

OMRON

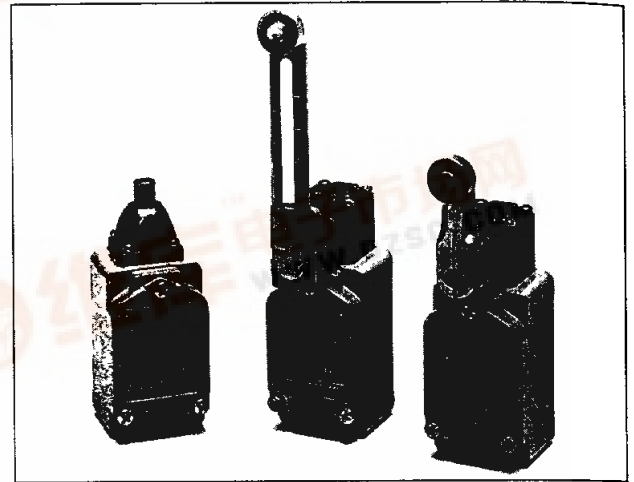
103-469 → 474

General-purpose Limit Switch**WL****Exceptionally Rugged Limit Switch With High Mechanical Strength**

Wide range of actuator options to accommodate application requirements

Resistant construction (IP67) is oil-tight, waterproof and dustproof.

Actuator head can be mounted in any one of four directions

**Ordering Information**

Actuator type	Model
Adjustable roller lever	WLCA12-G
Short roller lever	WLCA2-G
Locking fork roller lever	WLCA32-41G
Adjustable rod lever	WLCL-G
Plain top plunger	WLD-G
Roller top plunger	WLD2-G
Plain side plunger	WLSD-G
Roller side plunger	WLSD2-G
Coil spring	WLNJ-G

Specifications**■ Characteristics**

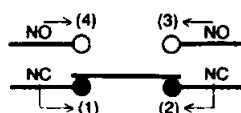
Operating speed	1 mm/s to 2 m/s (with Model WLCA2)	
Operating frequency	Mechanical	120 operations/min
	Electrical	30 operations/min
Contact resistance	25 MΩ max (initial)	
Insulation resistance	100 MΩ min (at 500 VDC)	
Dielectric strength	1,000 VAC (600 V)*, 50/60 Hz for 1 minute between non-continuous terminals 2,200 VAC, 50/60 Hz for 1 minute between each terminal and non-current-carrying metal part and between each terminal and ground	
Temperature rise	50 degrees max.	
Vibration	Malfunction 10 to 55 Hz, 1.5-mm double amplitude	
Shock	Mechanical durability	approx 1,000 m/s ² (approx 100 G)
	Malfunction durability	approx 300 m/s ² (approx 30 G)
Ambient temperature	Operating -10° to 80°C (with no icing)	
Ambient humidity	95% RH max	
Degree of protection	NEMA	Types 1, 2, 3, 3R, 4, 5, 6, 12 and 13
	IEC	IP67
	JIS	Immersion-proof
	UL	3, 4 and 13
Life expectancy	Mechanical	15,000,000 operations min
	Electrical	See 'Engineering Data'
Weight	Approx 275 g (with Model WLCA2)	

■ Contact Ratings

Rated voltage (V)	Non-inductive load (A)				Inductive load (A)			
	Resistive load		Lamp load		Inductive load		Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	10		3	1 5	10		5	2 5
250 VAC			2	1			3	1 5
480 VAC			1 5	0 8			3	1 5
600 VAC	3	1	0 5		1 5	1	0 5	
8 VDC	10		6	3	10	6		
14 VDC			4					
30 VDC	6		4		6	4		
125 VDC	0 8		0 2	0 2	0 8	0 2		
250 VDC	0 4		0 1	0 1	0 4	0 1		

Contact form

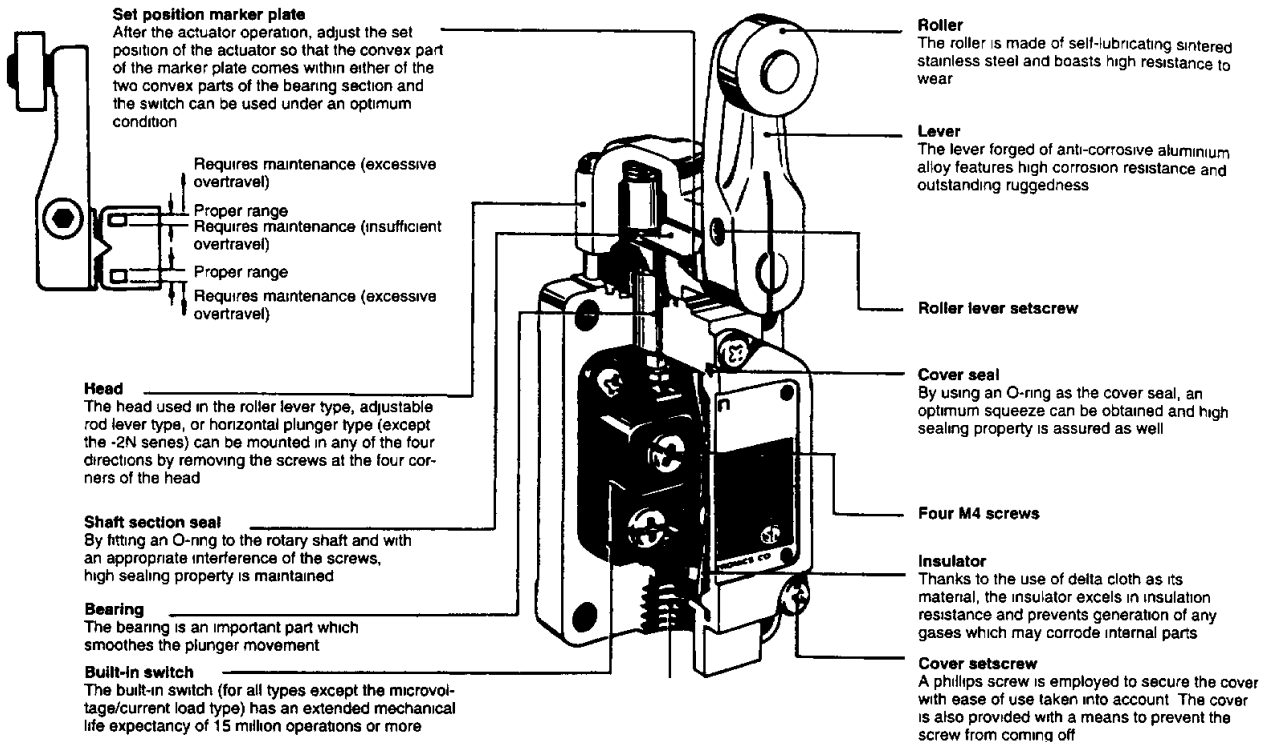
Standard type, Microload type



■ Operating Characteristics

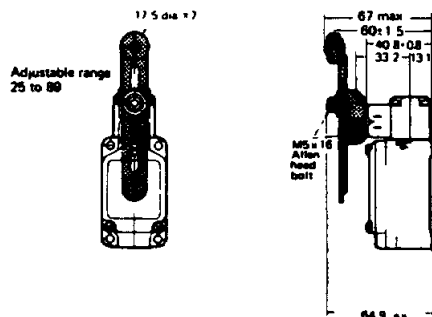
Item	Model									
	WLCA12G	WLCA2G	WLCA3241G	WLCLG	WLDG	WLD2G	WLSDG	WLSD2G	WLNJG	
Operating force (max)	13 34 N		11 77N	1 39N	26 7N		40 03N		1 47N	
Releasing force (min)	2 23N		—	0 27N	8 92N		8 81N	8 89N	—	
Pretravel (max)	15°±5°		50°±5°	15°±5°	1 7mm		2 8mm		20±10mm	
Overtravel (min.)	30°		35°	30°	6 4mm	5 6mm	6 4mm	5 6mm	—	
Movement differential (max)	12°		—	12°	1mm					
Total travel (min)	40°		90°±10°	40°	—					
Operating position	—				34±0 8mm	44±0 8mm	54 2±0 8mm	54 1±0 8mm		
Total travel position (max)					29 5mm	39 5mm	—			

Engineering Data



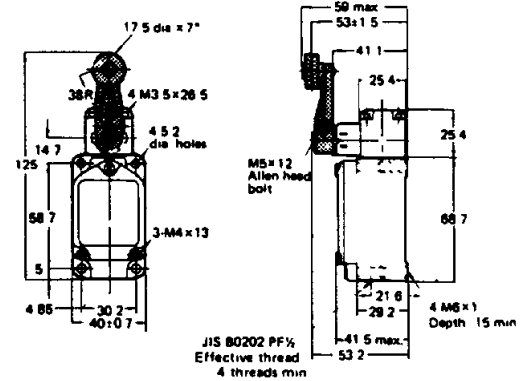
Dimensions

WLCA12



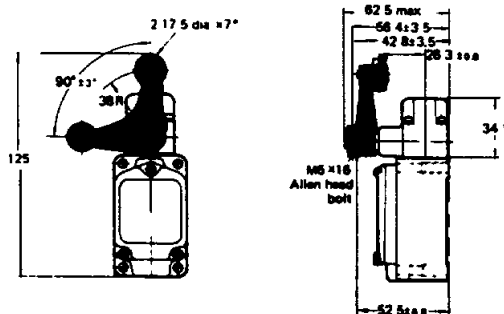
* Stainless sintered roller

WLCA2



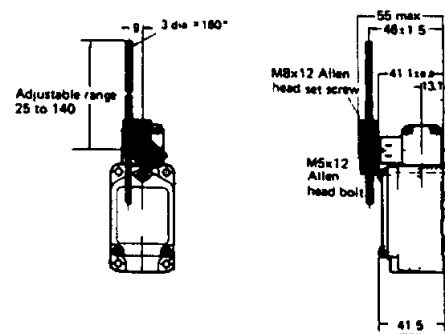
* Stainless sintered roller

WLCA32-41



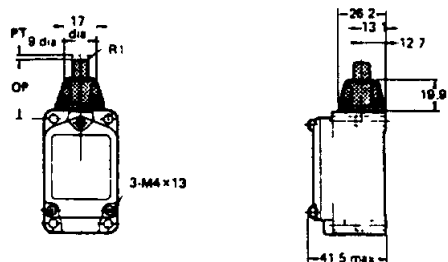
* Resin roller

WLCL



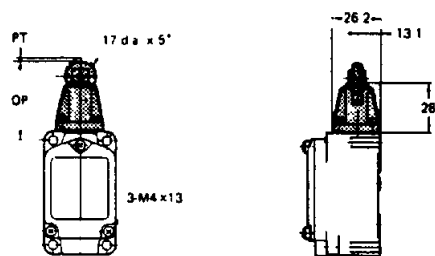
* Stainless steel rod

WLD



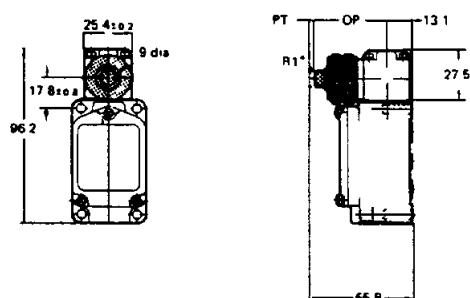
* Stainless sintered plunger

WLD2



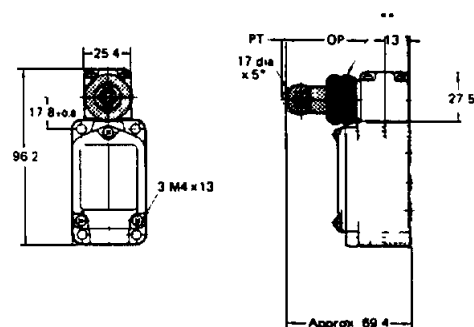
* Stainless sintered roller

WLSD



* Stainless steel plunger

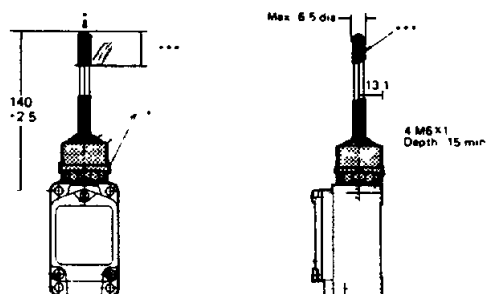
WLSD2



* Stainless steel roller

** Face nut (by loosening this nut, the direction of the roller may be changed arbitrarily)

WLNJ



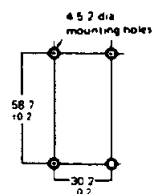
* The coil spring may be operated from any direction except axial direction (↕)

** Rubber cap and clamping band

*** Stainless steel coil spring

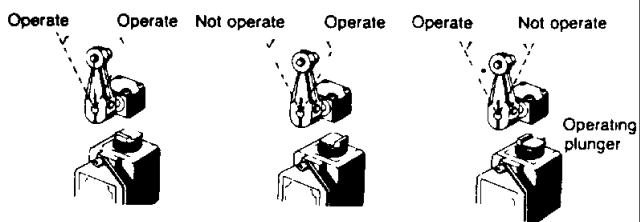
**** Optimum operating range of the coil spring is within 1/3 of the entire length from the top end

Mounting holes



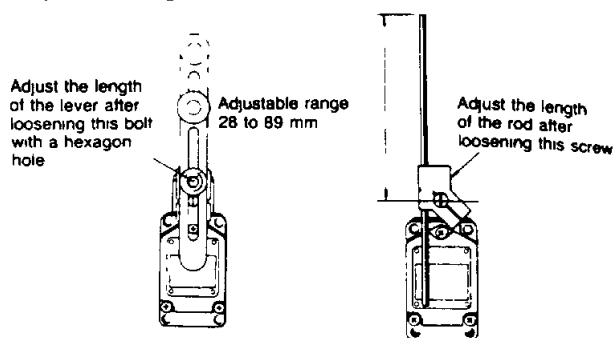
Operation

Operating direction can be varied



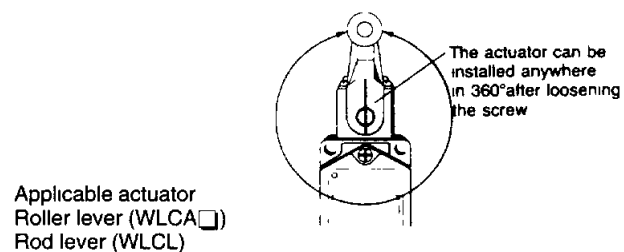
Applicable actuators Roller lever (WLCA□)
Rod lever (WLCL)

Adjustable length of lever or rod



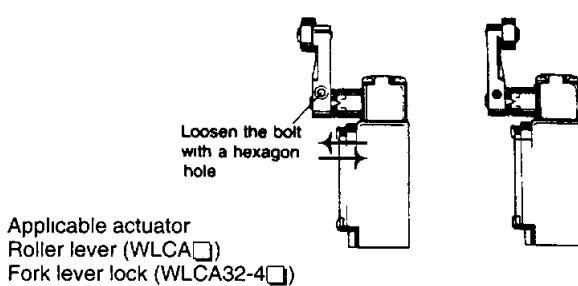
Applicable actuators Adjustable roller lever (WLCA12 etc)
Rod lever (WLCL etc)

Installation position of the actuator can be varied



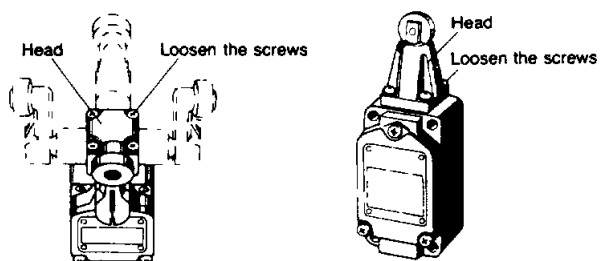
Applicable actuator Roller lever (WLCA□)
Rod lever (WLCL)

Roller may be installed in the shaft side (inside)



Applicable actuator Roller lever (WLCA□)
Fork lever lock (WLCA32-4□)

Direction of the head can be varied



Applicable actuators Roller lever (WLCA□)
Rod lever (WLCL)
Horizontal plunger (WLSD□)
Roller plunger (WLD2)