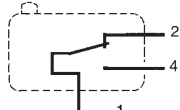


Miniature Switches Series 83 161 DIN 41635 A

General specifications

Layout



Components

Material

- Case : glass-filled polyamide (self-extinguishing version to UL 94 V0 and IEC 695-2-1 850° C - available on request)
- Button : polyamide
- Contacts : nickel silver or gold alloy (dual-current)

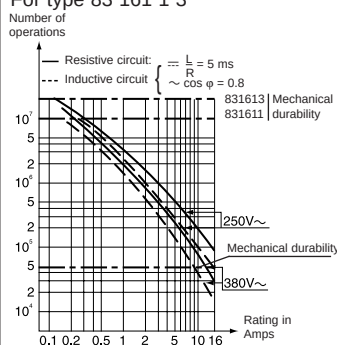
Actuators

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

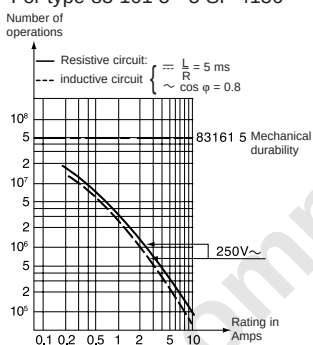
Approvals: NF - UL/cUL

Operating curve

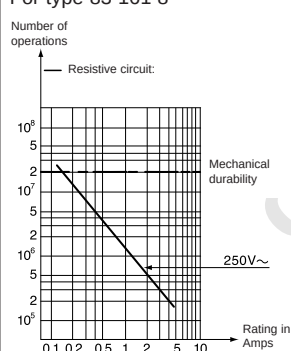
For type 83 161 1 3



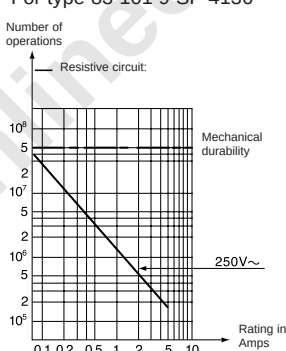
For type 83 161 5 - 5 SP 4136



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 $\pm 1(.6 \pm .004)$	15.2 $\pm 0.45(.6 \pm .018)$
Tripping point 83 161 6	14.8 $\pm 1(.59 \pm .004)$	15 $\pm 0.45(.59 \pm .018)$

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 $\pm 2(.85 \pm .08)$	21.7 $\pm 0.7(.85 \pm .03)$
Tripping point 83 161 6	21.5 $\pm 2(.85 \pm .08)$	21.5 $\pm 0.7(.85 \pm .03)$

Other information

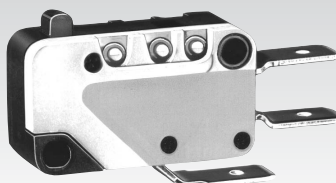
For other forces, actuators, connections and temperatures, please consult us.

Normally stocked items

Catalog products produced to order

Products and specifications subject to change without notice.

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							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	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)	
							2
C	C	C	C	C	C	C	
B	B	B	B	B	B	B	
A	A	A	A	A	A	A	
							3



5 screw



6 for 3/16 Quick Connects

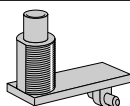


7 for .11 Quick Connects

												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	B	C	A	B		A	B	C	A	B	C	
4	2	1.5	2	1		4	2	1.5	3	1.8	1.5	
15.2 ^{+2.5} (.6 ⁺¹)	15.2 ⁺¹ (.6 ^{+0.4})	15.2 ^{+0.8} (.6 ^{+0.3})	20.5 ^{+1.5} (.81 ^{+0.6})	20.5 ^{+0.9} (.81 ^{+0.3})		20.5 ^{+2.9} (.81 ^{+1.1})	20.5 ^{+1.5} (.81 ^{+0.6})	20.5 ^{+1.2} (.81 ^{+0.5})	20.4 ⁺² (.8 ^{+0.8})	20.5 ^{+0.7} (.81 ^{+0.3})	20.5 ^{+0.9} (.81 ^{+0.3})	
14.4 ^{+2.5} (.56 ⁺¹)	14.8 ⁺¹ (.58 ^{+0.4})	14.9 ^{+0.8} (.59 ^{+0.3})	20.1 ^{+1.5} (.79 ^{+0.6})	20.3 ^{+0.8} (.80 ^{+0.3})		19.7 ^{+2.9} (.76 ^{+1.1})	20.1 ^{+1.5} (.79 ^{+0.6})	20.2 ^{+1.2} (.79 ^{+0.5})	20.2 ⁺² (.79 ^{+0.8})	20.2 ⁺² (.79 ^{+0.8})		

L

** Telescopic
plunger
Manual action
161L

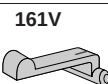


D Factory Mount only

1	
21.5 ⁺¹ (.85 ^{+0.4})	
21.5 ⁺¹ (.85 ^{+0.4})	

For factory mounting, specify fixing position A, B or C

V



D Factory Mount only

1	
18.35 ^{+0.45}	

C

70 507 526

Flat 161A R50 (1.9)



A	B	C
6	3	2
15.2 ^{+0.3}	15.2 ⁺²	15.2 ^{+1.6}

D

79 215 835

Flat 161A R60 (2.39)



A	B	C
7	3.5	2.2
15.2 ^{+0.9}	15.2 ^{+2.5}	15.2 ^{+2.3}

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 Ø = No actuator

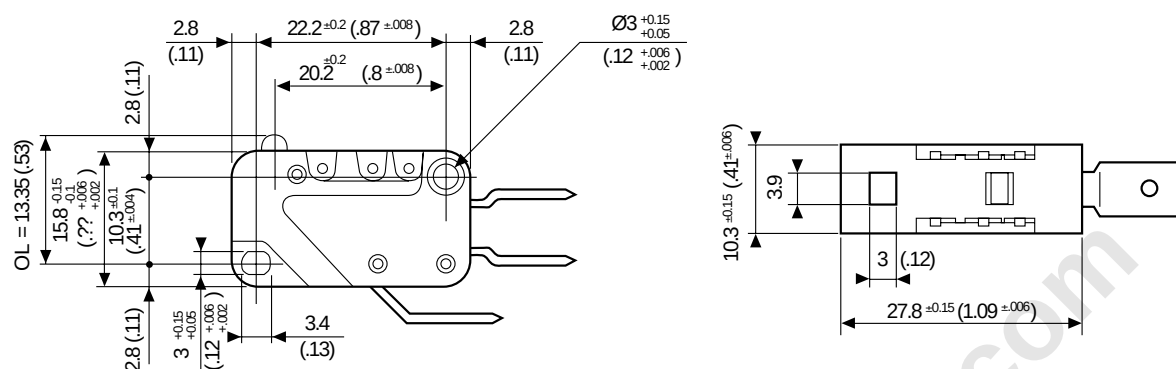
To order actuators separately, use the 8 digit P/N

Example switch is 831612, SPDT, 1/4" Q.C., C actuator mounted in A position

Miniature Switches DIN 41635 A

Dimensions

83 161

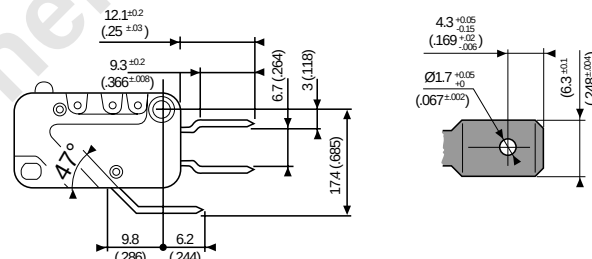
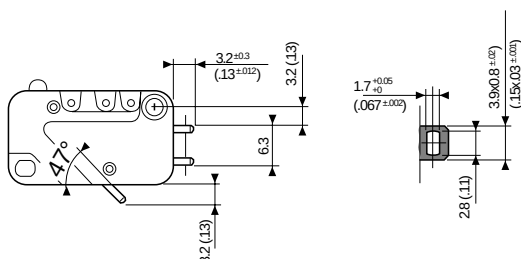


mm (in)

Connections

2 Solder

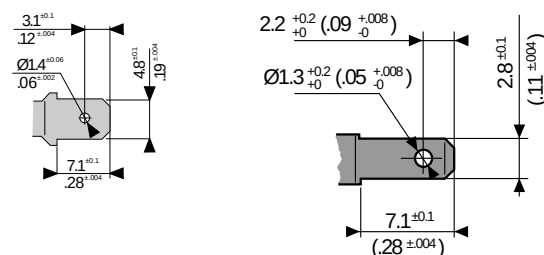
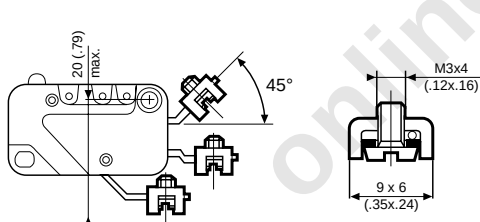
3 (6.3x0.8 (1/4x.03)) Quick Connects



5 Screw

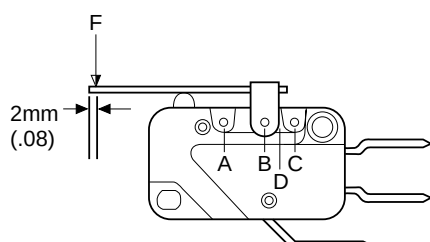
6 (4.8x0.5 (.3/16x.02)) Quick Connects

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

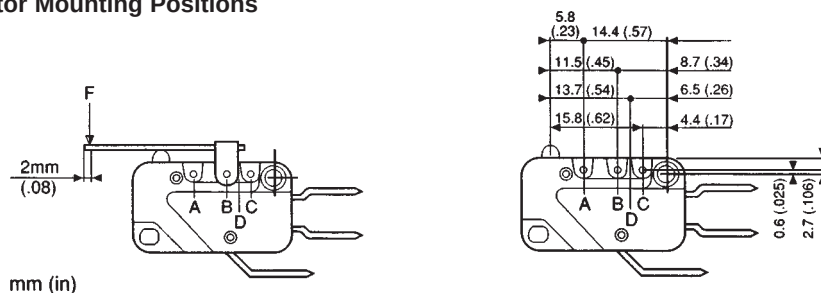
Pre-travel: $1.4 \times 4 = 5.6 \text{ mm}$ ($.055 \times 4 = .22 \text{ in}$)

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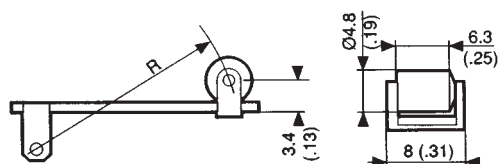
Miniature Switches DIN 41635 A

Actuator Mounting Positions

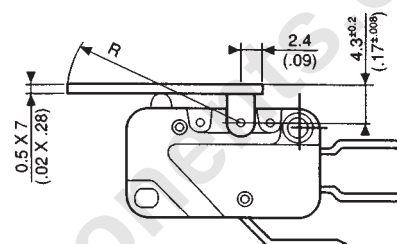


Actuators

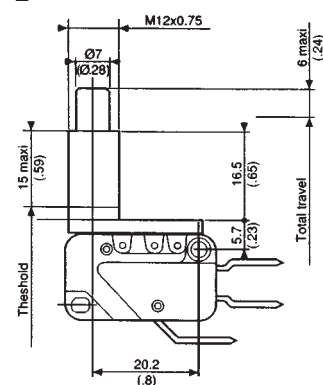
E - G



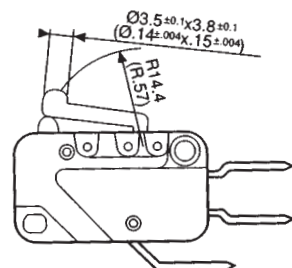
A - B - C - D



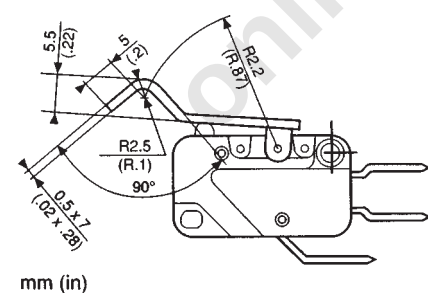
L



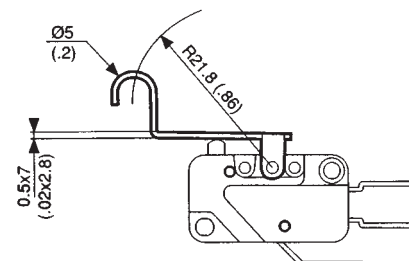
V



F



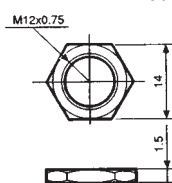
H



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



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