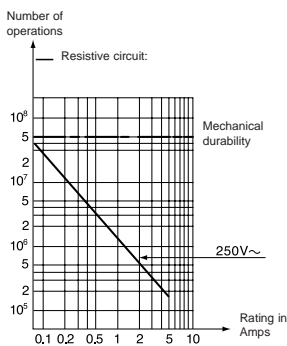
For type 83 161 5 - 5 SP 4136



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)

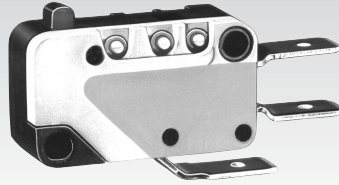
21.5 ± 0.7 (.85 ± 0.03)

Other information

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

Normally stocked items

Catalog products produced to order



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	831612C2.0	831613C2.0	831615C2.0	•	831616C2.0	831618C2.0
831611C3.0	831612C3.0	831613C3.0	831615C3.0	•	831616C3.0	831618C3.0
831611C6.0	831612C6.0	831613C6.0	831615C6.0	•	831616C6.0	831618C6.0
High Force	High Current	Standard	Low Force	Ultra Light Force	Wide Gap	Dual Current

10.1	15.1	10.1	4	4	6.1	0.1
1/2	1/2	1/2	1/10	1/10	1/3	N/A

3 (10.5)	0.8 (2.8)	0.8 (2.8)	0.25 (0.9)	0.15 (0.54)	5 (18)	0.8 (2.8)
1 (3.5)	0.2 (0.7)	0.2 (0.7)	0.05 (0.18)	0.04 (0.14)	0.5 (1.8)	0.2 (0.7)
4.5 (15.8)	2 (7.0)	2 (7.0)	0.35 (1.2)	0.2 (0.72)	6 (21.6)	0.2 (.07)
20 (70.5)	20 (70.5)	20 (70.5)	20 (70.5)	20 (70.5)	20 (70.5)	20 (70.5)
16.1 (0.63)	16.2 (0.64)	16.2 (0.64)	16.3 (0.64)	16.3 (0.64)	16.1 (0.63)	16.2 (0.64)
14.7 ^{+0.4} (.58 ^{+0.16})	14.7 ^{+0.3} (.58 ^{+0.16})	14.7 ^{+0.3} (.58 ^{+0.16})	14.7 ^{+0.4} (.58 ^{+0.16})	14.7 ^{+0.3} (.58 ^{+0.16})	14.5 ^{+0.4} (.58 ^{+0.16})	14.7 ^{+0.4} (.58 ^{+0.16})
0.35 (0.014)	0.35 (0.014)	0.35 (0.014)	0.35 (0.014)	0.35 (0.014)	0.8 (0.03)	0.35 (0.014)
1.1 (0.05)	1.2 (0.05)	1.2 (0.05)	1.1 (0.05)	1.2 (0.05)	0.9 (0.035)	1.2 (0.05)
-20 +125 (-4 +257)	-20 +125 (-4 +257)	-20 +125 (-4 +257)	-20 +125 (-4 +257)	-20 +125 (-4 +257)	-20 +125 (-4 +257)	-20 +125 (-4 +257)
10 ⁷	2 x 10 ⁷	2 x 10 ⁷	5 x 10 ⁷	5 x 10 ⁷	5 x 10 ⁴	2 x 10 ⁷
0.4 (0.016)	0.4 (0.016)	0.4 (0.016)	0.4 (0.016)	0.4 (0.016)	3.2 (0.126)	0.4 (0.016)
5.6 (.2)	5.6 (.2)	5.6 (.2)	5.6 (.2)	5.6 (.2)	5.6 (.2)	5.6 (.2)

C	C	C	C	C	C	C
B	B	B	B	B	B	B
A	A	A	A	A	A	A



5 screw



6 for 3/16" Quick Connects



7 for .11 Quick Connects

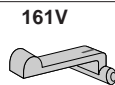
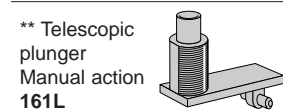
B 70 507 524	E 79 215 742	G 70 507 529	F 70 507 528
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Flat **161A** R25.4 (1) Roller **161E** R13.6 (.54) Roller **161E** R24.1 (.95) Dummy **161F** roller R22.2 (.84)



A	B	C	A	B	C	A	B	C
4	2	1.5	2	1	4	2	1.5	3
15.2 ^{+2.5} (.6 ⁺¹)	15.2 ⁺¹ (.6 ^{+0.4})	15.2 ^{+0.8} (.6 ^{+0.03})	20.5 ^{+1.5} (.81 ^{+0.05})	20.5 ^{+0.8} (.81 ^{+0.03})	20.5 ^{+2.0} (.81 ^{+0.11})	20.5 ^{+1.5} (.81 ^{+0.05})	20.5 ^{+1.2} (.81 ^{+0.05})	20.4 ⁺² (.8 ^{+0.08})
14.4 ^{+2.5} (.56 ⁺¹)	14.8 ⁺¹ (.58 ^{+0.4})	14.9 ^{+0.8} (.59 ^{+0.03})	20.1 ^{+1.5} (.79 ^{+0.05})	20.3 ^{+0.8} (.80 ^{+0.03})	19.7 ^{+2.0} (.76 ^{+0.11})	20.1 ^{+1.5} (.79 ^{+0.05})	20.2 ^{+1.2} (.79 ^{+0.05})	20.2 ⁺² (.79 ^{+0.08})

L	V 161V	C 70 507 526	D 79 215 835
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** Telescopic plunger Manual action 161L	D Factory Mount only	D Factory Mount only	A	B	C	A	B	C
	1	1	6	3	2	7	3.5	2.2
	21.5 ⁺¹ (.85 ^{+0.4})	18.35 ^{+0.45}	15.2 ^{+2.3}	15.2 ⁺²	15.2 ^{+1.5}	15.2 ^{+2.5}	15.2 ^{+2.5}	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)

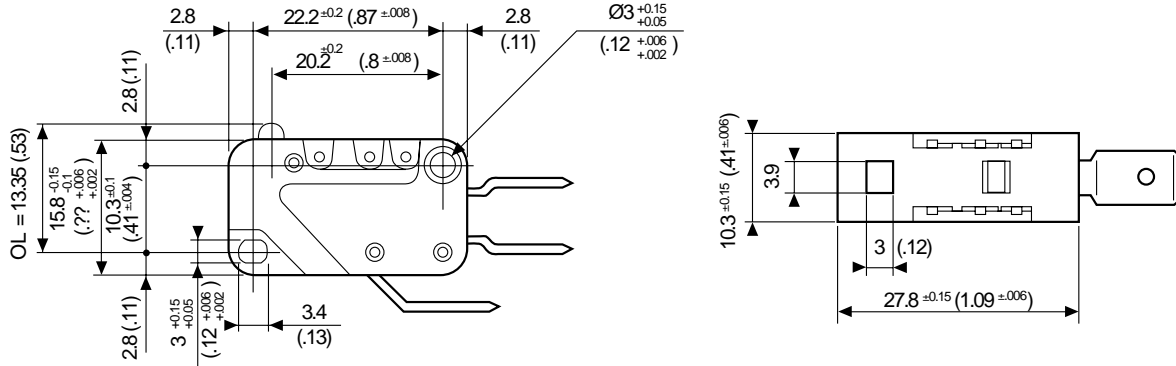
To order, please specify :

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	A B (std) C D
To order actuators separately, use the 8 digit P/N			Example switch is 831612, SPDT, 1/4" Q.C., C actuator mounted in A position		
					Ø = No actuator

Miniature Switches DIN 41635 A

Dimensions

83 161

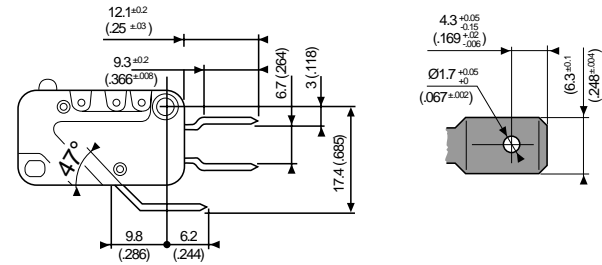
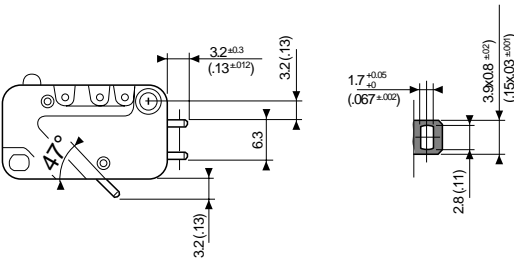


mm (in)

Connections

2 Solder

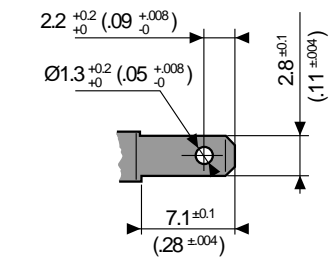
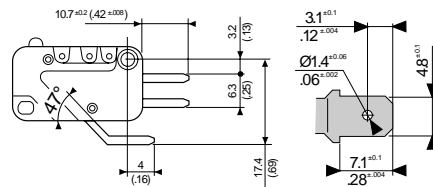
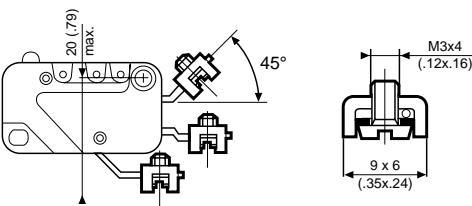
3 (6.3x0.8 (1/4x.03)) Quick Connects



5 Screw

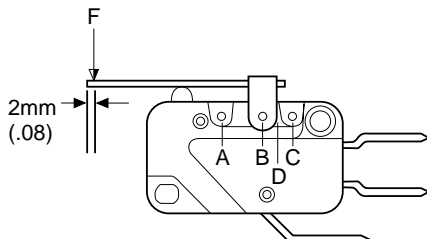
6 (4.8x0.5 (.3/16x.02)) Quick Connects

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



Actuators

mm (in)



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

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

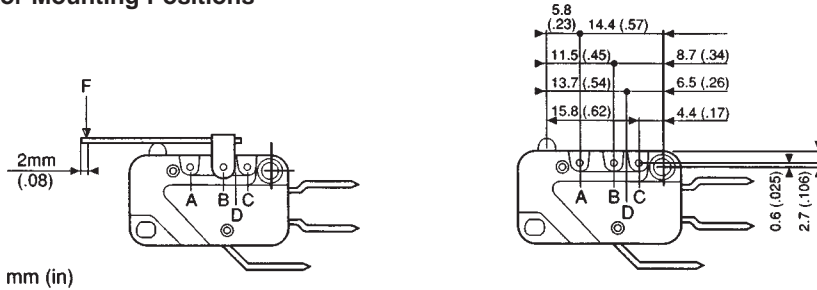
Example :

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

Operating force : 0.8 ÷ 4 = 0.2 N

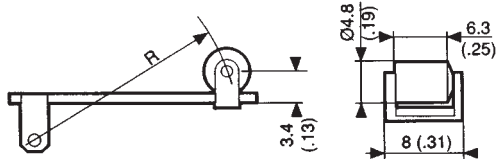
Pre-travel: 1.4 x 4 = 5.6 mm (.055 x 4 = .22 in)

Actuator Mounting Positions

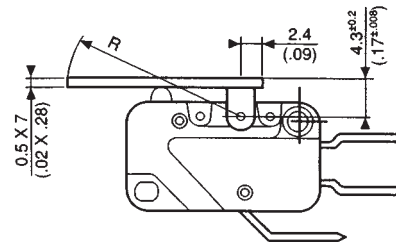


Actuators

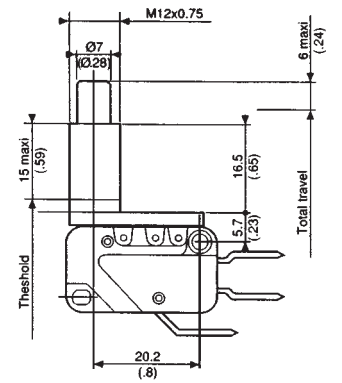
E - G



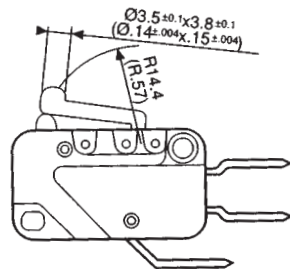
A - B - C - D



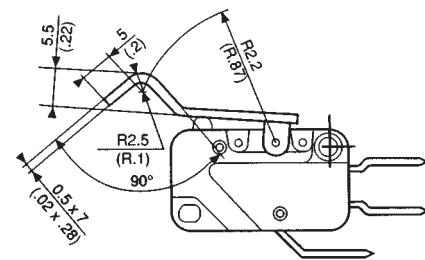
L



V

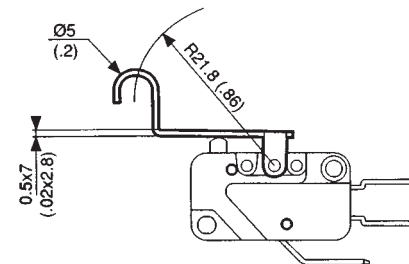


F



mm (in)

H



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

