

A

High-Capacity Basic Switch

2

Features

- High-capacity switch capable of handling 20 A loads with large inrush currents
- Directly switches such loads as motors, halogen lamps, and solenoids
- Same shape as OMRON Basic Switch Model Z except pin plunger position, yet endures inrush currents as large as 75 A



SWITCHES & KNOBS

Ordering Information

Model number	Operating force g max.	Release force g min.	Pretravel mm (inch) max.	Overtravel mm (inch) min.	Movement differential* mm (inch) max.	Operating position mm (inch) nom.	Actuator length mm (inch) nom.	Style
A-20G-B7-K	625	285	1.3 (.051)	0.25 (.010)	0.2 (.008)	16.3 (.642)	—	
A-20GD-B7-K	625	285	1.3 (.051)	3.0 (.118)	0.2 (.008)	26.2 (1.031)	—	
A-20GQ-B7-K	625	285	1.3 (.051)	5.6 (.220)	0.2 (.008)	21.8 (.858)	—	
A-20GQ22-B7-K	630	280	1.3 (.051)	3.58 (.141)	0.35 (.014)	33.4 (1.315)	—	
A-20GL-B7-K	255	28	8.7 (.343)	1.6 (.063)	1.7 (.067)	17.5 (.689)	45.2 (1.780)	
A-20GL2-B7-K	255	28	8.7 (.343)	1.6 (.063)	1.7 (.067)	28.6 (1.125)	41.7 (1.641)	
A-20GV-B7-K	70	14	15.9 (.626)	4.0 (.157)	2.4 (.094)	19.0 (.748)	63.5 (2.500)	
A-20GV2-B7-K	90	14	12.0 (.472)	2.4 (.094)	2.2 (.087)	30.2 (1.189)	48.4 (1.906)	
A-20GV22-B7-K	160	42	6.5 (.256)	1.2 (.047)	1.2 (.047)	29.8 (1.173)	26.2 (1.031)	

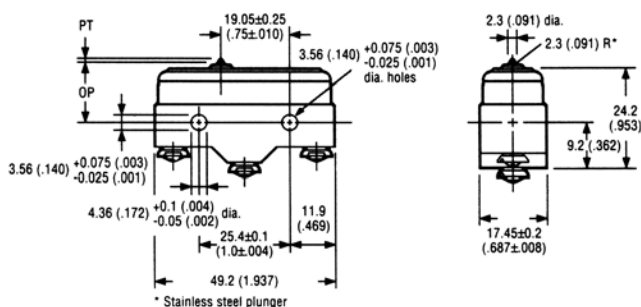
Note: 1. All models above are screw terminal versions. Other available terminal versions are listed below.
2. † denotes opposite actuator direction.

Construction Data

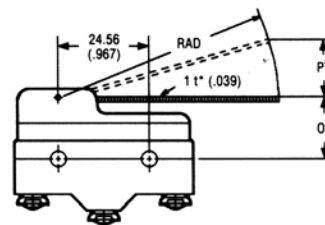
Termination Screw terminal, solder terminal, and quick connect terminal (#250)

Packaging method Box

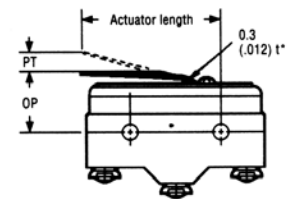
Dimensions [Unit: mm (inch)]



Actuators: Actuators are available in many special forms and lengths. OMRON offers standard type integral hinged lever and roller actuators. The length of the actuator is dimensioned from the centerline of the switch mounting hole as shown.



* Stainless steel lever



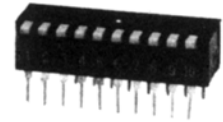
Opposite actuator direction
* Stainless steel spring lever

A6D

Dip Switch

Features

- Smooth, sure switching action
- Completely sealed construction allows immersion-cleaning without taping
- Designed to standards of DIL-IC; top actuated types are auto insertable
- Bifurcated movable contacts
- Subminiature size to save space by reducing the volume to 41% and mounting surface to 67% of conventional type



Characteristic Data

Switching capacity 100mA, 5 VDC; 30mA, 30 VDC

Insulation resistance 100MΩ min. (at 250 VDC)

Dielectric strength 500 VAC for 1 minute

Service life:

Mechanical: 5,000 operations min.

Electrical: 2,000 operations min.

Ordering Information

No. of pins	Top actuated	Raised actuator	Side actuated
2	A6D-2100	A6D-2103	A6DR-2100
4	A6D-4100	A6D-4103	A6DR-4100
6	A6D-6100	A6D-6103	A6DR-6100
8	A6D-8100	A6D-8103	A6DR-8100
10	A6D-0100	A6D-0103	A6DR-0100

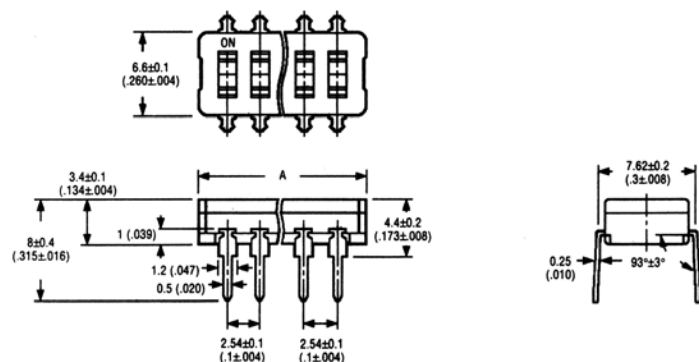
Construction Data

Termination PC board terminals

Packaging method tubes

Dimensions [Unit: mm (inch)]

A6D-□100 – Top Actuated Type



Model	Dimensions A±0.2 (±.008)
A6D-2100	7.1 (.280)
A6D-3100	9.7 (.382)
A6D-4100	12.2 (.480)
A6D-5100	14.7 (.579)
A6D-6100	17.3 (.681)
A6D-7100	19.8 (.780)
A6D-8100	22.4 (.882)
A6D-9100	24.9 (.980)
A6D-0100	27.4 (1.079)

Note: Unless otherwise specified, a tolerance of ±0.4mm (±0.016) applies to all dimensions.

B3F

Features

- Extended mechanical/electrical service life: 10×10^6 operations for 12 x 12 mm (.472 x .472 in.) type and 1×10^6 operations for the 6 x 6 mm (.236 x .236 in.) type
- Ideal for applications such as audio, office and communications equipment, measuring instruments, TVs, VCRs, etc.
- Surface illumination type, vertical type, high force type, surface mount type sealed, and gold-plated contact type are available as series versions
- Flux-tight base structure allows automatic soldering of the keyswitches onto a PC board
- All switches are miniature, low profiled and housed in a 6 x 6 mm (.236 x .236 in.) or 12 x 12 mm (.472 x .472 in.) case
- Snap-action contact mechanism assures short key stroking with a sharp click for secure input

Characteristic Data

Switching capacity 50mA, 24 VDC (Resistive)

Insulation resistance 100M Ω min. (at 250 VDC)

Dielectric strength 500 VAC, 50/60 Hz for 1 minute

Service life (mechanical/electrical)*:

B3F-1 ☐ **B3F-4** ☐: 3×10^6 (0.3×10^6) operations min.

Operating force:

B3F-1 ☐: General purpose type: 100 $\pm$ 30 g

High-force type: 150 $\pm$ 50 g

B3F-4 ☐: General purpose type: 130 $\pm$ 50 g

High-force type: 260 $\pm$ 70 g

Release force (min.):

B3F-1 ☐: General purpose type: 20 g, High-force type: 50 g

B3F-4 ☐: General purpose type: 30 g, High-force type: 50 g

Note: * Figure in parentheses denotes the service life of high force type.

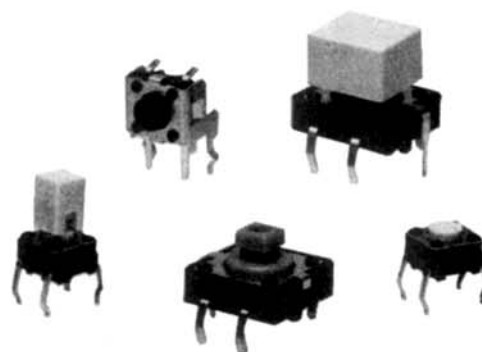
Construction Data

Termination PC board terminals

Packaging method Box with inner bags, tubes

Mechanical Keyswitches

2 SWITCHES & KNOBS



Ordering Information

6 x 6 mm (.236 x .236 in.) type

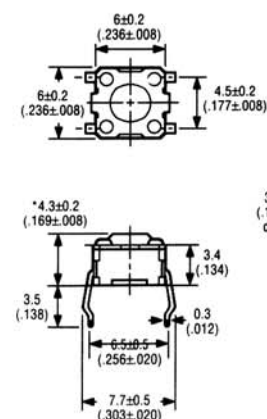
Type	Plunger	Classification Ground terminal Switch height x Pitch	General purpose type (OF=100g)		High-force type (OF=150g)	
			Not provided	Provided	Not provided	Provided
Standard	Flat	4.3 x 6.5 mm (.169 x .256 in.)	B3F-1000	B3F-1100	B3F-1002	B3F-1102
	Projected	7.3 x 6.5 mm (.287 x .256 in.)	B3F-1050	B3F-1150	B3F-1052	B3F-1152

12 x 12 mm (.472 x .472 in.) type

Type	Plunger	Classification Ground terminal Switch height x Pitch	General purpose type (OF=100g)		High-force type (OF=150g)	
			Not provided	Provided	Not provided	Provided
Standard	Flat	4.3 x 12.5 mm (.169 x .492 in.)	B3F-4000	B3F-4100	B3F-4005	B3F-4105
	Projected	7.3 x 12.5 mm (.287 x .492 in.)	B3F-4050	B3F-4150	B3F-4055	B3F-4155

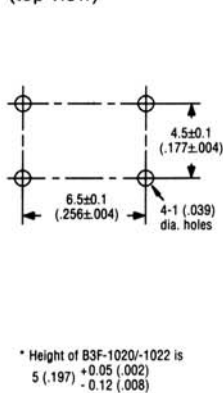
Dimensions [Unit: mm (inch)]

B3F-1000

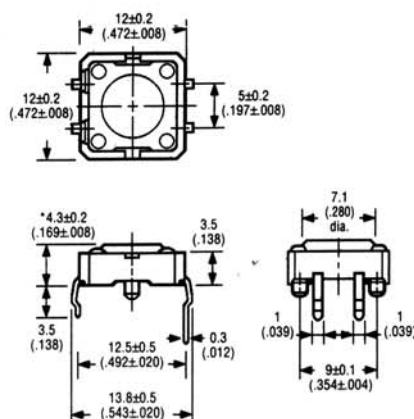


B3F-10

Mounting holes (top view)

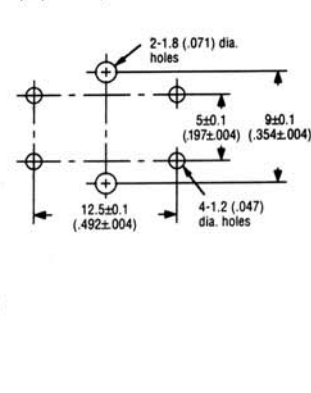


B3F-4000



B3F-40

Mounting holes (top view)



Note: 1. Unless otherwise specified, a tolerance of ± 0.4 mm (.016 in.) applies to all dimensions.

2. * Fit the projection of the switch into this hole to secure the switch.

3. ** Terminal numbers are not indicated on this switch. With the switch turned over so that the logo mark "OMRON" is visible on the upper part of the rear side of the switch base, the terminal on the right of the logo mark is numbered "1" and that on the bottom right is "3". Accordingly, two terminals on the left side are numbered "2" and "4" respectively.

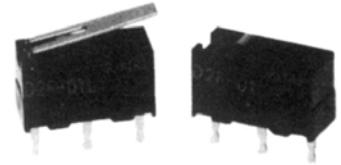
4. Vertical style and caps available.

D2F

Subminiature Basic Switch

Features

- Super compact: 6.5 mm (.256 in.) H x 12.8 mm (.504 in.) W x 5.8 mm (.228 in.) D, ideal for PCB mounting
- Long lifespan thanks to high-precision dual spring reverse-action mechanism
- Flux penetration prevented by using an insert terminal and allowing a height difference at the case bottom
- Ideal for a wide variety of applications, from household appliances and office equipment to audio equipment and communications equipment



Ordering Information

Model number	Operating force g max.	Release force g min.	Pretravel mm (inch) max.	Overtravel mm (inch) min.	Movement differential mm (inch) max.	Operating position mm (inch) nom.	Actuator length mm (inch) nom.	Style
D2F-01	150	20	0.5 (.020)	0.25 (.010)	0.12 (.005)	5.5 (.217)	—	
D2F-01L	80	5	—	0.55 (.022)	0.5 (.020)	6.8 (.268)	5.2 (.205)	
D2F-01L2	80	5	—	0.55 (.022)	0.5 (.020)	13±2.0 (.512±.079)	5.2 (.205)	
D2F-01L3	80	5	—	0.5 (.020)	0.45 (.018)	8.5±1.2 (.335±.047)	5.2 (.205)	

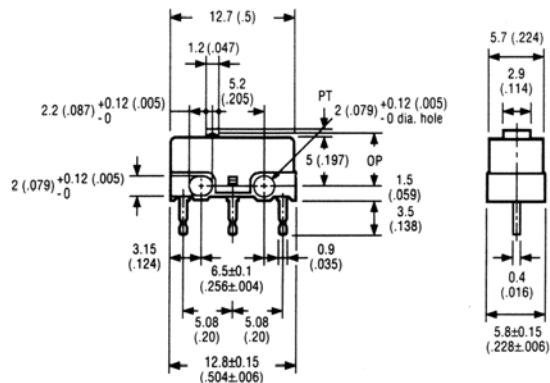
Note: 1. All models above are PCB terminal versions. Other available terminal versions are listed below

Construction Data

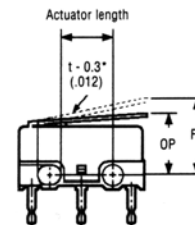
Termination PCB terminal, self-supporting terminal, solder terminal, and right-angle terminal

Packaging method Trays with box

Dimensions [Unit: mm (inch)]



Actuators: Actuators are available in many special forms and lengths. OMRON offers standard type integral hinged lever and roller actuators. The length of the actuator is dimensioned from the centerline of the switch mounting hole as shown.



* Stainless copper lever

D4A-N

General Purpose Limit Switch

Features

- Heavy-duty switch features plug-in construction
- Oiltight, watertight construction meets NEMA 3, 4, 4X, 6P and 13
- Convenient front mounting, easy installation and maintenance
- Wide temperature range: -40° to 100°C (-40° to 212°F)
- Side rotary switches accept a wide selection of levers
- Increased mechanical durability



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S W I T C H E S

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K N O B

Ordering Information

Description	SPDT double break-no indicator	DPDT double break-no indicator
Side Rotary Switches		
Standard	D4A-1101N	D4A-2501N
High-precision	D4A-1102N	D4A-2502N
Low torque	D4A-1103N	D4A-2503N
High precision/low torque	D4A-1104N	D4A-2504N
Maintained contact	D4A-1105N	D4A-2505N
Sequential operation	—	D4A-2717N
Center neutral operation	—	D4A-2918N

Note: 1. When ordering side rotary switches, see the following chart.

2. Add "-F" suffix for Viton® fluoroelastomer seals that withstand temperatures to 120°C (248°F). For example, **D4A-1101N-F**.

Description		Lever radius	Material	Diameter	Width	Part number
Levers for D4A-N Side Rotary Switches						
Standard roller levers, front mount		38.1 mm (1.5 in.)	Stainless steel	19.1 mm (0.75 in.)	7.9 mm (0.31 in.)	D4A-A00
		38.0 mm (1.5 in.)	Nylon	17.5 mm (0.69 in.)	30 mm (1.18 in.)	WL-1A104
		50.0 mm (1.97 in.)	Stainless steel	17.5 mm (0.69 in.)	15 mm (0.59 in.)	WL-1A200
		63.0 mm (2.48 in.)	Stainless steel	17.5 mm (0.69 in.)	7.0 mm (0.28 in.)	WL-1A300
Standard roller lever, back mount		38.1 mm (1.5 in.)	Stainless steel	19.1 mm (0.75 in.)	7.9 mm (0.31 in.)	D4A-A10
Adjustable roller lever, front mount		25 to 89 mm (0.98 to 3.5 in.) L	Nylon	17.5 mm (0.69 in.)	7.0 mm (0.28 in.)	WL-2A111
		33 to 91 mm (1.3 to 3.6 in.) L	Stainless steel	19.1 mm (0.75 in.)	7.4 mm (0.29 in.)	D4A-C00
Spring rod lever		290 mm (11.5 in.) L	Stainless steel	2 mm (0.08 in.)	—	WL-4A201
Adjustable rod lever		150 mm (5.91 in.) L	Stainless steel	3 mm (0.12 in.)	—	D4A-D00
		350 to 380 mm (13.8 to 15 in.) L	Stainless steel	3.2 mm (0.13 in.)	—	WL-3A100

D4A-N

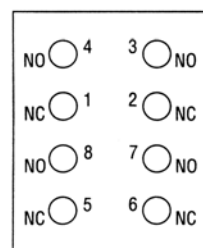
General Purpose Limit Switch

Electrical Specifications

Circuit	Rated voltage	Amperes		Continuous carrying current	Voltamperes	
		Make	Break		Make	Break
NEMA A600 Rating (UL/CSA)						
SPDT double break	120 VAC	60	6	10	7200	720
	240 VAC	30	3	10	7200	720
	480 VAC	15	1.5	10	7200	720
	600 VAC	12	1.2	10	7200	720
NEMA B600 Rating (UL/CSA)						
DPDT double break	120 VAC	30	3	5	3600	360
	240 VAC	15	1.5	5	3600	360
	480 VAC	7.5	0.75	5	3600	360
	600 VAC	6	0.6	5	3600	360
NEMA A300 Rating (UL/CSA) for SPDT Switches with Neon Lamp Status Indicators						
SPDT double break	120 VAC	60	6	10	7200	720
	240 VAC	30	3	10	7200	720

Note: 1. All switches must be the same polarity.

Terminal Arrangement



Contact Ratings

NEMA A600 for SPDT models
NEMA B600 for DPDT models
NEMA A300 for SPDT models with neon lamp status indicator

Contact Resistance

25 mΩ maximum (Initial)

Operating Characteristics

Part number	Description	OF max.	RF min.	PT max.	OT min.	MD max.	
						SPDT	DPDT
D4A-□□01N	Standard	4 kg-cm (3.5 lb.-in.)	0.5 kg-cm (0.4 lb.-in.)	12°±3°	70°	4°±1°	5°±2°
D4A-□□02N	High-precision	4 kg-cm (3.5 lb.-in.)	0.5 kg-cm (0.4 lb.-in.)	5°±2°	75°	3°±1°	4°±1°
D4A-□□03N	Side rotary, low torque	2 kg-cm (1.7 lb.-in.)	—	12°±3°	70°	4°±1°	5°±2°
D4A-□□04N	Side rotary, high-precision /low torque	2 kg-cm (1.7 lb.-in.)	—	5°±2°	75°	3°±2°	4°±2°
D4A-□□05N	Side rotary, maintained contact	4 kg-cm (3.5 lb.-in.)	—	55°±10°	20°	28°±7°	28°±7°
D4A-□□17N	Side rotary, sequential operation	4 kg-cm (3.5 lb.-in.)	0.5 kg-cm (0.4 lb.-in.)	1st pole 7°±3° 2nd pole 15°±3°	65°	Each pole 4°±2°	Each pole 4°±2°
D4A-□□18N	Side rotary, center neutral operation	4 kg-cm (3.5 lb.-in.)	0.2 kg-cm (0.2 lb.-in.)	15°±3°	65°	4°±1°	4°±1°

Legend: OF = Operating Force (max.); RF = Reset Force (min.); OT = Overtravel (min.); PT = Pretravel;
MD = Movement Differential (max.); PO = Positively Open (max.); TT = Total Travel

Note: 1. The operating position depends on the level selected.

D4A-N

General Purpose Limit Switch

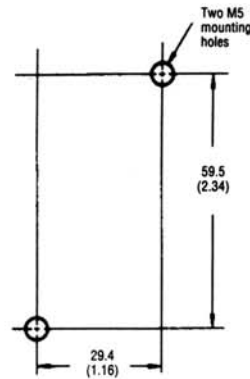
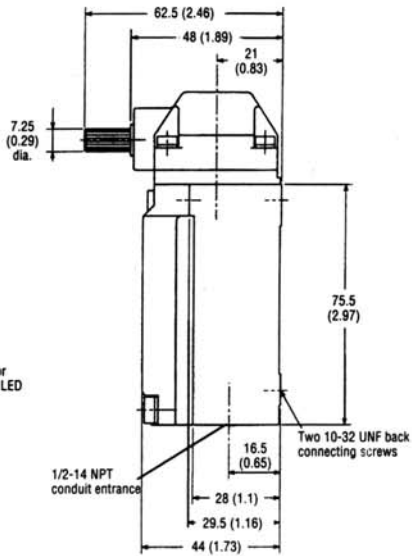
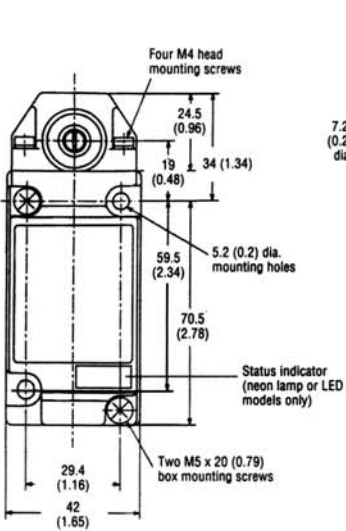
Dimensions [Unit: mm (inch)]

Side Rotary Switches

D4A-1101N dim A

D4A-1101N dim B

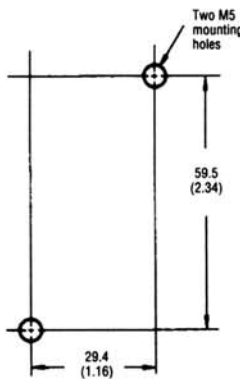
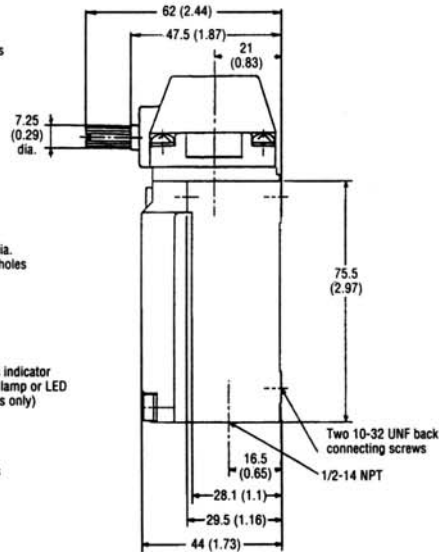
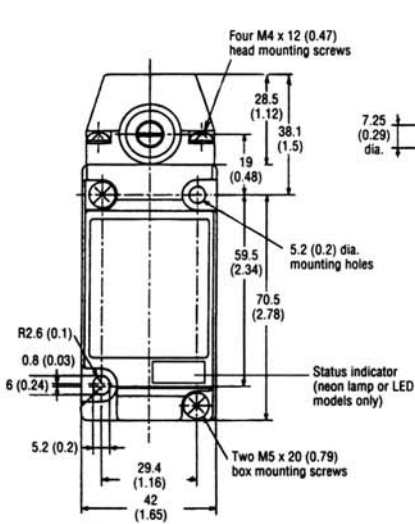
D4A Mounting holes



D4A-1105N dim A

D4A-1105N dim B

D4A Mounting holes



Approved by Standards

UL Recognized, File No. E76675
CSA Certified, File No. LR45746

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S W I T C H E S

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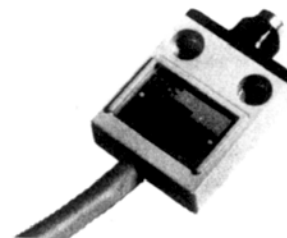
K N O B

D4C

Enclosed Limit Switches

Features

- Sealed, compact, slim prewired limit switch
- Rugged diecast housing
- Meets UL types 3, 4 and 13
- Triple-sealed construction
- Designed for easy gang mounting
- Rated load of 5 A, 250 VAC
- Prewired with 3 m (9.8 ft.) or 5 m (16.4 ft.) of cable
- UL recognized (File No. E76675)/CSA certified (File No. LR45746) approvals
- IEC-IP67: 300 volt rating



Electrical Specifications – Maximum Carrying Currents

Rated voltage	Non-inductive load (A)				Inductive load (A)				Inrush current (A)	
	Resistive load		Lamp load		Inductive load		Motor load			
	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	5	5	1.5	0.7	3	3	2.5	1.3	20 max.	10 max.
250 VAC	5	5	1	0.5	2	2	1.5	0.8	20 max.	10 max.
8 VDC	5	5	2	2	5	4	3	3	20 max.	10 max.
14 VDC	5	5	2	2	4	4	3	3	20 max.	10 max.
30 VDC	4	4	2	2	3	3	3	3	20 max.	10 max.
125 VDC	0.4	0.4	0.05	0.05	0.4	0.4	0.05	0.05	20 max.	10 max.
250 VDC	0.2	0.2	0.03	0.03	0.2	0.2	0.03	0.03	20 max.	10 max.

Test conditions: 1. Inductive load ratings are based on a power factor of 0.4 min. (AC) and a time constant of 7 ms max. (DC).

2. Lamp load has an inrush current of 10 times the steady-state current, while motor load has an inrush current of 6 times the steady-state current.

Operating Characteristics

Part number	Description	OF	RF	OT	PT	MD	OP
D4C-01	Pin plunger	1.2 kg (42.32 oz.)	450 g (15.87 oz.)	3 mm (0.118 in.)	1.8 mm (0.07 in.)	0.2 mm (0.008 in.)	15.7 ± 1 mm (0.62 ± 0.04 in.)
D4C-02	Roller plunger	1.2 kg (42.32 oz.)	450 g (15.87 oz.)	3 mm (0.118 in.)	1.8 mm (0.07 in.)	0.2 mm (0.008 in.)	28.5 ± 1 mm (1.12 ± 0.04 in.)
D4C-20	Roller lever	580 g (20.46 oz.)	150 g (5.29 oz.)	40°	25°	3°	—

Legend: OF = Operating Force (max.); RF = Reset Force (min.); OT = Overtravel (min.); PT = Pretravel;
MD = Movement Differential (max.); OP = Operating Position

D4C-
Cable
D4C-16=3 m (9.8 ft.)
17=5 m (16.4 ft.)

Dimensions [Unit: mm (inch)]

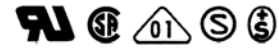
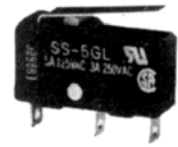
Part number	Actuator	L	W	D
D4C-1601	Pin plunger	40.13 (1.58)	17.53 (0.69)	54.10 (2.13)
D4C-1602	Roller plunger	40.13 (1.58)	17.53 (0.69)	67.06 (2.64)
D4C-1620	Roller lever	40.13 (1.58)	50.04 (1.97)	102.62 (4.04)

SS

Subminiature Basic Switch

Features

- Economical, subminiature basic switch offers long life (30 x 10⁶ operations)
- All models are free from overtravel restrictions, permit easy setting
- Wide switching capacity range from microvoltage/current loads (1 mA at 5 VDC) to high-capacity loads (10.1 A at 250 VAC)



Ordering Information

Model number	Operating force g max.	Release force g min.	Pretravel mm (inch) max.	Overtravel mm (inch) min.	Movement differential mm (inch) max.	Operating position mm (inch) nom.	Actuator length mm (inch) nom.	Style
SS-01	150	25	0.5 (.020)	0.5 (.020)	0.1 (.004)	8.4 (.331)	—	
SS-01GL	50	6	1.2 (.047)	0.8 (.031)	13.6 (.535)	8.8 (.346)	14.5 (.571)	
SS-5	150	25	0.5 (.020)	0.5 (.020)	0.1 (.004)	8.4 (.331)	—	
SS-5GL	50	6	5.6 (.220)	1.2 (.047)	0.8 (.031)	8.8 (.346)	14.5 (.571)	
SS-5GL13	50	6	5.6 (.220)	1.2 (.047)	0.8 (.031)	10.7 (.421)	15.8 (.622)	
SS-5GL2	50	6	5.6 (.220)	1.2 (.047)	0.8 (.031)	14.5 (.571)	14.5 (.571)	
SS-10	150	25	0.6 (.024)	0.4 (.016)	0.12 (.005)	8.4 (.331)	—	
SS-10GL	50	6	1.0 (.039)	1.0 (.039)	13.6 (.535)	8.8 (.346)	14.5 (.571)	

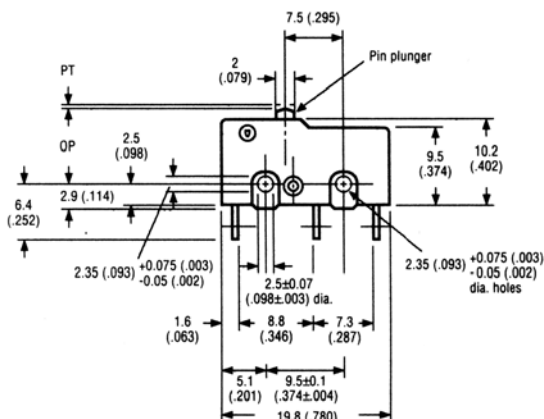
Note: 1. All models above are solder terminal versions. Other available terminal versions are listed below.

Construction Data

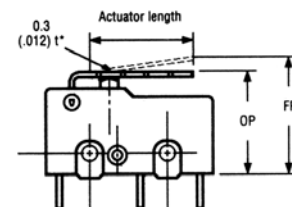
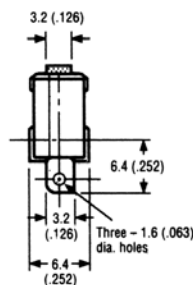
Termination Solder terminal, quick connect terminal (#110), PCB terminal, and right/left angle terminal

Packaging method Trays with box

Dimensions [Unit: mm (inch)]



Actuators: Actuators are available in many special forms and lengths. OMRON offers standard type integral hinged lever and roller actuators. The length of the actuator is dimensioned from the centerline of the switch mounting hole as shown.



* Stainless steel lever

General Purpose Basic Switch

Features

- High precision basic switch in a variety of styles
- Wide margins of operating conditions increases the operating speed range
- Available in a variety of contact forms: basic, split contact, maintained contact, adjustable contact gap types
- UL listed, CSA certified



Ordering Information

Model number	Operating force g max.	Release force g min.	Pretravel mm (inch) max.	Overtravel mm (inch) min.	Movement differential mm (inch) max.	Operating position mm (inch) nom.	Actuator length mm (inch) nom.	Style
Z-15G-B7-K	350	114	0.4 (.016)	0.13 (.005)	0.05 (.002)	15.9 (.626)	—	
Z-15GD-B7-K	350	114	0.4 (.016)	1.6 (.063)	0.05 (.002)	21.5 (.846)	—	
Z-15GQ-B7-K	350	114	0.4 (.016)	5.5 (.217)	0.05 (.002)	21.8 (.858)	—	
Z-15GQ21-B7-K	350	114	0.4 (.016)	3.58 (.129)	0.05 (.002)	33.4 (1.315)	—	
Z-15GQ22-B7-K	350	114	0.4 (.016)	3.58 (.129)	0.05 (.002)	33.4 (1.315)	—	
Z-15GW-B7-K	70	14	10.0 (.394)	5.6 (.220)	1.27 (.050)	19.0 (.748)	63.5 (2.500)	
Z-15GW2-B7-K	100	22	7.1 (.280)	4.0 (.157)	1.02 (.040)	30.2 (1.189)	48.5 (1.909)	
Z-15GW22-B7-K	160	42	2.7 (.106)	2.4 (.094)	0.5 (.020)	30.2 (1.189)	26.6 (1.047)	
Z-15GW55-B7-K	100	14	10.1 (.398)	5.6 (.220)	2.0 (.079)	19.0 (.748)	63.5 (2.500)	

Note: 1. All models above are screw terminal versions. Other available terminal versions are listed below.

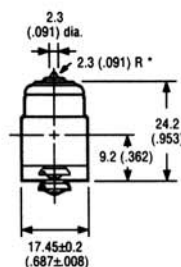
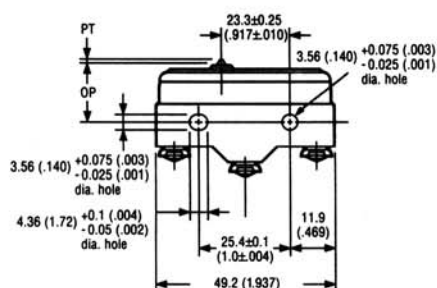
Construction Data

Termination Screw terminal, solder terminal, and quick connect terminal (#250)

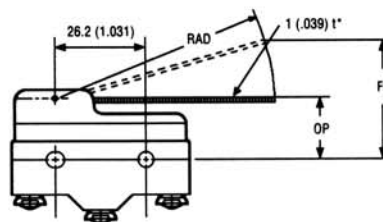
Packaging method Box

Dimensions [Unit: mm (inch)]

Actuators: Actuators are available in many special forms and lengths. OMRON offers standard type integral hinged lever and roller actuators. The length of the actuator is dimensioned from the centerline of the switch mounting hole as shown.



* Stainless steel plunger



* Stainless steel lever

ZE/ZV/ZV2

Enclosed Limit Switches

Features

- Large switching capacity and long service life
- 15-amp, 125 VAC switching capacity
- Rugged diecast housing
- Sealed (booted) switches meet NEMA types 1, 2, 3, 4 and 5
- UL recognized (File No. E76675) and CSA certified (File No. LR21642)



Electrical Specifications – Maximum Carrying Currents

Rated voltage	Non-inductive load (amps)				Inductive load (amps)				Inrush current (amps)	
	Resistive load		Lamp load		Inductive load		Motor load		NC	NO
	NC	NO	NC	NO	NC	NO	NC	NO		
125 VAC	15	15	3	1.5	15	15	5	2.5	30 max.	15 max.
250 VAC	15	15	2.5	1.25	15	15	3	1.5	30 max.	15 max.
480 VAC	10	10	1.5	0.75	6	6	1.5	0.75	30 max.	15 max.
125 VDC	0.5	0.5	0.5	0.5	0.05	0.05	0.05	0.05	30 max.	15 max.
250 VDC	0.25	0.25	0.25	0.25	0.03	0.03	0.03	0.03	30 max.	15 max.

Note: 1. Inductive load has a power factor of 0.4 minimum (AC) and a time constant of 7 msec (CC).

2. Lamp load has an inrush current of 10 times the steady-state current, while motor load has an inrush current of 6 times the steady-state current.

Operating Characteristics

Part number	Description	OF	RF	OT	PT	MD	OP
ZE-N-2S	Sealed pin plunger	800 g (28.2 oz.)	240 g (8.5 oz.)	5 mm (0.197 in.)	2 mm (0.079 in.)	0.1 mm (0.004 in.)	45.8 ± 0.8 mm (1.80 ± 0.03 in.)
ZE-N22-2S	Sealed roller plunger	500 g (17.6 oz.)	100 g (3.5 oz.)	3.5 mm (0.138 in.)	1 mm (0.039 in.)	0.12 mm (0.005 in.)	49.7 ± 0.8 mm (1.96 ± 0.03 in.)
ZE-NA2-2S	Sealed roller arm lever	640 g (22.6 oz.)	230 g (8.1 oz.)	6 mm (0.236 in.)	5 mm (0.197 in.)	0.4 mm (0.016 in.)	—
ZE-NJ-2S	Sealed coil spring	150 g (5.3 oz.)	—	—	15°	—	—

Legend: OF = Operating Force (max.); RF = Reset Force (min.); OT = Overtravel (min.) PT = Pretravel;
MD = Movement Differential (max.); OP = Operating Position

Dimensions [Unit: mm (inch)]

Part number	Actuator	L	W	D
ZE-N-2S	Sealed pin plunger	86.11 (3.39)	29.46 (1.16)	73.15 (2.88)
ZE-N22-2S	Sealed roller plunger	86.11 (3.39)	29.46 (1.16)	75.95 (2.99)
ZE-NA2-2S	Sealed roller arm lever	86.11 (3.39)	29.46 (1.16)	101.6 (4.00)
ZE-NJ-2S	Sealed coil spring	86.11 (3.39)	29.46 (1.16)	173.99 (6.85)