General-purpose Basic Switch
Z

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.

Model Number Structure

■ Configuration

Basic models	General-purpose		Refer to page 34.
	Drip-proof	Without terminal protective cover	Refer to individual datasheets. (Contact your OMRON representative).
		With terminal protective cover	Refer to individual datasheets. (Contact your OMRON representative).
		Molded terminal	Refer to page 36.
Split-contact models	General-purpose		Refer to page 35.
Maintained-contact models	General-purpose		Refer to page 36.

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: 0.15 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)
F: 1.0 mm (split-contact models)

Drip-proof Models

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.)

■ Model Number Legend

Basic Models

Z-□□□□-□
1 2 3 4 5

1. **Ratings**
   - 01: 0.1 A (for micro load)
   - 15: 15 A
2. **Contact Gap**
   - H2: 0.15 (extra-high-sensitivity)
   - H: 0.25 mm (high-sensitivity, micro load)
   - G: 0.5 mm (standard)
   - E: 1.8 mm (high-capacity)
3. **Actuator**
   - None: Pin plunger
   - S: Slim spring plunger
   - D: Short spring plunger
   - K: Spring plunger (medium OP)
   - K3: Spring plunger (high OP)
   - Q3: Panel mount plunger (low OP)
   - Q: Panel mount plunger (medium OP)
   - Q8: Panel mount plunger (high OP)
   - Q22: Panel mount roller plunger
   - Q21: Panel mount cross roller plunger
   - L: Leaf spring (high OF)
   - L2: Roller leaf spring
   - W21: Short hinge lever
   - W: Hinge lever (low OF)
   - W3: Hinge lever (medium OF)
   - W32: Hinge lever (high OF)
   - W4: Low-force hinge lever
   - W44: Long hinge lever
   - W78: Low-force wire hinge lever (low OF)
   - W52: Low-force wire hinge lever (high OF)
   - W22: Short hinge roller lever
   - W2: Hinge roller lever
   - W25: Hinge roller lever (large roller)
   - W49: Short hinge cross roller lever
   - W54: Hinge cross roller lever
   - W2277: Unidirectional short hinge roller lever (Low OF)
   - M: Reverse hinge lever
   - M22: Reverse short hinge roller lever
   - M2: Reverse hinge roller lever
   - NJ: Flexible rod (high OF)
   - NJS: Flexible rod (low OF)
4. **Degree of Protection**
   - None: General-purpose
   - 55: Drip-proof
   - A55: Drip-proof (including the terminals)
5. **Terminals**
   - None: Solder terminal
   - B: Screw terminal (with toothed washer)
   - B5V: Screw terminal with terminal cover (for Z-15G□A55 only)

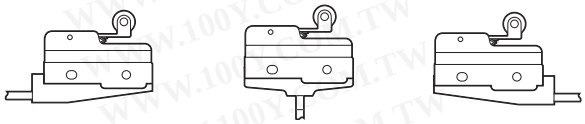
Note: For combinations of models, refer to the following pages.

Standard Models (Drip-proof Type/ Molded Terminals)

Z-□55-M□□ □M
1 2 3 4

1. **Drip-proof Type**
2. **Lead Outlets**
   - None: VSF
   - 19: VCT
3. **Directions of Lead Outlets (See following diagrams.)**
   - L: Left
   - R: Right
   - D: Descending

L Type D Type R Type



4. **Length of Lead Outlets**
   - 1: 1 m
   - 3: 3 m

Split-contact Models

Z-10F□Y-B
1 2 3 4 5

1. **Ratings**
   - 10: 10 A
2. **Contact Gap**
   - F: 1 mm (high-capacity)
3. **Actuator**
   - None: Pin plunger
   - S: Slim spring plunger
   - D: Short spring plunger
   - Q: Panel mount plunger
   - Q22: Panel mount roller plunger
   - W: Hinge lever
   - W22: Short hinge roller lever
   - W2: Hinge roller lever
   - M22: Reverse short hinge roller lever
4. **Construction**
   - Y: Split-contact models
5. **Terminals**
   - None: Solder terminal
   - B: Screw terminal (with toothed washer)

Maintained-contact Models

Z-15-E□R
1 2 3 4

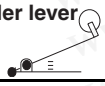
1. **Ratings**
   - 15: 15 A
2. **Contact Gap**
   - E: 1.8 mm (High capacity)
3. **Actuator**
   - None: Pin plunger
   - S: Slim spring plunger
   - W: Hinge lever
4. **Structure**
   - R: Maintained-contact models

Ordering Information

■ List of Models

Basic Models (General-purpose)

Actuator			Standard	High-sensitivity	High-capacity	Micro load	Extra-high-sensitivity
			G (0.5 mm)	H (0.25 mm)	E (1.8 mm)	H (0.25 mm)	H2 (0.15 mm)
Pin plunger		Solder terminal	Z-15G	Z-15H	Z-15E	Z-01H	Z-15H2
		Screw terminal	Z-15G-B	Z-15H-B	Z-15E-B	Z-01H-B	Z-15H2-B
Slim spring plunger		Solder terminal	Z-15GS	Z-15HS	---	Z-01HS	---
		Screw terminal	Z-15GS-B	Z-15HS-B	---	Z-01HS-B	---
Short spring plunger		Solder terminal	Z-15GD	Z-15HD	Z-15ED	Z-01HD	---
		Screw terminal	Z-15GD-B	Z-15HD-B	Z-15ED-B	Z-01HD-B	---
Panel mount plunger	Low OP	Solder terminal	Z-15GQ3	---	---	---	---
		Screw terminal	Z-15GQ3-B				
	Medium OP	Solder terminal	Z-15GQ	Z-15HQ	Z-15EQ	Z-01HQ	---
		Screw terminal	Z-15GQ-B	Z-15HQ-B	Z-15EQ-B	Z-01HQ-B	---
	High OP	Solder terminal	Z-15GQ8	---	---	---	---
		Screw terminal	Z-15GQ8-B				
Panel mount roller plunger		Solder terminal	Z-15GQ22	Z-15HQ22	Z-15EQ22	---	---
		Screw terminal	Z-15GQ22-B	Z-15HQ22-B	Z-15EQ22-B	---	---
Panel mount cross roller plunger		Solder terminal	Z-15GQ21	Z-15HQ21	Z-15EQ21	---	---
		Screw terminal	Z-15GQ21-B	Z-15HQ21-B	Z-15EQ21-B		---
Leaf spring		Solder terminal	Z-15GL	---	---	---	---
		Screw terminal	Z-15GL-B				
Roller leaf spring		Solder terminal	Z-15GL2	---	---	---	---
		Screw terminal	Z-15GL2-B				
Short hinge lever		Solder terminal	Z-15GW21	---	---	---	---
		Screw terminal	Z-15GW21-B				
Hinge lever	Low OF	Solder terminal	Z-15GW	Z-15HW	---	---	---
		Screw terminal	Z-15GW-B	Z-15HW-B	---	---	---
	Medium OF	Solder terminal	Z-15GW3	---	---	---	---
		Screw terminal	Z-15GW3-B				
	High OF	Solder terminal	Z-15GW32	---	---	---	---
		Screw terminal	Z-15GW32-B				
Low-force hinge lever		Solder terminal	Z-15GW4	Z-15HW24	---	---	---
		Screw terminal	Z-15GW4-B	Z-15HW24-B	---		---
Low-force wire hinge lever	Low OF	Solder terminal	---	Z-15HW78	---	---	---
		Screw terminal		Z-15HW78-B	---		---
	High OF	Solder terminal	---	Z-15HW52	---	---	---
		Screw terminal		Z-15HW52-B	---		---
Short hinge roller lever		Solder terminal	Z-15GW22	Z-15HW22	Z-15EW22	Z-01HW22	---
		Screw terminal	Z-15GW22-B	Z-15HW22-B	Z-15EW22-B	Z-01HW22-B	---
Short hinge cross roller lever		Solder terminal	Z-15GW49	---	---	---	---
		Screw terminal	Z-15GW49-B				
Hinge roller lever	Standard	Solder terminal	Z-15GW2	Z-15HW2	---	---	---
		Screw terminal	Z-15GW2-B	Z-15HW2-B	---	---	---
	Large roller	Solder terminal	Z-15GW25	---	---	---	---
		Screw terminal	Z-15GW25-B				

Actuator		Standard	High-sensitivity	High-capacity	Micro load	Extra-high-sensitivity
		G (0.5 mm)	H (0.25 mm)	E (1.8 mm)	H (0.25 mm)	H2 (0.15 mm)
Hinge cross roller lever 	Solder terminal	Z-15GW54	---	---	---	---
	Screw terminal	Z-15GW54-B				
Unidirectional short hinge roller lever 	Solder terminal	Z-15GW2277	---	---	---	---
	Screw terminal	Z-15GW2277-B				
Reverse hinge lever (see note) 	Solder terminal	Z-15GM	---	---	---	---
	Screw terminal	Z-15GM-B				
Reverse short hinge roller lever (see note) 	Solder terminal	Z-15GM22	---	---	---	---
	Screw terminal	Z-15GM22-B				
Reverse hinge roller lever (see note) 	Solder terminal	Z-15GM2	---	---	---	---
	Screw terminal	Z-15GM2-B				

Note: The pin plungers of reverse-type models are continuously pressed by the actuator levers with compression coil springs and the pin plungers are freed by operating the levers. Reverse-type models are highly vibration- and shock-resistive because the pin plungers are normally pressed.

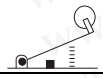
Minimum Order Lot

The following models are available at the minimum order lot specified below. Orders must be placed per lot.

Actuator	Standard	High-sensitivity	Minimum order lot (pcs)
	G (0.5 mm)	H (0.25 mm)	
Short spring plunger	Z-15GD-B	---	10
Panel mount plunger	Z-15GQ Z-15GQ-B Z-15GQ8-B	---	
Panel mount roller plunger	Z-15GQ22 Z-15GQ22-B	---	
Panel mount cross roller plunger	Z-15GQ21-B	---	
Short hinge lever	Z-15GW21-B	---	
Hinge lever	Z-15GW Z-15GW-B	---	
Low-force hinge lever	Z-15GW4-B	Z-15HW24-B	
Low-force hinge wire lever	---	Z-15HW78-B	
Short hinge roller lever	Z-15GW22 Z-15GW22-B	---	
Hinge roller lever	Z-15GW2 Z-15GW2-B	---	
Reverse short hinge roller lever	Z-15GM22-B	---	
Reverse hinge roller lever	Z-15GM2-B	---	

Split-contact Models

Actuator			F (1.0 mm)
Pin plunger 		Solder terminal	---
		Screw terminal	Z-10FY-B
Slim spring plunger 		Solder terminal	---
		Screw terminal	Z-10FSY-B
Short spring plunger 		Solder terminal	---
		Screw terminal	Z-10FDY-B
Panel mount plunger 	Medium OP	Solder terminal	---
		Screw terminal	Z-10FQY-B

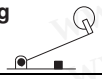
Actuator			F (1.0 mm)
Panel mount roller plunger 		Solder terminal	---
		Screw terminal	Z-10FQ22Y-B
Hinge lever 	Low OP	Solder terminal	---
		Screw terminal	Z-10FWY-B
Short hinge roller lever 		Solder terminal	---
		Screw terminal	Z-10FW22Y-B
Hinge roller lever 		Solder terminal	---
		Screw terminal	Z-10FW2Y-B
Reverse short hinge roller lever 		Solder terminal	---
		Screw terminal	Z-10FM22Y-B

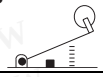
Note: The pin plungers of reverse-type models are continuously pressed by the actuator levers with compression coil springs and the pin plungers are freed by operating the levers. Reverse-type models are highly vibration- and shock-resistive because the pin plungers are normally pressed.

Maintained-contact Models

Actuator	Maintained-contact model
Pin plunger	Z-15ER
Slim spring plunger 	Z-15ESR
Hinge lever 	Z-15EWR

Basic Models (Drip-proof Models)

Actuator			Basic model (drip-proof)		
			Standard		Micro load
			G (0.5 mm)		H (0.25 mm)
			Without drip-proof terminal protective cover	With drip-proof terminal protective cover	Without drip-proof terminal protective cover
Pin plunger 		Solder terminal	Z-15G55	---	Z-01H55
		Screw terminal	Z-15G55-B	Z-15GA55-B5V	Z-01H55-B
Short spring plunger 		Solder terminal	Z-15GD55	---	Z-01HD55
		Screw terminal	Z-15GD55-B		Z-01HD55-B
Spring plunger 	Medium OP	Solder terminal	Z-15GK55	---	---
		Screw terminal	Z-15GK55-B		
	HIgh OP	Solder terminal	Z-15GK355	---	---
		Screw terminal	Z-15GK355-B	Z-15GK3A55-B5V	
Panel mount plunger 	Medium OP	Solder terminal	Z-15GQ55	---	---
		Screw terminal	Z-15GQ55-B	Z-15GQA55-B5V	
Panel mount roller plunger 		Solder terminal	Z-15GQ2255	---	---
		Screw terminal	Z-15GQ2255-B	Z-15GQ22A55-B5V	
Panel mount cross roller plunger 		Solder terminal	---	---	---
		Screw terminal	Z-15GQ2155-B	Z-15GQ21A55-B5V	
Leaf spring 		Solder terminal	Z-15GL55	---	---
		Screw terminal	Z-15GL55-B		
Roller leaf spring 		Solder terminal	Z-15GL255	---	---
		Screw terminal	Z-15GL255-B		
Short hinge lever 		Solder terminal	Z-15GW2155	---	---
		Screw terminal	Z-15GW2155-B		
Long hinge lever 		Solder terminal	Z-15GW4455	---	---
		Screw terminal	Z-15GW4455-B	Z-15GW44A55-B5V	
Hinge lever 		Solder terminal	Z-15GW55	---	---
		Screw terminal	Z-15GW55-B	Z-15GWA55-B5V	
Short hinge roller lever 		Solder terminal	Z-15GW2255	---	Z-01HW2255
		Screw terminal	Z-15GW2255-B	Z-15GW22A55-B5V	Z-01HW2255-B

Actuator			Basic model (drip-proof)		
			Standard		Micro load
			G (0.5 mm)		H (0.25 mm)
			Without drip-proof terminal protective cover	With drip-proof terminal protective cover	Without drip-proof terminal protective cover
Hinge roller lever 	Parallel	Solder terminal	Z-15GW255	---	---
		Screw terminal	Z-15GW255-B	Z-15GW2A55-B5V	
Unidirectional short hinge roller lever 		Solder terminal	Z-15GW227755	---	---
		Screw terminal	Z-15GW227755-B	Z-15GW2277A55-B5V	
Reverse hinge lever (see note 1) 		Solder terminal	Z-15GM55	---	---
		Screw terminal	Z-15GM55-B		
Reverse short hinge roller lever (see note 1) 		Solder terminal	Z-15GM2255	---	---
		Screw terminal	Z-15GM2255-B		
Reverse hinge roller lever (see note 1) 		Solder terminal	Z-15GM255	---	---
		Screw terminal	Z-15GM255-B		
Flexible rod (coil spring) (see note 2) 		Solder terminal	Z-15GNJ55	---	---
		Screw terminal	Z-15GNJ55-B		

Note: 1. The pin plungers of reverse-type models are continuously pressed by the actuator levers with compression coil springs and the pin plungers are freed by operating the levers.

2. The tip is made of resin.

Minimum Order Lot

The following models are available at the minimum order lot specified below. Orders must be placed per lot.

Actuator	Standard		High-sensitivity	Minimum order lot
	G (0.5 mm)		H (0.25 mm)	
Short spring plunger	Z-15GD55-B	---	---	10
Spring plunger	Z-15GK55-B	---	---	
Hinge lever	Z-15GW4455-B Z-15GW55 Z-15GW55-B	---	---	
Short hinge roller lever	Z-15GW2255 Z-15GW2255-B	---	---	
Hinge roller lever	Z-15GW255-B	---	---	
Flexible rod (coil spring)	Z-15GNJ55-B	---	---	
Flexible rod (steel wire)	---	---	Z-15HNJS55-B	

Basic Models (Drip-proof High-sensitivity Models)

Actuator		High-sensitivity
		H (0.25 mm)
Flexible rod (steel wire) 	Solder terminal	Z-15HNJS55
	Screw terminal	Z-15HNJS55-B

Specifications

■ Approved Standards

Agency	Standard	File No.
UL	UL508	E41515
CSA	CSA C22.2 No. 55	LR21642
TÜV Rheinland	EN61058-1	R9451585

■ Approved Standard Ratings

UL508 (File No. E41515)
CSA C22.2 No.55 (File No. LR21642)

Rated voltage	Z-15	Z-10F	Z-01H
125 VAC	15 A 1/8 HP	6 A 1/10 HP	0.1 A
250 VAC	15 A 1/4 HP	6 A 1/8 HP	---
480 VAC	15 A	6 A	---
30 VDC	---	---	0.1 A
125 VDC	0.5 A	0.6 A	---
250 VDC	0.25 A	0.3 A	---

Note: Consult with OMRON about approved part numbers by standards.

TÜV (EN61058-1)

Rated voltage	Z-15H□-B	Z-15G□-B	Z-01H□-B
250 VAC	15 A	15 A	---
125 VAC	---	---	0.1 A
30 VDC	---	---	0.1 A

Note: Z-15H2 Series models are not approved.

■ Ratings

Z-15 (Except Micro Load and Flexible Rod Models)

Item / Model	Rated voltage	Non-inductive load				Inductive load			
		Resistive load		Lamp load		Inductive load		Motor load	
		NC	NO	NC	NO	NC	NO	NC	NO
G, H, E	**125 VAC** **250 VAC** **500 VAC**	15 (10) A (see note) 15 (10) A (see note) 10 A		3 A 2.5 A 1.5 A	1.5 A 1.25 A 0.75 A	15 (10) A (see note) 15 (10) A (see note) 6 A		5 A 3 A 1.5 A	2.5 A 1.5 A 0.75 A
G	**8 VDC** **14 VDC** **30 VDC** **125 VDC** **250 VDC**	15 A 15 A 6 A 0.5 A 0.25 A		3 A 3 A 3 A 0.5 A 0.25 A	1.5 A 1.5 A 1.5 A 0.5 A 0.25 A	15 A 10 A 5 A 0.05 A 0.03 A		5 A 5 A 5 A 0.05 A 0.03 A	2.5 A 2.5 A 2.5 A 0.05 A 0.03 A
H	**8 VDC** **14 VDC** **30 VDC** **125 VDC** **250 VDC**	15 A 15 A 2 A 0.4 A 0.2 A		3 A 3 A 2 A 0.4 A 0.2 A	1.5 A 1.5 A 1.4 A 0.4 A 0.2 A	15 A 10 A 1 A 0.03 A 0.02 A		5 A 5 A 1 A 0.03 A 0.02 A	2.5 A 2.5 A 1 A 0.03 A 0.02 A
E	**8 VDC** **14 VDC** **30 VDC** **125 VDC** **250 VDC**	15 A 15 A 15 A 0.75 A 0.3 A		3 A 3 A 3 A 0.75 A 0.3 A	1.5 A 1.5 A 1.5 A 0.75 A 0.3 A	15 A 15 A 10 A 0.4 A 0.2 A		5 A 5 A 5 A 0.4 A 0.2 A	2.5 A 2.5 A 2.5 A 0.4 A 0.2 A

Note: Figures in parentheses are for the Z-15HW52 and Z-15HW78(-B) models, the AC ratings of these models are 125 and 250 V only.

Z-15 (Flexible Rod Models)

Rated voltage	Non-inductive load				Inductive load			
	Resistive load		Lamp load		Inductive load		Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC **250 VAC**	15 A		2 A 1 A	1 A 0.5 A	7 A 5 A		2.5 A 1.5 A	2 A 1 A
8 VDC **14 VDC** **30 VDC** **125 VDC** **250 VDC**	15 A 15 A 2 A 0.4 A 0.2 A		2 A 2 A 2 A 0.4 A 0.2 A	1 A 1 A 1 A 0.4 A 0.2 A	7 A 7 A 1 A 0.03 A 0.02 A		3 A 3 A 1 A 0.03 A 0.02 A	1.5 A 1.5 A 0.5 A 0.03 A 0.02 A

Z-15H2

Rated voltage	Non-inductive load				Inductive load			
	Resistive load		Lamp load		Inductive load		Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC 250 VAC	10 A		3 A 2.5 A	1.5 A 1.25 A	10 A		5 A 3 A	2.5 A 1.5 A
8 VDC 14 VDC 30 VDC 125 VDC 250 VDC	15 A 15 A 2 A 0.4 A 0.2 A		3 A 3 A 2 A 0.4 A 0.2 A	1.5 A 1.5 A 1.4 A 0.4 A 0.2 A	15 A 10 A 1 A 0.03 A 0.02 A		5 A 5 A 1 A 0.03 A 0.02 A	2.5 A 2.5 A 1 A 0.03 A 0.02 A

Z-01H

Rated voltage	Resistive load	
	NC	NO
125 VAC	0.1 A	
8 VDC 14 VDC 30 VDC	0.1 A 0.1 A 0.1 A	

Z-10F

Model	Rated voltage	Non-inductive load				Inductive load			
		Resistive load		Lamp load		Inductive load		Motor load	
		NC	NO	NC	NO	NC	NO	NC	NO
Series connection	125 VAC 250 VAC	10 A 10 A		4 A 2.5 A	2 A 1.5 A	6 A		5 A 3 A	2.5 A 1.5 A
	30 VDC 125 VDC 250 VDC	10 A 1 A 0.6 A		4 A 1 A 0.6 A	2 A 1 A 0.6 A	6 A 0.1 A 0.05 A		6 A 0.1 A 0.05 A	3 A 0.1 A 0.05 A
Parallel connection	125 VAC 250 VAC	6 A 6 A		3 A 2.5 A	1.5 A 1.25 A	4 A 4 A		4 A 2 A	2 A 1 A
	30 VDC 125 VDC 250 VDC	6 A 0.6 A 0.3 A		4 A 0.6 A 0.3 A	2 A 0.6 A 0.3 A	4 A 0.1 A 0.05 A		6 A 0.1 A 0.05 A	3 A 0.1 A 0.05 A

Note: 1. The above current ratings are the values of the steady-state current.

2. Inductive load has a power factor of 0.4 min. (AC) and a time constant of 7 ms max. (DC).

3. Lamp load has an inrush current of 10 times the steady-state current.

4. Motor load has an inrush current of 6 times the steady-state current.

5. The normally closed and normally open ratings of reverse hinge lever models are opposite to each other.

6. The AC ratings of molded terminals are 125 and 250 V only.

7. The ratings values apply under the following test conditions:
Ambient temperature: 20±2°C
Ambient humidity: 65±5%
Operating frequency: 20 operations/min

■ Characteristics

Item	Basic (except micro load and flexible rod)/ maintained contact Z-15	Basic (micro load) Z-01H	Basic (flexible rod) Z-15	Split-contact Z-10F
Operating speed (see note)	0.01 mm to 1 m/s (see note 1)		1 mm to 1 m/s	0.1 mm to 1 m/s (see note 1)
Operating frequency	Mechanical: 240 operations/min Electrical: 20 operations/min		Mechanical: 120 operations/min Electrical: 20 operations/min	Mechanical: 240 operations/min Electrical: 20 operations/min
Insulation resistance	100 MΩ min. (at 500 VDC)			
Contact resistance	15 mΩ max. (initial value)	50 mΩ max. (initial value)	15 mΩ max. (initial value)	25 mΩ max. (initial value)
Dielectric strength	Between contacts of same polarity Contact gap G: 1,000 VAC, 50/60 Hz for 1 min Contact gap H, H2: 600 VAC, 50/60 Hz for 1 min Contact gap E: 1,500 VAC, 50/60 Hz for 1 min Between current-carrying metal parts and ground, and between each terminal and non-current-carrying metal parts 2,000 VAC, 50/60 Hz for 1 min		Between contacts of same polarity Contact gap G: 1,000 VAC, 50/60 Hz for 1 min Contact gap H: 600 VAC, 50/60 Hz for 1 min Between current-carrying metal parts and ground, and between each terminal and non-current-carrying metal parts 2,000 VAC, 50/60 Hz for 1 min	Between contacts of same polarity Contact gap F: 1,500 VAC, 50/60 Hz for 1 min Between current-carrying metal parts and ground, and between each terminal and non-current-carrying metal parts 2,000 VAC, 50/60 Hz for 1 min
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude (see note 5)		Malfunction: 10 to 20 Hz, 1.5-mm double amplitude (see note 5)	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude (see note 5)
Shock resistance	Destruction: 1,000 m/s² max. Malfunction: 300 m/s² max. (see note 2, 5)		Destruction: 1,000 m/s² max. Malfunction: 50 m/s² max. (see note 5)	Destruction: 1,000 m/s² max. Malfunction: 300 m/s² max. (see note 3, 5)
Durability	Mechanical: Contact gap G, H, H2: 20,000,000 operations min. (see note 4) Contact gap E: 300,000 operations Electrical: Contact gap G, H, H2: 500,000 operations min. Contact gap E: 100,000 operations min.		Mechanical: 1,000,000 operations min. Electrical: 100,000 operations min.	Mechanical: 500,000 operations min. (see note 1) Electrical: 100,000 operations min.
Degree of protection	General-purpose: IP00 Drip-proof: Equivalent to IP62			
Degree of protection against electric shock	Class I			
Proof tracking index (PTI)	175			
Switch category	D (IEC335-1)			
Ambient temperature	Operating: General-purpose: –25°C to 80°C (with no icing) Drip-proof: –15°C to 80°C (with no icing)			
Ambient humidity	Operating: General-purpose: 35% to 85% Drip-proof: 35% to 95%			
Weight	Approx. 22 to 58 g		Approx. 42 to 48 g	Approx. 34 to 61 g

Note: 1. The values are for the plunger models. (For the lever models, the values are at the plunger section.) (Consult your OMRON representative for other models.)

2. The values are for the Z-15G pin plunger.

3. The values are for the Z-10FY-B.

4. The values are for the pin plunger. The durability for models other than the pin plunger is 10,000,000 min.

5. Malfunction: 1 ms max.

■ Contacts Specification

Item		Z-15	Z-01H	Z-10F
Contacts	Shape	Rivet	Single crossbar	Rivet
	Material	Silver alloy	Gold alloy	Silver alloy
Inrush current	NC	30 A max.	0.1 A max.	40 A max.
	NO	15 A max.	0.1 A max.	20 A max.

■ Contact Form

Basic Models

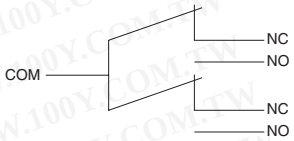
General-purpose

Contact Form (SPDT)

Note: The Z-15GM is a reversible model and the NO and NC positions are reversed.

Split-contact Models

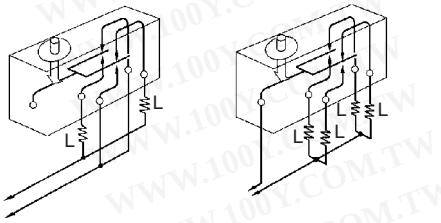
Contact Form (Split-contact)



Note: The NO and NC terminal arrangement is reversed for Models with reverse operation (Z-10FM).

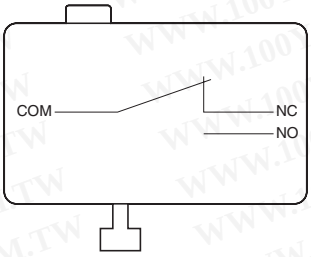
Connection Example

Series Connection **Parallel Connection**



Maintained-contact Models

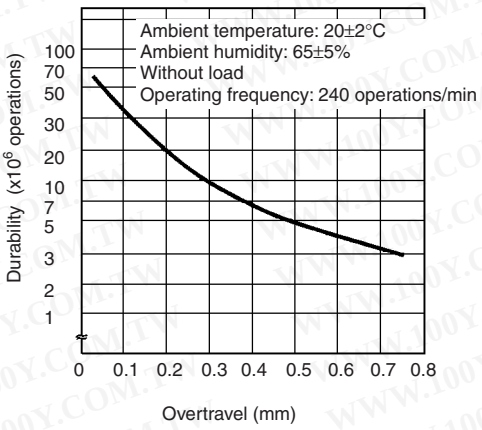
Contact Form (Maintained-contact)



Engineering Data

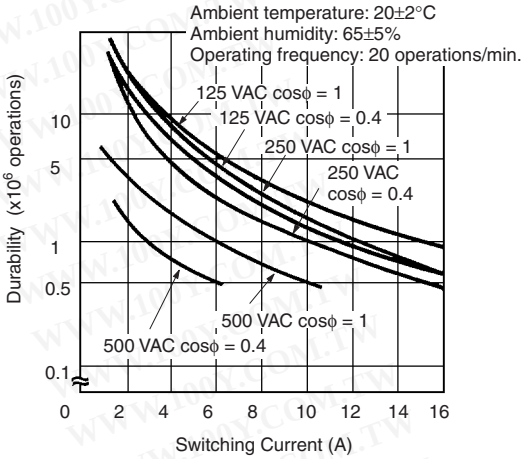
■ Mechanical Durability

Z-15G



■ Electrical Durability

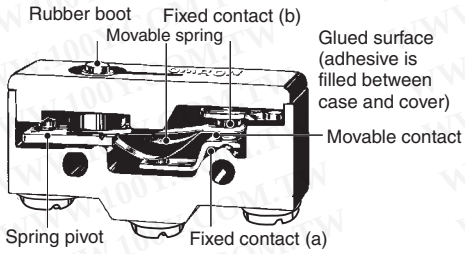
Z-15G



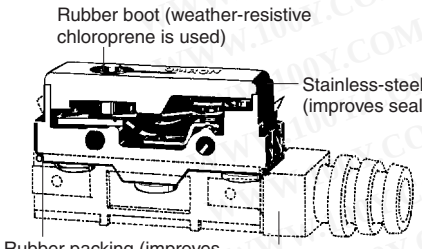
Nomenclature

■ Drip-proof Construction

Without Terminal Protective Cover



With Terminal Protective Cover



Terminal protective covers are sold separately for maintenance purposes, which can be, however, used with the Z-□-B5V models only.

Dimensions

Note: 1. Unless otherwise indicated, all units are in millimeters.
2. Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.

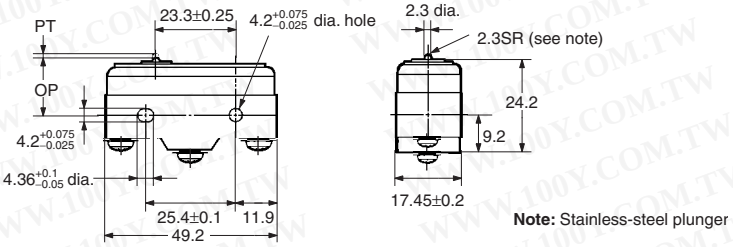
■ Dimensions and Operating Characteristics

Basic Models (General-purpose) & Split-contact Models

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, refer to *Terminals* on page 59.

Pin Plunger

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

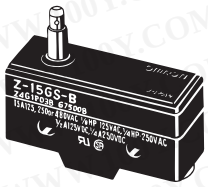


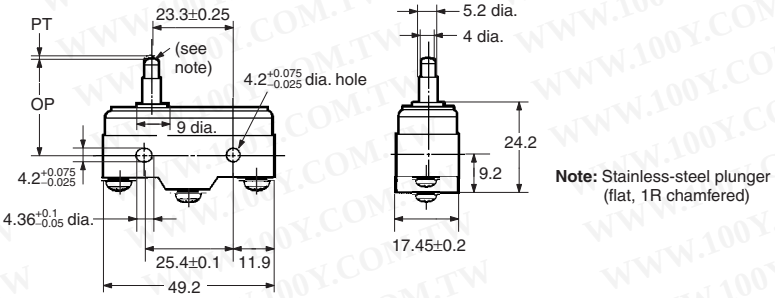
Note: Stainless-steel plunger

	Z-15G-B	Z-15H-B	Z-15H2-B	Z-15E-B	Z-01H-B	Z-10FY-B
OF	2.45 to 3.43 N	1.96 to 2.75 N	1.96 to 2.5 N	6.12 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	1.12 N	0.78 N	1.12 N
PT max.	0.4 mm	0.3 mm	0.3 mm	0.8 mm	0.5 mm	0.8 mm
OT min.	0.13 mm	0.13 mm	0.1 mm	0.13 mm	0.13 mm	0.13 mm
MD max.	0.05 mm	0.025 mm	0.005 to 0.008 mm	0.13 mm	0.04 mm	0.1 mm
OP	15.9±0.4 mm					

Slim Spring Plunger

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



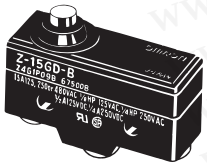


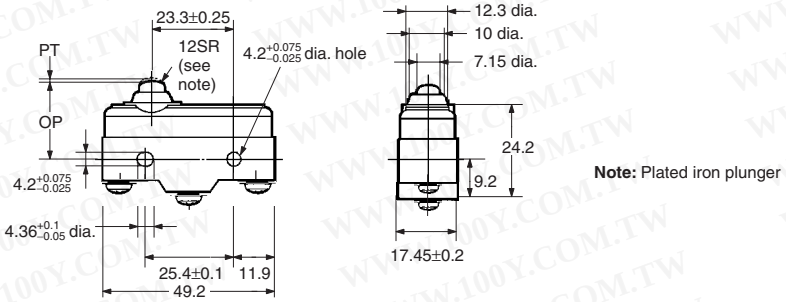
Note: Stainless-steel plunger (flat, 1R chamfered)

	Z-15GS-B	Z-15HS-B	Z-01HS	Z-10FSY-B
OF	2.45 to 3.43 N	1.96 to 2.79 N	2.45 N max.	4.46 to 7.26 N
RF min.	1.12 N	1.12 N	0.78 N	1.12 N
PT max.	0.4 mm	0.3 mm	0.5 mm	0.8 mm
OT min.	1.6 mm	1.6 mm	1.6 mm	1.6 mm
MD max.	0.05 mm	0.025 mm	0.05 mm	0.1 mm
OP	28.2±0.5 mm			

Short Spring Plunger

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



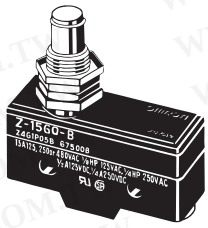


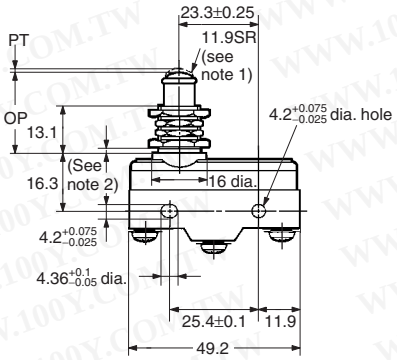
Note: Plated iron plunger

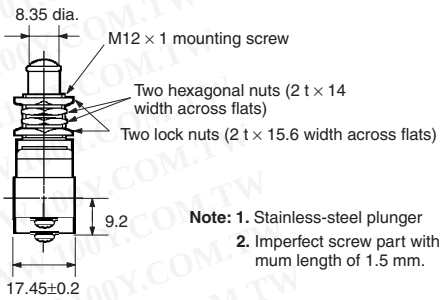
	Z-15GD-B	Z-15HD-B	Z-15ED-B	Z-01HD-B	Z-10FDY-B
OF	2.45 to 3.43 N	1.96 to 2.79 N	6.13 to 7.85 N	2.45 N max.	4.46 to 7.26 N
RF min.	1.12 N	1.12 N	1.12 N	0.78 N	1.12 N
PT max.	0.4 mm	0.3 mm	0.8 mm	0.5 mm	0.8 mm
OT min.	1.6 mm	1.6 mm	1.6 mm	1.6 mm	1.6 mm
MD max.	0.05 mm	0.025 mm	0.13 mm	0.05 mm	0.1 mm
OP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

Panel Mount Plunger

Z-15GQ-B, Z-01HQ-B
Z-15HQ-B, Z-10FQY-B
Z-15EQ-B

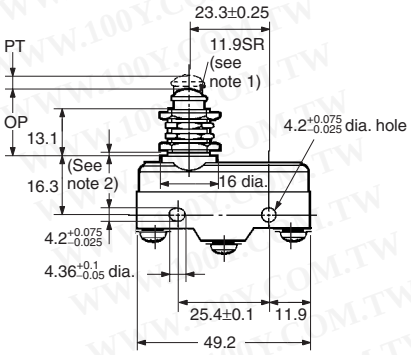


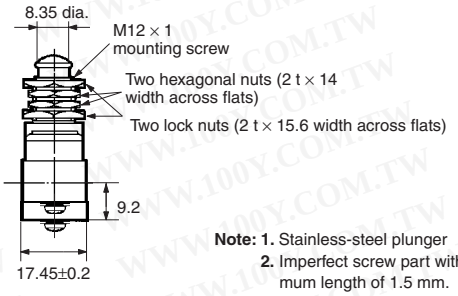




Note: 1. Stainless-steel plunger
2. Imperfect screw part with a maximum length of 1.5 mm.

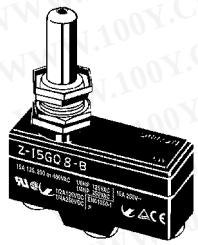
Z-15GQ3-B

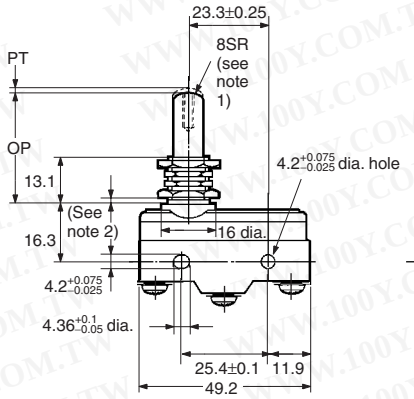


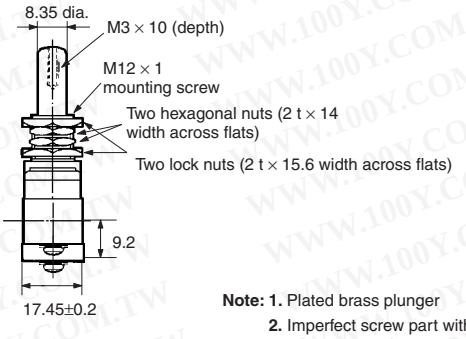


Note: 1. Stainless-steel plunger
2. Imperfect screw part with a maximum length of 1.5 mm.

Z-15GQ8-B







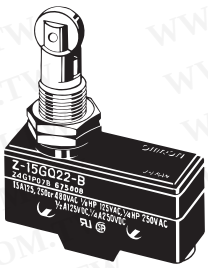
Note: 1. Plated brass plunger
2. Imperfect screw part with a maximum length of 1.5 mm.

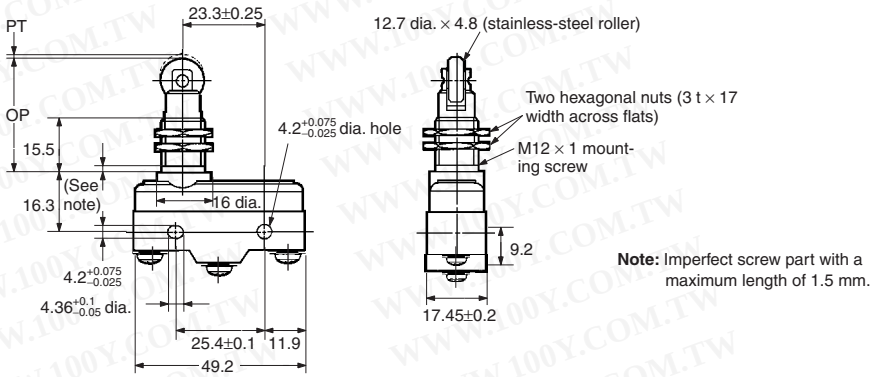
	Z-15GQ-B	Z-15HQ-B	Z-15EQ-B	Z-01HQ-B	Z-10FQY-B	Z-15GQ3-B	Z-15GQ8-B
OF	2.45 to 3.43 N	1.96 to 2.79 N	6.13 to 7.85 N	2.45 N max.	4.46 to 7.26 N	2.45 to 3.43 N	2.45 to 3.43 N
RF min.	1.12 N	1.12 N	1.12 N	0.78 N	1.12 N	1.12 N	1.12 N
PT max.	0.4 mm	0.3 mm	0.8 mm	0.5 mm	0.8 mm	4.2 mm	0.5 mm
OT min.	5.5 mm	5.5 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

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. 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.

Panel Mount Roller Plunger

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





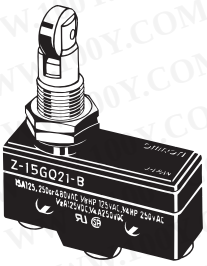
Note: Imperfect screw part with a maximum length of 1.5 mm.

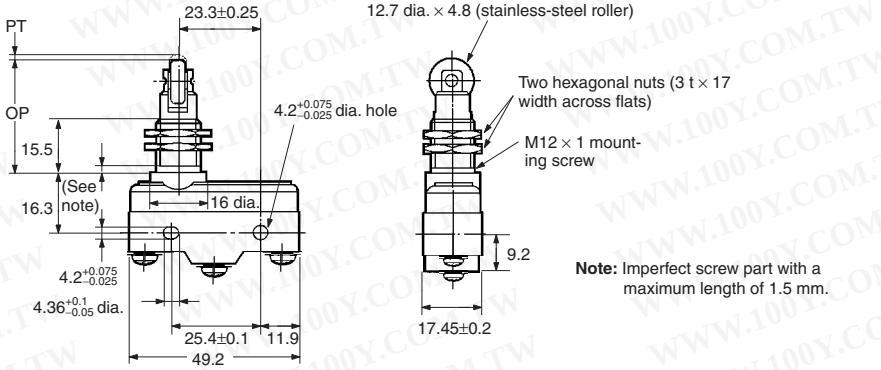
	Z-15GQ22-B	Z-15HQ22-B	Z-15EQ22-B	Z-10FQ22Y-B
OF	2.45 to 3.43 N	1.96 to 2.79 N	6.13 to 7.85 N	4.46 to 7.26 N
RF min.	1.12 N	1.12 N	1.12 N	1.12 N
PT max.	0.4 mm	0.3 mm	0.8 mm	1 mm
OT min.	3.58 mm	3.58 mm	3.58 mm	3.55 mm
MD max.	0.05 mm	0.025 mm	0.13 mm	0.1 mm
OP	33.4±1.2 mm			

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

Panel Mount Cross Roller Plunger

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





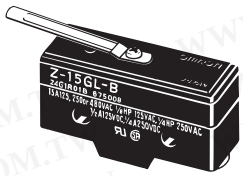
Note: Imperfect screw part with a maximum length of 1.5 mm.

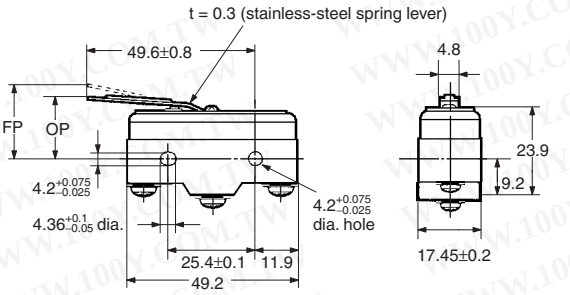
	Z-15GQ21-B	Z-15HQ21-B	Z-15EQ21-B
OF	2.45 to 3.43 N	1.96 to 2.79 N	6.13 to 7.85 N
RF min.	1.12 N	1.12 N	1.12 N
PT max.	0.4 mm	0.3 mm	0.8 mm
OT min.	3.58 mm	3.58 mm	3.58 mm
MD max.	0.05 mm	0.025 mm	0.13 mm
OP	33.4±1.2 mm		

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



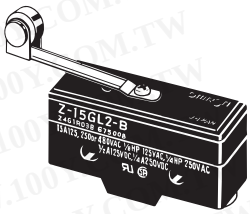


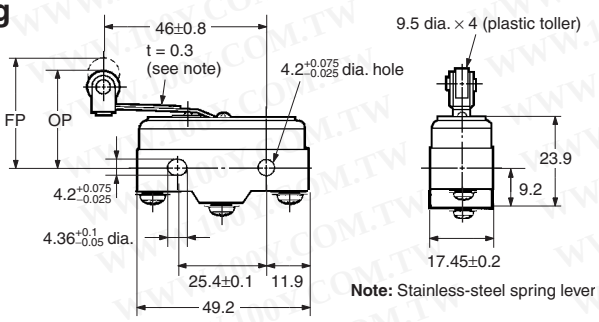
OF max.	1.38 N
RF min.	0.14 N
OT min.	1.6 mm (see note)
MD max.	1.3 mm
FP max.	20.6 mm
OP	17.4±0.8 mm

Note: When operating, be sure not to exceed 1.6 mm.

Roller Leaf Spring

Z-15GL2-B





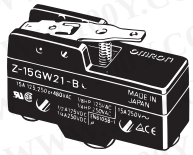
Note: Stainless-steel spring lever

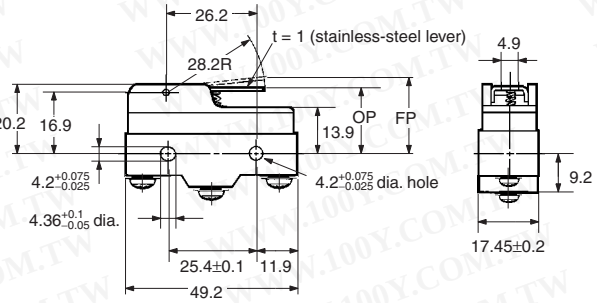
OF max.	1.38 N
RF min.	0.14 N
OT min.	1.6 mm (see note)
MD max.	1.3 mm
FP max.	31.8 mm
OP	28.6±0.8 mm

Note: When operating, be sure not to exceed 1.6 mm.

Short Hinge Lever

Z-15GW21-B

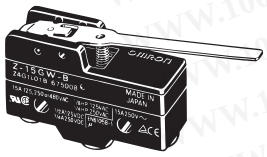


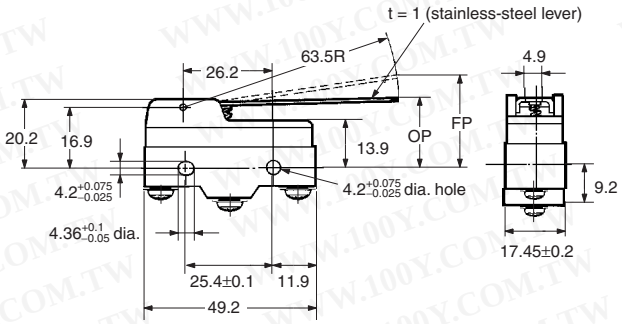


OF max.	1.57 N
RF min.	0.27 N
OT min.	2 mm
MD max.	1 mm
FP max.	24.8 mm
OP	19±0.8 mm

Hinge Lever

Z-15GW-B, Z-15GW32-B
Z-15HW-B, Z-10FWY-B
Z-15GW3-B (Lever Length: 56R)
(see note)



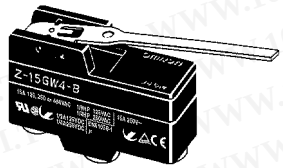


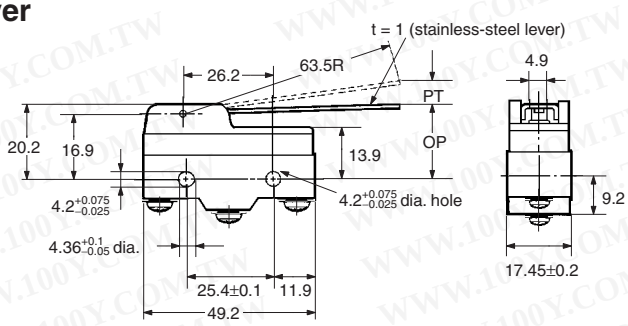
Note: The external dimensions of the actuator vary.

	Z-15GW-B	Z-15HW-B	Z-15GW32-B	Z-10FWY-B	Z-15GW3-B
OF max.	0.69 N	0.66 N	1.47 to 1.96 N	0.88 N	0.78 N
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				

Low-force Hinge Lever

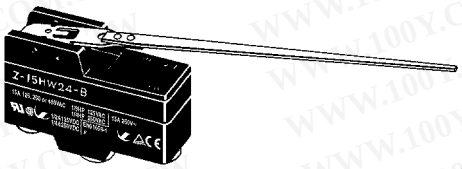
Z-15GW4-B

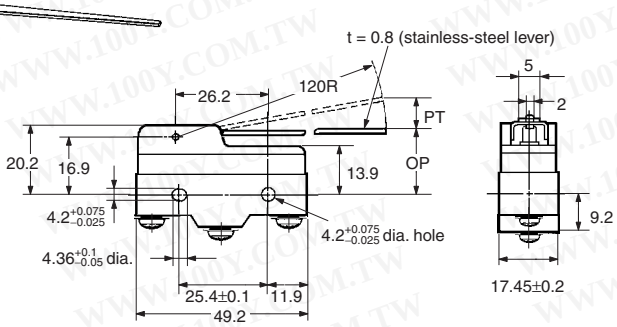




OF max.	274 mN
RF min.	34.3 mN
PT max.	10 mm
OT min.	5.6 mm
MD max.	1.27 mm
OP	19±0.8 mm

Z-15HW24-B

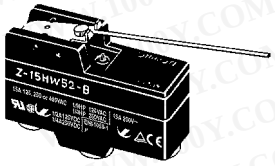


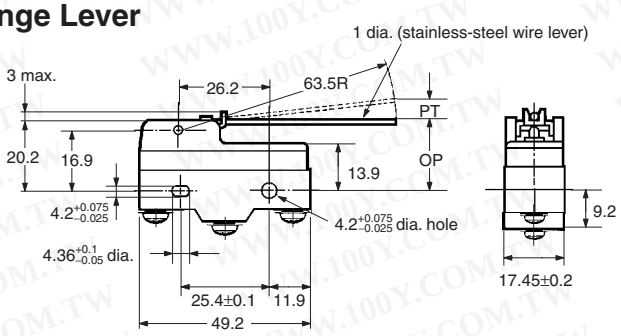


OF max.	58.8 mN
RF min.	4.90 mN
PT max.	19.8 mm
OT min.	10 mm
MD max.	2 mm
OP	19.8±1.6 mm

Low-force Wire Hinge Lever

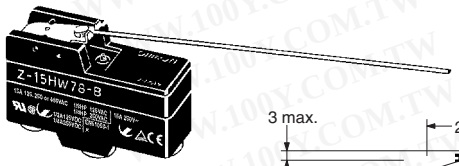
Z-15HW52-B

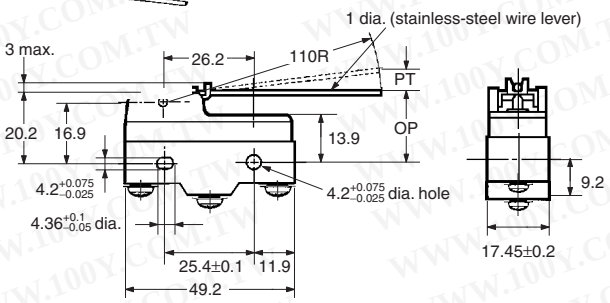




OF max.	58.8 mN
RF min.	4.90 mN
PT max.	8.3 mm
OT min.	5.6 mm
MD max.	0.65 mm
OP	19±1 mm

Z-15HW78-B

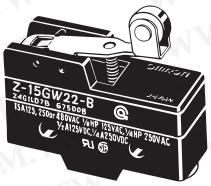


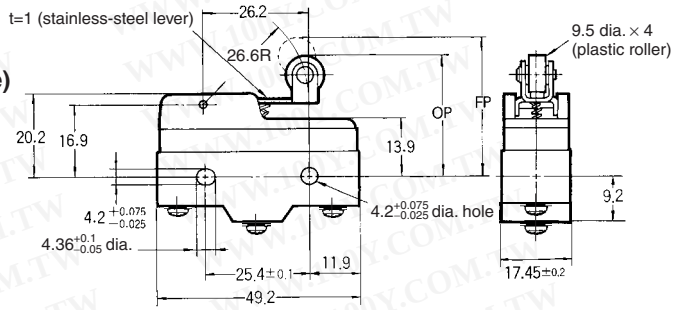


OF max.	39.2 mN
RF min.	2.94 mN
PT max.	10 mm
OT min.	6 mm
MD max.	3 mm
OP	20±1 mm

Short Hinge Roller Lever

Z-15GW22-B, Z-01HW22-B
Z-15HW22-B, Z-10FW22Y-B (see note)
Z-15EW22-B, Z-15GW2-B
Z-15HW2-B (see note), Z-10FW2Y-B (see note)
(Lever Length: 48.5R) (see note)



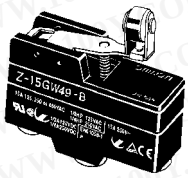


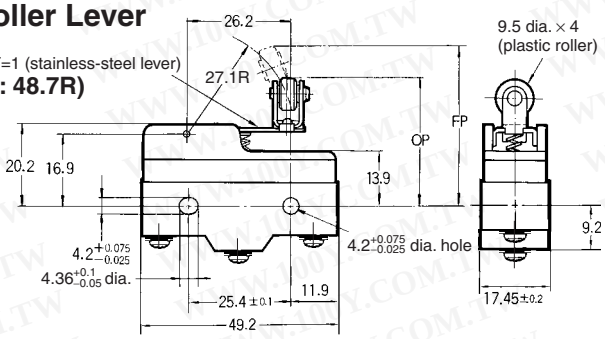
Note: The external dimensions of the actuator vary.

	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	32.5 mm	34.8 mm	36.5 mm		37.4 mm
OP	30.2±0.4 mm		30.2±0.4 mm	30.2±0.4 mm	30.2±0.4 mm	30.2±0.8 mm		30.2±0.8 mm

Short Hinge Cross Roller Lever

Z-15GW49-B
Z-15GW54-B (Lever Length: 48.7R)
(see note)

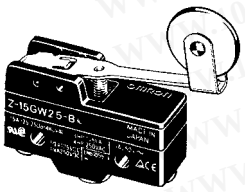


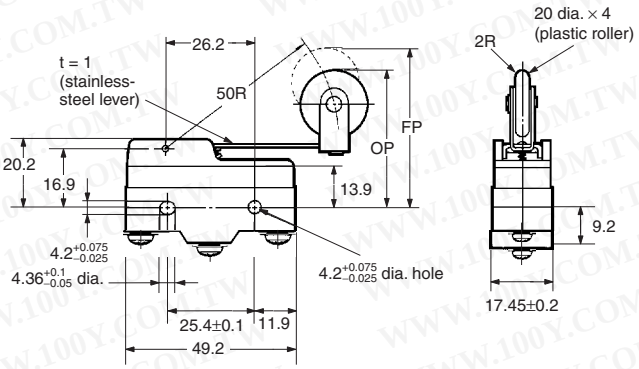


Model	Z-15GW49-B	Z-15GW54-B
OF max.	1.67 N	0.98 N
RF min.	0.41 N	0.22 N
OT min.	2.4 mm	4 mm
MD max.	0.51 mm	1 mm
FP max.	33.3 mm	37.3 mm
OP	31±0.4 mm	31±0.8 mm

Note: The external dimensions of the actuator vary.

Z-15GW25-B

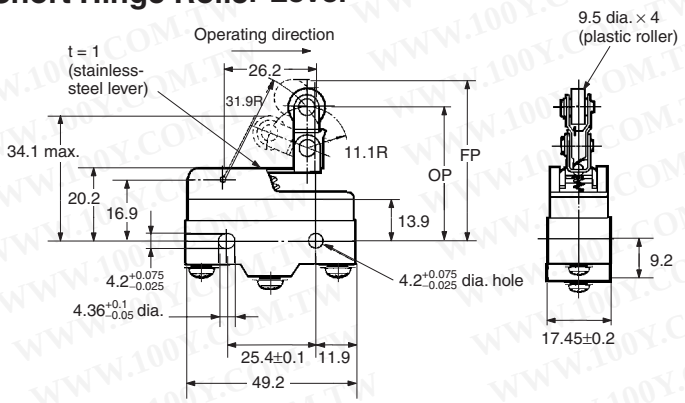




OF max.	0.98 N
RF min.	0.21 N
OT min.	4 mm
MD max.	1.6 mm
FP max.	47.5 mm
OP	41.2±0.8 mm

Unidirectional Short Hinge Roller Lever

Z-15GW2277-B

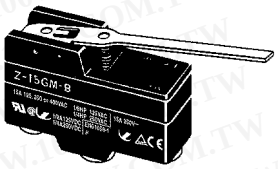


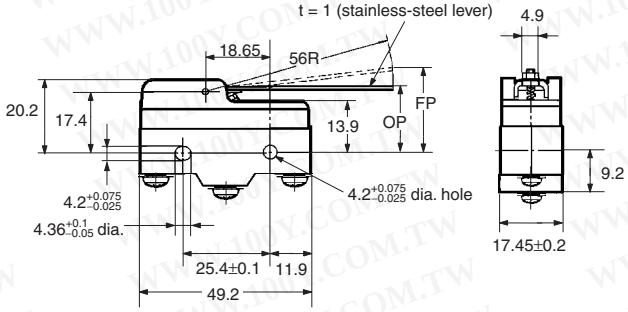
OF max.	1.67 N
RF min.	0.41 N
OT min.	2.4 mm
MD max.	0.51 mm
FP max.	43.6 mm
OP	41.3±0.8 mm

Reverse Hinge Lever

Note: The pin plungers of reverse-type models are continuously pressed by the actuator levers with compression coil springs and the pin plungers are freed by operating the levers. Reverse-type models are highly vibration- and shock-resistive because the pin plungers are normally pressed.

Z-15GM-B



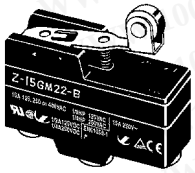


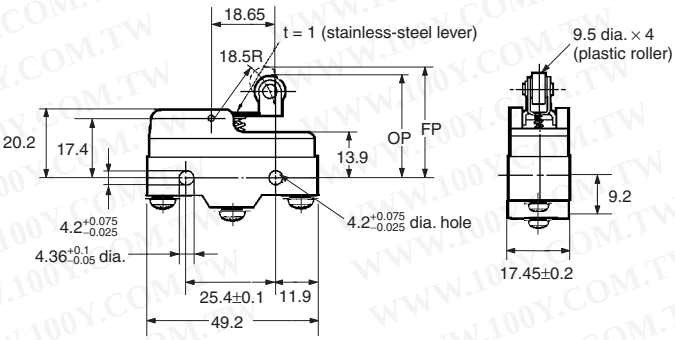
OF max.	1.67 N
RF min.	0.27 N
OT min.	5.6 mm
MD max.	0.89 mm
FP max.	23.8 mm
OP	19±0.8 mm

Reverse Short Hinge Roller Lever

Note: The pin plungers of reverse-type models are continuously pressed by the actuator levers with compression coil springs and the pin plungers are freed by operating the levers. Reverse-type models are highly vibration- and shock-resistive because the pin plungers are normally pressed.

Z-15GM22-B,
Z-10FM22Y-B



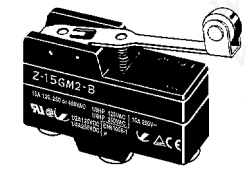


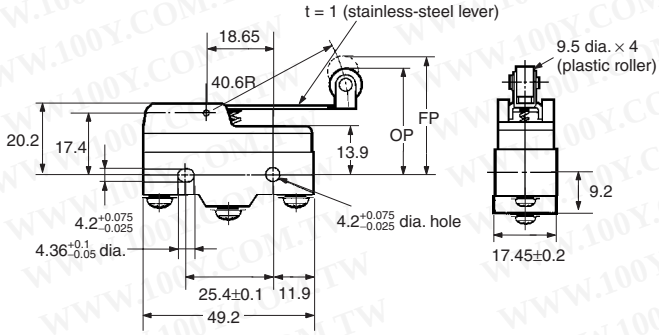
Model	Z-15GM22-B	Z-10FM22Y-B
OF max.	5.28 N	6.37 N
RF min.	1.67 N	1.67 N
OT min.	2 mm	2 mm
MD max.	0.28 mm	0.56 mm
FP max.	31.8 mm	33 mm
OP	29.4±0.4 mm	29.4±0.4 mm

Reverse Hinge Roller Lever

Note: The pin plungers of reverse-type models are continuously pressed by the actuator levers with compression coil springs and the pin plungers are freed by operating the levers. Reverse-type models are highly vibration- and shock-resistive because the pin plungers are normally pressed.

Z-15GM2-B



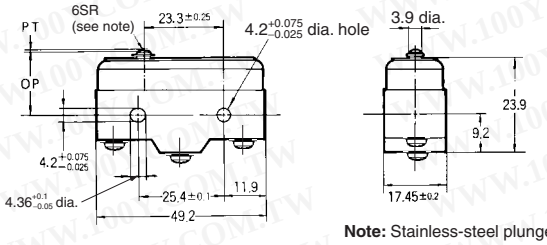


OF max.	2.35 N
RF min.	0.55 N
OT min.	4 mm
MD max.	0.64 mm
FP max.	35 mm
OP	30.2±0.8 mm

Basic Models (Drip-proof) without Terminal Protective Cover

Pin Plunger

Z-15G55-B
Z-01H55-B

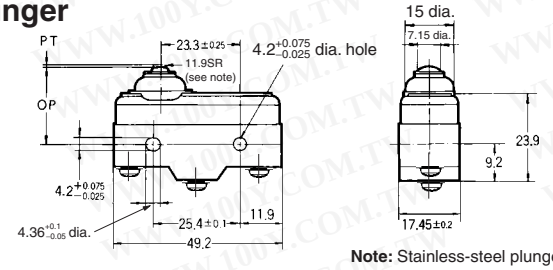


Note: Stainless-steel plunger

Model	Z-15G55-B	Z-01H55-B
OF	2.45 to 4.22 N	3.43 N max.
RF min.	1.12 N	0.78 N
PT max.	2.2 mm	2.2 mm
OT min.	0.13 mm	0.13 mm
MD max.	0.06 mm	0.06 mm
OP	15.9±0.4 mm	

Short Spring Plunger

Z-15GD55-B
Z-01HD55-B

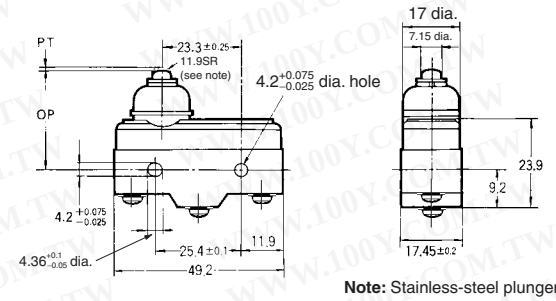


Note: Stainless-steel plunger

Model	Z-15GD55-B	Z-01HD55-B
OF max.	5.30 N	3.63 N
RF min.	1.12 N	0.78 N
PT max.	1.8 mm	1.9 mm
OT min.	1.6 mm	1.6 mm
MD max.	0.06 mm	0.06 mm
OP	21.5±0.5 mm	

Spring Plunger

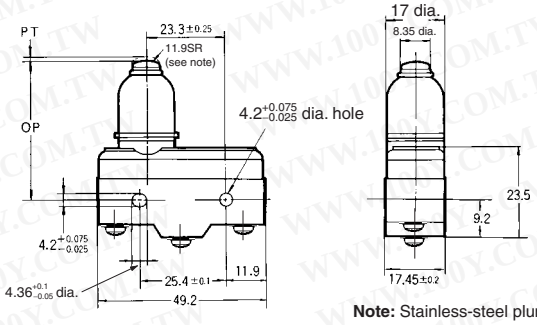
Z-15GK55-B



Note: Stainless-steel plunger

OF max.	5.30 N
RF min.	1.12 N
PT max.	2.3 mm
OT min.	1.6 mm
MD max.	0.06 mm
OP	28.2±0.5 mm

Z-15GK355-B

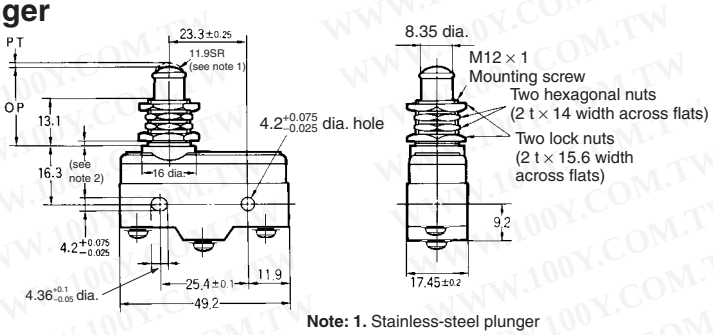


Note: Stainless-steel plunger

OF max.	5.30 N
RF min.	1.12 N
PT max.	2.4 mm
OT min.	3.5 mm
MD max.	0.06 mm
OP	37.8±1.2 mm

Panel Mount Plunger

Z-15GQ55-B



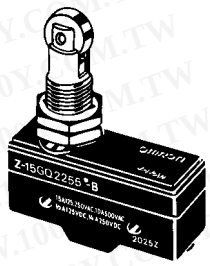
OF max.	5.30 N
RF min.	1.12 N
PT max.	1.8 mm
OT min.	5.5 mm
MD max.	0.06 mm
OP	21.8±0.8 mm

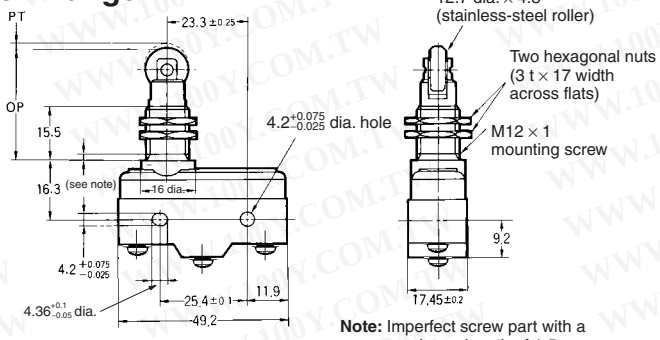
Note: 1. Stainless-steel plunger
2. Imperfect screw part with a maximum length of 1.5 mm.

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

Panel Mount Roller Plunger

Z-15GQ2255-B





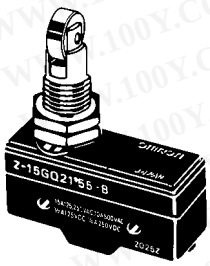
OF max.	5.30 N
RF min.	1.12 N
PT max.	1.8 mm
OT min.	3.58 mm
MD max.	0.06 mm
OP	33.4±1.2 mm

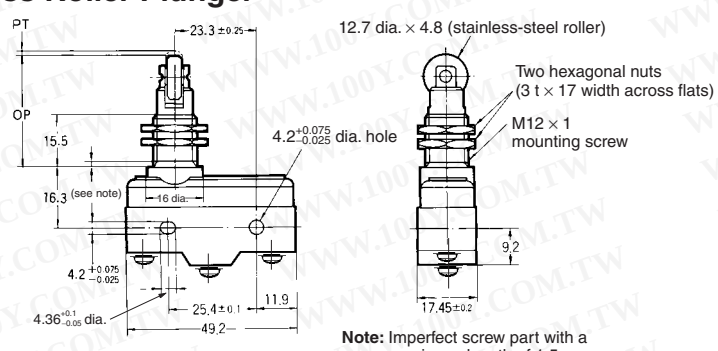
Note: Imperfect screw part with a maximum length of 1.5 mm.

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

Panel Mount Cross Roller Plunger

Z-15GQ2155-B





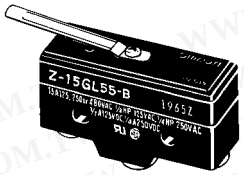
OF max.	5.30 N
RF min.	1.12 N
PT max.	1.8 mm
OT min.	3.58 mm
MD max.	0.06 mm
OP	33.4±1.2 mm

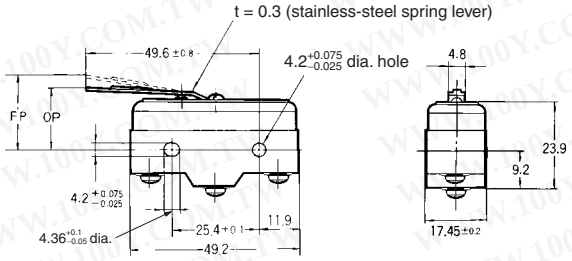
Note: Imperfect screw part with a maximum length of 1.5 mm.

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-15GL55-B



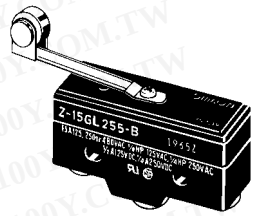


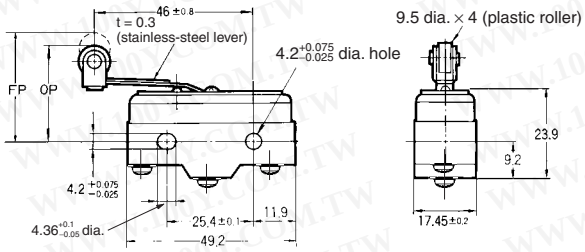
OF max.	1.96 N
RF min.	0.14 N
OT min.	1.6 mm
MD max.	1.3 mm
FP max.	20.6 mm
OP	17.5±0.8 mm

Note: When operating, be sure not to exceed 1.6 mm.

Roller Leaf Spring

Z-15GL255-B



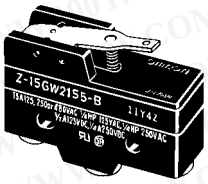


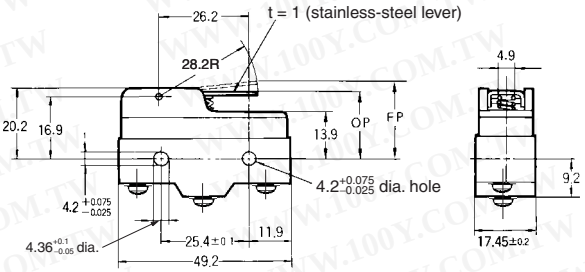
OF max.	1.96 N
RF min.	0.14 N
OT min.	1.6 mm
MD max.	1.3 mm
FP max.	31.8 mm
OP	28.6±0.8 mm

Note: When operating, be sure not to exceed 1.6 mm.

Short Hinge Lever

Z-15GW2155-B

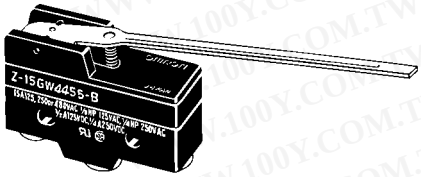


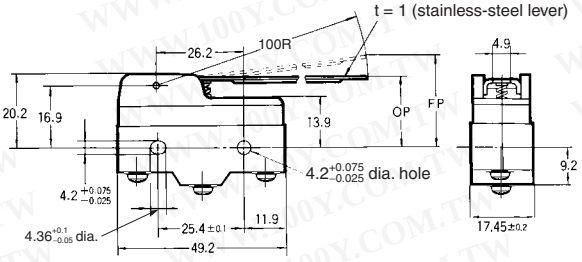


OF max.	1.86 N
RF min.	0.27 N
OT min.	2 mm
MD max.	1 mm
FP max.	25 mm
OP	19±0.8 mm

Long Hinge Lever

Z-15GW4455-B

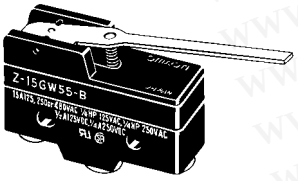


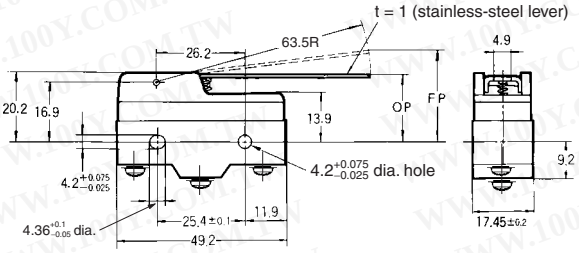


OF max.	0.88 N
RF min.	0.14 N
OT min.	5.6 mm
MD max.	3.5 mm
FP max.	33 mm
OP	19±1.2 mm

Hinge Lever

Z-15GW55-B

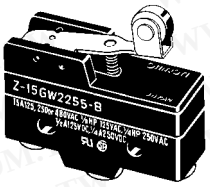


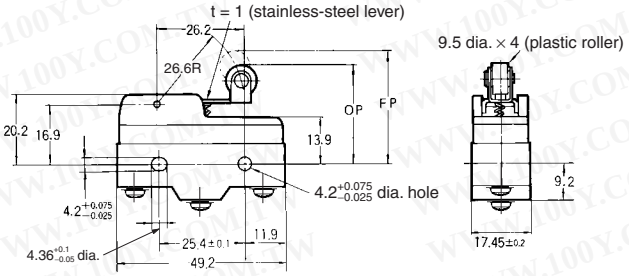


OF max.	0.98 N
RF min.	0.14 N
OT min.	5.6 mm
MD max.	2 mm
FP max.	28.2 mm
OP	19±0.8 mm

Short Hinge Roller Lever

Z-15GW2255-B
Z-01HW2255-B

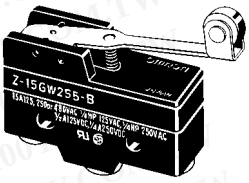


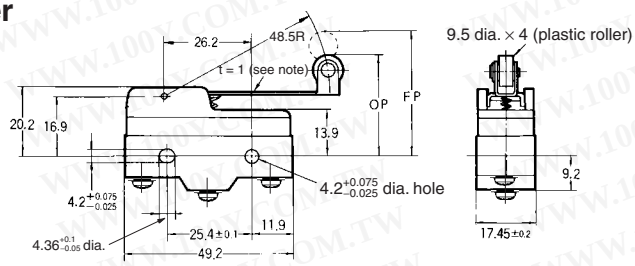


Model	Z-15GW2255-B	Z-01HW2255-B
OF max.	1.96 N	1.96 N
RF min.	0.41 N	0.27 N
OT min.	2.4 mm	2.4 mm
MD max.	0.8 mm	0.8 mm
FP max.	32.9 mm	
OP	30.2±0.4 mm	

Hinge Roller Lever

Z-15GW255-B



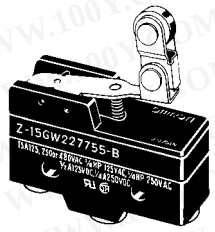


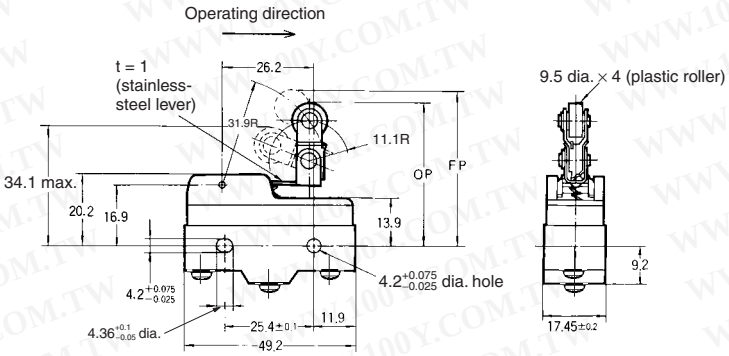
OF max.	1.27 N
RF min.	0.21 N
OT min.	4 mm
MD max.	1.6 mm
FP max.	36.5 mm
OP	30.2±0.8 mm

Note: Stainless-steel lever

Unidirectional Short Hinge Roller Lever

Z-15GW227755-B



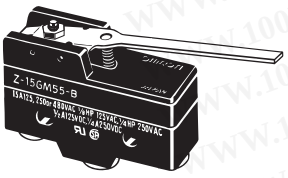


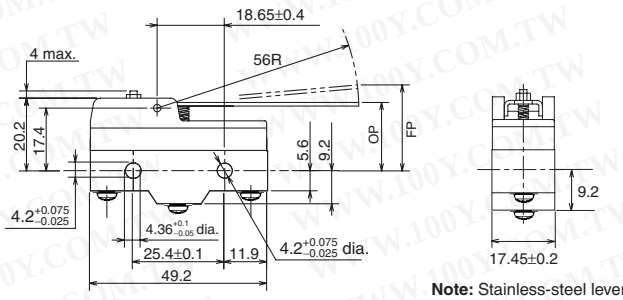
OF max.	1.77 N
RF min.	0.49 N
OT min.	2.4 mm
MD max.	0.8 mm
FP max.	43.6 mm
OP	41.3±0.8 mm

Reverse Hinge Lever

Note: The pin plungers of reverse-type models are continuously pressed by the actuator levers with compression coil springs and the pin plungers are freed by operating the levers. Reverse-type models are highly vibration- and shock-resistive because the pin plungers are normally pressed.

Z-15GM55-B





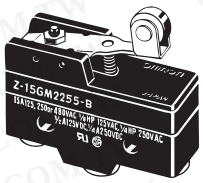
OF max.	1.96 N
RF min.	0.27 N
OT min.	5.6 mm
MD max.	0.89 mm
FP max.	23.8 mm
OP	19±0.8 mm

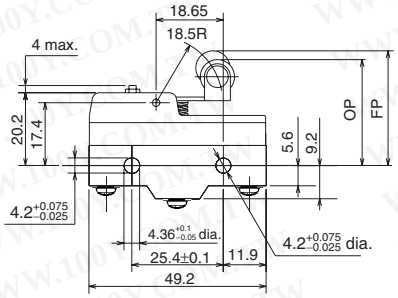
Note: Stainless-steel lever

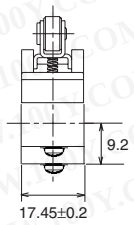
Reverse Short Hinge Roller Lever

Note: The pin plungers of reverse-type models are continuously pressed by the actuator levers with compression coil springs and the pin plungers are freed by operating the levers. Reverse-type models are highly vibration- and shock-resistive because the pin plungers are normally pressed.

Z-15GM2255-B







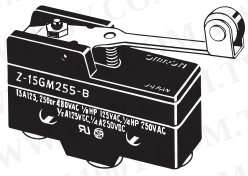
Note: Stainless-steel lever

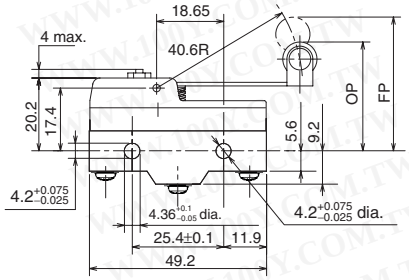
OF max.	5.69 N
RF min.	1.67 N
OT min.	2 mm
MD max.	0.28 mm
FP max.	31.8 mm
OP	29.4±0.4 mm

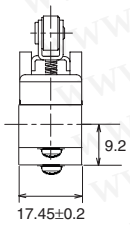
Reverse Hinge Roller Lever

Note: The pin plungers of reverse-type models are continuously pressed by the actuator levers with compression coil springs and the pin plungers are freed by operating the levers. Reverse-type models are highly vibration- and shock-resistive because the pin plungers are normally pressed.

Z-15GM255-B







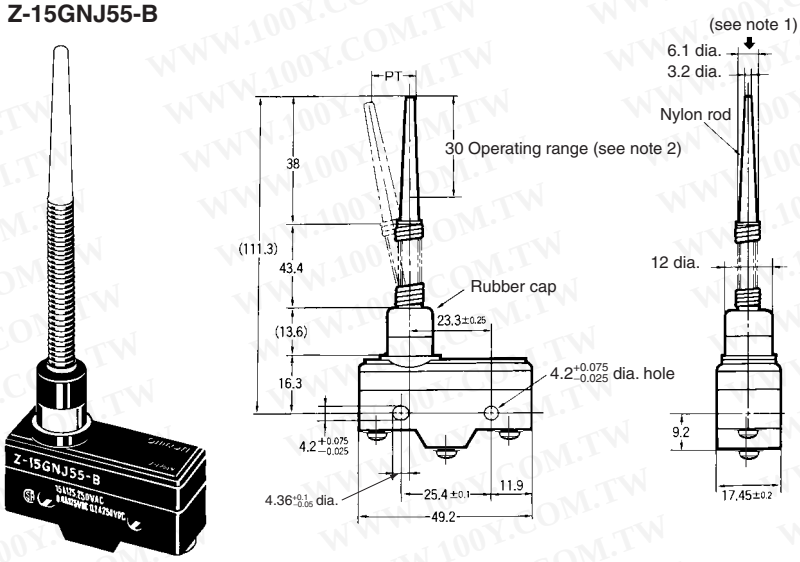
Note: Stainless-steel lever

OF max.	2.65 N
RF min.	0.55 N
OT min.	4 mm
MD max.	0.64 mm
FP max.	35 mm
OP	30.2±0.8 mm

Flexible Rod (Coil Spring)

Z-15GNJ55-B

OF max.	0.49 N
PT max.	(20 mm)
OT	42 to 60 mm



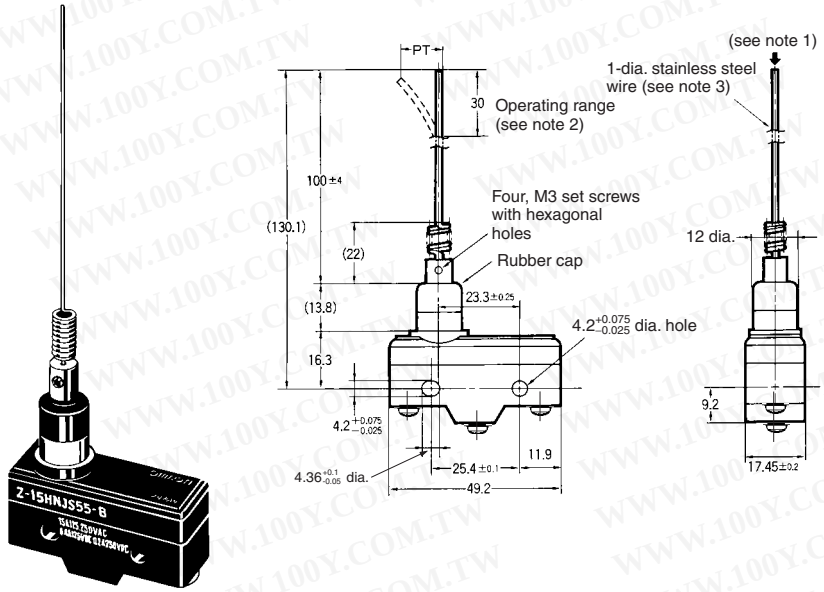
Note: 1. Operation is possible in any direction other than the axial direction (indicated by the arrow ↓).

2. Use only the area within the top 30 mm of the rod as the operating part. (Do not use the area that falls within 80 mm from the mounting hole as the operating part. Using this area may cause damage to the nylon rod.

Flexible Rod (Steel Wire)

Z-15HNJS55-B

OF max.	0.15 N
PT max.	(25 mm)



Note: 1. Operation is possible in any direction other than the axial direction (indicated by the arrow ↓).

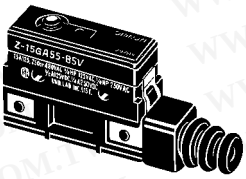
2. Use only the area within the top 30 mm of the rod as the operating part. (Do not use the area that falls within 100 mm from the mounting hole as the operating part. Using this area may cause damage to the steel wire.)

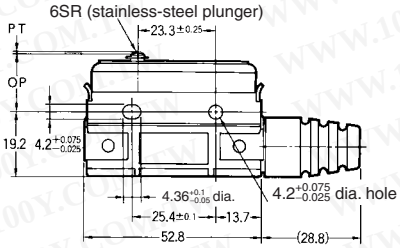
3. The steel wire can be replaced if damaged. (Model: Lever for HNJS55)

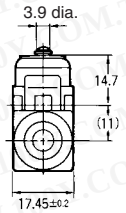
Basic Models (Drip-proof) with Terminal Protective Cover

Pin Plunger

Z-15GA55-B5V

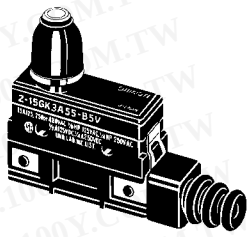


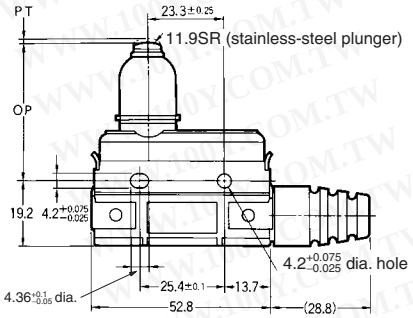


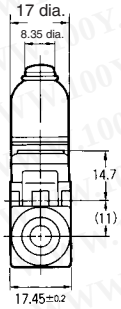


OF max.	2.45 to 4.22 N
RF min.	1.12 N
PT max.	2.2 mm
OT min.	0.13 mm
MD max.	0.06 mm
OP	15.9±0.4 mm

Z-15GK3A55-B5V



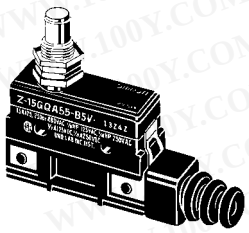


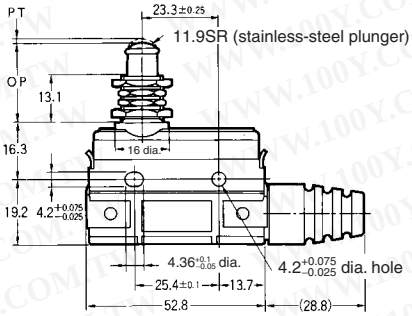


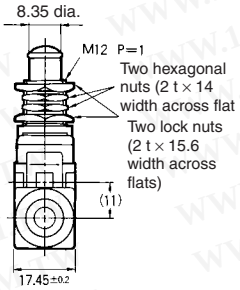
OF max.	5.30 N
RF min.	1.12 N
PT max.	2.4 mm
OT min.	3.5 mm
MD max.	0.06 mm
OP	37.8±1.2 mm

Panel Mount Plunger

Z-15GQA55-B5V





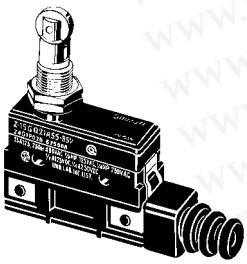


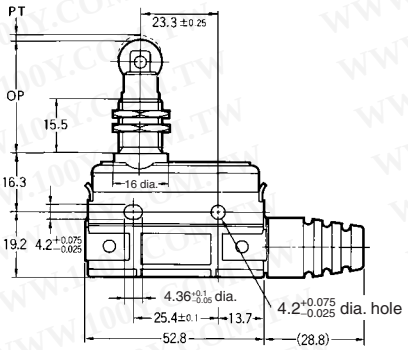
OF max.	5.30 N
RF min.	1.12 N
PT max.	1.8 mm
OT min.	5.5 mm
MD max.	0.06 mm
OP	21.8±0.8 mm

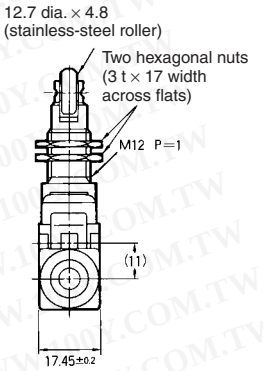
Note: Do not use the M12 mounting screw and the case mounting hole at the same time, or the case may be damaged.

Panel Mount Roller Plunger

Z-15GQ22A55-B5V





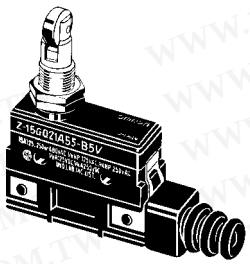


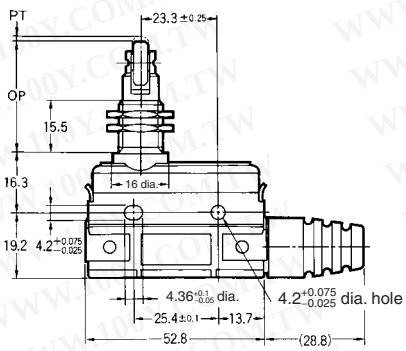
OF max.	5.30 N
RF min.	1.12 N
PT max.	1.8 mm
OT min.	3.58 mm
MD max.	0.06 mm
OP	33.4±1.2 mm

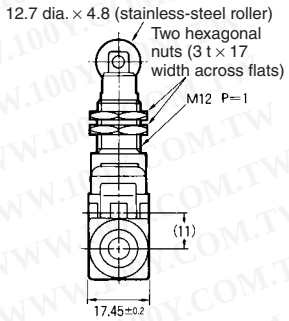
Note: Do not use the M12 mounting screw and the case mounting hole at the same time, or the case may be damaged.

Panel Mount Cross-roller Plunger

Z-15GQ21A55-B5V





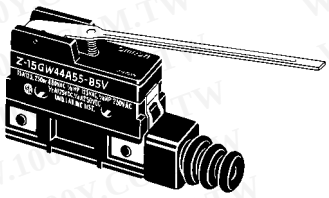


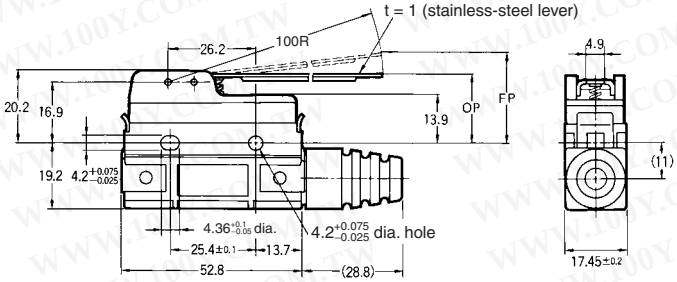
OF max.	5.30 N
RF min.	1.12 N
PT max.	1.8 mm
OT min.	3.58 mm
MD max.	0.06 mm
OP	33.4±1.2 mm

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

Long Hinge Lever

Z-15GW44A55-B5V

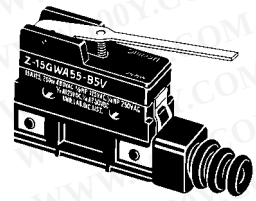


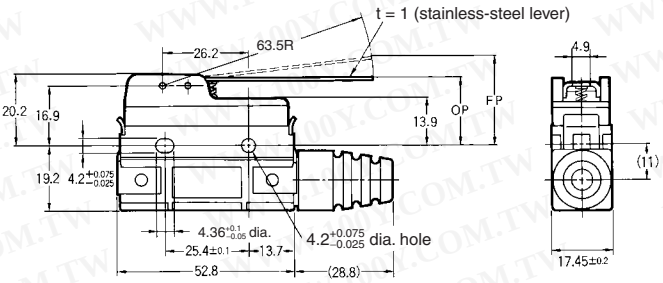


OF max.	0.88 N
RF min.	0.14 N
OT min.	5.6 mm
MD max.	3.5 mm
FP max.	33 mm
OP	19±1.2 mm

Hinge Lever

Z-15GWA55-B5V

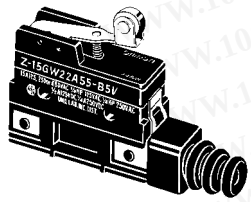


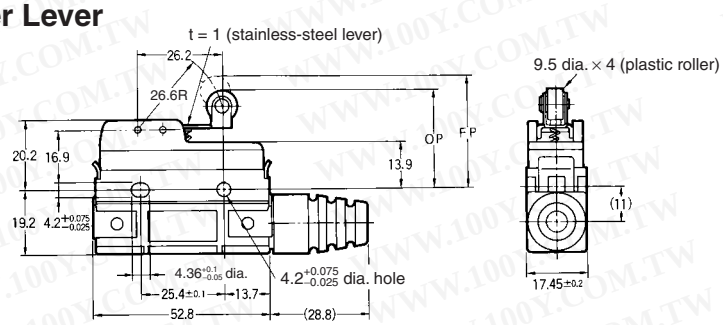


OF max.	0.98 N
RF min.	0.14 N
OT min.	5.6 mm
MD max.	2 mm
FP max.	28.2 mm
OP	19±0.8 mm

Short Hinge Roller Lever

Z-15GW22A55-B5V

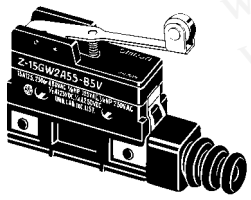


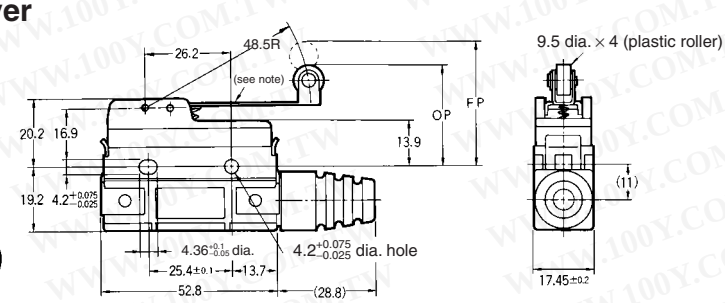


OF max.	1.96 N
RF min.	0.41 N
OT min.	2.4 mm
MD max.	0.8 mm
FP max.	32.9 mm
OP	30.2±0.4 mm

Hinge Roller Lever

Z-15GW2A55-B5V



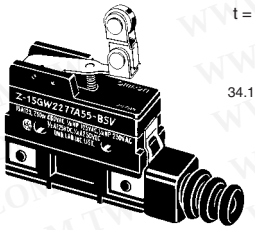


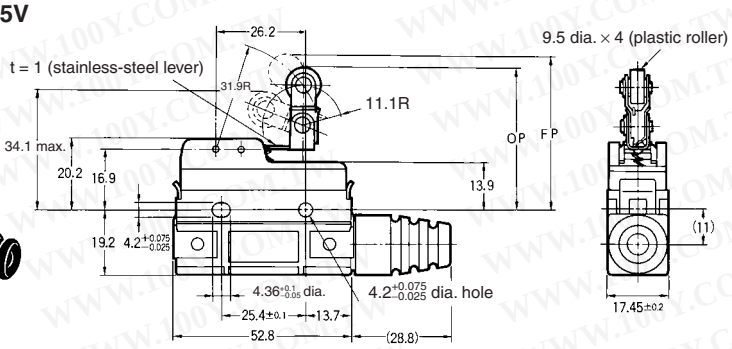
OF max.	1.27 N
RF min.	0.21 N
OT min.	4 mm
MD max.	1.6 mm
FP max.	36.5 mm
OP	30.2±0.8 mm

Note: t = 1 (stainless-steel lever)

Unidirectional Short Hinge Roller Lever

Z-15GW2277A55-B5V



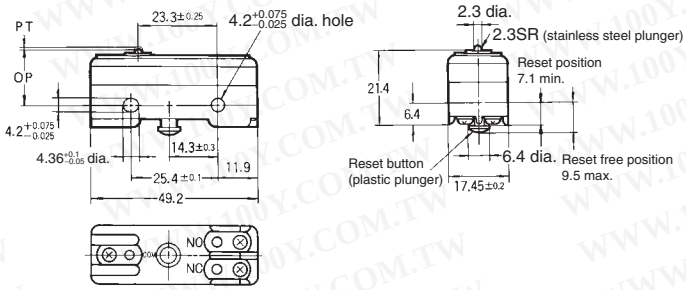


OF max.	1.77 N
RF min.	0.49 N
OT min.	2.4 mm
MD max.	0.8 mm
FP max.	43.6 mm
OP	41.3±0.8 mm

Maintained-contact Models

Pin Plunger

Z-15ER



Plunger

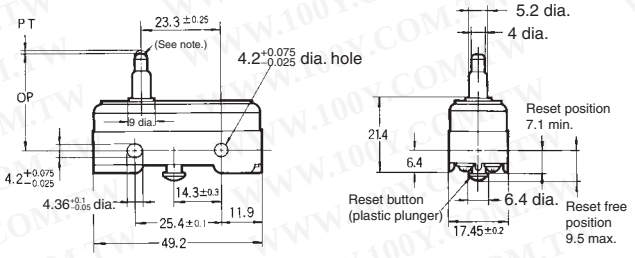
OF max.	1.96 to 2.50 N
PT max.	0.4 mm
OT min.	0.13 mm
OP	15.9±0.4 mm

Reset Button

OF max.	0.55 to 2.79 N
OT min.	0.4 mm

Slim Spring Plunger

Z-15ESR



Note: Stainless steel plunger (tip only, flat, R1 bevel).

Plunger

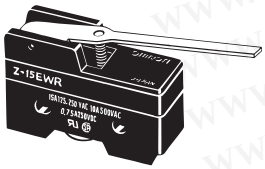
OF max.	2.65 N
PT max.	0.4 mm
OT min.	1.6 mm
OP	28.2±0.5 mm

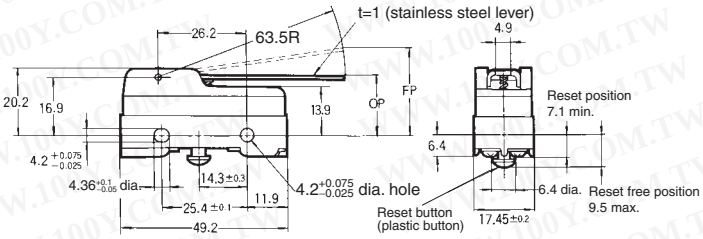
Reset Button

OF max.	2.79 N
OT min.	0.4 mm

Hinge Lever

Z-15EWR





Lever Tip

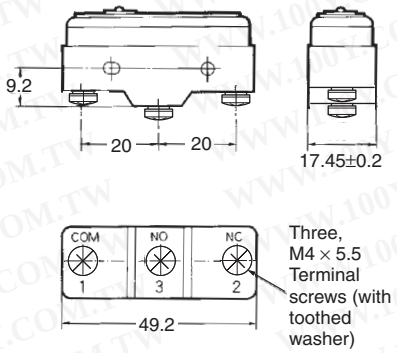
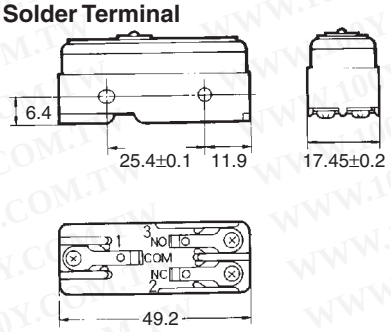
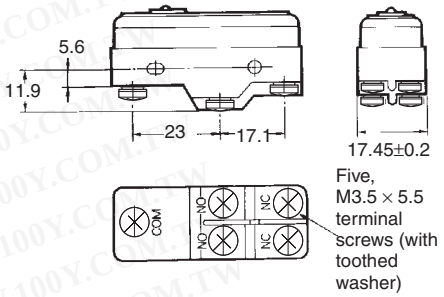
OF max.	0.54 N
OT min.	5.6 mm
FP max.	28.2 mm
OP	19±0.8 mm

Reset Button

OF max.	2.94 N
OT min.	0.4 mm

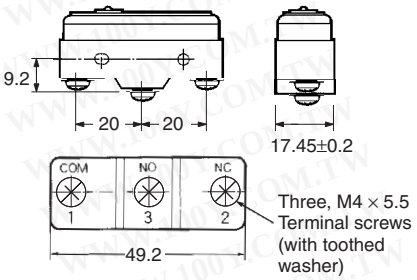
■ Terminals

Basic Models (General-purpose) & Split-contact Models

Basic (General-purpose) Models		Split-contact Models
Screw Terminals (-B)  Appropriate terminal screw tightening torque: 0.78 to 1.18 N·m.	**Solder Terminal** 	**Screw Terminals (Y-B)**  Appropriate terminal screw tightening torque: 0.49 to 0.78 N·m.
Note: With reverse action models (Z-15GM), the positions of NO and NC terminals are reversed.		**Note:** With reverse action models (Z-10FM), the positions of NO and NC terminals are reversed.

Basic Models (Drip-proof) without Terminal Protective Cover

Without Terminal Protective Cover

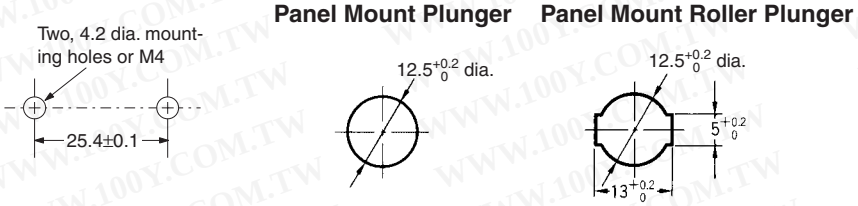


Note: With reverse action models (Z-15GM), the positions of NO and NC terminals are reversed.

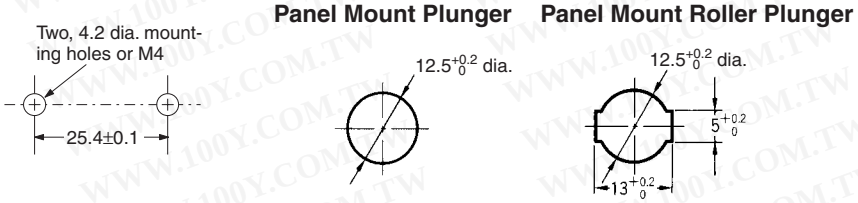
Mounting

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.

Basic Models (General-purpose) & Split-contact Models



Basic Models (Drip-proof) without Terminal Protective Cover



Molded Terminals (Drip-proof Type/Molded Terminal)

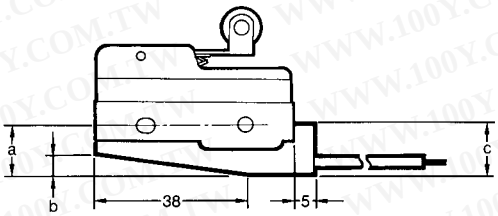
■ Contact Form

Note: With the reverse action model (Z-15GM), the positions of NO and NC terminals are reversed.

■ Dimensions

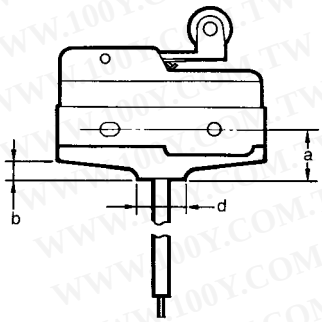
L/R Type

(The following illustration is the R type.)



Lead wire	a	b	d
VSF	12	4	13
VCT	19	11	20

D Type



Lead wire	a	b	d
VSF	12	4	12
VCT	19	11	16

Lead Wire Specifications

Lead wire	Nominal cross-sectional area (mm^2)	Finished outer diameter (mm)	Connection to terminal	Length (m)
VSF (single-core, vinyl cord)	1.25	Approx. 3.1 dia.	Black: COM White: NO Red: NC	1, 3
VCT (vinyl-insulated cable)		Three-core: approx. 10.5 dia.		

Note: No models with molded terminals are approved by UL, CSA, or TÜV.

Precautions

Refer to pages 25 to 30 of *General Information* for details.

■ Correct Use

Panel Mount Switch (Z-15□Q□, Z-01□Q□)

When mounting the panel mount plunger model with screws on a side surface, be careful of the dog angle and operation speed. Excessive dog angle or operation speed may damage the Switch.

The Switch can be panel mounted, provided that the hexagonal nut of the actuator is tightened to a torque of 2.94 to 4.9 N·m.

When using the panel mount plunger model mounted with screws on a side surface, be careful not to apply a large shock. Applying a shock exceeding 100G may damage the Switch.

When using the panel mount plunger model mounted with screws on a side surface, remove the hexagonal nuts from the actuator.

High-sensitivity Switch (Z-15H)/ Extra-high-sensitivity Switch (Z-15H2)

When using the Switch in a DC circuit, be sure to provide an arc suppressor as well because the small contact gap of the Switch may result in contact troubles.

In an application where a high repeat accuracy is required, limit the current that flows through the Switch to within 0.1 A. Also, use a relay to control a high-capacity load if the Switch is connected to such a load. (In this case, the exciting current of the relay coil is the load of the Switch.)

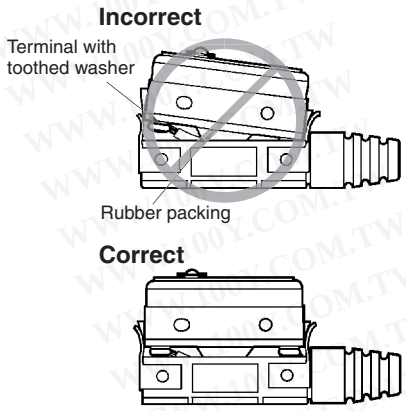
Do not apply a force of 19.6 N or higher to the pin plunger.

Exercise care that the environment conditions such as temperature and humidity do not change abruptly.

Models with Drip-proof Terminal Cover (Z-□A55-B5V)

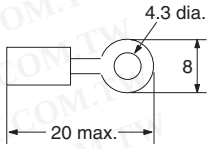
Wiring

To attach the Protective Cover to the case, hold the cover in almost parallel to the case and then push it to the case. If the cover is pushed diagonally, the rubber packing may slip off, degrading the sealability of the Switch.



Use round solderless terminals having the following dimensions to connect leads to the terminals. Tighten the screws of terminals to a torque of 0.78 to 1.18 N·m.

Use the terminal shown below.



A cable 8.5 to 10.5 mm in diameter can be applicable to the sealing rubber of the lead outlet of the Switch. A two-core or three-core VCT cable having a cross-sectional area of 1.25 mm^2 is especially suitable for this.

Use M4 small screws with spring toothed washer are used as the terminal screws.

Drip-proof Switch (Z□55)

The Switch is not perfectly oil-tight; so do not dip it in oil or water.

The rubber boots are made from weather-resistive chloroprene rubber.

Do not use Basic Switches in places with radical changes in temperature.

Rubber boots and rubber caps will tend to harden at lower ambient temperatures. If an Actuator is used in a pressed state for an extended period of time at low temperatures, it may return slowly or it may not return at all.

OMRON can provide special Actuators for use at low temperature with rubber boots or rubber caps made of silicon rubber, which has superior resistance to cold. Ask you OMRON representative for details.

Split-contact Switch (Z-10F□Y)

The applicable current varies depending on how the contacts are used. If the Switch is connected in series, the Switch can endure a current 1.5 to 2 times higher than the current that can be applied in parallel connection.

Flexible Rod Switch (Z-15□NJ□55, Drip-proof)

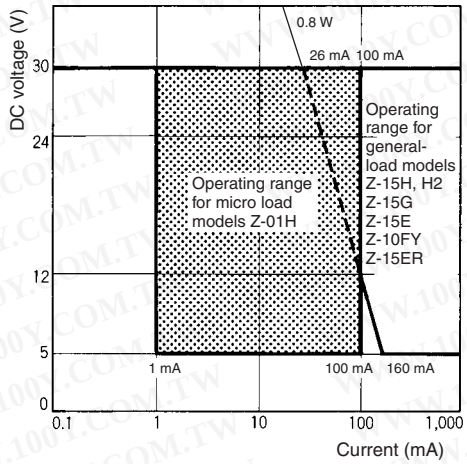
When the rod is fully swung, the Switch may operate when the lever returns, causing chattering. Use a circuit that compensates for chattering wherever possible.

Do not switch the rod to the fullest extent when the Switch is to break a power circuit because such a practice may cause metal deposition to occur between the mating contacts of the Switch.

Micro Load Applicable Range

Using a model for ordinary loads to open or close the contact of a micro load circuit may result in faulty contact. Use models that operate in the following range. However, even when using micro load models within the operating range shown here, if inrush current occurs when the contact is opened or closed, it may increase contact wear and so decrease durability. Therefore, insert a contact protection circuit where necessary.

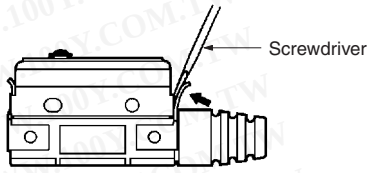
The minimum applicable load is the N-level reference value. This value indicates the malfunction reference level for the reliability level of 60% (λ 60). The equation, λ 60 = 0.5×10^{-6}/operations indicates that the estimated malfunction rate is less than 1/2,000,000 operations with a reliability level of 60%.



Item	Z-01H	Z-15□, Z-10FY
Minimum applicable load	1 mA at 5 VDC	160 mA at 5 VDC

Others

Do not apply an excessive force to the mounting bracket with a screwdriver or a similar object when attaching or detaching the protective cover; otherwise, the cover will be deformed.



This terminal protective cover cannot be used with models whose model number does not have the prefix "-B5V."

Terminal protective covers can be ordered separately for maintenance use.

■ Accessories (Order Separately)

Refer to *Z/A/X/DZ Common Accessories* for details about Terminal Covers, Separators, and Actuators.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. B001-E1-12A

In the interest of product improvement, specifications are subject to change without notice.