MINIATURE MICROSWITCHES - SEALED, COMPACT

V3DS - 8329

- **C-spring snap-action mechanism with wiping contacts**
- **IP67 protection**
- **Broad range of operating forces from 1 N to 4.5 N**
- **Quick-connect terminals or wire lead output**
- **Ratings from 1 mA 4 V⎓ to 10 A 250 V∿**
- **Choice of actuators on 3 possible fixing positions (pre-assembled or retrofittable)**
- **ENEC, cURus and CCC approved**

Main specifications

Function	Connections	Standard 83293	High current 83291	High current High force 83290	Low force 83294	Dual-current 83298	Dual-current Low force 83299
I (changeover)	W3 (QC 6.3 x 0.8)	83293001	83291001	83290001	83294001	83298001	83299001
I (changeover)	F0 (wires)	83293009	83291009	83290009	83294009	83298009	83299009
R (normally closed)	W3 (QC 6.3 x 0.8)	●	●	●	●	●	●
R (normally closed)	F0 (wires)	83293609	83291609	83290609	83294609	83298609	83299609
C (normally open)	W3 (QC 6.3 x 0.8)	●	●	●	●	●	●
C (normally open)	F0 (wires)	83293809	83291809	83290809	83294809	83298809	83299809
Electrical characteristics							
Rating nominal / 250 V AC (A)		5	10	10	3	3*	3*
Rating thermal / 250 V AC (A)		7.5	10	10	7.5	6	6
Rating UL / 125/250 VAC (A)		6(1)	10(2)	10(2)	6(1)	6(1) - 0.1(0.04)	6(1) - 0.1(0.04)
Mechanical characteristics							
Maximum operating force (N)		2	2.5	4.5	1	2	1
Min. Release force (N)		0.2	0.5	0.8	0.1	0.2	0.1
Max. Allowable overtravel force (N)		20	20	20	20	20	20
Rest position max. (mm)		16.2	16.2	16.2	16.2	16.2	16.2
Operating position (mm)		$14.7^{\pm 0.5}$	$14.7^{\pm 0.5}$	$14.7^{\pm 0.5}$	$14.7^{\pm 0.5}$	$14.7^{\pm 0.5}$	$14.7^{\pm 0.5}$
Maximum differential travel (mm)		0.5	0.5	0.5	0.5	0.5	0.5
Min. overtravel (mm)		1	1	1	1	1	1
Ambient operating temperature (°C)		-40 → +85	-40 → +85	-40 → +85	-40 → +85	-40 → +85	-40 → +85
Mechanical life for 2/3 OT (operations)		10^6	10^6	10^6	10^6	10^6	10^6
Contact gap (mm)		1	1	1	1	1	1
Weight, terminal versions (g)		9	9	9	9	9	9
Weight, wire versions (g)		39	39	39	39	39	39

Additional specifications

- Case: PBT GF (UL 94-V0 / GWFI 850 °C)
- Button: PA66 GF
- Membrane: silicone rubber
- Contacts: silver alloy, gold-plated silver alloy (dual-current)
- Terminals: brass
- Wire leads: tinned copper, XLPE insulated
- Levers: stainless steel
- Degree of protection: IP67 (mechanism and wire output)
- Recommended min actuating speed: 83290: 0.1 mm/s
  83291: 0.3 mm/s
  83293/83298: 1 mm/s
  83294/83299: 3 mm/s
- Certification marks:

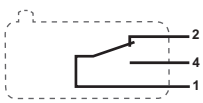
Product adaptations

- **Special levers: special shapes and lengths, pinned actuators, ….**
- **Special leads**
- **Special connections: 4.8 x 0.5 and 4.8 x 0.8 quick-connect, …**
- **Cable output**

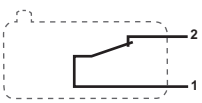
Principles

Single break snap-action switch

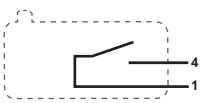
Changeover - SPDT (form C)



Normally closed - SPST-NC (form B)



Normally open - SPST-NO (form A)



Standard product | Product made to order | ● Contact us

Curves

Electrical life

83290 - 83291
- 250 V~ 10 A resistive 50 000 cycles

83293
- 250 V~ 5 A resistive 100 000 cycles

83294
- 250 V~ 3A resistive 100 000 cycles

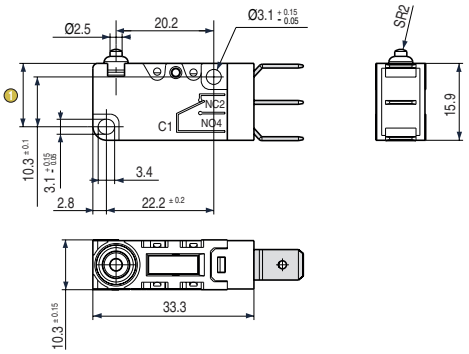
83298 - 83299
- 5 V⎓ 1 mA resistive 200 000 cycles
- 250 V~ 3A resistive 100 000 cycles

* Models 83298 and 83299 are designed to operate equally well on low-current (1 mA 4 V minimum recommended) or medium-current circuits (3 A maximum recommended) circuits. However, a given product should only be used to switch one type of circuit during its working life.

Dimensions

Product

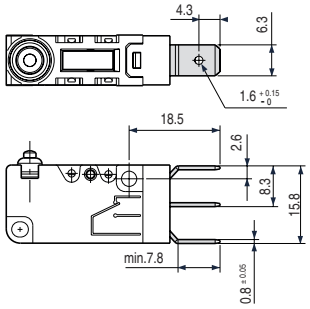
8329



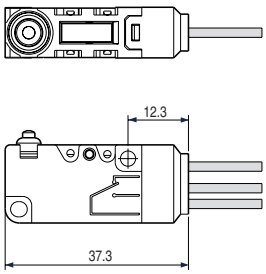
1 Total travel position = 13.2 max

Connections

W3 quick-connect 6.3 x 0.8



F0 wire output

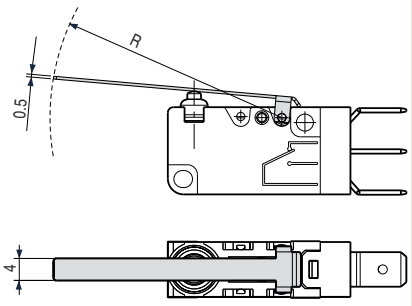


Wire characteristics
1: Black (common)
2: Red (NC)
4: Brown (NO)
Cross-section: 0.8 mm^2
Standard length: 300 mm
Other lengths on request
(length in meters: e.g. 1.5)

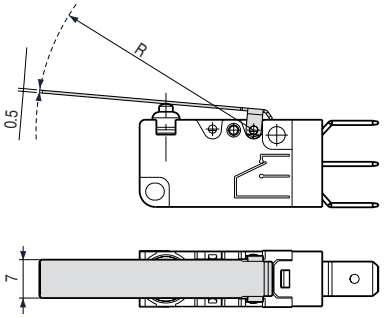
Other connections:
consult us

Actuators

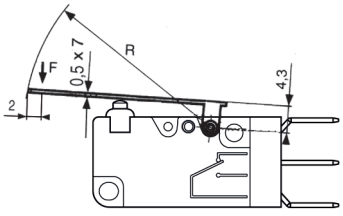
290A4 flat



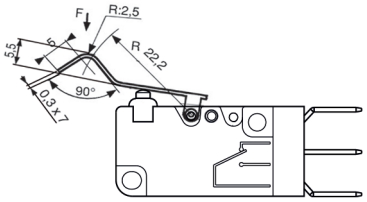
290A7 flat



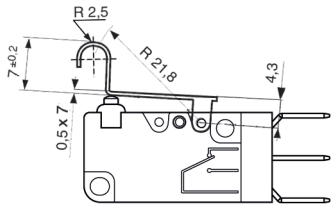
161A flat



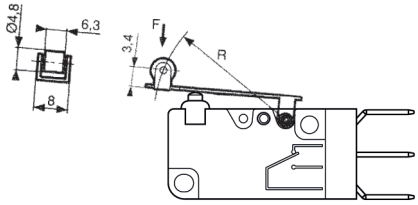
161F dummy roller



161G dummy roller

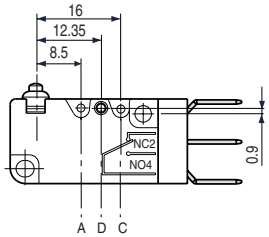


161E roller



Other shapes and dimensions: consult us

Actuator mounting positions



Positions A and C are standard
Position D is for factory mounted pinned actuators: consult us.

Actuators and mounting accessories

Part numbers for standard actuators		**70771217**		**70771218**	
Actuators		Flat **290A4** R42.3		Flat **290A7** R39.5	
Fixing position		A	C	A	C
Coefficient for force *		4.5	2.5	4.5	2.5
Rest position - max	mm	21.5	19	22	18.7
Operating position	mm	$14.7^{\pm2.5}$	$15.2^{\pm1.5}$	$14.8^{\pm2.5}$	$15.2^{\pm1.5}$
Total travel position - max	mm	10.6	12.6	10.3	12.7
Differential travel - max	mm	2.5	1.5	2.5	1.5

Part numbers for standard actuators		**70507524**		**70507529**		**70507528**		**79218651**	
Actuators		Flat **161A** R25.4		Roller **161E** R24.1		Dummy roller **161F** R22.2		Dummy roller **161G** R21.8	
Fixing position		A	C	A	C	A	C	A	C
Coefficient for force *		3	1.5	3	1.5	2.5	-	2.5	1.3
Rest position - max	mm	20	19	25	24.5	25	-	25.5	25
Operating position	mm	$14.2^{\pm1.5}$	$15^{\pm0.9}$	$20^{\pm1.5}$	$20.5^{\pm1}$	$20.2^{\pm1.5}$	-	$21.5^{\pm1.3}$	$22.2^{\pm1}$
Total travel position - max	mm	12	13.8	18	19.2	18.5	-	20	21
Differential travel - max	mm	1.5	1	1.5	1	1.5	-	1.3	1

* To calculate force on actuator, divide the switch force by the coefficient given in the table.
Example: 83291 with lever 290A7 R39.5 Pos C (coeff. 2.5)
Max Operating force: 2.5 N /2.5 = 1 N
Min Release force: 0.5 N /2.5 = 0.2 N

Except where otherwise indicated, levers are supplied unmounted. For factory mounting, specify fixing position A or C.

Installation recommendations

See “Basic technical concepts”

How to order

Use 8 digit part numbers when they are defined

Other cases, precise: Type of microswitch - Function - Connection - Actuator* - Fixing position*
* if needed
Example: 83293 I W3 290A7 R39.5 C

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