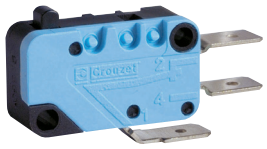
MINIATURE MICROSWITCHES - PREMIUM

V3 - 83161

- High precision flexible leaf snap-action mechanism
- Operation without balance-point, even at extremely slow actuating speed
- Broad range of operating forces from 0.15 N to 5 N
- Ratings from 4 A to 10(8) and 16(4) A 250 V~, 10(4) A 400 V~ and 1/2 hp 125-250 V~
- Contact gap less or greater than 3 mm (micro-disconnection (*μ*) or full disconnection)
- Operating temperature from -60 °C up to +150 °C - High resistance to shock and vibration
- Mechanical life up to 50 million cycles
- ENEC and cURus approved
- Wide choice of actuators on 4 possible fixing positions (pre-assembled or retrofittable)



Main specifications

			Standard 831613		High force 831611		Low force 831614	
			Standard	UL	Standard	UL	Standard	UL
Function	**Connections**	Actuators						
I (changeover)	W2 (solder)	No	**83161301**	**83161348**	**83161102**	**83161058**	**83161402**	**83161431**
I (changeover)	W3 (QC 6.3x0.8)	No	**83161338**	**83161344**	**83161118**	**83161165**	**83161401**	●
I (changeover)	W6A5 (QC 4.8x0.5)	No	**83161304**	**83161343**	**83161110**	**83161182**	**83161403**	**83161407**
I (changeover)	W3R5 (QC 6.3x0.8, Rast 5)	No	**83163023**	**83163107**	●	●	●	●
I (changeover)	W5 (screw + clamp)	No	**83161303**	**83161349**	**83161113**	**83161055**	●	**83161408**
I (changeover)	W6D8 (QC 4.8x0.8)	No	**83161305**	**83161341**	**83161123**	●	●	**83161429**
I (changeover)	W7A5 (QC 2.8x0.5)	No	**83161309**	**83161350**	**83161189**	●	**83161405**	●
I (changeover)	2W7A8 (QC 2.8x0.8, double)	No	**83161310**	●	**83161059**	●	●	●
R (normally closed)	W2 (solder)	No	**83161316**	**83163041**	**83161117**	●	●	●
R (normally closed)	W3 (QC 6.3x0.8)	No	**83161311**	**83163066**	**83161109**	**83161187**	●	●
R (normally closed)	W6A5 (QC 4.8x0.5)	No	**83161359**	●	**83161070**	●	**83161424**	●
R (normally closed)	W3R5 - W5 - W6D8 - W7A5 - 2W7A8	No	●	●	●	●	●	●
C (normally open)	W2 (solder)	No	**83161315**	**83163326**	**83161104**	**83161082**	●	**83161435**
C (normally open)	W3 (QC 6.3x0.8)	No	**83161312**	**83161346**	**83161103**	**83161188**	**83161404**	**83161412**
C (normally open)	W6A5 (QC 4.8x0.5)	No	**83161325**	●	**83161125**	**83161111**	●	●
C (normally open)	W3R5 - W5 - W6D8 - W7A5 - 2W7A8	No	●	●	●	●	●	●
Configurations with actuators		Yes	See page 5	See page 5	See page 5	See page 5	See page 5	See page 5
Electrical characteristics								
Rating nominal / 250 V AC (A)			16		16		10	
Rating thermal / 250 V AC (A)			20		20		12	
Rating ENEC / 250 V AC (A)			10(8)-16(4)	10(8)-16(4)	10(8)-16(4)	10(8)-16(4)	10(3)	10(3)
Rating UL / 125/250 V AC (A)			-	16 GP-1/2hp	-	16 GP-1/2hp	-	10 GP - 1/4hp
Mechanical characteristics								
Maximum operating force (N)			0.8		3		0.5	
Min. Release force (N)			0.2		1		0.1	
Maximum total travel force (N)			2		4.5		1.5	
Max. Allowable overtravel force (N)			20		20		20	
Maximum rest position (mm)			16.2		16.1		16.2	
Operating position (mm)			$14.7^{\pm 0.3}$		$14.7^{\pm 0.4}$		$14.7^{\pm 0.4}$	
Maximum differential travel (mm)			0.35		0.35		0.35	
Min. overtravel (mm)			1.2		1.1		1.1	
Ambient operating temperature (°C)			-60 → +125		-60 → +125		-60 → +125	
Mechanical life for 2/3 OT (operations)			2×10^7		10^7		3×10^7	
Contact gap (mm)			0.4		0.4		0.4	
Weight (g)			5.6		5.6		5.6	

Additional specifications

- Case: PA6 GF (UL 94-V2 / GWFI 960 °C) - Standard versions
  PBT GF (UL 94-V0 / GWFI 960 °C) - UL versions
  PET GF (UL 94-V0 / GWFI 960 °C / GWIT 775 °C) - On request
- Button: PA66
- Moving blade: silver-plated beryllium copper
- Contacts: silver alloy, micro-profile
- Terminals: brass (Except W2: tinned brass)
- Levers: stainless steel or polyamide, polyamide roller
- Nuts for 161L: nickel-plated brass
- Degree of protection: IP40 (mechanism)
- Proof tracking index: PTI 250
- Protection against electric shock: button and 161-type actuators have reinforced insulation for Ui 250V / Uimp 2,5kV / pollution 2
- Recommended min actuating speed: 0.001 mm/s
- Conformity / Certifications: Standard versions:
  UL versions:

Standard product | Product made to order | ● Contact us

Main specifications (continued)

Function	Connections	Actuators	Very low force 831615 Standard	Very low force 831615 UL	Ultra low force 831615 SP4136 Standard	Ultra low force 831615 SP4136 UL	Wide contact gap 831616 Standard	Wide contact gap 831616 UL
I (changeover)	W2 (solder)	No	83161502	●	83161520	●	83161601	●
I (changeover)	W3 (QC 6.3x0.8)	No	83161501	83161513	83161519	83161573	83161602	83161636
I (changeover)	W6A5 (QC 4.8x0.5)	No	83161503	83161508	●	83161577	-	-
I (changeover)	W3R5 (QC 6.3x0.8, Rast 5)	No	83161516	83161518	●	83161575	83161619	●
I (changeover)	W5 (screw + clamp)	No	83161509	83161511	●	●	83161603	●
I (changeover)	W6D8 (QC 4.8x0.8)	No	83161507	●	●	●	-	-
I (changeover)	W7A5 (QC 2.8x0.5)	No	●	●	●	●	-	-
I (changeover)	2W7A8 (QC 2.8x0.8, double)	No	●	●	●	●	-	-
R (normally closed)	W2 (solder)	No	83161595	●	●	●	83161609	●
R (normally closed)	W3 (QC 6.3x0.8)	No	83161528	●	●	●	83161605	●
R (normally closed)	W6A5 (QC 4.8x0.5)	No	●	●	●	●	-	-
R (normally closed)	W3R5 - W5 - W6D8 - W7A5 - 2W7A8	No	●	●	●	●	●*	●*
C (normally open)	W2 (solder)	No	●	●	83161589	●	●	●
C (normally open)	W3 (QC 6.3x0.8)	No	●	●	●	●	83161606	●
C (normally open)	W6A5 (QC 4.8x0.5)	No	83161504	●	●	●	-	-
C (normally open)	W3R5 - W5 - W6D8 - W7A5 - 2W7A8	No	●	●	●	●	●*	●*
Configurations with actuators		Yes	See page 5	See page 5	See page 5	See page 5	See page 5	See page 5
Electrical characteristics								
Rating nominal / 250 V AC (A)			4		4		12	
Rating thermal / 250 V AC (A)			5		5		15	
Rating ENEC / 250 V AC (A)			4(1)	4(1)	4(1)	4(1)	12(3)	12(3)
Rating UL / 125/250 V AC (A)			-	4GP - 1/10hp	-	4GP- 1/10hp	-	12GP - 1/3hp
Mechanical characteristics								
Maximum operating force (N)			0.25		0.15		5	
Min. Release force (N)			0.05		0.04		0.5	
Maximum total travel force (N)			0.40		0.2		6	
Max. Allowable overtravel force (N)			20		20		20	
Maximum rest position (mm)			16.3		16.3		16.1	
Operating position (mm)			$14.7^{\pm 0.4}$		$14.7^{\pm 0.3}$		$14.5^{\pm 0.4}$	
Maximum differential travel (mm)			0.35		0.35		0.8	
Min. overtravel (mm)			1.1		1.2		0.9	
Ambient operating temperature (°C)			-40 → +125		-40 → +125		-60 → +125	
Mechanical life for 2/3 OT (operations)			5×10^7		5×10^7		5×10^4	
Contact gap (mm)			0.4		0.4		3.2	
Weight (g)			5.6		5.6		5.6	

* Please consult us

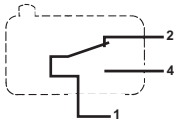
Product adaptations

- **Special levers: special shapes and lengths, flexible levers, adjustable, two-pole, pinned, ….**
- **Special connections: angled, with 7mm spacing (RAST 7-W3R7), for PCB, long solder (W2L),...**
- **High operating temperature: +150 °C**
- **Special contacts (for gold plated contacts: see "*V3 Dual-current* - 83161")**
- **Reduced or increased switching hysteresis: max 0.1 mm to max 0.8 mm differential travel**
- **Specific operating force easily achievable**
- **Telescopic plunger and adjustable fixing by threaded barrel: plastic version (161L accessory) or metal version (SP9603)**
- **Housing material complying with IEC 60335-1 for unattended appliances: GWFI 850° C / GWIT 775° C (SP9680)**
- **400 V~ ENEC approved versions**

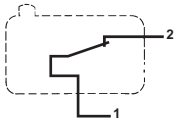
Principles

Single break snap-action switch

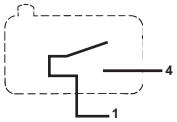
Changeover - SPDT (form C)



Normally closed - SPST-NC (form B)

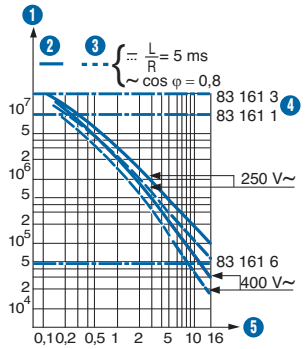


Normally open - SPST-NO (form A)



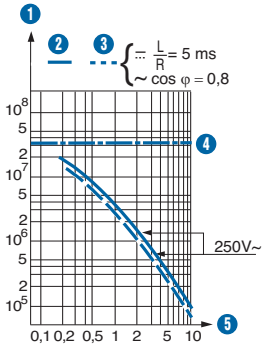
Curves

Operating curve for types 831611* / 831613* / 831616



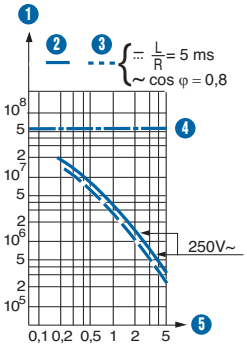
1. Number of cycles
2. Resistive circuit
3. Inductive circuit
4. Mechanical life limit
5. Current in Amps

Operating curve for type 831614



1. Number of cycles
2. Resistive circuit
3. Inductive circuit
4. Mechanical life limit
5. Current in Amps

Operating curve for types 831615 / 831615 SP4136



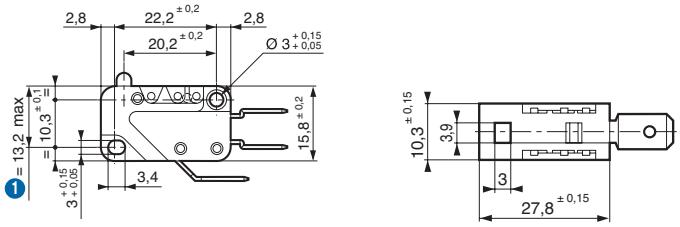
1. Number of cycles
2. Resistive circuit
3. Inductive circuit
4. Mechanical life limit
5. Current in Amps

* For 831611 UL and 831613 UL: please consult us

Dimensions

Product

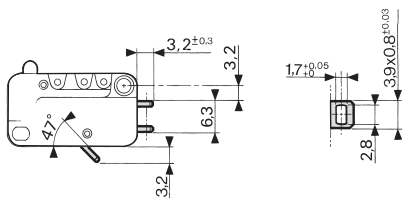
83161



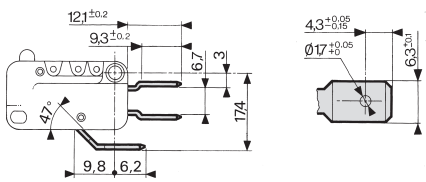
1. Total travel position

Connections

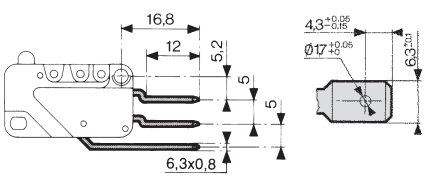
W2 solder



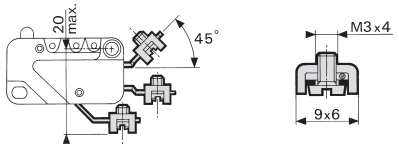
W3 quick-connect 6.3 x 0.8



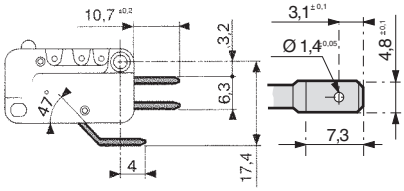
W3R5 quick-connect 6.3 x 0.8 for RAST 5 connector



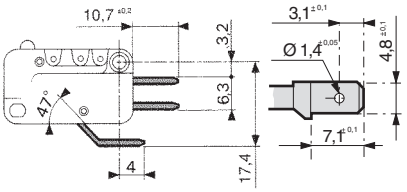
W5 screw with clamp



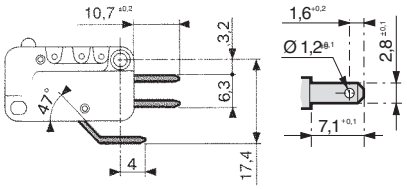
W6A5 quick-connect 4.8 x 0.5



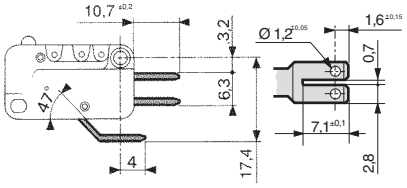
W6D8 quick-connect 4.8 x 0.8



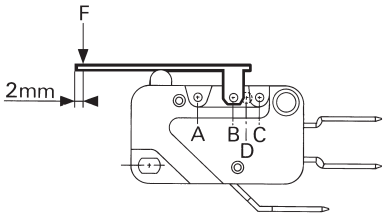
W7A5 quick-connect 2.8 x 0.5

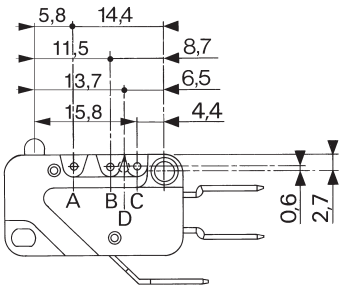


2W7A8 quick-connect 2.8 x 0.8, double



Actuator mounting positions

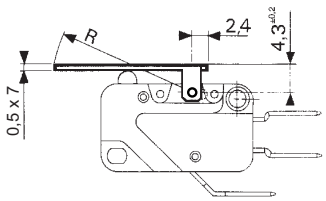




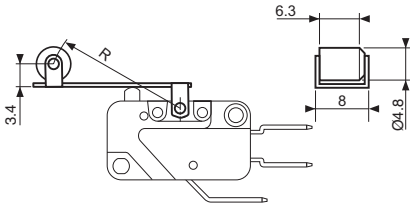
To calculate force
Divide the switch force by the coefficient given in the table.
To calculate travel
Multiply the switch travel by the same coefficient.
Example :
83 161 3 with lever 161 A - R 25.4 position A (coeff. 4)
Operating force: 0.8 : 4 = 0.2 N
Overtravel: 1.2 x 4 = 4.8 mm

Actuators

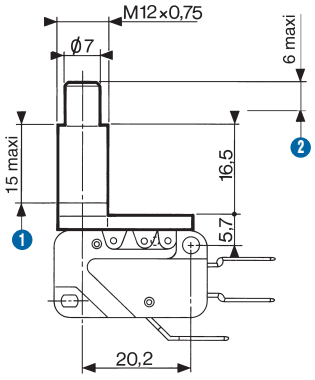
161A flat



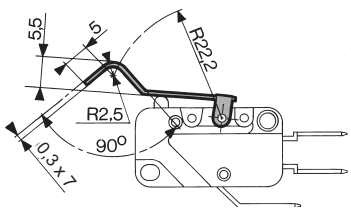
161E roller



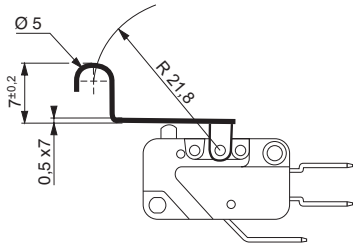
161L telescopic plunger



161F dummy roller



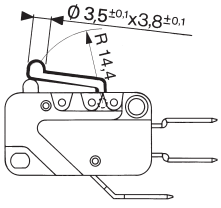
161G dummy roller



1 Thread length
2 Total travel

Nut thickness	Max. torque
1,5 mm	0.5 N.m
2 mm	0.7 N.m
2,5 mm	1 N.m

161V plastic

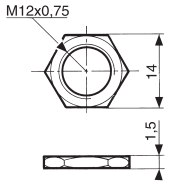


Other shapes and dimensions: consult us

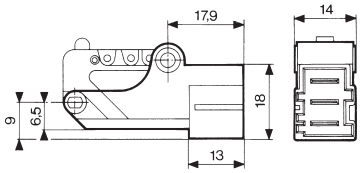
Also available are pinned actuators mounted on position D (factory mounting), same as for 83160 series. (datasheet: SP9640)

Mounting accessories

Nut for 161L



Housing 161J for connections W3 R5



Actuators and mounting accessories

Part numbers for standard actuators	**79215740**		**70507524**			**79215742**		**70507529**			**70507528**	
Actuators	Flat **161A** R14.2		Flat **161A** R25.4			Roller **161E** R13.6		Roller **161E** R24.1			Dummy roller **161F** R22.2	
Fixing positions	A	B	A	B	C	A	B	A	B	C	A	B
Coefficient	2	1	4	2	1.5	2	1	4	2	1,5	3.6	1.8
Operating position, except 831616 (mm)	15.2 ±1	15.2 ±0.45	15.2 ±2.5	15.2 ±1	15.2 ±0.8	20.5 ±1.5	20.5 ±0.8	20.5 ±2.9	20.5 ±1.5	20.5 ±1.2	20.4 ±2	20.4 ±0.7
Operating position 831616 (mm)	14.8 ±1	15 ±0.45	15.2 ±2.5	14.8 ±1	14.9 ±0.8	20.1 ±1.5	20.3 ±0.8	19.7 ±2.9	20.1 ±1.5	20.2 ±1.2	20.2 ±2	20.2 ±0.7

Part numbers for standard actuators	**79218651**					**79250338**	**70602118**
Actuators	Dummy roller **161G** R21,8			**Telescopic plunger **161L**	Manual actuation	Plastic**161V** R14.4	Housing **161J**	Nut for **161L**
Fixing positions	A	B	C	D		D		
Coefficient	3.6	1.8	1.2	1		1		
Operating position, except 831616 (mm)	21.7 ±2	21.7 ±0.7	21.7 ±0.5	21,5 ±1		18.55 ±0.45		
Operating postion 831616 (mm)	21.5 ±2	21.5 ±0.7	21.5 ±0.5	21,5 ±1		18.35 ±0.45		

Except where otherwise indicated, flat and roller levers are supplied unmounted.
For factory mounting, specify fixing position A, B or C.
** For 831611, 831612, 831613, 831616. Mounted in factory (supplied without nut)

V3-83161 microswitches with referenced actuators

	Actuators		161A R14.2 79215740		161A R25.4 70507524			161E R13.6 79215742		161E R24.1 70507529			161L
			Pos A	Pos B	Pos A	Pos B	Pos C	Pos A	Pos B	Pos A	Pos B	Pos C	Pos D
831611	I W2	STD	83161020	83161021	83161022	83161023	83161024	83161025	83161026	83161027	83161028	83161029	•
		UL	•	•	•	•	•	•	•	•	•	•	•
	I W3	STD	83161032	83161033	83161034	83161035	83161036	83161037	83161038	83161039	83161040	83161041	83161064
		UL	•	•	•	•	•	•	•	•	•	•	83161098
	I W6A5	STD	83161044	83161045	83161046	83161177	83161047	83161048	83161049	83161050	83161051	83161052	•
		UL	•	•	•	•	•	•	•	•	•	•	•
831613	I W2	STD	83163067	83163068	83163069	83163015	83163071	83163072	83163073	83163074	83163016	83163075	83161320
		UL	•	•	•	•	•	•	•	•	•	•	•
	I W3	STD	83163078	83163079	83163080	83163081	83163082	83163083	83161374	83163084	83163007	83163085	83161318
		UL	•	•	•	83161328	•	•	83163221	•	83163329	•	83163102
	I W6A5	STD	83163088	83163089	83163090	83163091	83163092	83163093	83163094	83163095	83163096	83163097	•
		UL	•	•	•	83161327	•	•	83163222	•	83163220	•	83161352
831615	I W2	STD	83161529	83161530	83161531	83161532	83161533	83161534	83161535	83161536	83161537	83161538	-
		UL	•	•	•	•	•	•	•	•	•	•	-
	I W3	STD	83161541	83161542	83161543	83161544	83161545	83161546	83161547	83161548	83161514	83161549	-
		UL	•	•	•	•	•	•	•	•	•	•	-
	I W6A5	STD	83161552	83161553	83161554	83161526	83161555	83161556	83161557	83161558	83161559	83161560	-
		UL	•	•	•	•	•	•	•	•	•	•	-
831616	I W3	STD	•	•	•	•	•	•	83161642	•	•	•	83161615
		UL	•	•	•	•	•	•	•	•	•	83161639	•

Standard product | Product made to order | ● Contact us

Installation recommendations

See “Basic technical concepts”

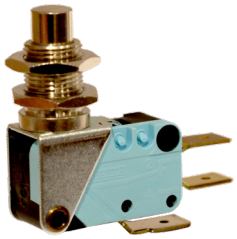
How to order

Use the 8 digit part numbers when they are defined

Other cases, precise:

Type of microswitch - Function - Connection - UL approval* - Actuator* - Fixing position* - Adaptation* + Mounting accessories*
* if needed
Example: 831613 C W3R5 UL 161E R13.6 B SP9680 + 79250338

Examples of special adaptations



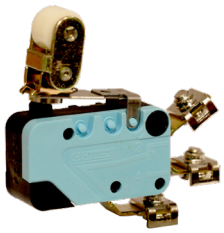
Telescopic plunger and adjustable fixing . 4mm overtravel. Metal version for heavy duty (SP9603)

Door switch for industrial vehicle

Angled W3 terminals

RAST 7mm - W3R7 connections

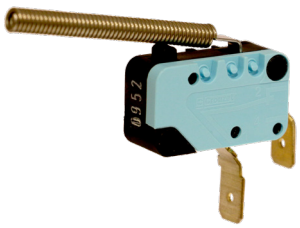
Long solder terminals (W2L)



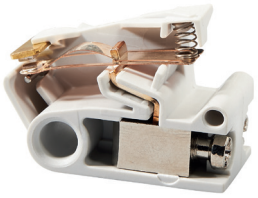
One-way roller lever (active on right, idle-return on left)

Lever fitted with POM ramp for transverse actuation

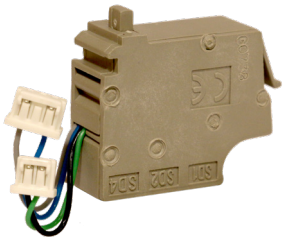
Two-pole lever



Spring lever for extra-long overtravel



Fully specific integrable switching module with terminal block for time switch



Auxiliary contact for power switches and circuit breakers. Integrates the *V3*-83161 mechanism

Warning:

The product information contained in this catalogue is given purely as information and does not constitute a representation, warrantly or any form of contractual commitment. Crouzet and its subsidiaries reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsability of the buyer to establish, particularly through all the appropriate tests, that the product is suitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.

MINIATURE MICROSWITCHES - PREMIUM

V3 Dual-current - 83161

- **High precision flexible leaf snap-action mechanism**
- **Operation without balance-point, even at extremely slow actuating speed**
- **Broad range of operating forces from 0.15 N to 3 N**
- **Use from 1 mA 4 V⎓ to 5 A 250 V~**
- **Operating temperature from -60 °C up to +150 °C - High resistance to shock and vibration**
- **Mechanical life up to 50 million cycles**
- **ENEC and cURus approved**
- **Wide choice of actuators on 4 possible fixing positions (pre-assembled or retrofittable)**

Main specifications

			Dual-current 831618		Dual-current High force 831618 SP4174		Dual-current Very low force 831619		Dual-current Ultra low force 831619 SP4136	
			Standard	UL	Standard	UL	Standard	UL	Standard	UL
Function	**Connections**	**Act.**								
I (changeover)	W2 (solder)	No	**83161801**	**83168021**	**83168015**	**83168008**	**83161928**	●	**83161901**	●
I (changeover)	W3 (QC 6.3x0.8)	No	**83161806**	**83161873**	**83161832**	**83161894**	**83161906**	●	**83161904**	**83161917**
I (changeover)	W6A5 (QC 4.8x0.5)	No	**83161812**	**83161813**	●	●	●	●	●	**83161911**
I (changeover)	W3R5 (QC 6.3x0.8, Rast 5)	No	●	●	●	●	●	●	●	●
I (changeover)	W5 (screw + clamp)	No	●	●	●	●	●	●	●	●
I (changeover)	W6D8 (QC 4.8x0.8)	No	●	●	●	●	●	●	**83161915**	●
I (changeover)	W7A5 (QC 2.8x0.5)	No	**83161803**	●	●	●	●	●	●	●
I (changeover)	2W7A8 (QC 2.8x0.8, double)	No	●	●	●	●	●	●	●	●
R (normally closed)	W2 (solder)	No	**83161807**	●	●	**83168024**	●	●	●	●
R (normally closed)	W3 (QC 6.3x0.8)	No	**83161821**	●	●	●	**83161907**	●	**83161916**	●
R (normally closed)	W6A5 (QC 4.8x0.5)	No	●	●	●	●	●	●	●	●
R (normally closed)	W3R5 - W5 - W6D8 W7A5 - 2W7A8	No	●	●	●	●	●	●	●	●
C (normally open)	W2 (solder)	No	**83161818**	**83168028**	●	●	●	●	●	●
C (normally open)	W3 (QC 6.3x0.8)	No	**83161822**	**83161827**	●	●	●	●	●	●
C (normally open)	W6A5 (QC 4.8x0.5)	No	**83161826**	**83161819**	●	●	●	**83161908**	●	●
C (normally open)	W3R5 - W5 - W6D8 W7A5 - 2W7A8	No	●	●	●	●	●	●	●	●
Configurations with actuators		Yes	See p. 10	See p. 10	See p. 10	See p. 10	See p. 10	See p. 10	See p. 10	See p. 10
Electrical characteristics										
Rating nominal / 250 V AC (A)			5*		5*		4*		4*	
Rating thermal / 250 V AC (A)			6		6		5		5	
Rating ENEC / 250 V AC (A)			5(1)	5(1)	5(1)	5(1)	4(1)	4(1)	4(1)	4(1)
Rating UL / 250 V AC (A)			-	5 GP	-	5 GP	-	4 GP	-	4 GP
Mechanical characteristics										
Maximum operating force (N)			0.8		3		0.25		0.15	
Min. Release force (N)			0.2		1		0.05		0.04	
Maximum total travel force (N)			2		4.5		0.40		0.2	
Max. permitted overtravel force (N)			20		20		20		20	
Maximum rest position (mm)			16.2		16.1		16.3		16.3	
Operating position (mm)			$14.7^{\pm 0.3}$		$14.7^{\pm 0.4}$		$14.7^{\pm 0.4}$		$14.7^{\pm 0.3}$	
Maximum differential travel (mm)			0.35		0.35		0.35		0.35	
Min. overtravel (mm)			1.2		1.1		1.1		1.2	
Ambient operating temperature (°C)			-60 → +125		-60 → +125		-40 → + 125		-40 → +125	
Mechanical life for 2/3 OT (operations)			2 x 10^7		10^7		5 x 10^7		5 x 10^7	
Contact gap (mm)			0.4		0.4		0.4		0.4	
Weight (g)			5.6		5.6		5.6		5.6	

Additional specifications

- Case: PA6 GF (UL 94-V2 / GWFI 960 °C) - Standard versions
  PBT GF (UL 94-V0 / GWFI 960 °C) - UL versions
  PET GF (UL 94-V0 / GWFI 960 °C / GWIT 775 °C) - On request
- Button: PA66
- Moving blade: silver-plated beryllium copper
- Contacts: gold alloy on silver alloy, crossbar (dual-current)
- Terminals: brass (except W2 : copper nickel)
- Levers: stainless steel or polyamide, polyamide roller
- Nuts for 161L: nickel-plated brass
- Degree of protection: IP40 (mechanism)
- Proof tracking index: PTI 250
- Protection against electric shock: button and 161-type actuators have reinforced insulation for Ui 250V / Uimp 2,5kV / pollution 2
- Recommended min actuating speed: 0.001 mm/s
- Conformity / Certifications: Standard versions:
  UL versions:

Standard product | Product made to order | ● Contact us

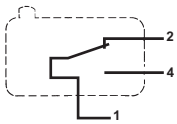
Product adaptations

- Special levers: special shapes and lengths, flexible levers, adjustable, two-pole, pinned, ...
- Special connections: angled, with 7mm spacing (RAST 7-W3R7), for PCB, long solder (W2L), ...
- High operating temperature: +150 °C
- Reduced or increased switching hysteresis: max 0.1 mm to max 0.8 mm differential travel
- Specific operating force easily achievable
- Telescopic plunger and adjustable fixing by threaded barrel: plastic version (161L accessory) or metal version (SP9603)
- Housing material complying with IEC 60335-1 for unattended appliances: GWFI 850° C / GWIT 775° C (SP9680)

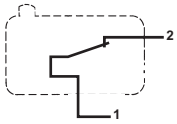
Principles

Single break snap-action switch

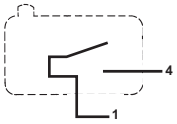
Changeover - SPDT (form C)



Normally closed - SPST-NC (form B)

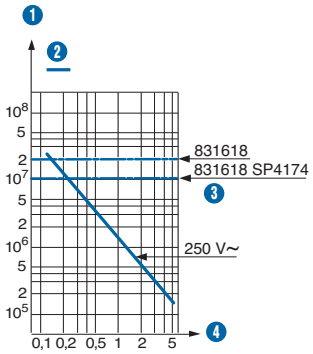


Normally open - SPST-NO (form A)



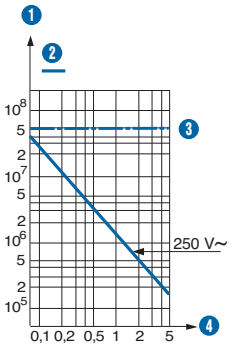
Curves

Operating curve for types 831618 and 831618 SP4174



1. Number of cycles
2. Resistive circuit
3. Mechanical life limit
4. Current in Amps

Operating curve for types 831619 and 831619 SP4136



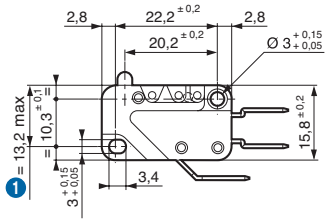
1. Number of cycles
2. Resistive circuit
3. Mechanical life limit
4. Current in Amps

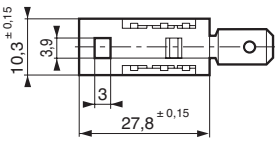
* These models are designed to operate equally well on low-current (1 mA 4 V minimum recommended) or medium-current (5 A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life.

Dimensions

Product

83161

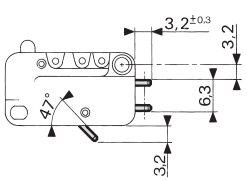


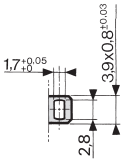


1. Total travel position

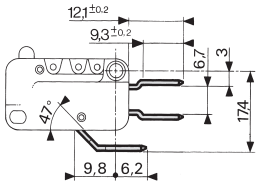
Connections

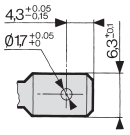
W2 solder



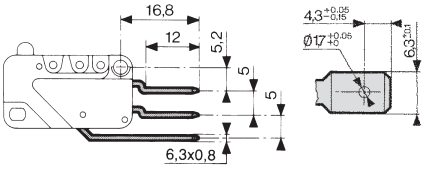


W3 quick-connect 6.3 x 0.8

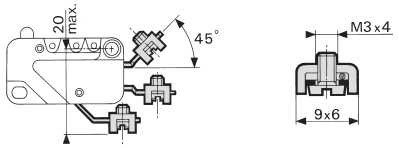




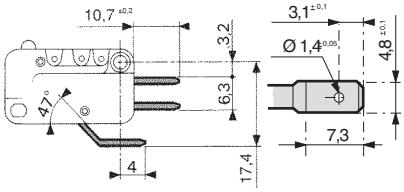
W3R5 quick-connect 6.3x0.8 for RAST 5 connector



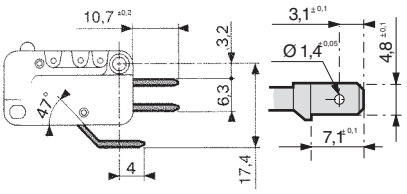
W5 screw



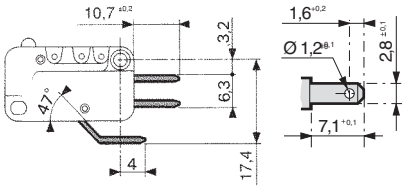
W6A5 quick-connect 4.8 x 0.5



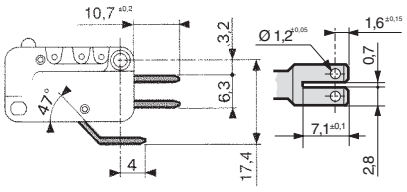
W6D8 quick-connect 4.8 x 0.8



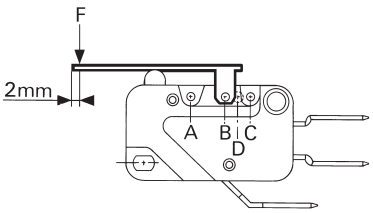
W7A5 quick-connect 2.8 x 0.5

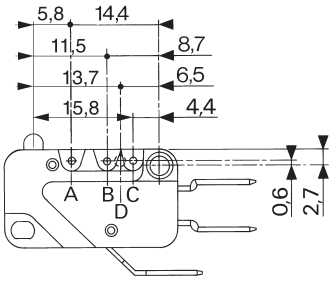


2W7A8 quick-connect 2.8 x 0.8, double



Actuator mounting positions

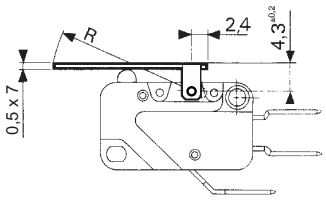




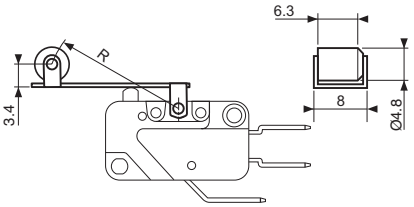
To calculate force
Divide the switch force by the coefficient given in the table.
To calculate travel
Multiply the switch travel by the same coefficient.
Example :
83 161 8 with lever 161 A - R 25.4 position A (coeff. 4)
Operating force: 0.8 : 4 = 0.2 N
Overtravel: 1.2 x 4 = 4.8 mm

Actuators

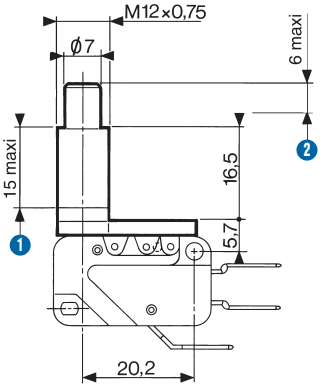
161A flat



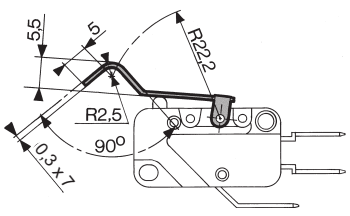
161E roller



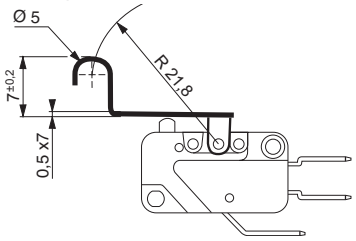
161L telescopic plunger



161F dummy roller



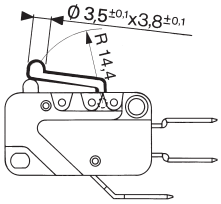
161G dummy roller



1 Thread length
2 Total travel

Nut thickness	Max. torque
1.5 mm	0.5 N.m
2 mm	0.7 N.m
2.5 mm	1 N.m

161V plastic

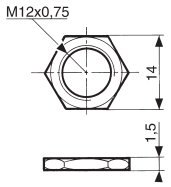


Other shapes and dimensions: consult us

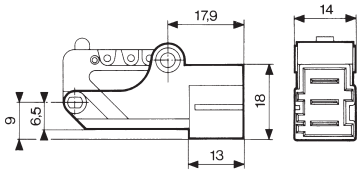
Also available are pinned actuators mounted on position D (factory mounting), same as for 83160 series. (datasheet: SP9640)

Mounting accessories

Nut for 161L

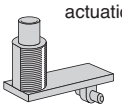
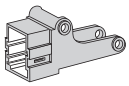


Housing 161J for connections W3 R5



Actuators and mounting accessories

Part numbers for standard actuators	79215740	70507524	79215742	70507529	70507528
Actuators	Flat **161A** R14.2	Flat **161A** R25.4	Roller **161E** R13.6	Roller **161E** R24.1	Dummy roller **161F** R22.2
Fixing positions	A B	A B C	A B	A B C	A B
Coefficient	2 1	4 2 1.5	2 1	4 2 1,5	3.6 1.8
Operating position (mm)	15.2 ±1 15.2 ±0.45	15.2 ±2.5 15.2 ±1 15.2 ±0.8	20.5 ±1.5 20.5 ±0.8	20.5 ±2.9 20.5 ±1.5 20.5 ±1.2	20.4 ±2 20.4 ±0.7

Part numbers for standard actuators	79218651					79250338	70602118
Actuators	Dummy roller **161G** R21,8			**Telescopic plunger **161L**	Manual actuation	Plastic**161V** R14.4	Housing **161J**	Nut for **161L**
								
Fixing positions	A	B	C	D		D		
Coefficient	3	1.8	1.2	1		1		
Operating position (mm)	21.7 ±2	21.7 ±0.7	21.7 ±0.5	21.5 ±1		18.55 ±0.45		

Except where otherwise indicated, flat and roller levers are supplied unmounted.
For factory mounting, specify fixing position A, B or C.
** For 831618, 831618 SP4174. Mounted in factory (supplied without nut)

***V3 Dual-current* - 83161 microswitches with referenced actuators**

Actuators			161A R14.2 79215740		161A R25.4 70507524			161E R13.6 79215742		161E R24.1 70507529			161L
			Pos A	Pos B	Pos A	Pos B	Pos C	Pos A	Pos B	Pos A	Pos B	Pos C	Pos D
831618	I W2	STD	83161838	83161839	83161840	83161841	83161842	83161843	83161844	83161845	83161846	83161847	83161833
		UL	•	•	•	•	•	•	•	•	•	•	•
	I W3	STD	83161850	83161851	83161852	83161853	83161854	83161855	83161856	83161857	83161858	83161859	83161820
		UL	•	•	•	•	•	•	•	•	•	•	•
	I W6A5	STD	83161862	83161863	83161864	83161865	83161866	83161867	83161824	83161868	83161869	83161870	•
		UL	•	•	•	•	•	•	•	•	•	•	•

Installation recommendations

See “Basic technical concepts”

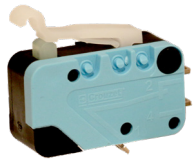
How to order

Use the 8 digit part numbers when they are defined

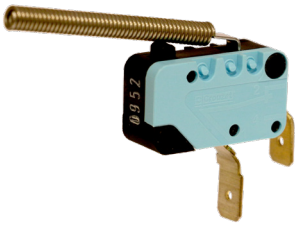
Other cases, precise:
Type of microswitch - Function - Connection - UL approval* - Actuator* - Fixing position* - Adaptation* + Mounting accessories*
* if needed
Example: 831618 C W6A5 UL 161L SP9680 + 70602118

Standard product | Product made to order | • Contact us

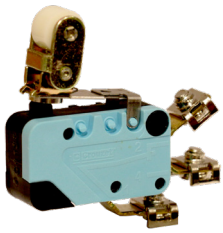
Examples of special adaptations



Plastic lever with no play in rest position



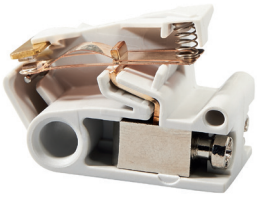
Spring lever for extra-long overtravel



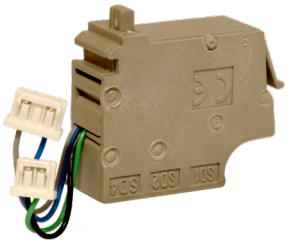
One-way roller lever (active on right, idle-return on left)

Angled W3 terminals

Telescopic plunger and adjustable fixing. 4mm overtravel.
Metal version for heavy duty.
Long barrel.



Fully specific integrable switching module with terminal block for time switch



Auxiliary contact for power switches and circuit breakers. Integrates the *V3* - 83161 mechanism

Door switch for industrial vehicle

Warning:

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