

Best-selling Basic Switch Boasting High Precision and Wide Variety



- A large switching capacity of 15 A with high repeat accuracy.
- A wide range of variations in contact form for your selection: basic, split-contact, maintained-contact, and adjustable contact gap types.
- A series of standard models for micro loads is available.
- A series of molded terminal-type models incorporating safety terminal protective cover is available.

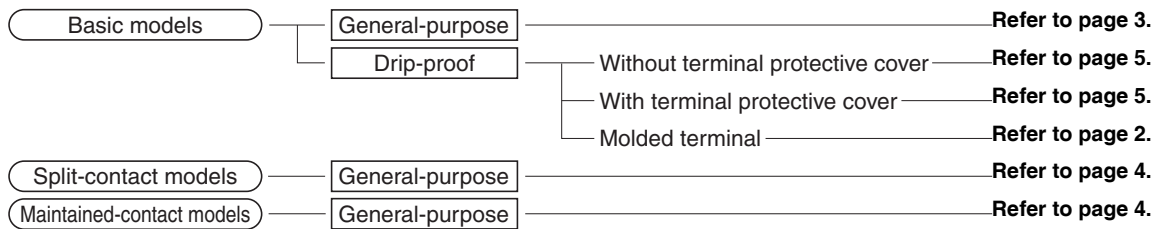


For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Be sure to read *Safety Precautions* on page 26 and *Safety Precautions for All Basic Switches*.

Model Number Structure

Configuration



Basic Models

General-purpose

- A variety of actuators is available for a wide range of application.
- The contact mechanism of models for micro loads is a crossbar type with gold-alloy contacts, which ensures highly reliable operations for micro loads.
- Contact Gap:
 - H2: 0.20 mm (extra-high-sensitivity)
 - H: 0.25 mm (high-sensitivity, micro voltage current load)
 - G: 0.5 mm (standard)
 - E: 1.8 mm (high-capacity)

Drip-proof

- These Switches use a rubber boot on the actuator and adhesive fill between the case and cover to increase resistance to drips.
- Models with drip-proof terminal protective covers and molded terminals with resin filling are also available.

Split-contact Models

- This type is identical in construction to the general-purpose basic switch except that it has two pairs of simultaneous acting contacts by splitting moving contacts.
- Since the moving contacts are connected to a common terminal, either parallel or series connection is possible.
- Highly reliable micro load switching is ensured if the model is used as a twin-contact switch.

Maintained-contact Models

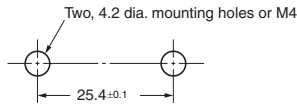
- The maintained-contact type has a reset button at the bottom of the switch case, in addition to the pushbutton (plunger) located on the opposite side of the reset button. Use these buttons alternately.
- Since the Switch has greater pretravel than overtravel, it is suitable for use in reversible control circuits, manual reset circuits, safety limit circuits, and other circuits which are not preferable for automatic resetting. (For further details, refer to individual datasheets.)

Dimensions

(Unit: mm)

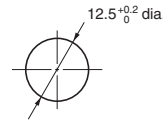
Mounting

Use M4 screws with plane washers and spring washers to mount the Switch. Tighten each mounting screw securely to a torque of 1.18 to 1.47 N·m.

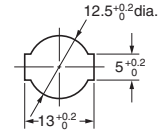


When mounting the Switch to a panel, use a tightening torque of 2.94 to 4.9 N·m for the hexagonal nuts on the actuator.

Panel Mount Plunger



Panel Mount Roller Plunger



Basic Models General-purpose and Split-contact Models

Terminals

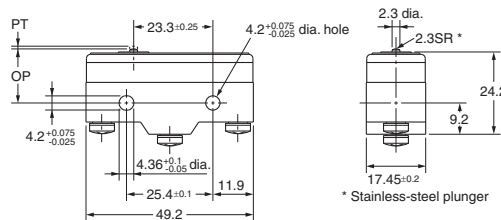
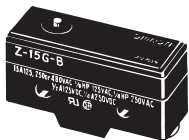
Basic Models		Split-contact Models
Screw Terminals (-B) Three, M4 × 5.5 Terminal screws (with toothed washer) Appropriate terminal screw tightening torque: 0.78 to 1.18 N·m.	Solder Terminal (-A) ("A" is not included in the model numbers.) Appropriate terminal screw tightening torque: 0.78 to 1.18 N·m.	Screw Terminals (Y-B) Five, M3.5 × 5.5 terminal screws (with toothed washer) Appropriate terminal screw tightening torque: 0.49 to 0.78 N·m. Note: With reverse action models (Z-10FM), the positions of NO and NC terminals are reversed.
Note: With reverse action models (Z-15GM), the positions of NO and NC terminals are reversed.		

Dimensions and Operating Characteristics

The models, illustrations, and graphics are for screw-terminal models (-B). The "A" at the end of the model number for solder terminal models has been omitted. For details of the terminals, see above.

Pin Plunger

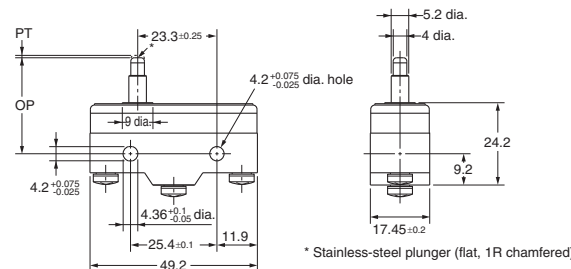
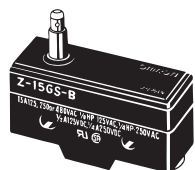
- Z-15G-B Z-15E-B
- Z-15H2-B Z-01H-B
- Z-15H-B Z-10FY-B



Operating Characteristics	Model	Z-15G-B	Z-15H2-B	Z-15H-B	Z-15E-B	Z-01H-B	Z-10FY-B
Operating force	OF	2.45 to 3.43 N	1.96 to 2.5 N	1.96 to 2.75 N	6.12 to 7.85 N	2.45 N max.	4.46 to 7.26 N
Release force	RF min.	1.12 N	1.12 N	1.12 N	1.12 N	0.78 N	1.12 N
Pretravel	PT max.	0.4 mm	0.3 mm	0.3 mm	0.8 mm	0.5 mm	0.8 mm
Overtravel	OT min.	0.13 mm	0.13 mm	0.13 mm	0.13 mm	0.13 mm	0.13 mm
Movement Differential	MD max.	0.05 mm	0.005 to 0.008 mm	0.025 mm	0.13 mm	0.04 mm	0.1 mm
Operating Position	OP	15.9 ± 0.4 mm					

Slim Spring Plunger

- Z-15GS-B Z-01HS-B
- Z-15HS-B Z-10FSY-B

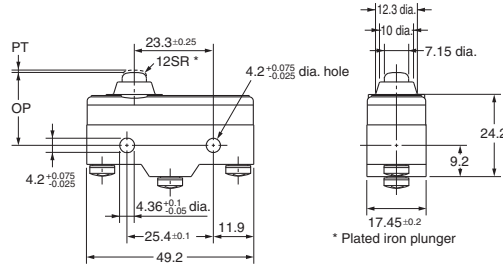
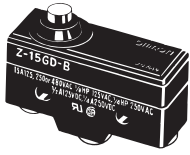


Operating Characteristics	Model	Z-15GS-B	Z-15HS-B	Z-01HS	Z-10FSY-B
Operating force	OF	2.45 to 3.43 N	1.96 to 2.79 N	2.45 N max.	4.46 to 7.26 N
Release force	RF min.	1.12 N	1.12 N	0.78 N	1.12 N
Pretravel	PT max.	0.4 mm	0.3 mm	0.5 mm	0.8 mm
Overtravel	OT min.	1.6 mm	1.6 mm	1.6 mm	1.6 mm
Movement Differential	MD max.	0.05 mm	0.025 mm	0.05 mm	0.1 mm
Operating Position	OP	28.2 ± 0.5 mm			

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

Short Spring Plunger

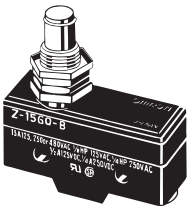
- Z-15GD-B Z-01HD-B
- Z-15HD-B Z-10FDY-B
- Z-15ED-B



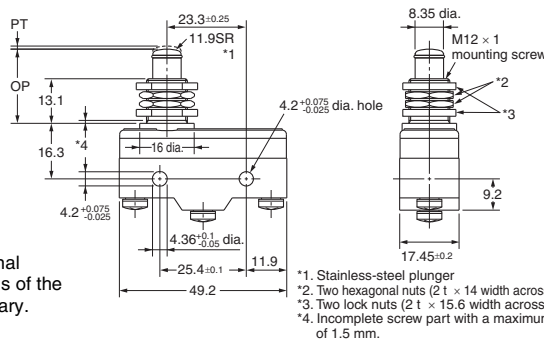
	Z-15GD-B	Z-15HD-B	Z-15ED-B	Z-01HD-B	Z-10FDY-B
OF	2.45 to 3.43 N	1.96 to 2.79 N	6.13 to 7.85 N	2.45 N max.	4.46 to 7.26 N
RF min.	1.12 N	1.12 N	1.12 N	0.78 N	1.12 N
PT max.	0.4 mm	0.3 mm	0.8 mm	0.5 mm	0.8 mm
OT min.	1.6 mm	1.6 mm	1.6 mm	1.6 mm	1.6 mm
MD max.	0.05 mm	0.025 mm	0.13 mm	0.05 mm	0.1 mm
OP	21.5±0.5 mm				

Panel Mount Plunger

- Z-15GQ-B Z-01HQ-B
- Z-15HQ-B Z-10FQY-B
- Z-15EQ-B Z-15GQ3-B *
- Z-15GQ8-B *



* The external dimensions of the actuator vary.



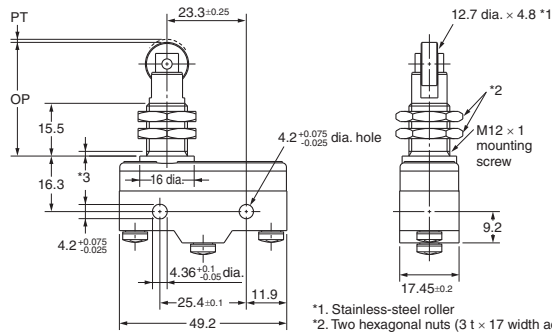
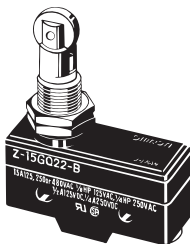
- Note: 1. Do not use the M12 mounting screw and the case mounting hole at the same time, or excessive pulling force will be imposed on the switch and the case and cover may be damaged.
 2. On the model Z-15GQ3-B, PT can be set to a value larger than that for the Z-15GQ.
 3. On the model Z-15GQ8-B, operating position can be adjusted by providing a screw in the plunger section.
 4. On the model Z-15GQ8-B, the M3 hole with a depth of 10 mm is a through hole. Take precautions so that no water or screw lock agent penetrates into the hole.

- *1. Stainless-steel plunger
- *2. Two hexagonal nuts (2 t × 14 width across flats)
- *3. Two lock nuts (2 t × 15.6 width across flats)
- *4. Incomplete screw part with a maximum length of 1.5 mm.

	Z-15GQ-B	Z-15HQ-B	Z-15EQ-B	Z-01HQ-B	Z-10FQY-B	Z-15GQ3-B	Z-15GQ8-B
OF	2.45 to 3.43 N	1.96 to 2.79 N	6.13 to 7.85 N	2.45 N max.	4.46 to 7.26 N	2.45 to 3.43 N	2.45 to 3.43 N
RF min.	1.12 N	1.12 N	1.12 N	0.78 N	1.12 N	1.12 N	1.12 N
PT max.	0.4 mm	0.3 mm	0.8 mm	0.5 mm	0.8 mm	4.2 mm	0.5 mm
OT min.	5.5 mm	5.5 mm	5.5 mm	5.5 mm	5.5 mm	2.5 mm	5.5 mm
MD max.	0.05 mm	0.025 mm	0.13 mm	0.05 mm	0.1 mm	2.2 mm	0.05 mm
OP	21.8±0.8 mm					18.8±0.8 mm	32.5±1 mm

Panel Mount Roller Plunger

- Z-15GQ22-B Z-15EQ22-B
- Z-15HQ22-B Z-10FQ22Y-B



Note: Do not use the M12 mounting screw and the case mounting hole at the same time, or the case may be damaged.

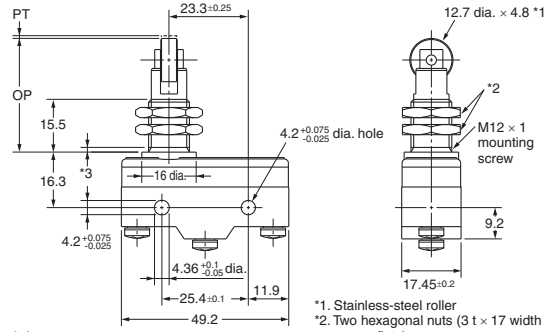
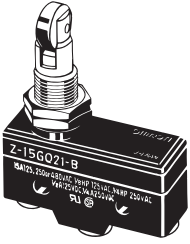
- *1. Stainless-steel roller
- *2. Two hexagonal nuts (3 t × 17 width across flats)
- *3. Incomplete screw part with a maximum length of 1.5 mm.

	Z-15GQ22-B	Z-15HQ22-B	Z-15EQ22-B	Z-10FQ22Y-B
OF	2.45 to 3.43 N	1.96 to 2.79 N	6.13 to 7.85 N	4.46 to 7.26 N
RF min.	1.12 N	1.12 N	1.12 N	1.12 N
PT max.	0.4 mm	0.3 mm	0.8 mm	1 mm
OT min.	3.58 mm	3.58 mm	3.58 mm	3.55 mm
MD max.	0.05 mm	0.025 mm	0.13 mm	0.1 mm
OP	33.4±1.2 mm			

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

Panel Mount Cross Roller Plunger

Z-15GQ21-B Z-15EQ21-B
Z-15HQ21-B



- *1. Stainless-steel roller
- *2. Two hexagonal nuts (3 t × 17 width across flats)
- *3. Incomplete screw part with a maximum length of 1.5 mm.

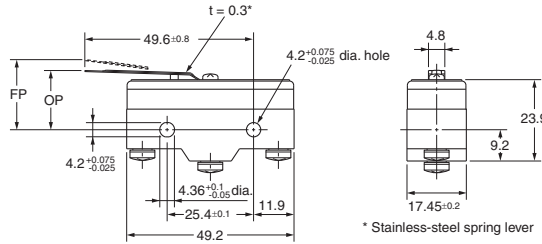
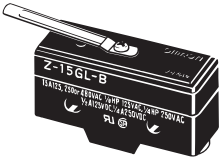
	Z-15GQ21-B	Z-15HQ21-B
OF	2.45 to 3.43 N	1.96 to 2.79 N
RF min.	1.12 N	1.12 N
PT max.	0.4 mm	0.3 mm
OT min.	3.58 mm	3.58 mm
MD max.	0.05 mm	0.025 mm
OP	33.4±1.2 mm	

	Z-15EQ21-B
OF	6.13 to 7.85 N
RF min.	1.12 N
PT max.	0.8 mm
OT min.	3.58 mm
MD max.	0.13 mm
OP	33.4±1.2 mm

Note: Do not use the M12 mounting screw and the case mounting hole at the same time, or the case may be damaged.

Leaf Spring

Z-15GL-B



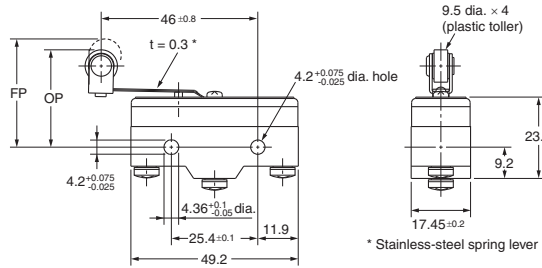
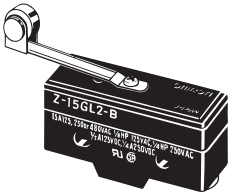
* Stainless-steel spring lever

OF max.	1.38 N
RF min.	0.14 N
OT *min.	1.6 mm
MD max.	1.3 mm
FP max.	20.6 mm
OP	17.4±0.8 mm

* When operating, be sure not to exceed 1.6 mm.

Roller Leaf Spring

Z-15GL2-B



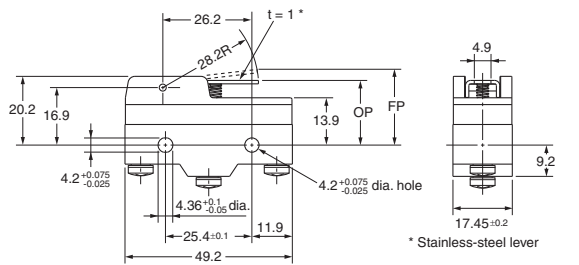
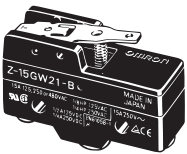
* Stainless-steel spring lever

OF max.	1.38 N
RF min.	0.14 N
OT *min.	1.6 mm
MD max.	1.3 mm
FP max.	31.8 mm
OP	28.6±0.8 mm

* When operating, be sure not to exceed 1.6 mm.

Short Hinge Lever

Z-15GW21-B



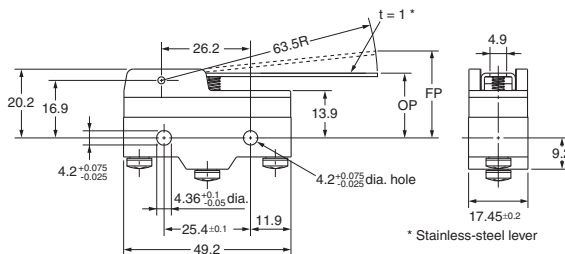
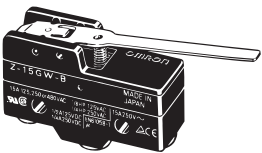
OF max.	1.57 N
RF min.	0.27 N
OT min.	2 mm
MD max.	1 mm
FP max.	24.8 mm
OP	19±0.8 mm

Hinge Lever

Z-15GW-B Z-15GW32-B

Z-15HW-B Z-10FWY-B

Z-15GW3-B (Lever Length: 56R)*

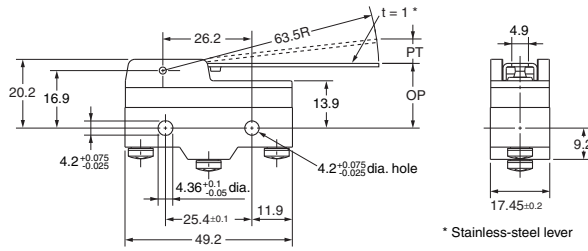
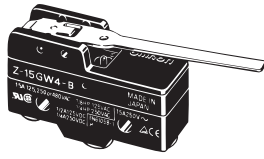


	Z-15GW-B	Z-15HW-B	Z-15GW32-B	Z-10FWY-B	Z-15GW3-B
OF	0.69 N max.	0.66 N max.	1.47 to 1.96 N	0.88 N max.	0.78 N max.
RF min.	0.14 N	0.14 N	0.92 N	0.14 N	0.15 N
OT min.	5.6 mm	5.6 mm	5.6 mm	5.6 mm	4.8 mm
MD max.	1.27 mm	0.63 mm	1.27 mm	2.4 mm	1.12 mm
FP max.	28.2 mm	27.4 mm	28.2 mm	29.8 mm	27.2 mm
OP	19±0.8 mm				

* The external dimensions of the actuator vary.

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

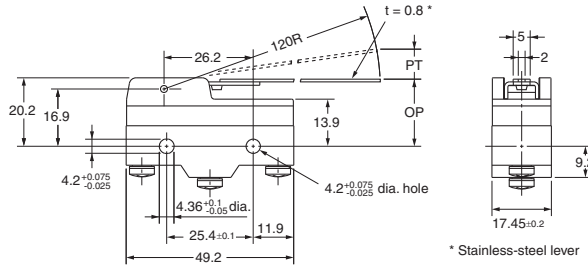
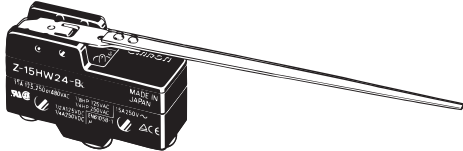
Low-force Hinge Lever
Z-15GW4-B



OF max.	274 mN
RF min.	34.3 mN
PT max.	10 mm
OT min.	5.6 mm
MD max.	1.27 mm
OP	19±0.8mm

* Stainless-steel lever

Z-15HW24-B

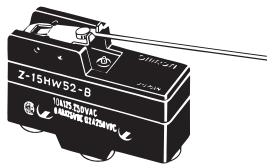


OF max.	58.8 mN
RF min.	4.90 mN
PT max.	19.8 mm
OT min.	10 mm
MD max.	2 mm
OP	19.8±1.6 mm

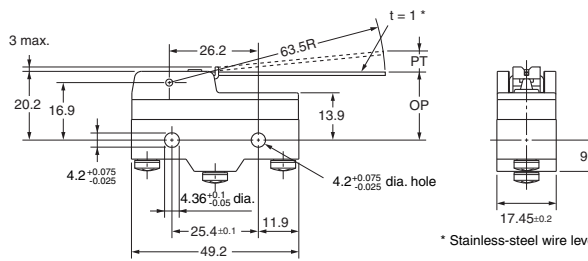
* Stainless-steel lever

Low-force Wire Hinge Lever

Z-15HW52-B
Z-15HW78-B (Lever Length: 110R) *



* The external dimensions of the actuator vary.



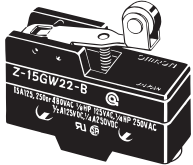
* Stainless-steel wire lever

Z-15HW52-B	
OF max.	58.8 mN
RF min.	4.90 mN
PT max.	8.3 mm
OT min.	5.6 mm
MD max.	0.65 mm
OP	19±1 mm

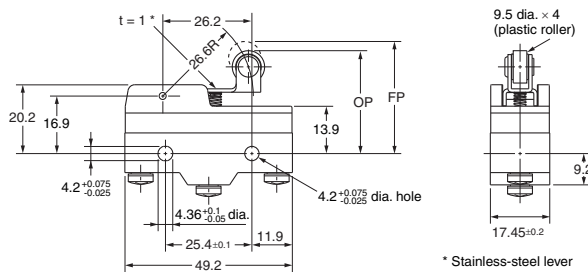
Z-15HW78-B	
OF max.	39.2 mN
RF min.	2.94 mN
PT max.	10 mm
OT min.	6 mm
MD max.	3 mm
OP	20±1 mm

Note: AC electrical ratings: 10 A, 125/250 V.

Short Hinge Roller Lever
Z-15GW22-B Z-01HW22-B
Z-15HW22-B Z-10FW22Y-B
Z-15EW22-B
Z-15GW2-B * Z-15HW2-B *
Z-10FW2Y-B *



* The external dimensions of the actuator vary. (Lever Length: 48.5R)



* Stainless-steel lever

	Z-15GW22-B	Z-15HW22-B	Z-15EW22-B	Z-01HW22-B	Z-10FW22Y-B	Z-15GW2-B	Z-15HW2-B	Z-10FW2Y-B
OF max.	1.57 N	1.47 N	1.94 N	1.57 N	2.45 N	0.98 N	0.84 N	1.27 N
RF min.	0.41 N	0.41 N	0.41 N	0.27 N	0.34 N	0.22 N	0.22 N	0.22 N
OT min.	2.4 mm	2.4 mm	2.4 mm	2.4 mm	2.4 mm	4 mm	4 mm	4 mm
MD max.	0.5 mm	0.45 mm	1.3 mm	0.5 mm	1 mm	1.02 mm	0.6 mm	2 mm
FP max.	32.5 mm		35.1 mm		34.8 mm		37.4 mm	
OP	30.2±0.4 mm		30.2±0.4 mm		30.2±0.4 mm		30.2±0.8 mm	

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