

## ED SERIES SAFETY LIMIT SWITCH

### Description



The ED series safety limit switches conform to EN 50047 and have been developed to provide a range of options including plastic cases in various sizes, a choice of snap acting, slow break/make with 2 contact configurations and a choice of actuator heads.

The ED series offers the option of rotating the head in 90° increments before installation to allow ease of mounting.

Highly limit switches can be used in other applications other than guard doors, for example on moving machine beds, crane arms, lifts, elevators, etc.

Operation of these limit switches is achieved by the sliding action of the guard or other moving object deflecting the plunger or lever. For safety applications it is important that upon actuation, the guard or other moving objects should not pass completely over the switch and allow the plunger or lever to return to its original position.

### Features

- Conforms to EN (TUV) standards corresponding to the CE marking
- Positive opening operation of NC (Normally Closed) contacts conforming to IEC /EN 60947-5-1 
- Double insulation makes ground terminal unnecessary (Bears  marking)
- Wide standard operating temperature range: -25°C to 80°C
- Full range of actuator heads and levers suitable for safety applications
- Sealing up to IP 67
- Wide switch variations, (Snap action and slow action basic switches)
- International conduit sizes



### Specifications

<b>Standards</b>	EN60947-5-1, UL508, EN50047, EN1088
<b>Approvals</b>	cULus, TUV and CE marked for all applicable directives
<b>Positive Opening Operation</b>	NC Contact
<b>Utilization Category</b>	AC15 A600
<b>Min Current</b>	5V, 5mA, DC
<b>Thermal Current (Ith)</b>	10A
<b>Rated Insulation Voltage</b>	600V AC
<b>Rated Impulse withstand Volt</b>	2500V AC
<b>Insulation Resistance</b>	100MΩ min. (DC 500V)
<b>Contact Resistance</b>	25mΩ max. (Initial)
<b>Max Switching Speed</b>	250mm/s
<b>Max Switching Frequency</b>	6000 operation per hour
<b>Enclosure Material</b>	UL approved glass-filled polybutylene terephthalate
<b>Roller Material</b>	Various polymers
<b>Enclosure Protection</b>	IP 67
<b>Operating Temperature</b>	Min -25°C (-18°F) Max 80°C (+176°F)
<b>Pollution Degree</b>	3
<b>Protection Against Electric Shock</b>	Class II (Double Insulation)
<b>Mech. Life Expectancy</b>	1 x 10 <sup>7</sup> Cycle min
<b>Electrically Life Expectancy</b>	150,000 Cycle min
<b>Vibration</b>	IEC 68-2-6, 10-55Hz±1 Hz, Excursion: 0.35mm, 1 octave/min
<b>Conduit Entry</b>	Various (see Product Selection table)
<b>Fixing</b>	2 x M4

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# ED SERIES SAFETY LIMIT SWITCH

## Structure Description

### Metal Lever Setting

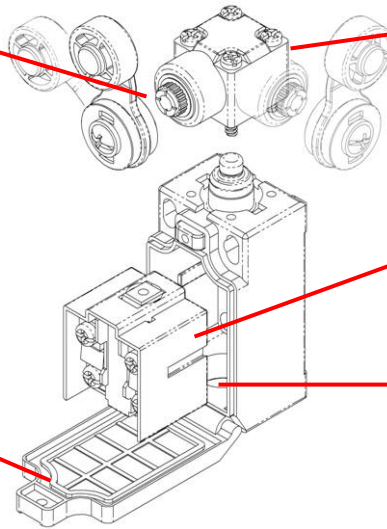
Grooves which engage the lever every 18° are cut in the operation indicator disk to prevent the lever from slipping against the rotary shaft.

### Hand

With roller lever models, the direction of the switch head can be varied to any of the four directions by loosening the roller lever switch screws at the four corners of the head.

### Cover

The cover, with a hinge on its lower part, can be opened by removing the screw of the cover, which ensures ease of maintenance and wiring.



### Contact Block

Wide switch variations.  
Snap-action: 1NC/1NO  
Slow-action: 1NC/1NO, 2NC

### Conduit

Wide switch variations.  
PG13.5 PG11  
M16 M20  
1/2-14NPT

## Product Selection

ED-□-□-□  
1 2 3

### 1. THREAD DIMENSION OF LEAD EXIT

- 1: PG13.5 (S)
- 2: 1/2NPT (C)
- 4: PG11 (O)
- 5: M16 (C)
- 6: M20 (O)
- 7: Connector (C)

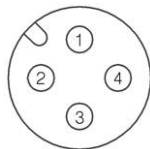
### 2. CONTACT TYPES

- 1: 1NC/1NO SLOW ACTION (BBM) (S)
- 2: 2NC SLOW ACTION (O)
- 3: 1NC/1NO SNAP ACTION (C)

### 3. HEAD AND ACTUATOR

- 20: Roller arm type
- 21: Adjustable roller arm type (standard roller)
- 22: Adjustable roller arm type (Long arm type)
- 24: Thermoplastic end flexible rod type
- 241: Cat whisker type
- 242: Wobble stick type
- 25: Rod lever type
- 27: Adjustable roller arm type (big roller)
- 31: Push plunger type
- 32: Roller plunger type
- 62: Roller lever type
- 63: One-Way roller arm lever type

M12 Connector  
pin arrangement



## Contact Block Form

TYPE	CONTACT FORM	CONNECTOR PIN ARRANGEMENT	OPERATION DIAGRAMS	
			Closed	Open
ED-□-1-□□	1NC/1NO(Slow action) (See Note 1)			
ED-□-2-□□	2NC (Slow action) (See Note 2)			
ED-□-3-□□	1NC/1NO(Snap action) (See Note 1)			

Note: 1. Only NC contact 11-12 has an approved positive opening mechanism.

2. NC contacts 11-12 and 21-22 have an approved positive opening mechanism.

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# ED SERIES SAFETY LIMIT SWITCH

## Positive Opening Mechanism

### 1NC/1NO Contact (Snap action)

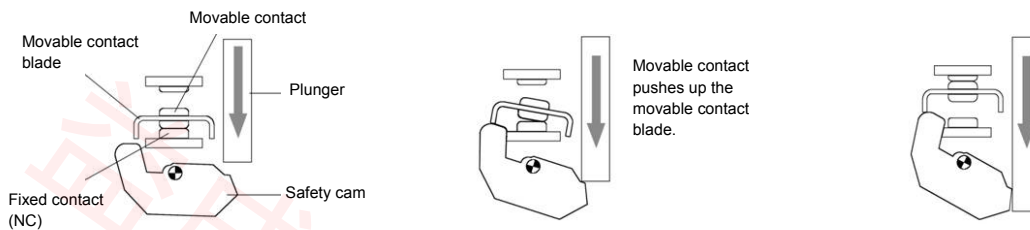
Conforms to EN60947-5-1 Positive Opening

If metal deposition between mating contacts occurs on the NC contact side, they can be pulled apart by the shearing force and tensile force generated when the safety cam or plunger engages the movable contact blade. When the safety cam or plunger is moved in the direction of the black arrow the Limit Switch releases.

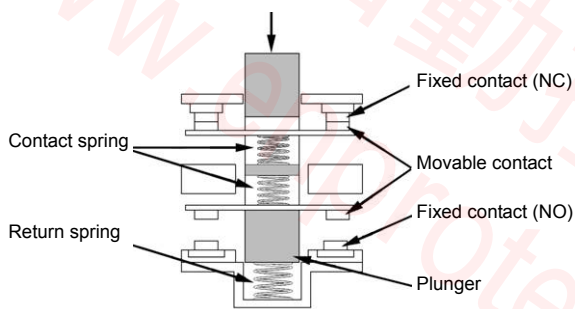
1. When metal deposition occurs.

2. When contacts are being pulled apart.

3. When contacts are completely pulled apart.



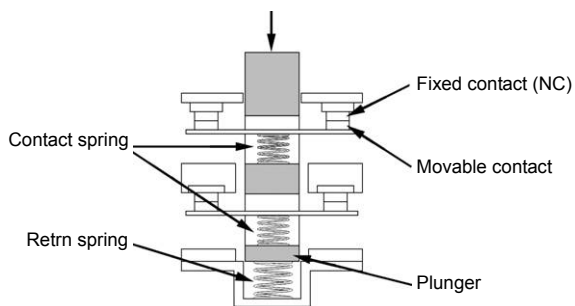
### 1NC/1NO Contact (Slow action)



Only the NC contacts have a positive opening function.

When metal deposition occurs, the contacts are separated from each other by pushing in the plunger.

### 2NC Contact (Slow action)



Both NC contacts incorporate a positive opening function.

When metal deposition occurs, the contacts are separated from each other by pushing in the plunger the plunger.

# ED SERIES SAFETY LIMIT SWITCH

## Operating Characteristics

Unit: mm

Item No.	Operating Characteristics	Dimensions
ED-20 Roller Arm Type	<p>Slow Action 1NC\1NO ED-__-1-20</p> <p>Slow Action 2NC ED-__-2-20</p> <p>Snap Action 1NC\1NO ED-__-3-20</p>	
ED-21 Adjustable Roller Arm type (Standard arm)	<p>Slow Action 1NC\1NO ED-__-1-21</p> <p>Slow Action 2NC ED-__-2-21</p> <p>Snap Action 1NC\1NO ED-__-3-21</p>	
(Only for slow action models.)		
ED-22 Adjustable Roller Arm Type (Long arm )	<p>Slow Action 1NC\1NO ED-__-1-22</p> <p>Slow Action 2NC ED-__-2-22</p> <p>Snap Action 1NC\1NO ED-__-3-22</p>	
(Only for slow action models.)		

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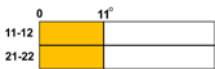

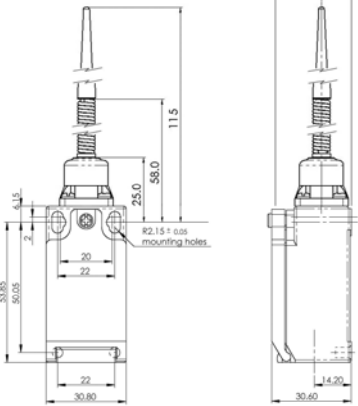
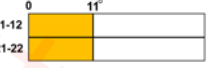

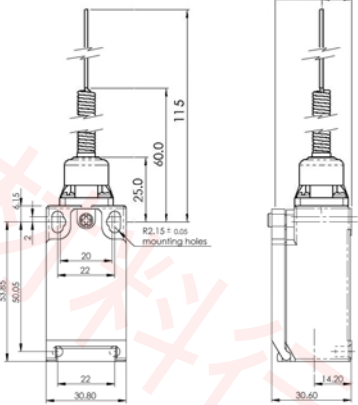


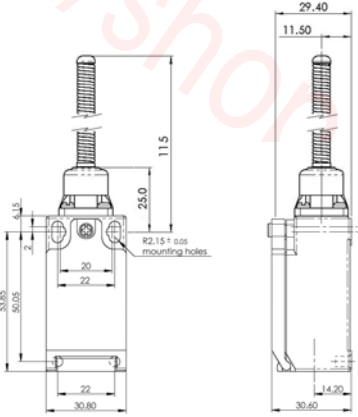
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# ED SERIES SAFETY LIMIT SWITCH

## Operating Characteristics

Unit: mm

Item No.	Operating Characteristics	Dimensions
ED-24 Thermoplastic End Flexible Rod Type	<p>Slow Action 2NC ED-__-2-24</p>  <p>Snap Action 1NC\1NO ED-__-3-24</p> 	
ED-241 Cat Whisker Type	<p>Slow Action 2NC ED-__-2-241</p>  <p>Snap Action 1NC\1NO ED-__-3-241</p> 	
ED-242 Wobble Stick Type	<p>Slow Action 2NC ED-__-2-242</p>  <p>Snap Action 1NC\1NO ED-__-3-242</p> 	

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# ED SERIES SAFETY LIMIT SWITCH

## Operating Characteristics

Unit: mm

Item No.	Operating Characteristics	Dimensions
<p>ED-27 Adjustable Roller Arm Type (Big roller)</p>	Slow Action 1NC\1NO ED-__-1-27	
	Slow Action 2NC ED-__-2-27	
	Snap Action 1NC\1NO ED-__-3-27	
<p>ED-25 Rod Lever Type</p>	Slow Action 1NC\1NO ED-__-1-25	
	Slow Action 2NC ED-__-2-25	
	Snap Action 1NC\1NO ED-__-3-25	
<p>ED-31 Push Plunger Type</p>	Slow Action 1NC\1NO ED-__-1-31	
	Slow Action 2NC ED-__-2-31	
	Snap Action 1NC\1NO ED-__-3-31	
	Operation Force    OF max    RF min	
	ED-__-1-31	1000gf    550gf
	ED-__-2-31	1000gf    550gf
	ED-__-3-31	900gf    550gf

(↔ for slow action models.)

(↔ Only for slow action models.)



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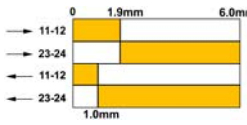
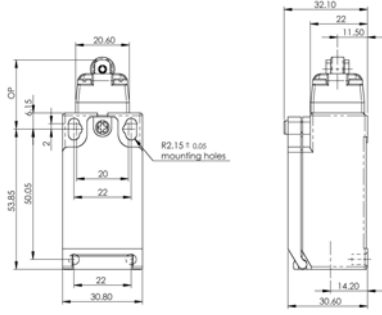

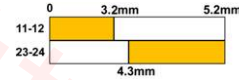


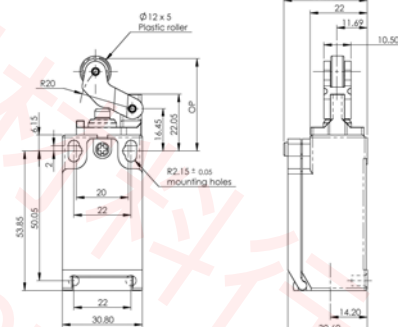

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# ED SERIES SAFETY LIMIT SWITCH

## Operating Characteristics

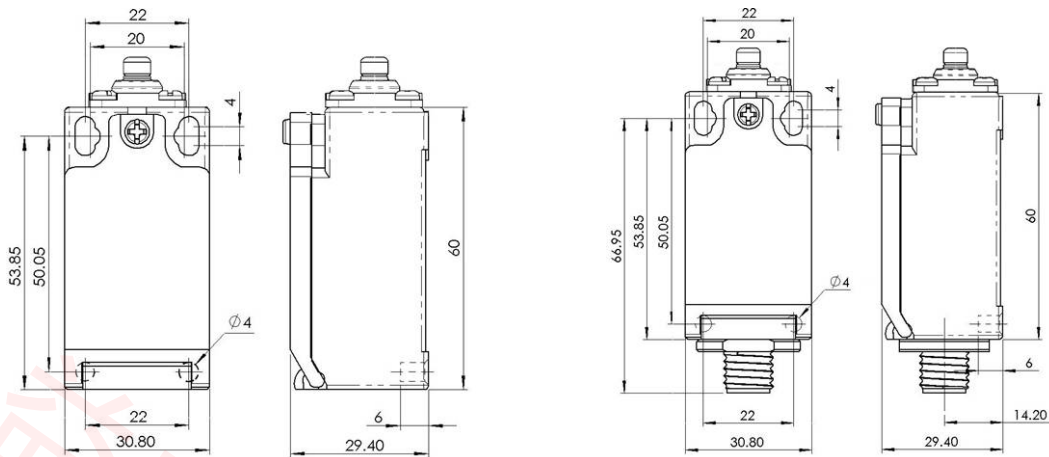
Unit: mm

Item No.	Operating Characteristics	Dimensions
<b>ED-32</b> Roller Plunger Type 	Slow Action 1NC\1NO ED-__-1-32	
	Slow Action 2NC ED-__-2-32	
	Snap Action 1NC\1NO ED-__-3-32	
	Operation Force      OF max.      RF min.	
	ED-__-1-32	1000gf      550gf
	ED-__-2-32	1000gf      550gf
	ED-__-3-32	1000gf      550gf
		
<b>ED-62</b> Roller Lever Type 	Slow Action 1NC\1NO ED-__-1-62	
	Slow Action 2NC ED-__-2-62	
	Snap Action 1NC\1NO ED-__-3-62	
	Operation Force      OF max.      RF min.	
	ED-__-1-62	650gf      300gf
	ED-__-2-62	650gf      300gf
	ED-__-3-62	650gf      300gf
		
<b>ED-63</b> One-Way Roller Arm Lever Type 	Slow Action 1NC\1NO ED-__-1-63	
	Slow Action 2NC ED-__-2-63	
	Snap Action 1NC\1NO ED-__-3-63	
	Operation Force      OF max.      RF min.	
	ED-__-1-63	650gf      300gf
	ED-__-2-63	650gf      300gf
	ED-__-3-63	650gf      300gf

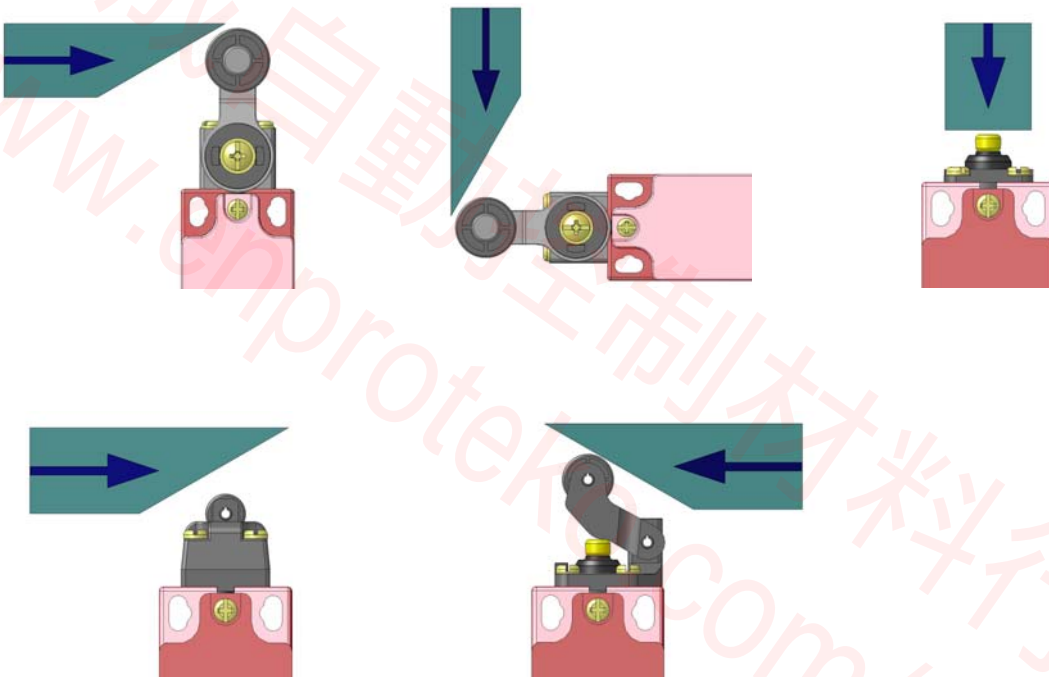
# ED SERIES SAFETY LIMIT SWITCH

## Dimensions

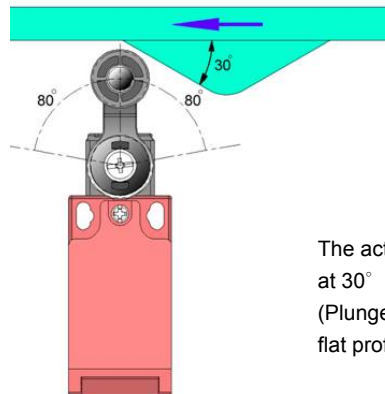
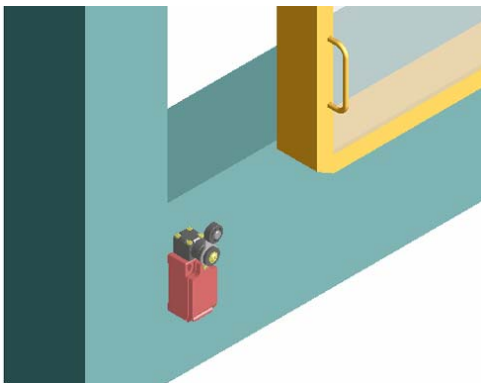
Unit: mm



## Operating examples



## Typical Applications



The actuating cam should be profiled at 30° for optimum operation.  
(Plunger-type switches operate from a flat profile.)

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## EDR SERIES SAFETY LIMIT SWITCH WITH RESET

### Features

- Each model features a positive opening mechanism (NC contacts only) and equipped with a lockable head.
- Conforms to EN (TUV) standards corresponding to the CE marking.
- Positive opening operation of NC (Normally Closed) contacts conforming to IEC /EN 60947-5-1 
- Double insulation makes ground terminal unnecessary (Bears  marking)
- Wide standard operating temperature range: -25°C to 80°C
- Full range of actuator heads and levers suitable for safety applications
- Sealing up to IP 67
- Wide switch variations, (Snap action and slow action basic switches)
- International conduit sizes



### Specifications

<b>Standards</b>	EN60947-5-1, UL508, EN50047, EN1088
<b>Approvals</b>	cULus, TUV and CE marked for all applicable directives
<b>Positive Opening Operation</b>	NC Contact
<b>Utilization Category</b>	AC15 A600
<b>Min Current</b>	5V, 5mA, DC
<b>Thermal Current (Ith)</b>	10A
<b>Rated Insulation Voltage</b>	600 VAC
<b>Rated Impulse withstand Volt</b>	2500 VAC
<b>Insulation Resistance</b>	100MΩ min. (DC 500V)
<b>Contact Resistance</b>	25mΩ max. (Initial)
<b>Max Switching Speed</b>	250mm/s
<b>Max Switching Frequency</b>	6000 operation per hour
<b>Enclosure Material</b>	UL approved glass-filled polybutylene terephthalate
<b>Roller Material</b>	Various polymers
<b>Enclosure Protection</b>	IP 67
<b>Operating Temperature</b>	Min -25°C (-18°F) Max 80°C (+176°F)
<b>Pollution Degree</b>	3
<b>Protection Against Electric Shock</b>	Class II (Double Insulation)
<b>Mech. Life Expectancy</b>	1 x 10 <sup>6</sup> Cycle min
<b>Electrically Life Expectancy</b>	150,000 Cycle min
<b>Vibration</b>	IEC 68-2-6, 10-55Hz±1 Hz, Excursion: 0.35mm, 1 octave/min
<b>Conduit Entry</b>	Various (see Product Selection table)
<b>Fixing</b>	2 x M4

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# EDR SERIES SAFETY LIMIT SWITCH WITH RESET

## Structure description

### Metal Lever Setting

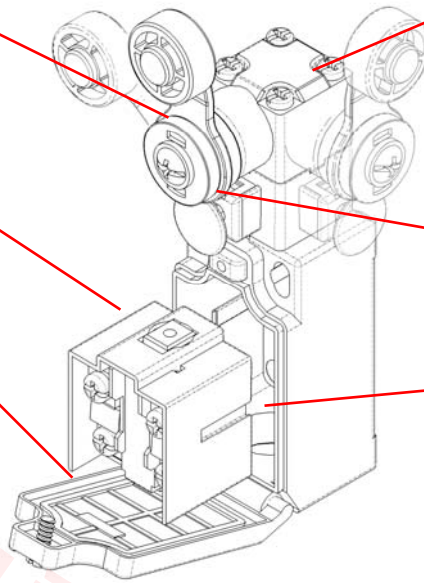
Grooves which engage the lever every 18° are cut in the operation indicator disk to prevent the lever from slipping against the rotary shaft.

### Contact Block

Has a positive opening mechanism separating the contacts when the contacts are welded.

### Cover

The cover, with a hinge on its lower part, can be opened by removing the screw of the cover, which ensures ease of maintenance and wiring.



### Head

With roller lever models, the direction of the switch head can be adjusted to any of the four directions by loosening the roller lever switch screws at the four corners of the head.

### Reset Head

The direction of the reset head can be adjusted to any of the four directions.

### Conduit

Wide switch variations.  
PG13.5 PG11  
M16 M20  
1/2-14NPT

## Product Selection

EDR-□-□-□  
1 2 3

### 1. THREAD DIMENSION OF LEAD EXIT

- 1: PG13.5 (S)
- 2: 1/2NPT (C)
- 4: PG11 (O)
- 5: M16 (C)
- 6: M20 (O)
- 7: Connector (C)

### 2. CONTACT TYPES

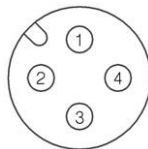
- 1: 1NC/1NO SLOW ACTION (BBM) (S)
- 2: 2NC SLOW ACTION (O)

### 3. HEAD AND ACTUATOR

- 20: Roller arm type
- 21: Adjustable roller arm type (standard roller)
- 22: Adjustable roller arm type (Long arm type)
- 25: Rod lever type
- 27: Adjustable roller arm type (big roller)
- 31: Push plunger type
- 32: Roller plunger type
- 62: Roller lever type
- 63: One-Way roller arm lever type

\*(s):standard (o):option (c): customization

### M12 Connector pin arrangement



## Contact Block Form

TYPE	CONTACT FORM	CONNECTOR PIN ARRANGEMENT	OPERATION DIAGRAMS	
			Closed	Open
ED-□-1-□□	1NC/1NO(Slow action) (See Note 1)			
ED-□-2-□□	2NC (Slow action) (See Note 2)			

Note: 1. Only NC contact 11-12 has an approved positive opening mechanism.

2. NC contacts 11-12 and 21-22 have an approved positive opening mechanism.

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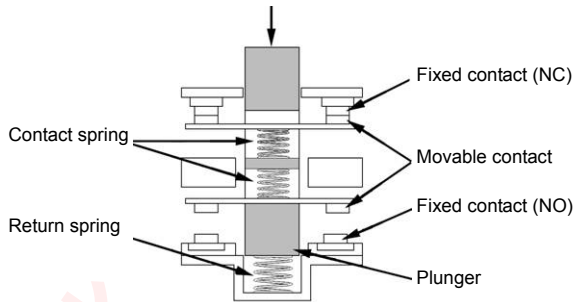
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# EDR SERIES SAFETY LIMIT SWITCH WITH RESET

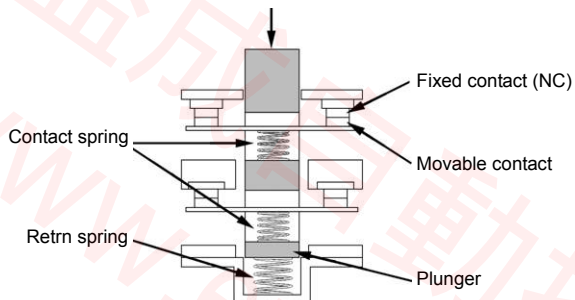
## Positive Opening Mechanism

### 1NC/1NO Contact (Slow action)



Only the NC contacts have a positive opening function.  
When metal deposition occurs, the contacts are separated from each other by pushing in the plunger.

### 2NC Contact (Slow action)



Both NC contacts incorporate a positive opening function.  
When metal deposition occurs, the contacts are separated from each other by pushing in the plunger the plunger.

## Operating Characteristics

Unit: mm

Item No.	Operating Characteristics	Dimensions
EDR-20 Roller Arm Type	<p>Slow Action 1NC1NO EDR-__-1-20</p> <p>Slow Action 2NC EDR-__-2-20</p>	



(Only for slow action models.)

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# EDR SERIES SAFETY LIMIT SWITCH WITH RESET

## Operating Characteristics

Unit: mm

### Item No.

### Operating Characteristics

### Dimensions

EDR-21

Adjustable Roller  
Arm type (Standard arm)

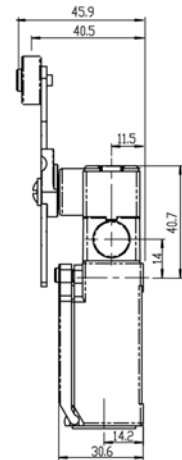
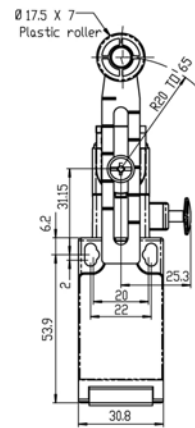
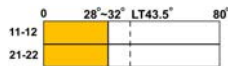


(Only for slow action models.)

Slow Action 1NC1NO  
EDR-\_\_-1-21



Slow Action 2NC  
EDR-\_\_-2-21



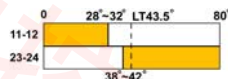
EDR-22

Adjustable Roller Arm Type  
(Long arm)

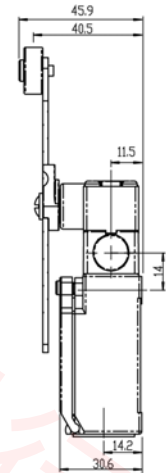
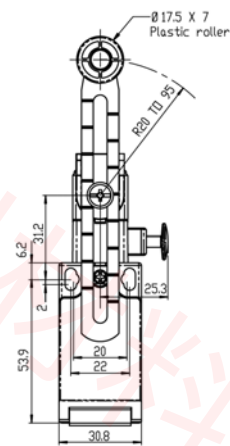
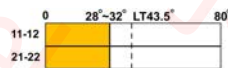


(Only for slow action models.)

Slow Action 1NC1NO  
EDR-\_\_-1-22



Slow Action 2NC  
EDR-\_\_-2-22



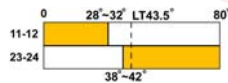
EDR-25

Rod Lever Type

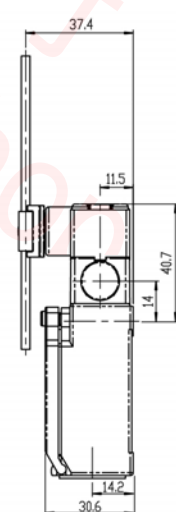
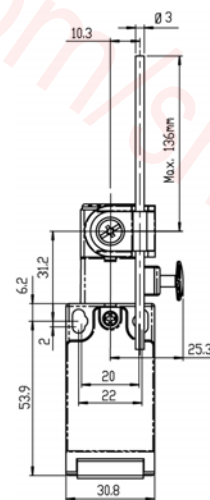
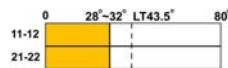


(Only for slow action models.)

Slow Action 1NC1NO  
EDR-\_\_-1-25



Slow Action 2NC  
EDR-\_\_-2-25



# EDR SERIES SAFETY LIMIT SWITCH WITH RESET

## Operating Characteristics

Unit: mm

### Item No.

### Operating Characteristics

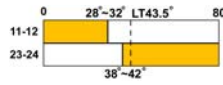
### Dimensions

EDR-27

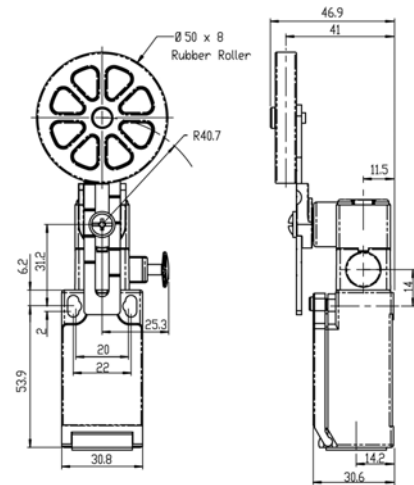
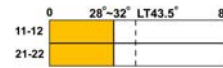
Adjustable Roller  
Arm Type (Big roller)



Slow Action 1NC\1NO  
EDR-\_\_-1-27



Slow Action 2NC  
EDR-\_\_-2-27



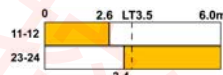
(Only for slow action models.)

EDR-31

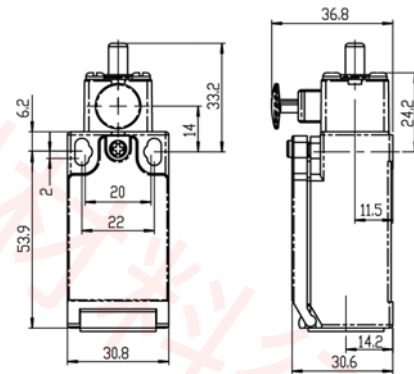
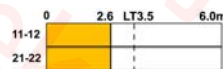
Push Plunger Type



Slow Action 1NC\1NO  
EDR-\_\_-1-31



Slow Action 2NC  
EDR-\_\_-2-31

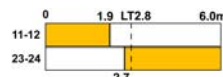


EDR-32

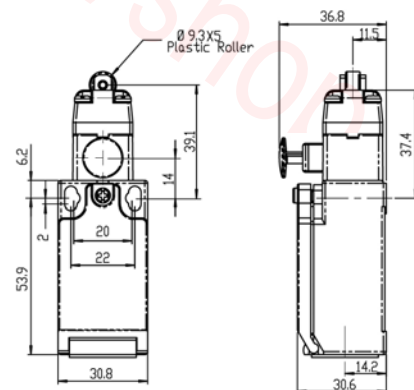
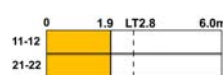
Roller Plunger Type



Slow Action 1NC\1NO  
ED-\_\_-1-32



Slow Action 2NC  
ED-\_\_-2-32



HIGHLY


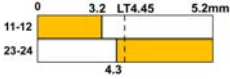
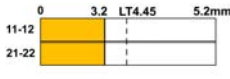
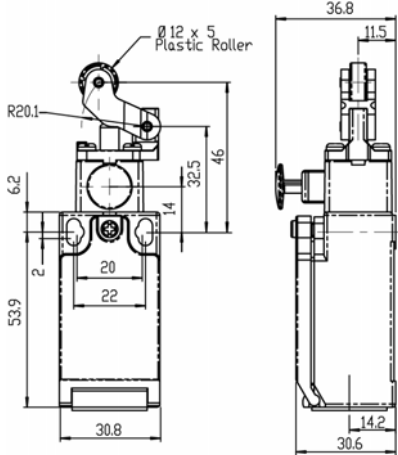

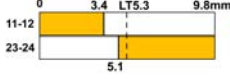
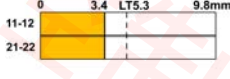
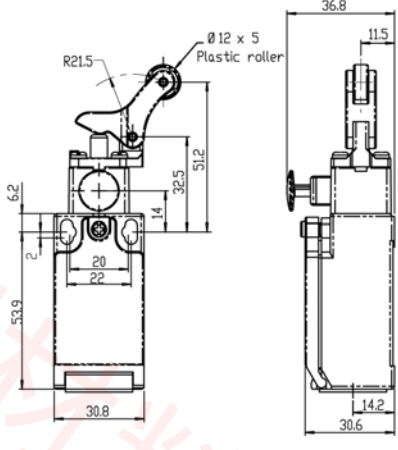
A23

Design, specifications are subject to change without notice.

# EDR SERIES SAFETY LIMIT SWITCH WITH RESET

## Operating Characteristics

Unit: mm

Item No.	Operating Characteristics	Dimensions
<p>ED-62 Roller Lever Type</p> 	<p>Slow Action 1NC\1NO ED-__-1-62</p>  <p>Slow Action 2NC ED-__-2-62</p> 	
<p>EDR-63 One-Way Roller Arm Lever Type</p> 	<p>Slow Action 1NC\1NO ED-__-1-63</p>  <p>Slow Action 2NC ED-__-2-63</p> 	

## LIMIT SWITCH

### Features

- High precision and metal die-casting body.
- Easy to wire connection construction.
- High mechanical strength.
- Dust-proof construction.



### Specifications

Item	Standard
Rating	10A, 125V or 250VAC
Contact Resistance	25mΩ max.(initial)
Insulation Resistance	100MΩ min. (at 500VDC)
Dielectric Strength	1,000VAC,50/60Hz for 1 minute
Service Life Mechanically	1,000,000 operations min.
Service Life Electrically	100,000 operations min.

### Product Selection

WL

1

#### HEAD AND ACTUATOR

**5101:** Push plunger type

**5102:** Roller plunger type

**5104:** Roller arm type

**5105:** Duble roller arm type

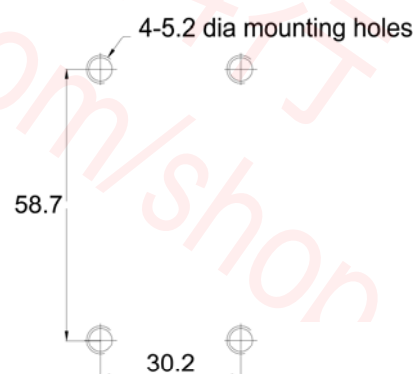
**5106:** Wobble stick type

**5107:** Rod lever type

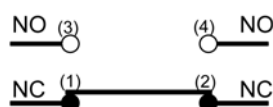
**5108:** Adjustable roller arm type (standard roller)

**5109:** Push plunger type

### Mounting Hole



### Contact Configuration



C1

Design, specifications are subject to change without notice.

# LIMIT SWITCH

## Operating Characteristics

Unit :mm

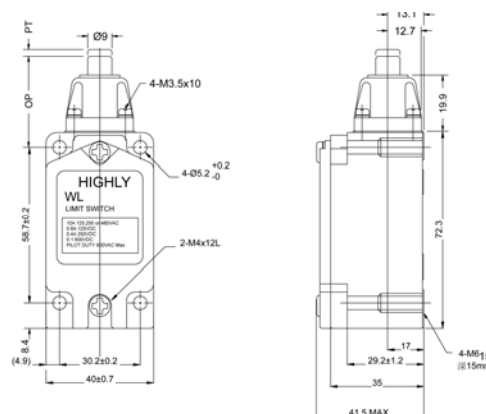
### Item NO.

### Dimensions

#### WL5101



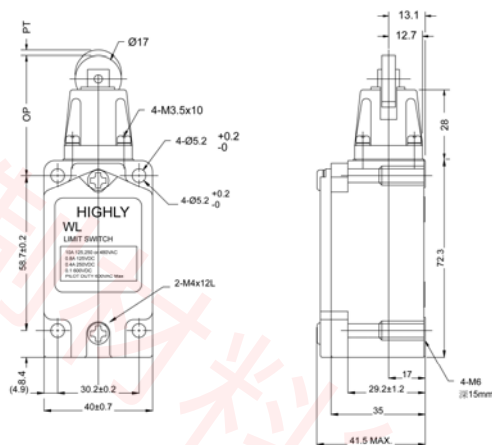
Terminal	Item No.
OF max.	2,720g
RF min.	910g
PT max.	1.7mm
OT min.	6.4mm
MD max.	1mm
TF max.	--
TT/OP min.	34±0.8mm



#### WL5102



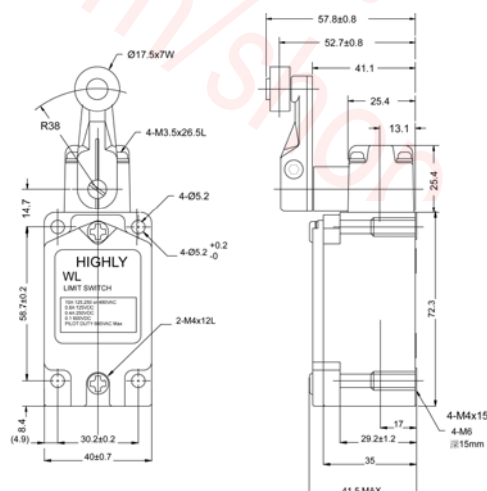
Terminal	Item No.
OF max.	2,720g
RF min.	910g
PT max.	1.7mm
OT min.	5.6mm
MD max.	1mm
TF max.	--
TT/OP min.	44±0.8mm



#### WL5104



Terminal	Item No.
OF max.	1360g
RF min.	227g
PT max.	20°
OT min.	30°
MD max.	12°
TF max.	2,720g
TT/OP min.	50°





# LIMIT SWITCH

## Operating Characteristics

Unit :mm

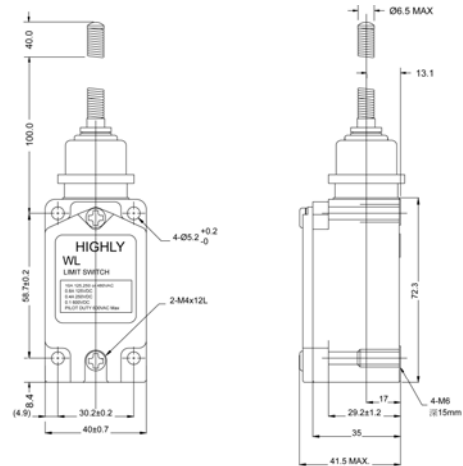
### Item NO.

### Dimensions

#### WL5106



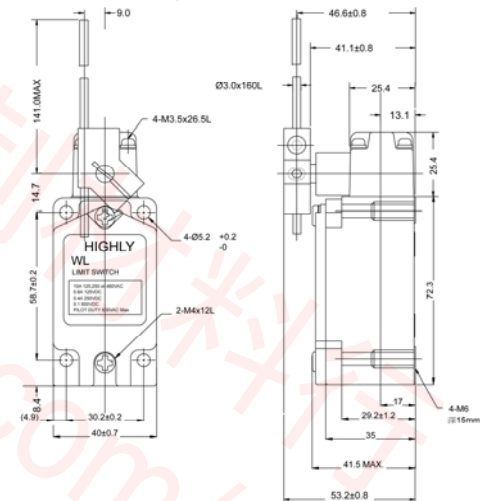
Terminal	Item No.
OF max.	150g
RF min.	--
PT max.	28mm
OT min.	28mm
MD max.	--
TF max.	--
TT/OP min.	--



#### WL5107



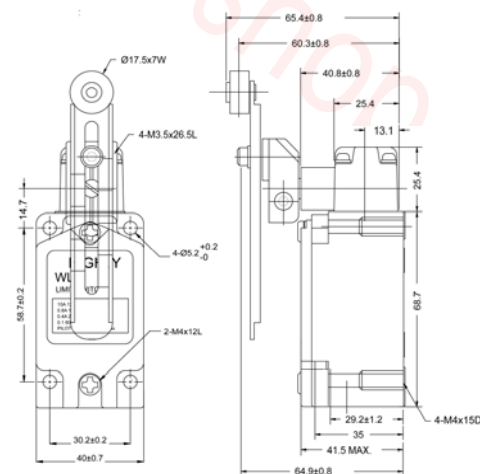
Terminal	Item No.
OF max.	1,360g
RF min.	227g
PT max.	22°
OT min.	30°
MD max.	12
TF max.	2,720g
TT/OP min.	50°*



#### WL5108



Terminal	Item No.
OF max.	142g
RF min.	28g
PT max.	20°
OT min.	30°
MD max.	12°
TF max.	200g
TT/OP min.	50°



HIGHLY

C1

Design, specifications are subject to change without notice.

# LIMIT SWITCH

## Operating Characteristics

Unit :mm

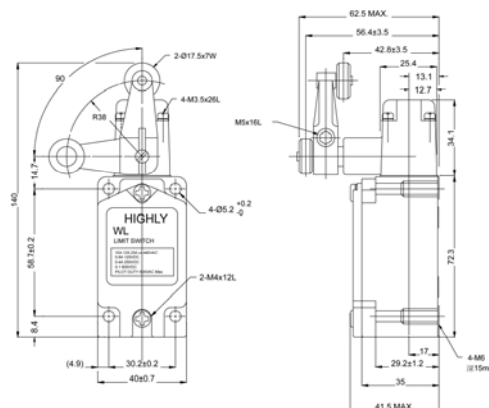
Item NO.

Dimensions

### WL5105



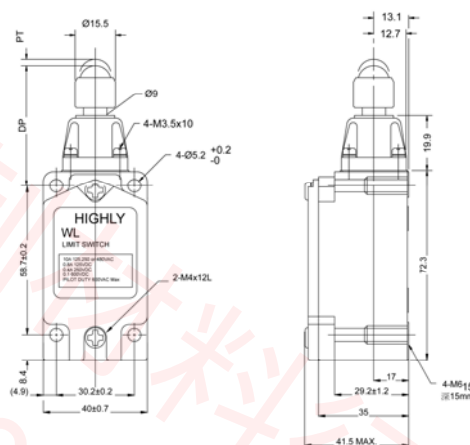
Terminal	Item No.
OF max.	1,200g
RF min.	--
PT max.	50°±5°
OT min.	35°
MD max.	--
TF max.	--
TT/OP min.	90°±10°



### WL5109



Terminal	Item No.
OF max.	2,720g
RF min.	910g
PT max.	1.7mm
OT min.	6.4mm
MD max.	1mm
TF max.	--
TT/OP min.	44±0.8mm



## Overtravel type

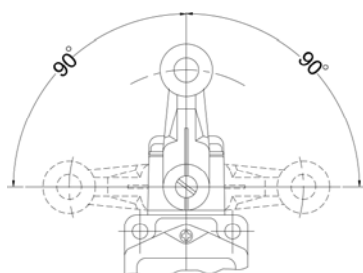
The overtravel type is a limit switch which is provided with a greater OT to facilitate dog setting. Since this type is identical to the Basic Type in dimensions, both types are interchangeable.

### -2 Series

The head of -2 series switch can be installed in any of the four directions.

90° operation on only one side – impossible

90° operation on either side - possible



Operating Characteristics	Type	WL 5104-2	WL 5108-2	WL 5107-2
	OF (max.)		900g	900g
RF (min.)		50g	50g	14g
PT (max.)		30°	30°	30°
OT (min.)		60°	60°	60°
MD (max.)		16°	16°	16°

HIGHLY

C1

Design, specifications are subject to change without notice.

## LIMIT SWITCH

### Features

- High precision and metal die-casting body.
- Easy to wire connection construction.
- High mechanical strength.
- Dust-proof construction.



### Specifications

Item	Standard
Rating	5A, 125V or 250VAC
Contact Resistance	25mΩ max.(initial)
Insulation Resistance	100MΩ min. (at 500VDC)
Dielectric Strength	1,000VAC,50/60Hz for 1 minute
Service Life Mechanically:	1,000,000 operations min.
Service Life Electrically	100,000 operations min.

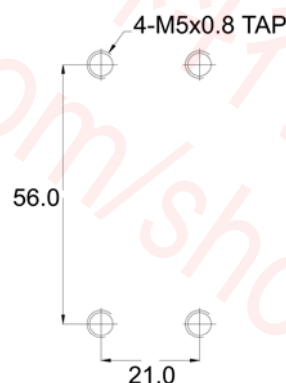
### Product Selection

AH   
1

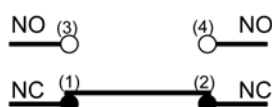
#### HEAD AND ACTUATOR

- 8111:** Push plunger type
- 8112:** Roller plunger type
- 8122:** Roller plunger type angle 90°
- 8104:** Roller arm type
- 8107:** Rod lever type
- 8108:** Adjustable roller arm type (standard roller)
- 8166:**Thermoplastic end flexible rod type
- 8169:**Cat whisker type
- 9101:**Wobble opening

### Mounting Hole



### Contact Configuration



HIGHLY

C5

Design, specifications are subject to change without notice.

# LIMIT SWITCH

## Operating Characteristics

Unit :mm

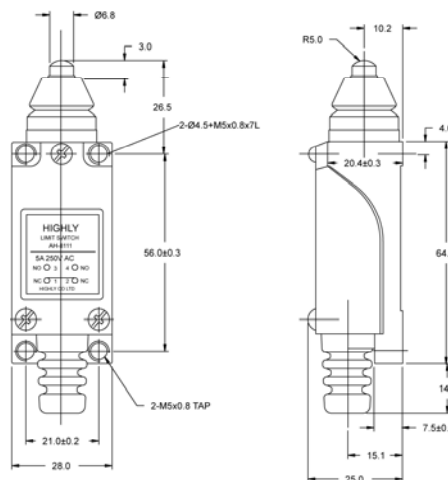
### Item NO.

### Dimensions

#### AH8111



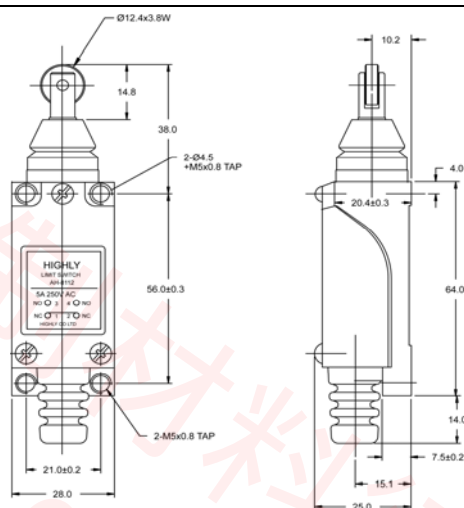
OF max.	900g
RF min.	150g
PT max.	1.5mm
MD max.	0.7mm
OT min.	4mm
TT min.	5.5mm



#### AH8112



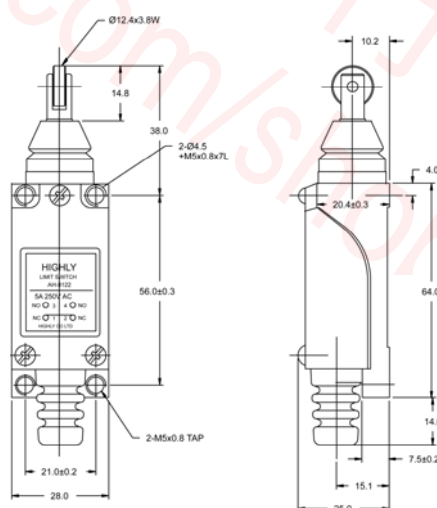
OF max.	900g
RF min.	150g
PT max.	1.5mm
MD max.	0.7mm
OT min.	4mm
TT min.	5.5mm



#### AH8122



OF max.	900g
RF min.	150g
PT max.	1.5mm
MD max.	0.7mm
OT min.	4mm
TT min.	5.5mm



# LIMIT SWITCH

## Operating Characteristics

Unit :mm

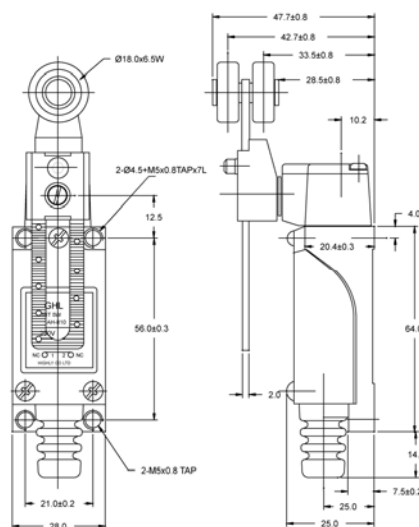
### Item NO.

### Dimensions

#### AH8104



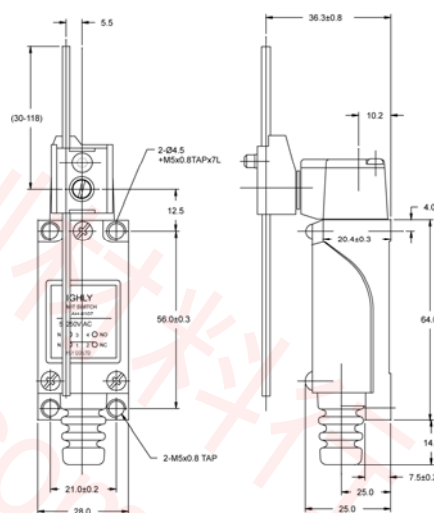
OF max.	600g
RF min.	50g
PT max.	20°
MD max.	10°
OT min.	75°
TT min.	95°



#### AH8107



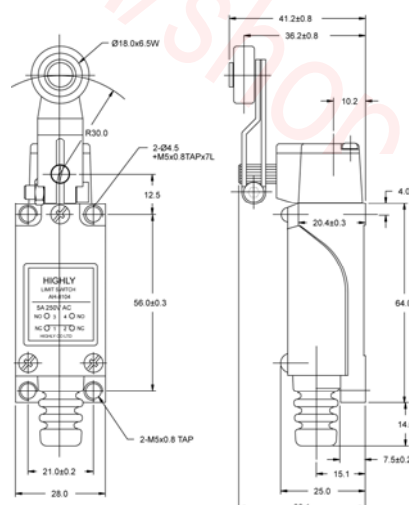
OF	800-230g
RF	50-12g
PT max.	20°
MD max.	10°
OT min.	75°
TT min.	95°



#### AH8108



OF	800-342g
RF	50-12g
PT max.	20°
MD max.	10°
OT min.	75°
TT min.	95°



# LIMIT SWITCH

## Operating Characteristics

Unit :mm

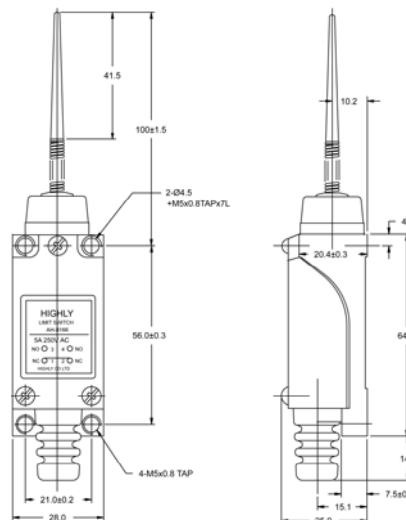
Item NO.

Dimensions

**AH-8166**



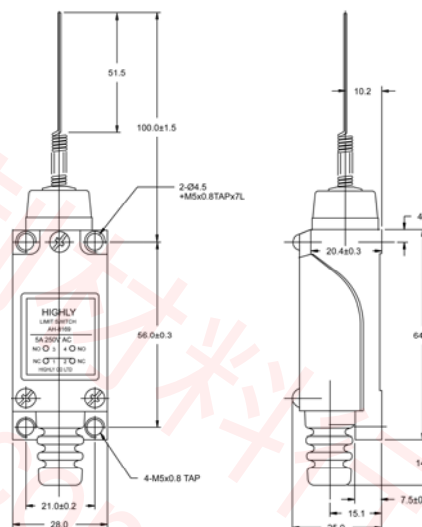
OF max.	900g
RF min.	--
PT max.	30mm
MD max.	--
OT min.	20mm
TT min.	50mm



**AH8169**



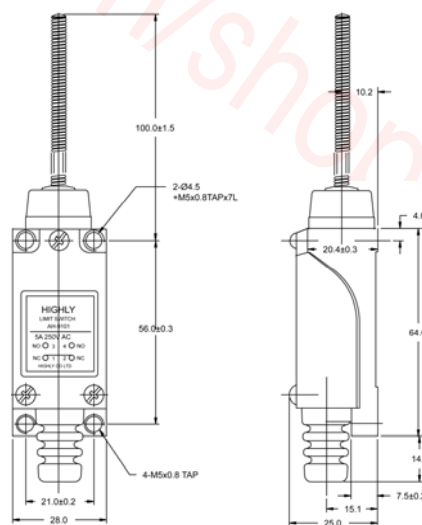
OF max.	900g
RF min.	--
PT max.	30mm
MD max.	--
OT min.	20mm
TT min.	50mm



**AH9101**



OF max.	900g
RF min.	--
PT max.	30mm
MD max.	--
OT min.	20mm
TT min.	50mm



## D COMPACT ENCLOSED SWITCH

### Features

- High precision and long life.
- Suitable for applications demanding higher mechanical strength,
- Gasket diaphragm seal provides high environmental resistance.



### Specifications

Item	Standard
Rating	10A, 125V or 250VAC
Contact Resistance	25mΩ max.(initial)
Insulation Resistance	100MΩ min. (at 500VDC)
Dielectric Strength	1,000VAC,50/60Hz for 1 minute
Service Life Mechanically:	1,000,000 operations min.
Service Life Electrically	100,000 operations min.

### Product Selection

D   
1

#### HEAD AND ACTUATOR

**5000:** Push plunger type

**5020:** Roller plunger type

**5040:** Cross Roller plunger type

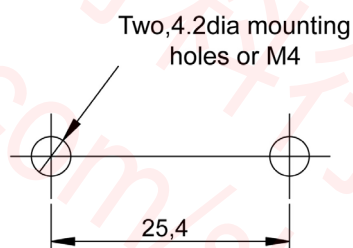
**1000:** Lever type

**1020:** Short Lever type

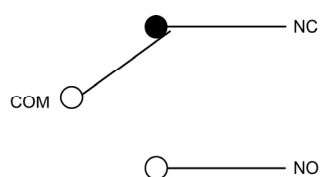
**2000:** Lever roller type

**2020:** Short Lever roller type

### Mounting Hole



### Contact Configuration



**HIGHLY**

C9

Design, specifications are subject to change without notice.

## D COMPACT ENCLOSED SWITCH

### Operating Characteristics

Unit : mm

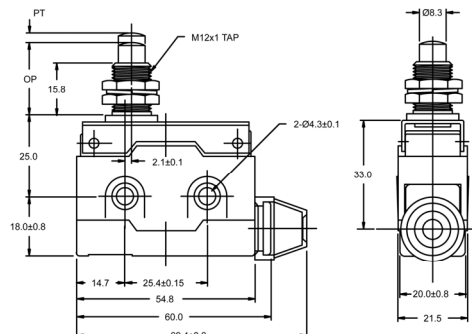
Item NO.

Dimensions

#### D5000



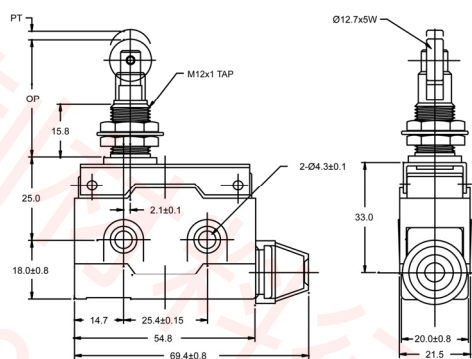
OF max.	600g
RF min.	100g
PT max.	1.6mm
OT min.	5mm
MD max.	0.2mm
OP	21.8± 1.2mm
FP	--



#### D5020



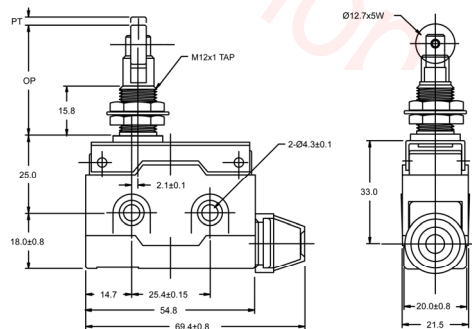
OF max.	600g
RF min.	100g
PT max.	1.6mm
OT min.	5mm
MD max.	0.2mm
OP	33.35± 1.2mm
FP	--



#### D5040



OF max.	600g
RF min.	100g
PT max.	1.6mm
OT min.	5mm
MD max.	0.2mm
OP	33.35± 1.2mm
FP	--



**HIGHLY**

C10

Design, specifications are subject to change without notice.



## D COMPACT ENCLOSED SWITCH

### Operating Characteristics

Unit : mm

Item NO.

Dimensions

#### D2000



OF max. 195g

RF min. 28g

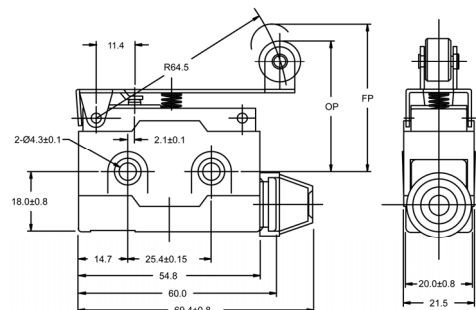
PT max. 8.5mm

OT min. 3.2mm

MD max. 2.6mm

OP 40±1mm

FP 50mm



#### D2020



OF max. 300g

RF min. 40g

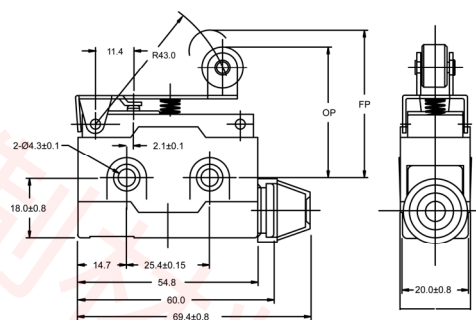
PT max. 6mm

OT min. 2mm

MD max. 1.5mm

OP 40±1mm

FP 46mm



#### D1000



OF max. 170g

RF min. 25g

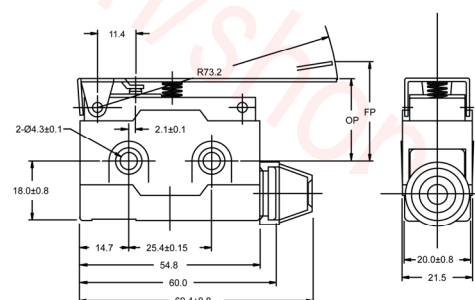
PT max. 10mm

OT min. 4mm

MD max. 3mm

OP 25±1mm

FP 35mm



**HIGHLY**

C11

Design, specifications are subject to change without notice.

## D COMPACT ENCLOSED SWITCH

### Operating Characteristics

Unit : mm

Item NO.

Dimensions

D1020



OF max. 260g

RF min. 35g

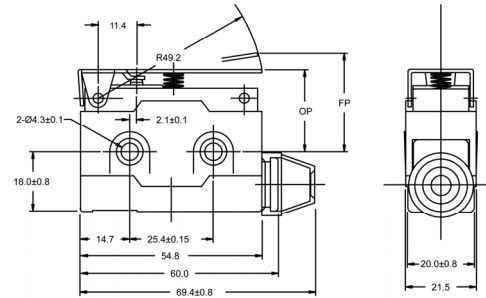
PT max. 7mm

OT min. 2.5mm

MD max. 1.7mm

OP 25± 1mm

FP 32mm



**NOTE:**

**HIGHLY**

C12

Design, specifications are subject to change without notice.