

Large Basic Switch

SZM-Z15 series



FEATURES

- Long mechanical life
- Single Pole Double Throw
- Power switching loads to 15 Amp.
- Wide range of actuators and terminal design
- High precision with good repeatability
- High vibration and shock resistance
- Wide operating speed range
- UL approved

APPLICATIONS

- Machine tools
- Vending machines
- Timing devices/Test instruments
- HVAC equipment
- Material handling

DESCRIPTION

SZM-Z15 Large Basic Switches comprise Honeywell's most cost-effective large basic portfolio. The precision snap-action mechanisms are offered with a wide variety of actuators, electrical ratings, and operating characteristics. These basic switches are ideal for applications requiring compactness, light weight, accurate repeatability, reliability and long life. Honeywell's manufacturing facilities and processes, high quality materials, and proven switching technology and design ensure stable performance and precision operation. Our worldwide network of manufacturing, sales, and distribution resources support you with rapid response and product and service availability.

WARNINGS



- DO NOT USE this product as safety or emergency devices or in any other applications where failure of the product could result in a personal injury
- This information presented in this product sheet is for reference only. DO NOT USE this document as product installation information.

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MODEL SELECTION GUIDE

■ Basic switch

Actuator Type	Screw Terminal	Soldering Terminal
Pin push plunger	SZM-Z15-G01	SZM-Z15-G01-S
Spring plunger	SZM-Z15-G02	SZM-Z15-G02-S
Short spring plunger	SZM-Z15-G03	SZM-Z15-G03-S
Panel mount plunger	SZM-Z15-G04	SZM-Z15-G04-S
Panel mount roller plunger	SZM-Z15-G05	SZM-Z15-G05-S
Panel mount cross roller plunger	SZM-Z15-G06	SZM-Z15-G06-S
Flexible leaf	SZM-Z15-G07	SZM-Z15-G07-S
Flexible roller leaf	SZM-Z15-G08	SZM-Z15-G08-S
Short hinge lever	SZM-Z15-G09	SZM-Z15-G09-S
Hinge lever	SZM-Z15-G10	SZM-Z15-G10-S
Low force hinge lever	SZM-Z15-G11	SZM-Z15-G11-S
Short hinge roller lever	SZM-Z15-G13	SZM-Z15-G13-S
Hinge roller lever	SZM-Z15-G14	SZM-Z15-G14-S
Low force, short hinge roller lever	SZM-Z15-G15	SZM-Z15-G15-S
Hinge long lever	SZM-Z15-G16	SZM-Z15-G16-S

Note: In addition to the listings above, many more standard and special types are available on your specific application needs. Contact your local sales office for more information.

■ Terminal Cover

SZM-Z-CA	Solder terminal
SZM-Z-CB	Screw terminal

TECHNICAL INFORMATION

■ Electrical Ratings

Rated voltage	Non-inductive load (A)				Inductive load (A)				Inrush current (A)	
	Resistive load		Lamp load		Inductive load		Motor load		N.C	N.O
	N.C	N.O	N.C	N.O	N.C	N.O	N.C	N.O		
125 VAC	15		3	1.5	15		5	2.5	30 max.	15 max.
250 VAC	15		2.5	1.25	15		3	1.5		
500 VAC	10		1.5	0.75	6		1.5	0.75		
8 VDC	15		3	1.5	15		5	2.5		
14 VDC	15		3	1.5	10		5	2.5		
30 VDC	6		3	1.5	5		5	2.5		
125 VDC	0.5		0.5	0.5	0.05		0.05	0.05		
250 VDC	0.25		0.25	0.25	0.03		0.03	0.03		

Notes: 1. Inductive load has a power factor of min. 0.4(AC) and a time constant of max. 7ms(DC)

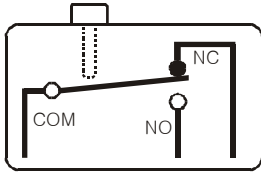
2. Lamp load has an inrush current of 10 times the steady-state current

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

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■ Circuitry

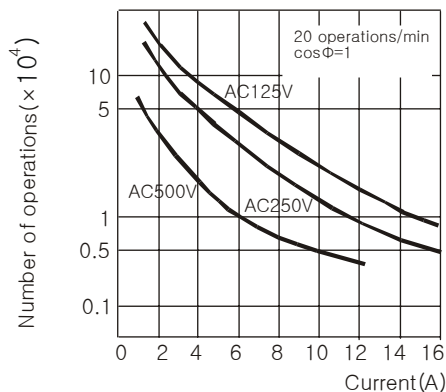


■ Specifications

Break Distance	0.5 mm
Circuitry	SPDT
Contact Material	AgCdO
Operating speed	0.1 mm/s to 1.0 m/s(plunger type), 1.0 mm/s to 1.0 m/s(lever type)
Operating frequency	Mechanically : 240 operations /min(plunger type), 120 operations /min(lever type) Electrically : 20 operation /min
Contact resistance(initial)	Max. 15 mΩ
Insulation resistance	Min. 100 MΩ (at 500 VDC)
Dielectric strength	1,000 VAC, 50/60 Hz for 1 minute between non-continuous terminals 2,000 VAC, 50/60 Hz for 1 minute between each terminal and non-current-carrying metal parts and between each terminal and ground
Vibration	Malfunction : 10 to 55 Hz at 1.5 mm double amplitude
Shock	Mechanical durability : Approx. 1,000 m/s ² (100G) Malfunction durability : Approx. 300 m/s ² (30G) with plunger types Approx. 50 m/s ² (5G) with lever types
Ambient temperature	-25 to +80 °C
Humidity	45% to 85% RH
Service life	Mechanically : 10,000,000 operations/min. Electrically : 500,000 operations/min.
Approval	UL listed
Weight	Approx. 20 to 60 g

Note : The data shown above are of initial value

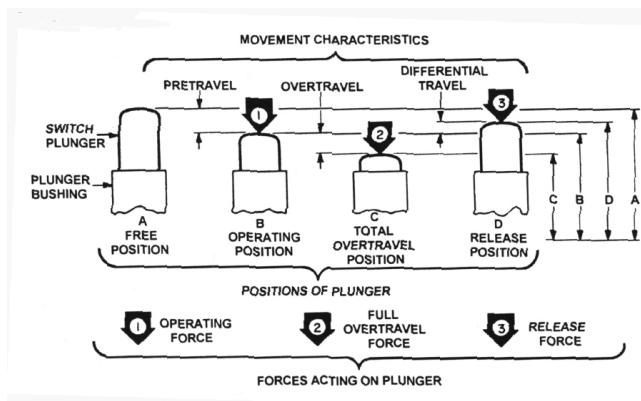
■ Electrical Life Curve



■ Operating characteristics

Catalog Listing	OF	RF min.	PT max.	OT min.	DT max.	OP
SZM-Z15-G01 / G01-S	250 to 350 g	114 g	0.4 mm	1.6 mm	0.05 mm	16.0 ± 0.4 mm
SZM-Z15-G02 / G02-S	250 to 350 g	114 g	0.4 mm	1.6 mm	0.05 mm	28.2 ± 0.5 mm
SZM-Z15-G03 / G03-S	250 to 350 g	114 g	0.4 mm	1.6 mm	0.05 mm	21.5 ± 0.5 mm
SZM-Z15-G04 / G04-S	250 to 350 g	114 g	0.4 mm	5.8 mm	0.05 mm	21.8 ± 0.8 mm
SZM-Z15-G05 / G05-S	250 to 350 g	114 g	0.4 mm	3.58 mm	0.05 mm	33.4 ± 1.2 mm
SZM-Z15-G06 / G06-S	250 to 350 g	114 g	0.4 mm	3.58 mm	0.05 mm	33.4 ± 1.2 mm
SZM-Z15-G07 / G07-S	141 g	14 g	4 mm	1.6 mm	1.3 mm	17.4 ± 0.8 mm
SZM-Z15-G08 / G08-S	141 g	14 g	4 mm	1.6 mm	1.3 mm	28.6 ± 0.8 mm
SZM-Z15-G09 / G09-S	160 g	28 g	5 mm	2 mm	1.0 mm	19.0 ± 0.8 mm
SZM-Z15-G10 / G10-S	80 g	15.5 g	10 mm	4.8 mm	1.12 mm	19.0 ± 0.8 mm
SZM-Z15-G11 / G11-S	28 g	3.5 g	10 mm	5.6 mm	1.27 mm	19.0 ± 0.8 mm
SZM-Z15-G13 / G13-S	160 g	42 g	5 mm	2.4 mm	0.5 mm	30.2 ± 0.4 mm
SZM-Z15-G14 / G14-S	100 g	22 g	8 mm	4 mm	1.02 mm	30.2 ± 0.8 mm
SZM-Z15-G15 / G15-S	80 g	10 g	5 mm	2 mm	1.2 mm	30.2 ± 1.0 mm
SZM-Z15-G16 / G16-S	70 g	14 g	13 mm	5 mm	2.5 mm	19.1 ± 1.0 mm

- DT(Differential Travel)** Plunger or actuator travel from point where contacts “snap-over” to point where they “snap-back”.
- FP(Free Position)** Position of switch plunger or actuator when no external force is applied.
- Full Overtravel Force** Force required to attain full overtravel of actuator.
- OP(Operating Position)** Position of switch plunger or actuator at which point contacts snap from normal to operated position. With flexible or adjustable actuators, the operating position is measured from the end of the lever or its maximum length. Location of operating position measurement shown on mounting dimension drawings.
- OF(Operating Force)** Amount of force applied to switch plunger or actuator to cause the contact “snap-over”. Note in the case of adjustable actuators, the force is measured from the maximum length position of the lever.
- OT(OverTravel)** Plunger or actuator travel safely available beyond operating position.
- PT(PreTravel)** Distance or angle traveled in moving plunger or actuator from free position to operating position.
- RF(Release Force)** Amount of force still applied to switch plunger or actuator at the moment contacts snap from operated position to non-operated position.
- Total Travel** Distance from actuator free position to overtravel limit position

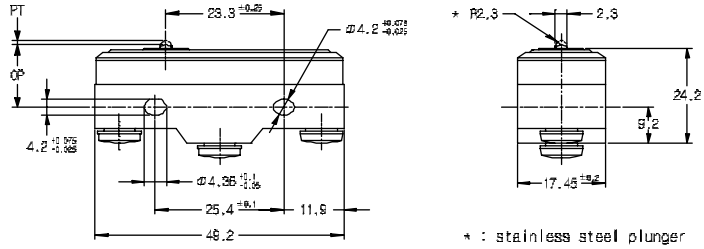


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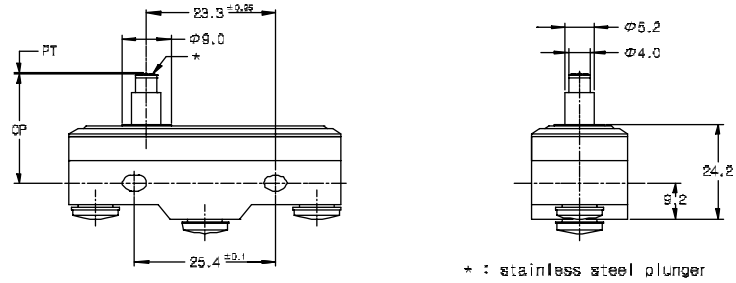
SZM-Z15 series

■ Dimensions

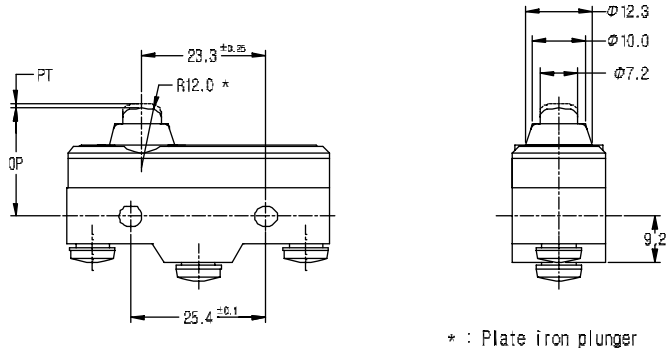
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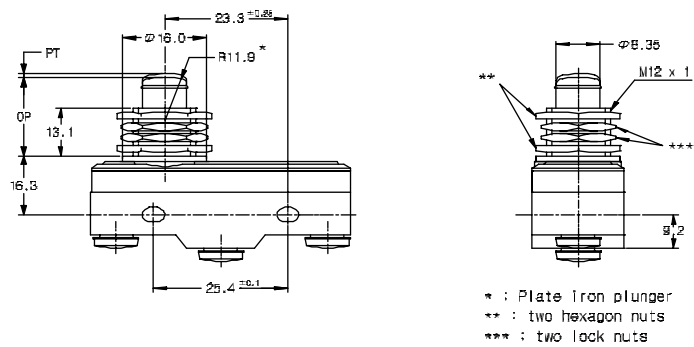
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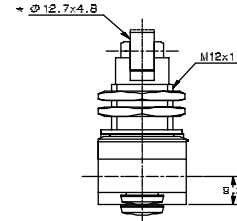
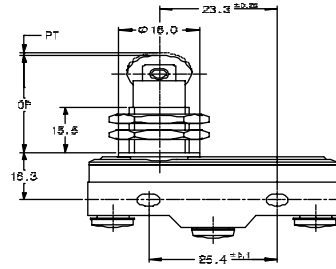


* : Plate Iron plunger
 ** : two hexagon nuts
 *** : two lock nuts

Large Basic Switch

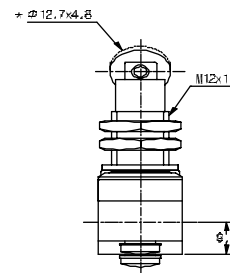
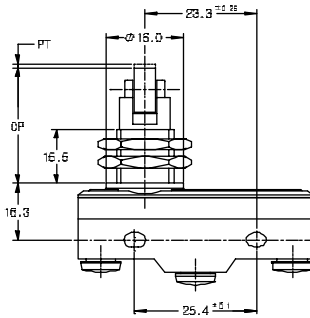
SZM-Z15 series

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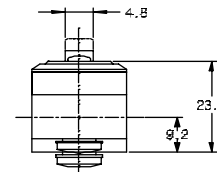
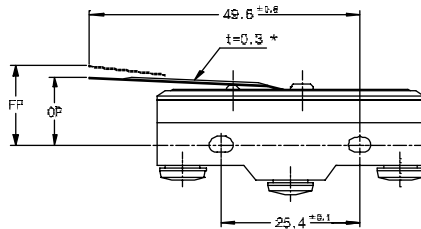
* : stainless steel roller

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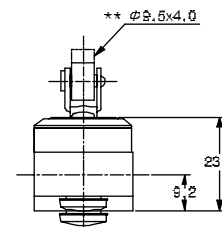
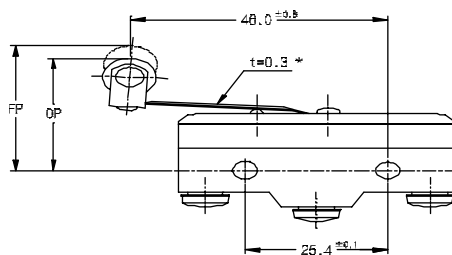
* : stainless steel roller

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* : stainless steel spring lever

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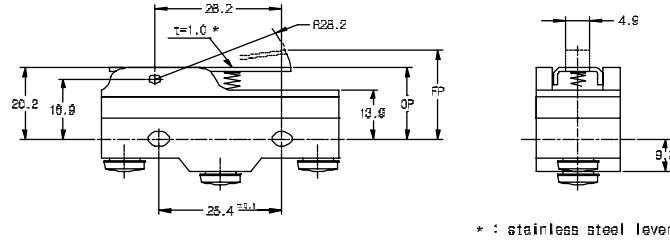


* : stainless steel spring lever
 ** : plastic roller

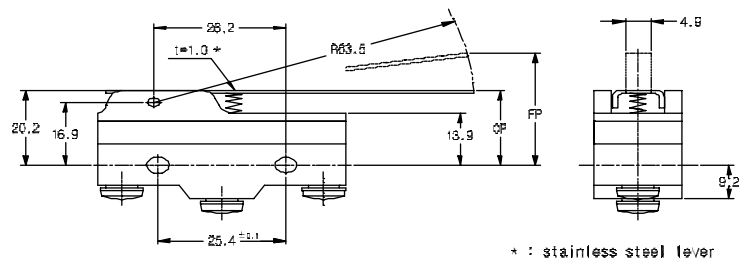
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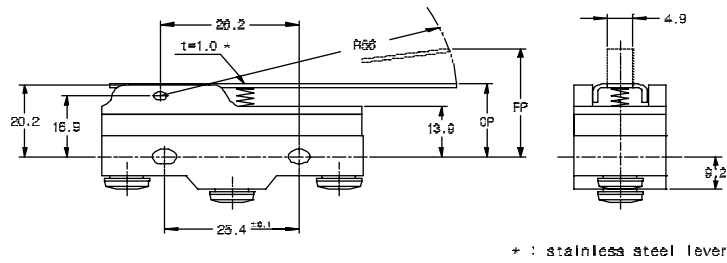
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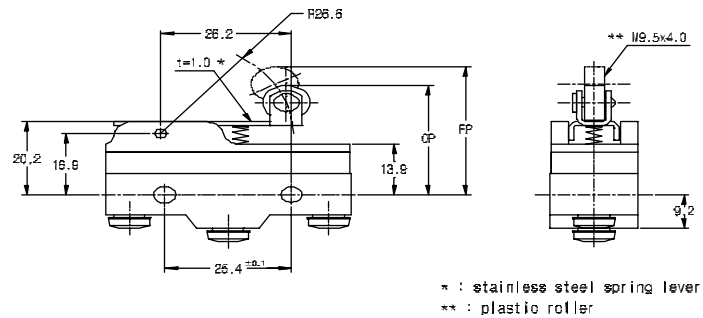
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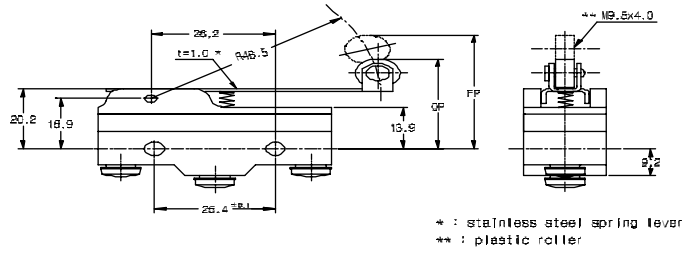
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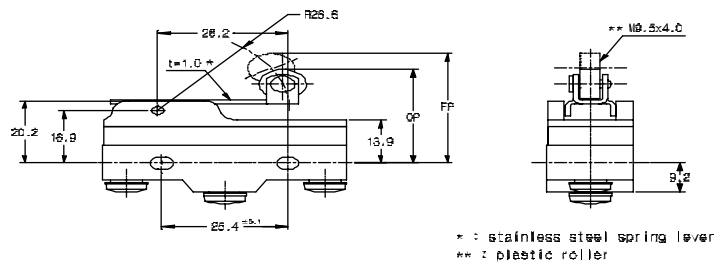
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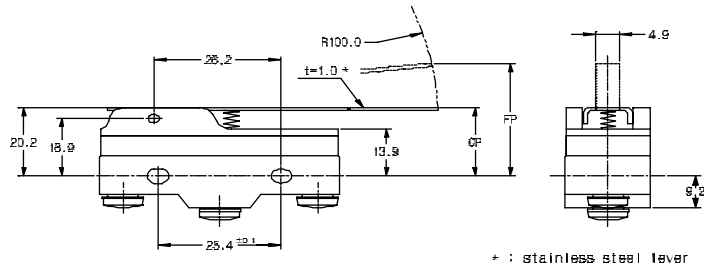
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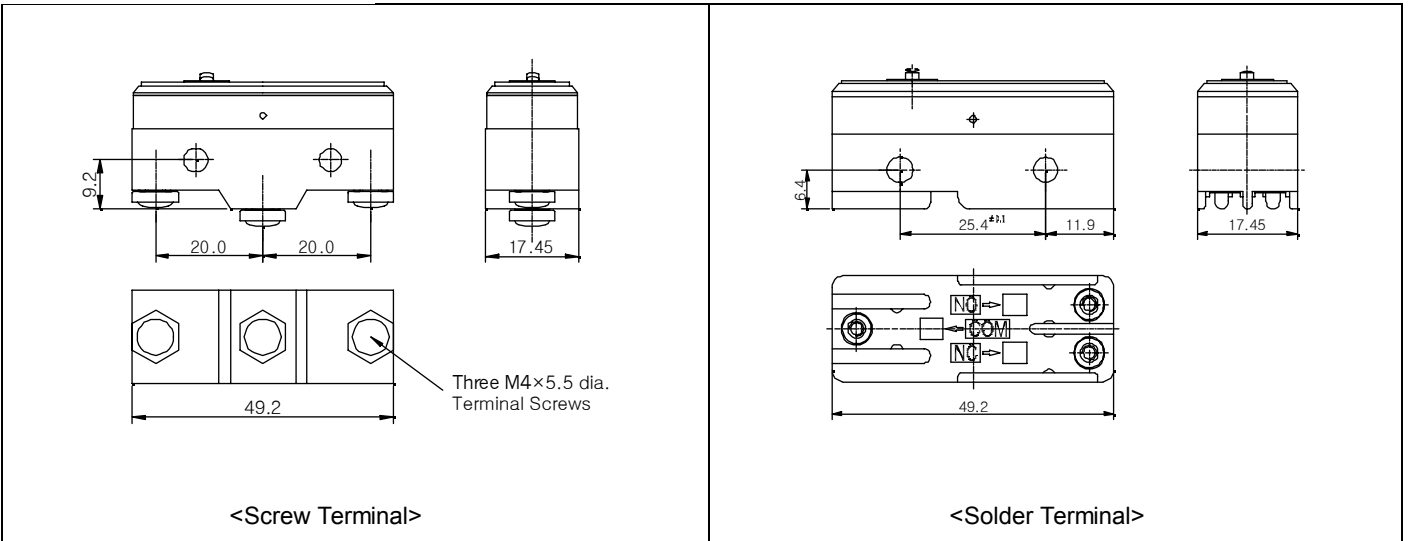
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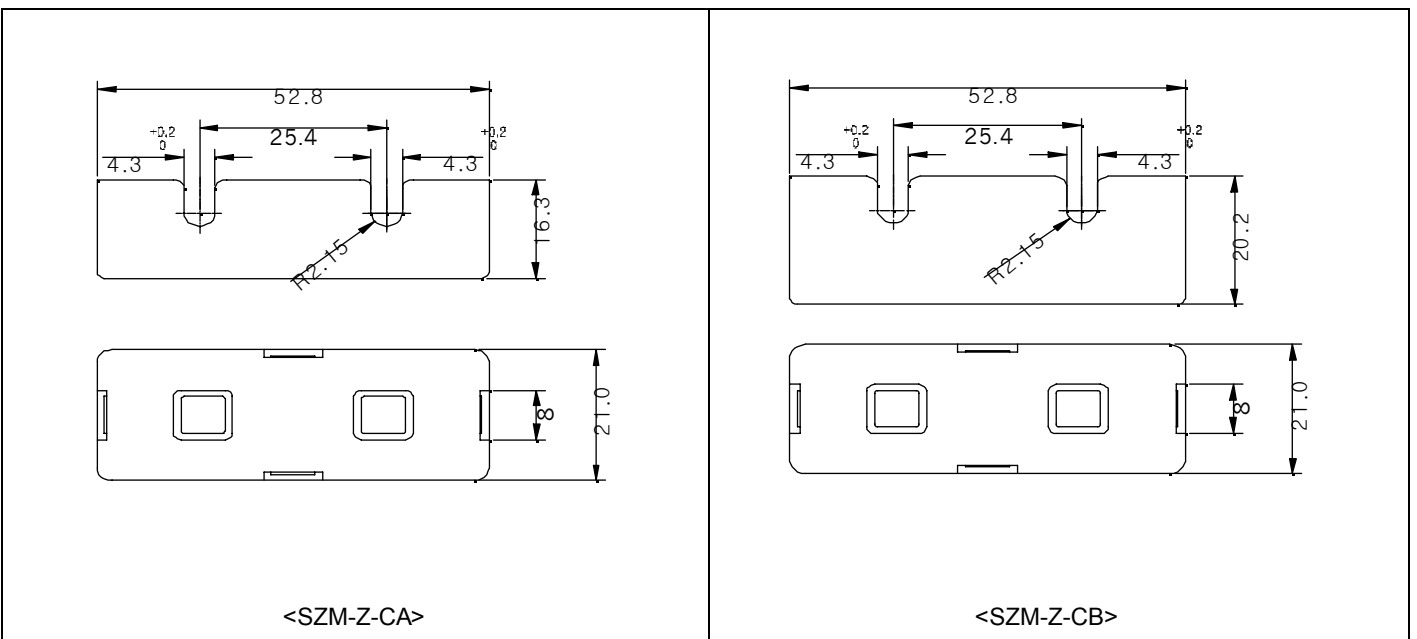
Large Basic Switch

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<Terminal dimension>



<Terminal cover>



General Purpose Relay

SZR-LY series

Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective material and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during that period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and **is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.**

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