


General-purpose Switches WL-N/WLG

Wide variety of head shapes to match the operating environment and application

- Wide variety of head shapes, including Roller Lever, Plunger, Flexible Rod, and Fork Lock Lever Switches. Wide variety of head shapes for fork lock lever
- You can select the optimum actuator shape for the workpiece shape and movement from a variety of actuators. Enables selection of optimum shape
- Degree of Protection; IP67
- Operation indicators (LED/neon lamps) for enabling simple daily inspection are available
- In addition to regular screw terminals, direct-wire and pre-wired connectors are also available based on the wiring specifications



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

 Be sure to read *Safety Precautions* on pages 83 to 88 and *Safety Precautions for All Limit Switches*.

Features

A type with operation indicators for easily confirming operation is available

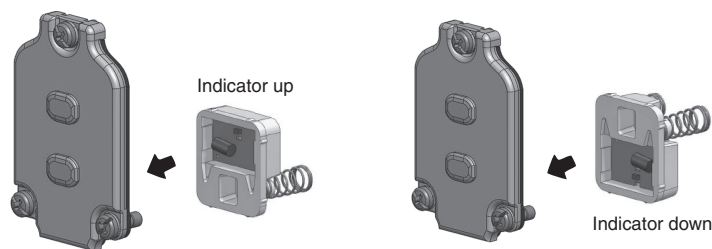
Indicates the operation status of the switches using LEDs and neon lamps.



The light-ON when operating status and the light-ON when not operating status can be easily switched by turning the lamp holder 180°.

Light-ON when Operating

Light-ON when Not Operating



Selectable based on wiring specifications



Screw terminals



Direct-wire connector



Pre-wired connector

Pre-wired connectors include Smartclick products that turn by only 1/8-turn when attaching and removing. This reduces the labor required for connections and maintenance.



 Smartclick

Model Number Structure

Model Number Legend (Not all combinations are possible. Ask your OMRON representative for details.)

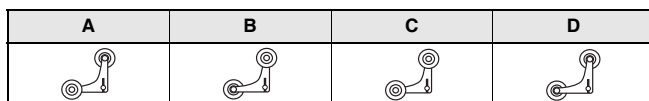
Basic models

WL□ - □□□□ -N
 (1) (2) (3) (4) (5)

(1) Actuator and Property Specifications

Code	Actuator		Pretravel (PT)
CA2	Roller Lever	Roller lever: R38 mm	15±5°
CA2-2			25±5°
CA2-2N			20° max.
CA2-7		Roller lever: R50 mm	15±5°
CA2-8		Roller lever: R63 mm	15±5°
CA12		Adjustable roller lever (R25 to 89 mm)	15±5°
CA12-2			25±5°
CA12-2N			20° max.
D28	Plunger Actuators	Sealed top-roller plunger	1.7 mm max.
D2		Top-roller plunger	1.7 mm max.
D18		Sealed top plunger	1.7 mm max.
D38		Sealed top-ball plunger	1.7 mm max.
SD		Horizontal plunger	2.8 mm max.
SD2		Horizontal-roller plunger	2.8 mm max.
SD3		Horizontal-ball plunger	2.8 mm max.
CL		Flexible Rod Actuators	Adjustable Rod Lever (25 to 140 mm)
CL-2	25±5°		
CL-2N	20° max.		
CAL4	Adjustable Rod Lever (350 to 380 mm)		15±5°
CAL5	Rod spring lever		15±5°
NJ	Coil spring (6.5 dia.)		20±10 mm
NJ-30	Coil spring (4.8 dia.)		20±10 mm
NJ-2	Flexible rod: Resin rod (8 dia.)		40±20 mm
NJ-S2	Flexible rod: Steel wire (1 dia.)	40±20 mm	
CA32-41	Fork Lock Lever *	A	55° max.
CA32-42		B	55° max.
CA32-43		C	55° max.
CA32-44		D	55° max.

* The lever attachment method varies in A to D.



(2) Built-in Switch Specifications

Code	Specifications
None	Standard
55	Airtight built-in switch

(3) Conduit Size, Ground Terminal Specifications

Code	Specifications
-	G1/2 without ground terminal
G1	G1/2 with ground terminal *
G	Pg13.5 with ground terminal *
Y	M20 with ground terminal *
TS	1/2-14NPT with ground terminal *

* Models with ground terminals are approved by EN/IEC (CE marking).

(4) Indicator Specifications

Code	Specifications
None	No indicator
LD	LED (10 to 115 VAC/DC)
LE	Neon lamp (125 to 250 VAC)

(5) Wiring Specifications

Code	Terminal shape	Connector shape	Voltage	Wiring locations	Connector pin No.
None	Screw terminals (Conduit size: G½)	---	---	---	---
K13A	Direct-wire connector type	Threaded (M12)	AC	NO only	NO: ③ ④
K13			DC	NO only	NO: ③ ④
K43A			AC	NC+NO	NO: ③ ④ NC: ① ②
K43			DC	NC+NO	NO: ③ ④ NC: ① ②
-M1J	Pre-wired connector *	Threaded (M12)	DC	NO only	NO: ③ ④
-M1GJ				NO only	NO: ① ④
-M1JB				NC only	NC: ③ ②
-DGJ				NC+NO	NO: ③ ④ NC: ① ②
-DK1EJ	Pre-wired connector *	Smartclick	DC	NO only	NO: ③ ④ NC: ②
-DTGJ				NC+NO	NO: ③ ④ NC: ① ②
-DTK1EJ				NO only	NO: ③ ④ NC: ②

* The standard cable length for a pre-wired connector is 0.3 m. Contact your OMRON representative for information on other cable lengths.

High-sensitivity and High-precision Models

WLG□ - □□□□
 (1) (2) (3) (4) (5)

(1) Actuator and Property Specifications

Code	Actuator		Pretravel (PT)
2	Roller lever	Roller lever: R38 mm High-sensitivity Models	10 ^{0+2°} _{-1°}
CA2	Roller lever	Roller lever: R38 mm High-precision Models	5 ^{0+2°} _{0°}
12	Roller lever	Adjustable roller lever (R25 to 89 mm) High-sensitivity Models	10 ^{0+2°} _{-1°}
L	Flexible rod	Adjustable Rod Lever (25 to 140 mm) High-sensitivity Models	10 ^{0+2°} _{-1°}

(2) Built-in Switch Specifications

Code	Specifications
None	Standard built-in switch
55	Airtight built-in switch

(3) Conduit Size, Ground Terminal Specifications

Code	Specifications
-	G1/2 without ground terminal
G1	G1/2 with ground terminal *
G	Pg13.5 with ground terminal *
Y	M20 with ground terminal *
TS	1/2-14NPT with ground terminal *

* Models with ground terminals are approved by EN/IEC (CE marking).

(4) Indicator Specifications

Code	Specifications
None	No indicator
LE	Neon lamp (125 to 250 VAC) *
LD	LED (10 to 115 VAC/DC)

* (5)Wiring Specifications: Screw terminals only

(5) Wiring Specifications





Code	Terminal shape	Connector shape	Voltage	Wiring locations	Connector pin No.
None	Screw terminals (Conduit size: G½)	---	---	---	---
K13	Direct-wire connector type	Threaded (M12)	DC	NO only	NO: ③ ④
K43				NC+NO	NO: ③ ④ NC: ① ②
-M1J	Pre-wired connector type *	Threaded (M12)	DC	NO only	NO: ③ ④
-M1GJ				NO only	NO: ① ④
-M1JB				NC only	NC: ③ ②
-DGJ03				NC+NO	NO: ③ ④ NC: ① ②
-DK1EJ03				NO only	NO: ③ ④ NC: ②
-M1TJ				NO only	NO: ③ ④
-M1TGJ	Pre-wired connectors type *	Smartclick	DC	NO only	NO: ① ④
-M1TJB				NC only	NC: ③ ②
-DTGJ03				NC+NO	NO: ③ ④ NC: ① ②
-DTK1EJ03				NO only	NO: ③ ④ NC: ②

* The standard cable length for a pre-wired connector is 0.3 m. Contact your OMRON representative for information on other cable lengths.



Ordering Information

Roller Lever

Standard built-in switch



Appearance	Actuator	Terminal shape	Pretravel (PT)	Without operation indicator	With operation indicator *	
				Model	LED	Neon lamp
					Model	Model
	Roller lever: R38 mm	Screw terminals (Conduit size: G½)	15±5°	WLCA2-N	WLCA2-LD-N	WLCA2-LE-N
			25±5°	WLCA2-2-N	WLCA2-2LD-N	WLCA2-2LE-N
			20° max.	WLCA2-2N-N	WLCA2-2NLD-N	WLCA2-2NLE-N
			10° ^{+2°} _{-1°}	WLG2	WLG2-LD	WLG2-LE
	Roller lever: R50 mm		15±5°	WLCA2-7-N	WLCA2-7LD-N	WLCA2-7LE-N
			25±5°	---	---	---
			20° max.	---	---	---
	Roller lever: R63 mm		15±5°	WLCA2-8-N	WLCA2-8LD-N	WLCA2-8LE-N
			25±5°	---	---	---
			20° max.	---	---	---
	Adjustable roller lever (R25 to 89 mm)		15±5°	WLCA12-N	WLCA12-LD-N	WLCA12-LE-N
			25±5°	WLCA12-2-N	WLCA12-2LD-N	WLCA12-2LE-N
		20° max.	WLCA12-2N-N	WLCA12-2NLD-N	WLCA12-2NLE-N	
		10° ^{+2°} _{-1°}	WLG12	WLG12-LD	WLG12-LE	

* The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring).



Appearance	Actuator	Terminal shape	Pretravel (PT)	Connector shape	Voltage	Wiring locations	Connector pin No.	Model
	Roller lever: R38 mm	Direct-wire connector	15±5°	Threaded (M12)	AC	NO only	NO: ③ ④	WLCA2-LDK13A-N
					DC	NO only	NO: ③ ④	WLCA2-LDK13-N
					AC	NC+NO	NO: ③ ④ NC: ① ②	WLCA2-LDK43A-N
			10° ^{+2°} _{-1°}		DC	NC+NO	NO: ③ ④ NC: ① ②	WLCA2-LDK43-N
					DC	NO only	NO: ③ ④	WLG2-LDK13
					DC	NC+NO	NO: ③ ④ NC: ① ②	WLG2-LDK43
					DC	NO only	NO: ③ ④	WLGCA2-LDK13
					DC	NC+NO	NO: ③ ④ NC: ① ②	WLGCA2-LDK43
						Roller lever: R38 mm	Pre-wired connectors	15±5°
NO only	NO: ③ ④	WLCA2-LD-M1GJ-N						
NC only	NC: ③ ②	WLCA2-LD-M1JB-N						
NC+NO	NO: ③ ④ NC: ① ②	WLCA2-LD-DGJ-N						
NO only	NO: ③ ④ NC: ②	WLCA2-LD-DK1EJ-N						
NC+NO	NO: ③ ④ NC: ① ②	WLCA2-LD-DTGJ-N						
Smartclick	NO only	NO: ③ ④ NC: ②	WLCA2-LD-DTK1EJ-N					
	NO only	NO: ③ ④	WLG2-LD-M1J					
	NO only	NO: ① ④	WLG2-LD-M1GJ					
	NC only	NC: ③ ②	WLG2-LD-M1JB					
	NC+NO	NO: ③ ④ NC: ① ②	WLG2-LD-DGJ03					
	NO only	NO: ③ ④ NC: ②	WLG2-LD-DK1EJ03					
10° ^{+2°} _{-1°}	Threaded (M12)	NO only	NO: ③ ④	WLG2-LD-M1TJ				
		NO only	NO: ① ④	WLG2-LD-M1TGJ				
		NC only	NC: ③ ②	WLG2-LD-M1TJB				
		NC+NO	NO: ③ ④ NC: ① ②	WLG2-LD-DTGJ03				
		NO only	NO: ③ ④ NC: ②	WLG2-LD-DTK1EJ03				
		NO only	NO: ③ ④	WLGCA2-LD-M1J				
	Smartclick	NO only	NO: ① ④	WLGCA2-LD-M1GJ				
		NC only	NC: ③ ②	WLGCA2-LD-M1JB				
		NC+NO	NO: ③ ④ NC: ① ②	WLGCA2-LD-DGJ03				
		NC+NO	NO: ③ ④ NC: ① ②	WLGCA2-LD-DTGJ03				
		NO only	NO: ③ ④ NC: ②	WLGCA2-LD-DTK1EJ03				
		NO only	NO: ③ ④	WLGCA2-LD-M1TJ				
5° ^{+2°} _{0°}	Threaded (M12)	NO only	NO: ① ④	WLGCA2-LD-M1TGJ				
		NC only	NC: ③ ②	WLGCA2-LD-M1JB				
		NC+NO	NO: ③ ④ NC: ① ②	WLGCA2-LD-DGJ03				
	Smartclick	NC+NO	NO: ③ ④ NC: ① ②	WLGCA2-LD-DTGJ03				
		NO only	NO: ③ ④ NC: ②	WLGCA2-LD-DTK1EJ03				
		NO only	NO: ③ ④	WLGCA2-LD-M1TJ				

Note: 1. The photo shows a typical model.
 2. The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring). (However, Three-core and Four-core Switches cannot be switched to light-ON when operating (NC wiring))

Airtight Built-in Switch

Appearance	Actuator	Terminal shape	Pretravel (PT)	Without operation indicator	With operation indicator *	
				Model	LED	Neon lamp
					Model	Model
	Roller lever: R38 mm	Screw terminals (Conduit size: G½)	15±5°	WLCA2-55-N	WLCA2-55LD-N	WLCA2-55LE-N
			25±5°	WLCA2-255-N	WLCA2-255LD-N	WLCA2-255LE-N
			20° max.	WLCA2-2N55-N	WLCA2-2N55LD-N	WLCA2-2N55LE-N
			10° ^{+2°} _{-1°}	WLG2-55	WLG2-55LD	WLG2-55LE
			5° ^{+2°} _{0°}	WLGCA2-55	WLGCA2-55LD	WLGCA2-55LE
	Adjustable roller lever (R25 to 89 mm)	Screw terminals (Conduit size: G½)	15±5°	WLCA12-55-N	WLCA12-55LD-N	WLCA12-55LE-N
			25±5°	---	---	---
			20° max.	---	---	---
			10° ^{+2°} _{-1°}	---	---	---








* The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring).

Appearance	Actuator	Terminal shape	Pretravel (PT)	Connector shape	Voltage	Wiring locations	Connector pin No.	Model
	Roller lever: R38 mm	Direct-wire connector	15±5°	Threaded (M12)	DC	NO only	NO: ③ ④	WLCA2-55LDK13-N
			10° ^{+2°} _{-1°}			NC+NO	NO: ③ ④ NC: ① ②	WLCA2-55LDK43-N
			5° ^{+2°} _{0°}			NO only	NO: ③ ④	WLG2-55LDK13
						NC+NO	NO: ③ ④ NC: ① ②	WLG2-55LDK43
						NO only	NO: ③ ④	WLGCA2-55LDK13
						NC+NO	NO: ③ ④ NC: ① ②	WLGCA2-55LDK43
	Roller lever: R38 mm	Pre-wired connectors	15±5°	Threaded (M12)	DC	NO only	NO: ③ ④	WLCA2-55LD-M1J-N
						NO only	NO: ① ④	WLCA2-55LD-M1GJ-N
						NC only	NC: ③ ②	WLCA2-55LD-M1JB-N
						NC+NO	NO: ③ ④ NC: ① ②	WLCA2-55LD-DGJ-N
						NO only	NO: ③ ④ NC: ②	WLCA2-55LD-DK1EJ-N
						NC+NO	NO: ③ ④ NC: ① ②	WLCA2-55LD-DTGJ-N
			10° ^{+2°} _{-1°}	Threaded (M12)		NO only	NO: ③ ④	WLD2-55LD-M1J
						NO only	NO: ① ④	WLG2-55LD-M1GJ
						NC only	NC: ③ ②	WLG2-55LD-M1JB
						NC+NO	NO: ③ ④ NC: ① ②	WLG2-55LD-DGJ03
						NO only	NO: ③ ④ NC: ②	WLG2-55LD-DK1EJ03
						NO only	NO: ③ ④	WLG2-55LD-M1TJ
			Smartclick	Smartclick		NO only	NO: ① ④	WLG2-55LD-M1TGJ
						NC only	NC: ③ ②	WLG2-55LD-M1TJB
						NC+NO	NO: ③ ④ NC: ① ②	WLG2-55LD-DTGJ03
						NO only	NO: ③ ④ NC: ②	WLG2-55LD-DTK1EJ03
						NO only	NO: ③ ④	WLG2-55LD-DTK1EJ03
						NO only	NO: ③ ④ NC: ②	WLG2-55LD-DTK1EJ03


- Note:**
- The photo shows a typical model.
 - The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring). (However, Three-core and Four-core Switches cannot be switched to light-ON when operating (NC wiring))

Plunger Actuators

Standard built-in switch




Appearance	Actuator	Terminal shape	Pretravel (PT)	Without operation indicator	With operation indicator *	
				Model	LED	Neon lamp
					Model	Model
	Sealed top-roller plunger	Screw terminals (Conduit size: G½)	1.7 mm max.	WLD28-N	WLD28-LD-N	WLD28-LE-N
	Top-roller plunger			WLD2-N	WLD2-LD-N	WLD2-LE-N
	Sealed top plunger			WLD18-N	WLD18-LD-N	WLD18-LE-N
	Sealed top-ball plunger		2.8 mm max.	WLD38-N	WLD38-LD-N	WLD38-LE-N
	Horizontal plunger			WLSN-N	WLSN-LD-N	WLSN-LE-N
	Horizontal-roller plunger			WLSN2-N	WLSN2-LD-N	WLSN2-LE-N
	Horizontal-ball plunger			WLSN3-N	WLSN3-LD-N	WLSN3-LE-N

* The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring).


Appearance	Actuator	Terminal shape	Pretravel (PT)	Connector shape	Voltage	Wiring locations	Connector pin No.	Model
	Sealed top-roller plunger	Direct-wire connector type	1.7 mm max.	Threaded (M12)	DC	NO only	NO: ③ ④	WLD28-LDK13-N
						NC+NO	NO: ③ ④ NC: ① ②	WLD28-LDK43-N
		Pre-wired connector type				NO only	NO: ③ ④	WLD28-LD-M1J-N
						NO only	NO: ① ④	WLD28-LD-M1GJ-N
						NC+NO	NO: ③ ④ NC: ① ②	WLD28-LD-DGJ-N
						NO only	NO: ③ ④ NC: ②	WLD28-LD-DK1EJ-N

Note: The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring). (However, Three-core and Four-core Switches cannot be switched to light-ON when operating (NC wiring))

Airtight Built-in Switch

Appearance	Actuator	Terminal shape	Pretravel (PT)	Without operation indicator	With operation indicator *	
				Model	LED	Neon lamp
					Model	Model
	Sealed top-roller plunger	Screw terminals (Conduit size: G½)	1.7 mm max.	WLD28-55-N	WLD28-55LD-N	WLD28-55LE-N
	Top-roller plunger		1.7 mm max.	WLD2-55-N	WLD2-55LD-N	WLD2-55LE-N
	Horizontal plunger		2.8 mm max.	WLSN-55-N	WLSN-55LD-N	---
	Horizontal-roller plunger		2.8 mm max.	WLSN2-55-N	WLSN2-55LD-N	---

* The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring).

Appearance	Actuator	Terminal shape	Pretravel (PT)	Connector shape	Voltage	Wiring locations	Connector pin No.	Model
	Sealed top-roller plunger	Direct-wire connector type	1.7 mm max.	Threaded (M12)	DC	NO only	NO: ③ ④	WLD28-55LDK13-N
						NC+NO	NO: ③ ④ NC: ① ②	WLD28-55LDK43-N
		Pre-wired connectors type				NO only	NO: ③ ④	WLD28-55LD-M1J-N
						NO only	NO: ① ④	WLD28-55LD-M1GJ-N
						NC+NO	NO: ③ ④ NC: ① ②	WLD28-55LD-DGJ-N
						NO only	NO: ③ ④ NC: ②	WLD28-55LD-DK1EJ-N

Note: The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring). (However, Three-core and Four-core Switches cannot be switched to light-ON when operating (NC wiring)).

Flexible Rod

Standard built-in switch

Appearance	Actuator	Terminal shape	Pretravel (PT)	Without operation indicator	With operation indicator *	
					LED	Neon lamp
					Model	Model
	Adjustable rod lever: (25 to 140 mm)	Screw terminals (Conduit size: G½)	15±5°	WLCL-N	WLCL-LD-N	WLCL-LE-N
			25±5°	WLCL-2-N	WLCL-2LD-N	WLCL-2LE-N
			20° max.	WLCL-2N-N	WLCL-2NLD-N	WLCL-2NLE-N
			10° ^{+2°} _{-1°}	WLGL	WLGL-LD	WLGL-LE
	Adjustable rod lever: (350 to 380 mm)		15±5°	WLCAL4-N	WLCAL4-LD-N	WLCAL4-LE-N
			25±5°	---	---	---
			20° max.	---	---	---
	Rod spring lever		15±5°	WLCAL5-N	WLCAL5-LD-N	WLCAL5-LE-N
			25±5°	---	---	---
			20° max.	---	---	---
	Coil spring (6.5 dia.)	20±10 mm	WLNJ-N	WLNJ-LD-N	WLNJ-LE-N	
	Coil spring (4.8 dia.)	20±10 mm	WLNJ-30-N	WLNJ-30LD-N	WLNJ-30LE-N	
	Flexible rod	40±20 mm	WLNJ-2-N	WLNJ-2LD-N	WLNJ-2LE-N	
	Flexible rod: Steel wire (1 dia.)	40±20 mm	WLNJ-S2-N	WLNJ-S2LD-N	WLNJ-S2LE-N	

* The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring).

Airtight Built-in Switch Specifications

Appearance	Actuator	Terminal shape	Pretravel (PT)	Without operation indicator	With operation indicator *	
					LED	Neon lamp
					Model	Model
	Adjustable rod lever: 25 to 140 mm	Screw terminals (Conduit size: G½)	15±5°	WLCL-55-N	WLCL-55LD-N	---
			25±5°	---	---	---
			20° max.	---	---	---
	Coil spring (6.5 dia.)		20±10 mm	WLNJ-55-N	WLNJ-55LD-N	---
				Flexible rod: Resin rod (8 dia.)	40±20 mm	WLNJ-255-N

* The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring).

Fork Lock Lever

Appearance	Actuator	Terminal shape	Pretravel (PT)	Without operation indicator	With operation indicator *	
					LED	Neon lamp
					Model	Model
	Fork Lock Lever A	Screw terminals (Conduit size: G½)	55° max.	WLCA32-41-N	WLCA32-41LD-N	WLCA32-41LE-N
	Fork Lock Lever B		55° max.	WLCA32-42-N	---	WLCA32-42LE-N
	Fork Lock Lever C		55° max.	WLCA32-43-N	WLCA32-43LD-N	WLCA32-43LE-N
	Fork Lock Lever D		55° max.	WLCA32-44-N	---	---

* The default setting is light-ON when not operating (NO wiring). Turn the lamp holder by 180° to change the setting to light-ON when operating (NC wiring).

WL-N/WLG

Specifications

Ratings

Screw terminals

Without Operation Indicator

Basic models (WL-N)

Ratings		Non-inductive load (A)				Inductive load (A)			
		Basic models (WL-N)				Basic models (WL-N)			
		Resistive load		Lamp load		Inductive load		Motor load	
Voltage (V)		NC	NO	NC	NO	NC	NO	NC	NO
AC	125	10	3	1.5	10	5	2.5		
	250	10	2	1	10	3	1.5		
	500	10	1.5	0.8	3	1.5	0.8		
DC	8	10	6	3	10	6			
	14	10	6	3	10	6			
	30	6	4	3	6	4			
	125	0.8	0.2	0.2	0.8	0.2			
	250	0.4	0.1	0.1	0.4	0.1			

High-sensitivity and High-precision models (WLG)

Ratings		Non-inductive load (A)	
		High-sensitivity and High-precision models (WLG)	
		Resistive load	
Voltage (V)		NC	NO
AC	125	5	
	250	5	
DC	125	0.4	
	250	0.2	

With Operation Indicator (LED)

Basic models (WL-N)

Ratings		Non-inductive load (A)				Inductive load (A)			
		Basic models (WL-N)				Basic models (WL-N)			
		Resistive load		Lamp load		Inductive load		Motor load	
Voltage (V)		NC	NO	NC	NO	NC	NO	NC	NO
AC	115	10	3	1.5	10	5	2.5		
DC	12	10	6	3	10	6			
	24	6	4	3	6	4			
	48	3	2	1.5	3	0.2			
	115	0.8	0.2		0.8	0.1			

High-sensitivity and High-precision models (WLG)

Ratings		Non-inductive load (A)	
		High-sensitivity and High-precision models (WLG)	
		Resistive load	
Voltage (V)		NC	NO
AC	115	5	
DC	115	0.4	

With Operation Indicators (Neon Lamps)

Basic models (WL-N)

Ratings		Non-inductive load (A)				Inductive load (A)			
		Basic models (WL-N)				Basic models (WL-N)			
		Resistive load		Lamp load		Inductive load		Motor load	
Voltage (V)		NC	NO	NC	NO	NC	NO	NC	NO
AC	125	10	3	1.5	10	5	2.5		
	250	10	2	1	10	3	1.5		

High-sensitivity and High-precision models (WLG)

Ratings		Non-inductive load (A)	
		High-sensitivity and High-precision models (WLG)	
		Resistive load	
Voltage (V)		NC	NO
AC	125	5	
	250	5	

- Note:**
- The above figures are for steady-state currents.
 - Inductive loads have a power factor of 0.4 min. (AC) and a time constant of 7 ms max. (DC).
 - A lamp load has an inrush current of 10 times the steady-state current.
 - A motor load has an inrush current of 6 times the steady-state current.

Allowable Inrush Current/Minimum Applicable Load

Operating characteristics type		Basic models (WL-N)	High-sensitivity and High-precision models (WLG)
Inrush current	NC	30 A max.	15 A max.
	NO	20 A max.	10 A max.
Minimum applicable load		5 VDC 1 mA, resistive load, P level	5 VDC 1 mA, resistive load, P level

Operation Indicator

Operation indicator type	LED	Neon lamp
Rated voltage	10 to 115 VAC/DC	125 to 250 VAC
Leakage current (Reference value)	Approx. 0.4 mA at 10 VAC/DC Approx. 0.5 mA at 115 VAC/DC	Approx. 0.6 mA at 125 VAC Approx. 1.9 mA at 250 VAC

Direct-wired connector and Pre-wired Connector Type

Connector DC Specifications: With Operation Indicators (LEDs)
Basic models (WL-N)

Ratings	Non-inductive load (A)				Inductive load (A)				
	Basic models (WL-N)				Basic models (WL-N)				
	Resistive load		Lamp load		Inductive load		Motor load		
Voltage (V)		NC	NO	NC	NO	NC	NO	NC	NO
DC	12	3		3		3		3	
	24	3		3		3		3	
	48	4	2	1.5		3		2	
	115	0.8	0.2	0.2		0.8		0.2	

High-sensitivity and High-precision models (WLG)

Ratings	Non-inductive load (A)			
	High-sensitivity and High-precision models (WLG)			
	Resistive load			
Voltage (V)		NC	NO	
DC	115	0.4		

Connector AC Specifications: With Operation Indicators (LEDs)
Basic models (WL-N)

Ratings	Non-inductive load (A)				Inductive load (A)				
	Basic models (WL-N)				Basic models (WL-N)				
	Resistive load		Lamp load		Inductive load		Motor load		
Voltage (V)		NC	NO	NC	NO	NC	NO	NC	NO
AC	115	3		3	1.5	3		3	2.5

High-sensitivity and High-precision models (WLG)

Ratings	Non-inductive load (A)			
	High-sensitivity and High-precision models (WLG)			
	Resistive load			
Voltage (V)		NC	NO	
AC	115	3		

- Note:** 1. The above figures are for steady-state currents.
 2. Inductive loads have a power factor of 0.4 min. (AC) and a time constant of 7 ms max. (DC).
 3. A lamp load has an inrush current of 10 times the steady-state current.
 4. A motor load has an inrush current of 6 times the steady-state current.

Minimum Applicable Load

Operating characteristics type	Basic models (WL-N)	High-sensitivity and High-precision models (WLG)
Minimum applicable load	5 VDC 1 mA, resistive load, P level	5 VDC 1 mA, resistive load, P level

Operation Indicator

Operation indicator type	LED	Neon lamp
Rated voltage	10 to 115 VAC/DC	125 to 250 VAC
Leakage current (Reference value)	Approx. 0.4 mA at 10 VAC/DC Approx. 0.5 mA at 115 VAC/DC	Approx. 0.6 mA at 125 VAC Approx. 1.9 mA at 250 VAC

Characteristics

Operating characteristics type		Basic models (WL-N)	High-sensitivity and High-precision models (WLG)
Permissible operating frequency	Mechanical	120 operations/minute	
	Electrical	30 operations/minute	
Rated frequency		50/60 Hz	
Permissible operating speed		1 mm/s to 1 m/s (in case of WLCA2-N)	
Insulation resistance		100 MΩ min. (at 500 VDC)	
Contact resistance		25 mΩ max. (initial value for the built-in switch)	
Vibration resistance	Malfunction	10 to 55 Hz, 1.5-mm double amplitude	
Shock	Destruction	1,000 m/s ² max.	
	Malfunction	300 m/s ² max. *2	
Durability *1	Mechanical	15,000,000 operations min.	10,000,000 operations min.
	Electrical	750,000 operations min. (3 A at 250 VAC, resistive load), but for high-precision models: *3	500,000 operations min. (3 A at 250 VAC, resistive load), but for high-precision models: *3
Ambient operating temperature		-10 to +80°C (with no icing)	
Ambient operating humidity		35 to 95%RH	
Degree of protection		IP67	
Weight		Approx. 255 g (in case of WLCA2-N)	Approx. 270 g (in case of WLGCA2)

Note: The above figures are initial values.

- *1. The values are calculated at an operating temperature of +5°C to +35°C, and an operating humidity of 40% to 70%RH. Contact your OMRON sales representative for more detailed information on other operating environments.
 *2. Except Switches with Flexible Rod Actuators.
 *3. In case of Screw terminals without operation indicators.

Operating characteristics type		Basic models (WL-N)		High-sensitivity and High-precision models (WLG)	
Wiring Specifications		Screw terminals	Direct-wire connector/ Pre-wired Connector Models	Screw terminals	Direct-wire connector/ Pre-wired Connector Models
Dielectric strength	Between terminals of the same polarity	1,000 VAC, 50/60 Hz for 1 min *	600 VAC, 50/60 Hz for 1 min *	600 VAC, 50/60 Hz for 1 min *	600 VAC, 50/60 Hz for 1 min *
	Between current-carrying metal part and ground	2,200 VAC, 50/60 Hz for 1 min	1,500 VAC, 50/60 Hz for 1 min	1,500 VAC, 50/60 Hz for 1 min	1,500 VAC, 50/60 Hz for 1 min
	Between each terminal and non-current-carrying metal part	2,200 VAC, 50/60 Hz for 1 min	1,500 VAC, 50/60 Hz for 1 min	1,500 VAC, 50/60 Hz for 1 min	1,500 VAC, 50/60 Hz for 1 min

* Excluding those with operation indicators.

Circuit Configuration

Terminal Connection Diagram

Operating characteristics type	Basic models (WL-N)																										
Wiring Specifications	Screw terminals	Direct-wire connector and Pre-wired Connector Models																									
Without operation indicator		<div style="display: flex; justify-content: space-around;"> <div> <p>AC</p> <table border="1"> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>③</td> </tr> <tr> <td>4 core</td> <td>④</td> <td>①</td> <td>②</td> <td>③</td> </tr> </table> <p>①②③④ indicate the connector pin number.</p> </div> <div> <p>DC</p> <table border="1"> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>③</td> </tr> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>①</td> </tr> <tr> <td>4 core</td> <td>④</td> <td>①</td> <td>②</td> <td>③</td> </tr> </table> <p>①②③④ indicate the connector pin number.</p> </div> </div>	2 core	④	---	---	③	4 core	④	①	②	③	2 core	④	---	---	③	2 core	④	---	---	①	4 core	④	①	②	③
2 core	④	---	---	③																							
4 core	④	①	②	③																							
2 core	④	---	---	③																							
2 core	④	---	---	①																							
4 core	④	①	②	③																							
With operation indicator (Light-ON when not operating *)		<div style="display: flex; justify-content: space-around;"> <div> <p>AC</p> <table border="1"> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>③</td> </tr> <tr> <td>4 core</td> <td>④</td> <td>①</td> <td>②</td> <td>③</td> </tr> </table> <p>①②③④ indicate the connector pin number.</p> </div> <div> <p>DC</p> <table border="1"> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>③</td> </tr> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>①</td> </tr> <tr> <td>4 core</td> <td>④</td> <td>①</td> <td>②</td> <td>③</td> </tr> </table> <p>①②③④ indicate the connector pin number.</p> </div> </div>	2 core	④	---	---	③	4 core	④	①	②	③	2 core	④	---	---	③	2 core	④	---	---	①	4 core	④	①	②	③
2 core	④	---	---	③																							
4 core	④	①	②	③																							
2 core	④	---	---	③																							
2 core	④	---	---	①																							
4 core	④	①	②	③																							

Operating characteristics type	High-sensitivity and High-precision models (WLG)																															
Wiring Specifications	Screw terminals	Direct-wire connector and Pre-wired Connector Models																														
Without operation indicator		<div style="display: flex; justify-content: space-around;"> <div> <p>AC</p> <table border="1"> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>③</td> </tr> <tr> <td>4 core</td> <td>④</td> <td>①</td> <td>②</td> <td>③</td> </tr> </table> <p>①②③④ indicate the connector pin number.</p> </div> <div> <p>DC</p> <table border="1"> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>③</td> </tr> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>①</td> </tr> <tr> <td>3 core</td> <td>④</td> <td>---</td> <td>②</td> <td>③</td> </tr> <tr> <td>4 core</td> <td>④</td> <td>①</td> <td>②</td> <td>③</td> </tr> </table> <p>①②③④ indicate the connector pin number.</p> </div> </div>	2 core	④	---	---	③	4 core	④	①	②	③	2 core	④	---	---	③	2 core	④	---	---	①	3 core	④	---	②	③	4 core	④	①	②	③
2 core	④	---	---	③																												
4 core	④	①	②	③																												
2 core	④	---	---	③																												
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3 core	④	---	②	③																												
4 core	④	①	②	③																												
With operation indicator (Light-ON when not operating *)		<div style="display: flex; justify-content: space-around;"> <div> <p>AC</p> <table border="1"> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>③</td> </tr> <tr> <td>4 core</td> <td>④</td> <td>①</td> <td>②</td> <td>③</td> </tr> </table> <p>①②③④ indicate the connector pin number.</p> </div> <div> <p>DC</p> <table border="1"> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>③</td> </tr> <tr> <td>2 core</td> <td>④</td> <td>---</td> <td>---</td> <td>①</td> </tr> <tr> <td>3 core</td> <td>④</td> <td>---</td> <td>②</td> <td>③</td> </tr> <tr> <td>4 core</td> <td>④</td> <td>①</td> <td>②</td> <td>③</td> </tr> </table> <p>①②③④ indicate the connector pin number.</p> </div> </div>	2 core	④	---	---	③	4 core	④	①	②	③	2 core	④	---	---	③	2 core	④	---	---	①	3 core	④	---	②	③	4 core	④	①	②	③
2 core	④	---	---	③																												
4 core	④	①	②	③																												
2 core	④	---	---	③																												
2 core	④	---	---	①																												
3 core	④	---	②	③																												
4 core	④	①	②	③																												

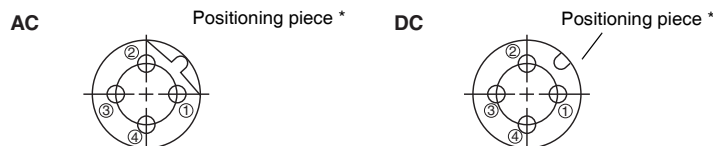
Note: Leakage current from indicator circuit may cause load malfunction (i.e., the load may remain ON). Make sure that the load operating current is higher than the leakage current.

For countermeasures, refer to technical support on your OMRON website.

* Light-ON when not operating means the operation indicator is lit when the actuator is free and is not lit when the actuator rotates or is pushed down and the Switch contacts contact to NO.

The above shows details of the switch interior. External wires (external resistances) are not shown. For details, refer to *Operation* on page 18.

Connector Pin Layout Diagram



* The position of the positioning piece is not always the same. If using an L-shaped connector causes problems in mounting, use a straight connector.

Structure and Nomenclature

WLCA2-N

Actuator Roller

The roller is made of self-lubricating sintered stainless steel and boasts high resistance to wear.

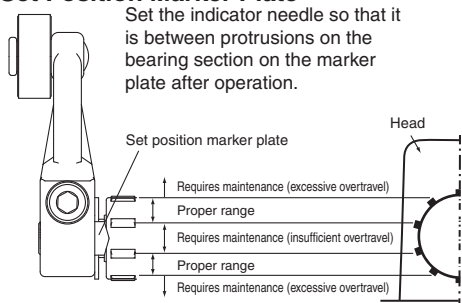
Lever

The lever is forged from corrosion-resistant aluminum alloy. It provides superior corrosion resistance and outstanding strength. With roller lever, adjustable rod and flexible rod models, the actuator position can be set anywhere within 360°. (The lever cannot be mounted in the opposite direction.)

Roller Lever Bolt

Set Position Marker Plate

Set the indicator needle so that it is between protrusions on the bearing section on the marker plate after operation.



Cover Setscrew

A combination Phillips-slotted screw is used. A retainer prevents the screw from falling from the cover even when the screw is loose.

Cover

Cover Seal

High sealing performance is achieved. The seal also serves as a spacer. There is no troublesome insulating paper, making it easy to work with the Switch.

Head-mounting Screws

Shaft Section Seal

An oil seal is fitted on the inlet of the shaft section to maintain a tight seal.

Operational Plunger

You can change the direction of the operational plunger to electrically switch the direction of operation between both sides, left only, or right only. (Refer to page 87)

Head

You can remove the two screws to mount the switch in any of the four possible orientations. If changing the direction of the head, pay attention to the orientation of the operation plunger. (Refer to page 87)

Main unit

Built-in Switch

Built-in switch with SPST-NO+NC contact form

Terminal Screws

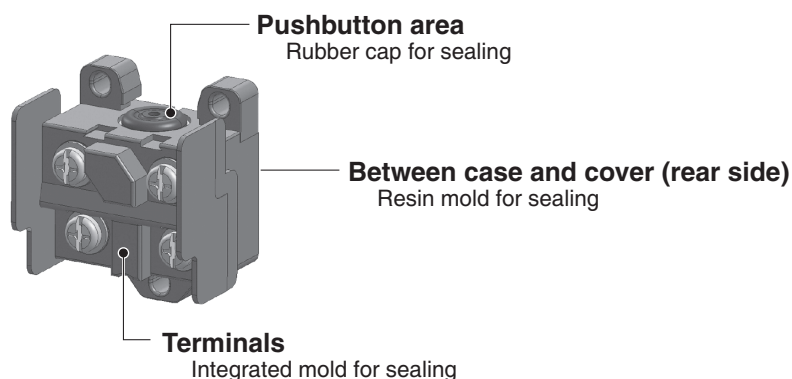
Four, M3.5 screws

Conduit Opening

The conduit screw is a parallel screw for G $\frac{1}{2}$ piping, and is used together with an SC connector to maintain a tight seal.

Built-in switch

Airtight built-in switch (-55)



General-purpose Switches

Environment-resistant Switches

Spatter-prevention Switches

Long-life Switches

Accessories

Safety Precautions

WLG2

Actuator

Roller

The roller is made of self-lubricating sintered stainless steel and boasts high resistance to wear.

Lever

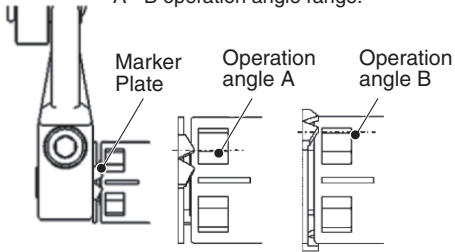
The lever is forged from corrosion-resistant aluminum alloy. It provides superior corrosion resistance and outstanding strength.

With roller lever, adjustable rod and flexible rod models, the actuator position can be set anywhere within 360°. (The lever cannot be mounted in the opposite direction.)

Roller Lever Setscrew

Set Position Marker Plate

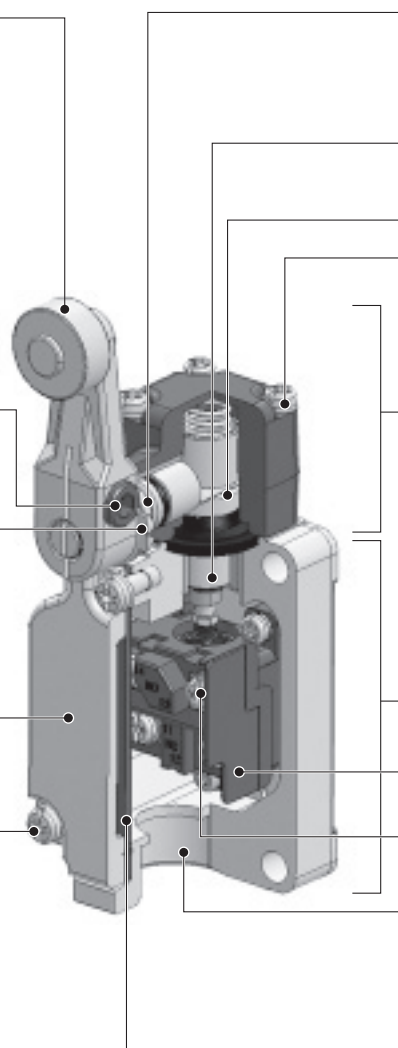
In the operation state, adjust the two pointers on the marker plate to within the A - B operation angle range.



Cover

Cover Setscrew

A combination Philips-slotted screw is used. A retainer prevents the screw from falling from the cover even when the screw is loose.



Shaft Section Seal

By fitting an O-ring to the rotary shaft and with an appropriate interference of the screws, high-sealing properties are maintained.

Bearing

The bearing smooths the plunger movement.

Operational Plunger

Head-mounting Screws

Head

By removing the four corner screws, the head can be mounted in any of four orientations.

Main unit

Built-in Switch

Built-in switch with SPST-NO+NC contact form.

Terminal Screws

Four, M3.5 screws

Conduit Opening

The conduit screw is a parallel screw for G½ piping, and is used together with an SC connector to maintain a tight seal.

Separator

The separator has outstanding insulation properties and prevents the generation of any gases which may corrode the internal parts.

Note: The built-in switch structure and name of each part are the same as on page 15.

Operation Indicator

Indicator Covers

The indicator covered if outsert molded from diecast aluminum and has outstanding sealing properties.

Indicator Windows

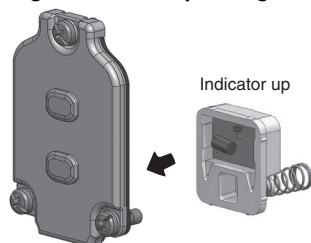
Operating status (i.e., light-ON when operating or light-ON when not operating) depends on whether a neon lamp or an LED is used.

Light-ON when Operating/Not Operating

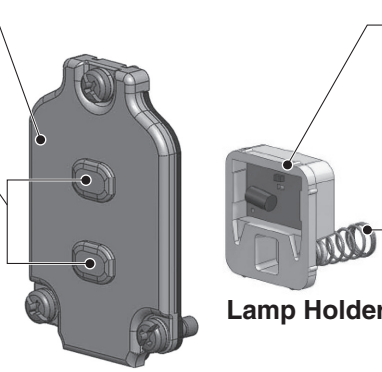
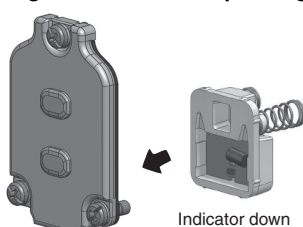
Indicators can be switched from light-ON when operating and light-ON when not operating, by simply rotating the indicator holder by 180°.

(However, Direct-wire connector, Pre-wired Connector, Three-core, and Four-core Switches cannot be switched to light-ON when operating (NC wiring).)

Light-ON when Operating



Light-ON when Not Operating

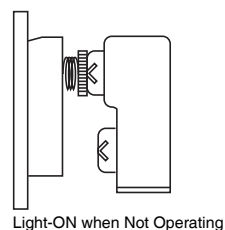


Indicator

The indicator is either a neon lamp or an LED. Switches with LED indicators have a built-in rectifier stack, so there is no connection polarity.

Contact Spring

The built-in switch's terminal screws are used to connect the indicator terminal. Since the connection spring (coil spring) is used for this connection, it will not be necessary to connect the indicator terminal. When a ground terminal is provided however, a lead wire must be used.



Operation

Operation indicator type	Operation type	When load is connected to NC (11-12)	When load is connected to NO (13-14)
LED Neon lamp	Light-ON when operating *1		
	Light-ON when not operating *2		

Note: 1. Leakage current from indicator circuit may cause load malfunction (i.e., the load may remain ON). Make sure that the load operating current is higher than the leakage current. For countermeasures, refer to technical support on your OMRON website.

2. For details on accessories (sold separately), refer to page 78.

*1. Light-ON when operating means that the lamp lights when the Limit Switch contacts (NC) release, or when the actuator rotates or is pushed down.

*2. Light-ON when not operating means the lamp remains lit when the actuator is free, or when the Limit Switch contacts (NO) close when the actuator rotates or is pushed down.

*3. The wiring varies depending on when the loads and indicator lamps are operating.

For contacts that include an internal circuit (indicator circuit), connect a resistor for protection.

To find the resistance value and capacity, calculate using the voltage, current, and power that is actually used.

· Resistance (Ω) = Voltage (V) \div Current (I)

· Power (W) = Current (A) \times Voltage (V)

· Capacity (W) = Power (W) \times Margin (approximately 2 \times)

Use the values below for reference.

Reference: Example of Protection Resistance

The capacity value is a numerical value that does not account for the margin. Select a resistor with sufficient capacity.

When calculating using the leakage current in this catalog, the display becomes slightly dim.

Use of a current that is at least around twice the leakage current is recommended.

Indicator		Voltage	Protection resistance (example)	
Type	Leakage current		Resistance	Capacity
LED	Approx. 0.5 mA	115 VAC/DC	Approx. 50 k Ω	0.27 W min.
	Approx. 0.4 mA	24 VAC/DC	Approx. 10 k Ω	0.06 W min.
		10 VAC/DC	Approx. 10 k Ω	0.01 W min.
Neon lamp	Approx. 1.9 mA	250 VAC	Approx. 100 k Ω	0.63 W min.
	Approx. 0.6 mA	125 VAC	Approx. 100 k Ω	0.16 W min.

Internal Circuits

LED	
Neon lamp	

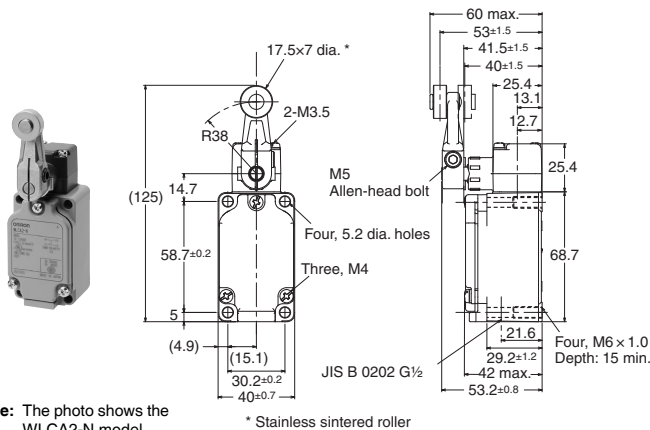
Dimensions

Roller Lever

Screw terminals

Roller lever R38

- WLCA2(-55)-N
- WLCA2-2(55)-N
- WLCA2-2N(55)-N

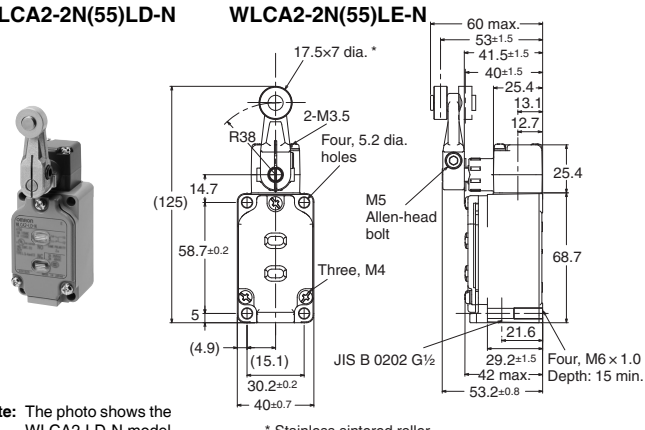


Note: The photo shows the WLCA2-N model.

* Stainless sintered roller

Roller lever R38 With operation indicator

- LED
 - WLCA2(-55)LD-N
 - WLCA2-2(55)LD-N
 - WLCA2-2N(55)LD-N
- Neon lamp
 - WLCA2(-55)LE-N
 - WLCA2-2(55)LE-N
 - WLCA2-2N(55)LE-N

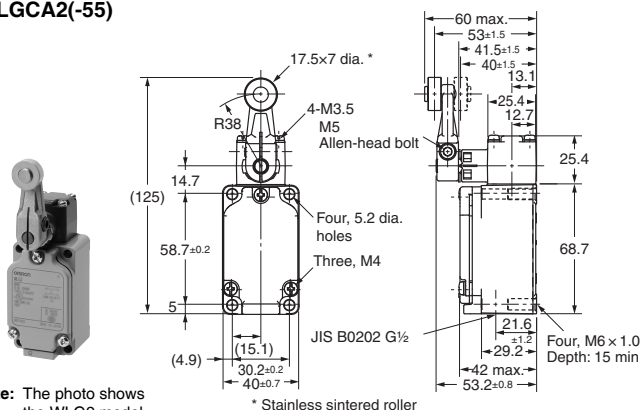


Note: The photo shows the WLCA2-LD-N model.

* Stainless sintered roller

Roller lever R38

- WLG2(-55)
- WLGCA2(-55)

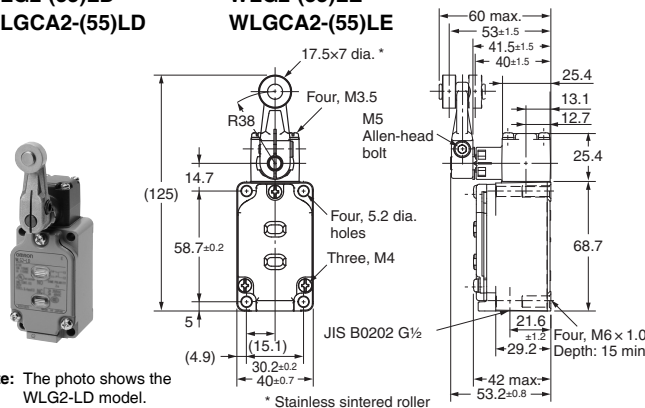


Note: The photo shows the WLG2 model.

* Stainless sintered roller

Roller lever R38 With operation indicator

- LED
 - WLG2(-55)LD
 - WLGCA2(-55)LD
- Neon lamp
 - WLG2(-55)LE
 - WLGCA2(-55)LE



Note: The photo shows the WLG2-LD model.

* Stainless sintered roller

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

Operating characteristics

Model		WLCA2(-55)-N WLCA2(-55)LD-N WLCA2(-55)LE-N	WLCA2-2(-55)-N WLCA2-2(55)LD-N WLCA2-2(55)LE-N	WLCA2-2N(-55)-N WLCA2-2N(55)LD-N WLCA2-2N(55)LE-N	WLG2(-55) WLG2(-55)LD WLG2(-55)LE	WLGCA2(-55) WLGCA2(-55)LD WLGCA2(-55)LE
Operating force	OF max.	13.34 N	13.34 N	13.34 N	9.81 N	13.34 N
Release force	RF min.	1.18 N	1.18 N	1.18 N	0.98 N	1.47 N
Pretravel	PT	15±5°	25±5°	20° max.	10° ^{+2°} _{-1°}	5° ^{+2°} _{0°}
Overtravel	OT min.	70°	60°	70°	65°	40°
Movement Differential	MD max.	12°	16°	10°	7°	3°

General-purpose Switches

Environment-resistant Switches

Spatter-prevention Switches

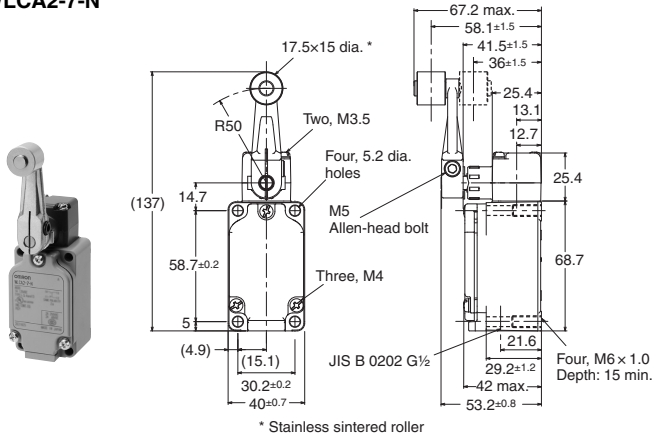
Long-life Switches

Accessories

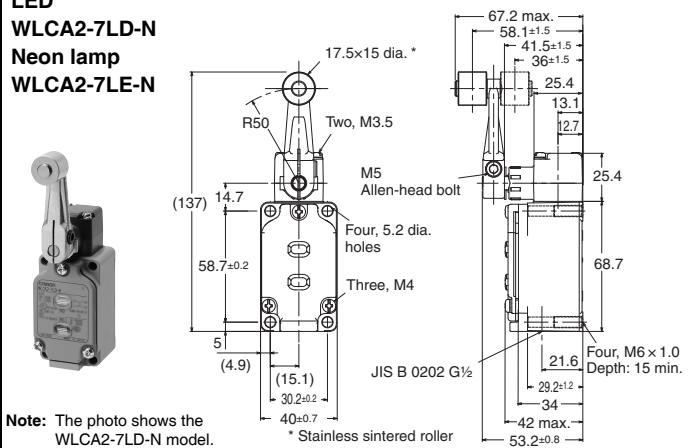
Safety Precautions

Screw terminals

Roller lever R50 WLCA2-7-N

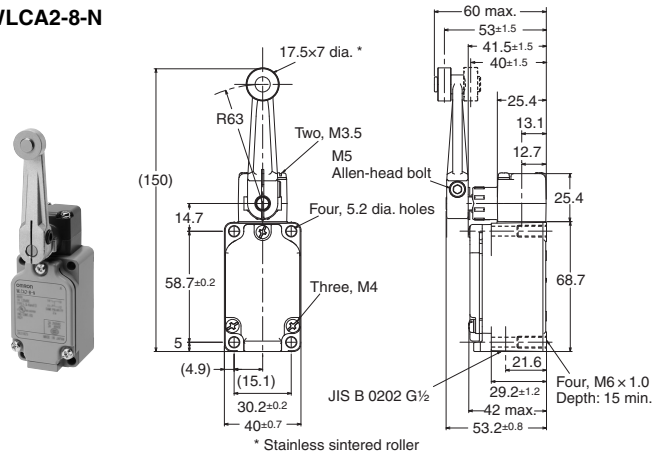


Roller lever R50 With operation indicator LED WLCA2-7LD-N Neon lamp WLCA2-7LE-N

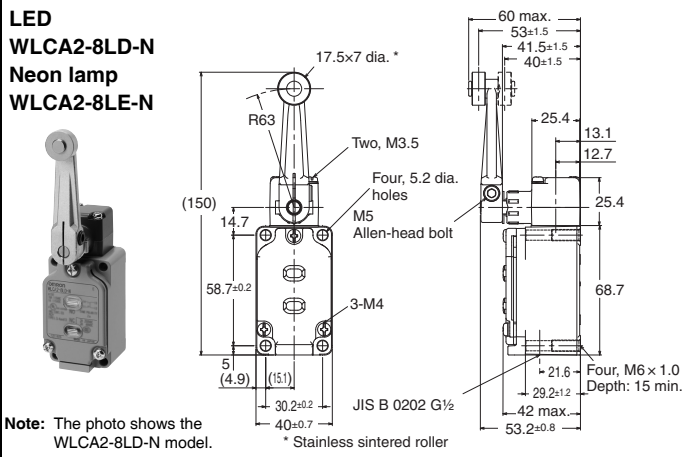


Note: The photo shows the WLCA2-7LD-N model.

Roller lever R63 WLCA2-8-N



Roller lever R63 With operation indicator LED WLCA2-8LD-N Neon lamp WLCA2-8LE-N



Note: The photo shows the WLCA2-8LD-N model.

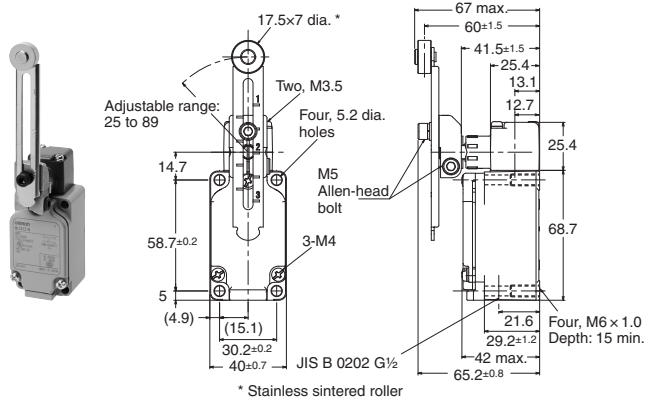
Note: Unless otherwise indicated, a tolerance of ± 0.4 mm applies to all dimensions.

	Model	WLCA2-7-N WLCA2-7LD-N WLCA2-7LE-N	WLCA2-8-N WLCA2-8LD-N WLCA2-8LE-N
Operating force	OF max.	10.2 N	8.04 N
Release force	RF min.	0.9 N	0.71 N
Pretravel	PT	$15 \pm 5^\circ$	$15 \pm 5^\circ$
Overtravel	OT min.	70°	70°
Movement Differential	MD max.	12°	12°

Screw terminals

Adjustable Roller Lever (R25 to 89 mm)

WLCA12(-55)-N
WLCA12-2-N
WLCA12-2N-N

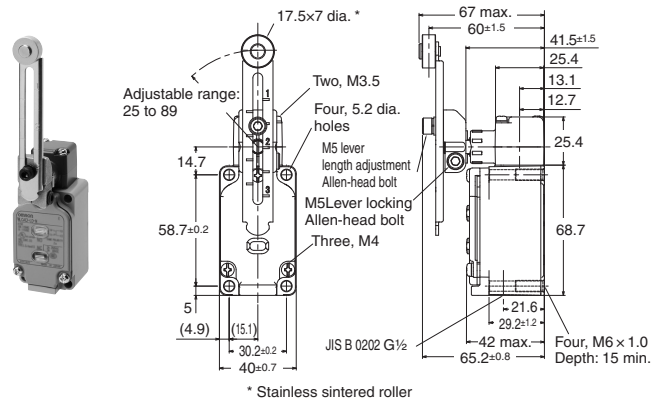


Note: The photo shows the WLCA12-N model.

Adjustable Roller Lever (R25 to 89 mm)

With operation indicator

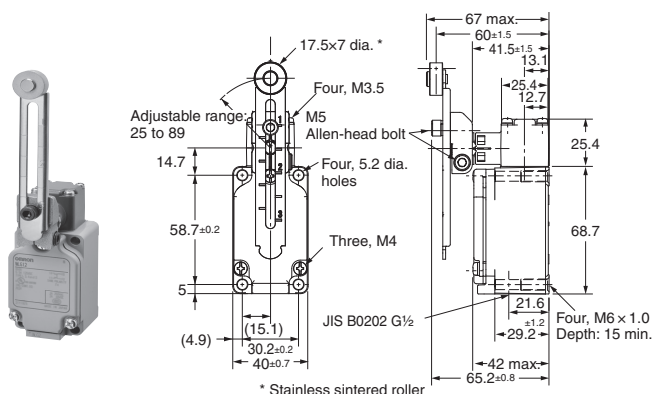
LED WLCA12(-55)LD-N
WLCA12-2LD-N
WLCA12-2NLD-N
Neon lamp WLCA12(-55)LE-N
WLCA12-2LE-N
WLCA12-2NLE-N



Note: The photo shows the WLCA12-LD-N model.

Adjustable Roller Lever (R25 to 89 mm)

WLG12

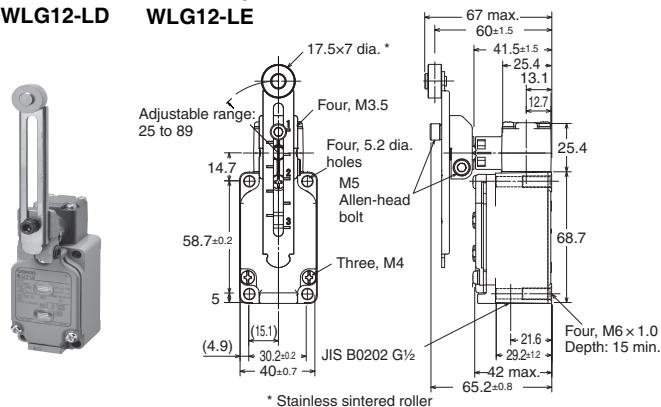


Note: Unless otherwise indicated, a tolerance of ±0.4 mm applies to all dimensions.

Adjustable Roller Lever (R25 to 89 mm)

With operation indicator

LED WLG12-LD
Neon lamp WLG12-LE



Note: The photo shows the WLG12-LD model.

Operating characteristics

Model		WLCA12 (-55) -N * WLCA12- (55) LD-N * WLCA12- (55) LE-N *	WLCA12-2-N * WLCA12-2LD-N * WLCA12-2LE-N *	WLCA12-2N-N * WLCA12-2NLD-N * WLCA12-2NLE-N *	WLG12 * WLG12-LD * WLG12-LE *
Operating force	OF max.	13.34 N	13.34 N	13.34 N	9.81 N
Release force	RF min.	1.18 N	1.18 N	1.18 N	0.98 N
Pretravel	PT	15±5°	25±5°	20° max.	10°+2° -1°
Overtravel	OT min.	70°	60°	70°	65°
Movement Differential	MD max.	12°	16°	10°	7°

* The operating characteristics are measured at the lever length of 38 mm.

Direct-wire connector

Roller lever R38 With operation indicator

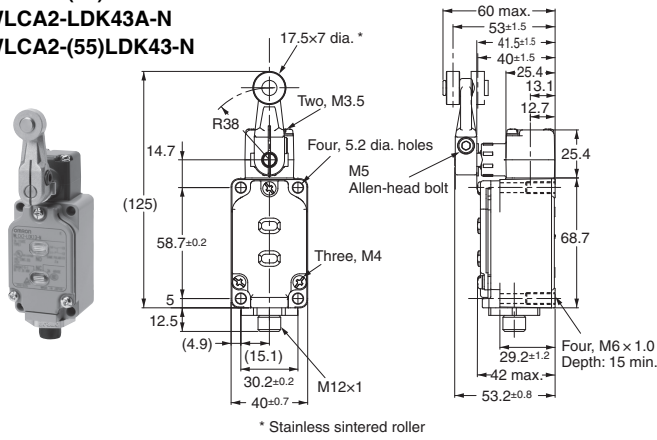
LED

WLCA2-LDK13A-N

WLCA2-(55)LDK13-N

WLCA2-LDK43A-N

WLCA2-(55)LDK43-N



* Stainless sintered roller

Note: The photo shows the WLCA2-LDK13-N model.

Roller lever R38 With operation indicator

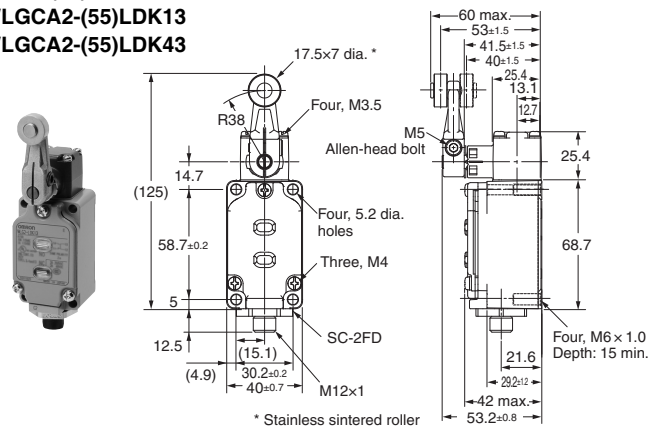
LED

WLG2-(55)LDK13

WLG2-(55)LDK43

WLGCA2-(55)LDK13

WLGCA2-(55)LDK43



* Stainless sintered roller

Note: The photo shows the WLG2-LDK13 model.

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

Operating characteristics

		Model	WLCA2-LDK13A-N WLCA2-(55)LDK13-N WLCA2-LDK43A-N WLCA2-(55)LDK43-N	WLG2-(55)LDK13 WLG2-(55)LDK43	WLCA2-(55)LDK13 WLCA2-(55)LDK43
Operating force	OF	max.	13.34 N	9.81 N	13.34 N
Release force	RF	min.	1.18 N	0.98 N	1.47 N
Pretravel	PT		15 \pm 5°	10 $^{+2}_{-1}$ °	5 $^{+2}_{0}$ °
Overtravel	OT	min.	70°	65°	40°
Movement Differential	MD	max.	12°	7°	3°

Pre-wired connectors

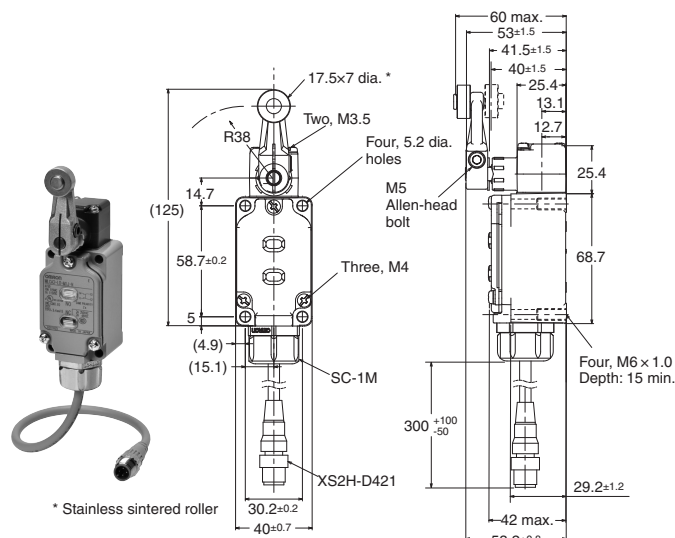
Roller lever R38 With operation indicator

LED

- Threaded (M12)
- WLCA2-(55)LD-M1J-N
- WLCA2-(55)LD-M1GJ-N
- WLCA2-(55)LD-DGJ-N
- WLCA2-(55)LD-DK1EJ-N

Smartclick

- WLCA2(55)LD-DTGJ-N
- WLCA2-LD-DTK1EJ-N



Note: The photo shows the WLCA2-LD-M1J-N model.

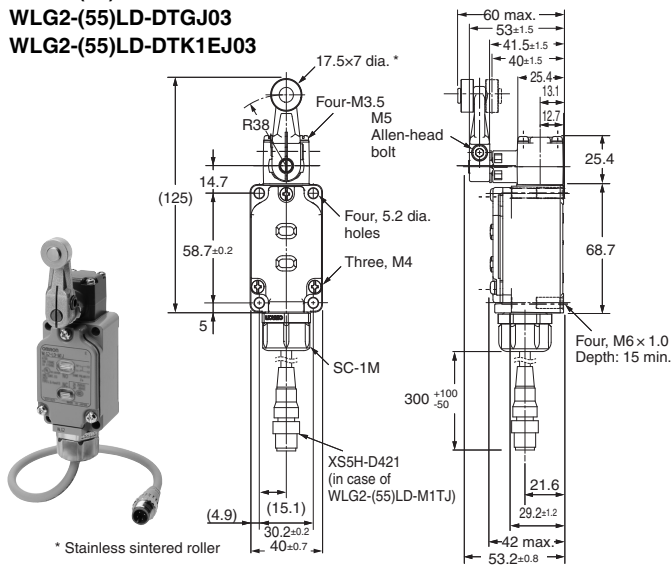
Roller lever R38 With operation indicator

LED

- Threaded (M12)
- WLG2-(55)LD-M1J
- WLG2-(55)LD-M1GJ
- WLG2-(55)LD-M1JB
- WLG2-(55)LD-DGJ03
- WLG2-(55)LD-DK1EJ03

Smartclick

- WLG2-(55)LD-M1TJ
- WLG2-(55)LD-M1TGJ
- WLG2-(55)LD-M1TJB
- WLG2-(55)LD-DTGJ03
- WLG2-(55)LD-DTK1EJ03



Note: The photo shows the WLG2-LD-M1J model.

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

Operating characteristics

Model	WLCA2-(55)LD-M1J-N WLCA2-(55)LD-M1GJ-N WLCA2-(55)LD-M1JB-N WLCA2-(55)LD-DGJ-N WLCA2-(55)LD-DK1EJ-N WLCA2-(55)LD-DTGJ-N WLCA2-LD-DTK1EJ-N	WLG2-(55)LD-M1J WLG2-(55)LD-M1GJ WLG2-(55)LD-M1JB WLG2-(55)LD-DGJ03 WLG2-(55)LD-DK1EJ03 WLG2-(55)LD-M1TJ WLG2-(55)LD-M1TGJ WLG2-(55)LD-M1TJB WLG2-(55)LD-DTGJ03 WLG2-(55)LD-DTK1EJ03	
Operating force	OF max.	13.34 N	9.81 N
Release force	RF min.	1.18 N	0.98 N
Pretravel	PT	15±5°	10 ⁺² / ₋₁ °
Overtravel	OT min.	70°	65°
Movement Differential	MD max.	12°	7°

General-purpose Switches

Environment-resistant Switches

Spatter-prevention Switches

Long-life Switches

Accessories

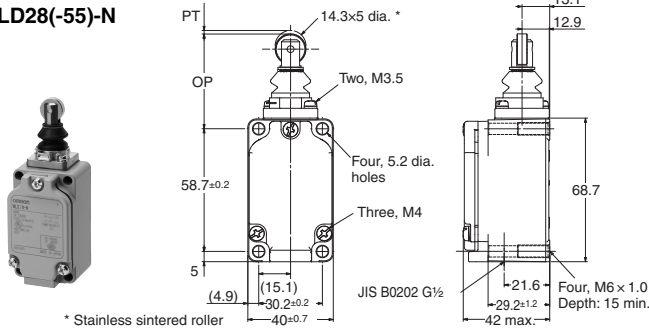
Safety Precautions

Plunger Actuators

Screw terminals

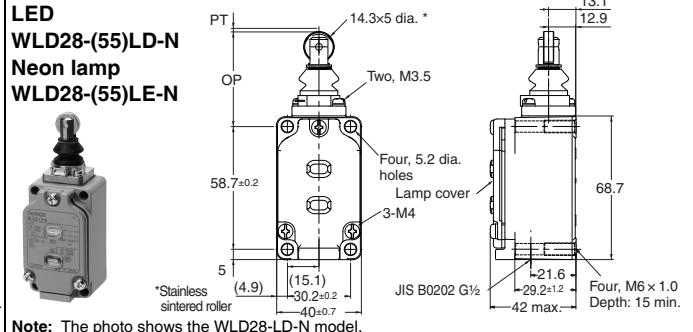
Sealed top-roller plunger

WLD28(-55)-N



Sealed top-roller plunger With operation indicator

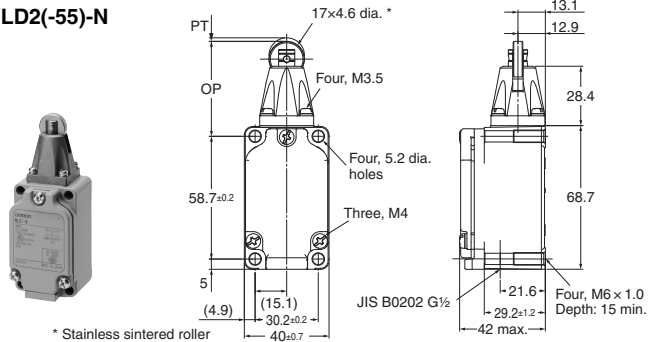
LED
WLD28(-55)LD-N
Neon lamp
WLD28(-55)LE-N



Note: The photo shows the WLD28-LD-N model.

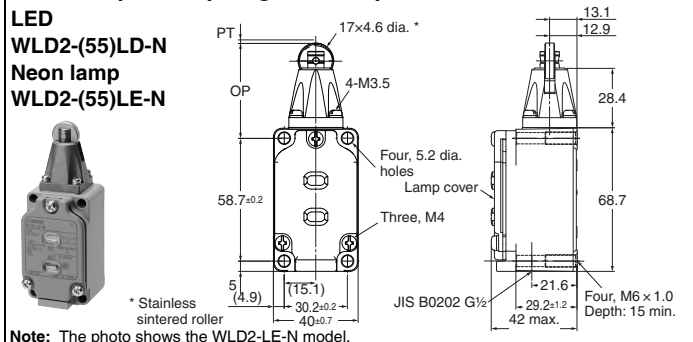
Top-roller plunger

WLD2(-55)-N



Sealed top-roller plunger With operation indicator

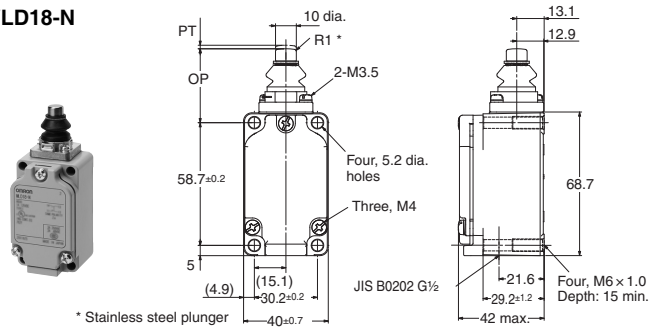
LED
WLD2(-55)LD-N
Neon lamp
WLD2(-55)LE-N



Note: The photo shows the WLD2-LE-N model.

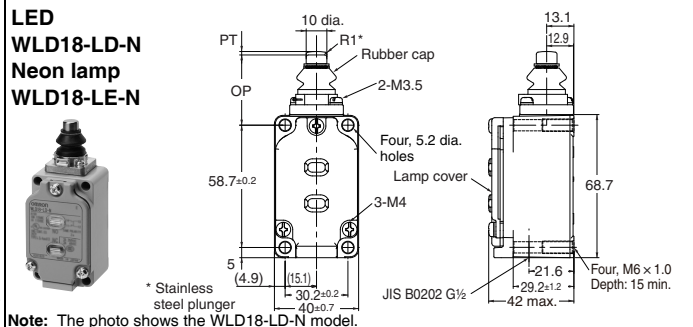
Sealed top plunger

WLD18-N



Sealed top-roller plunger With operation indicator

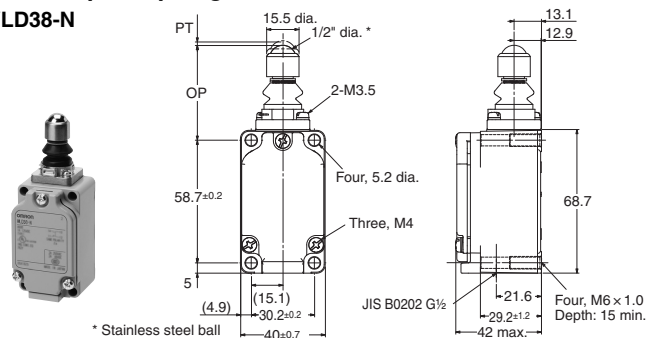
LED
WLD18-LD-N
Neon lamp
WLD18-LE-N



Note: The photo shows the WLD18-LD-N model.

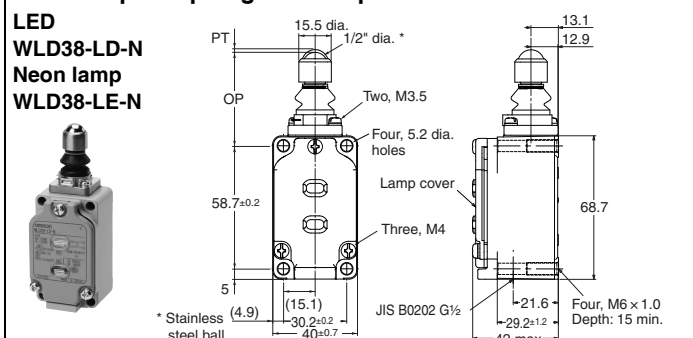
Sealed top-ball plunger

WLD38-N



Sealed top-ball plunger With operation indicator

LED
WLD38-LD-N
Neon lamp
WLD38-LE-N



Note: The photo shows the WLD38-LD-N model.

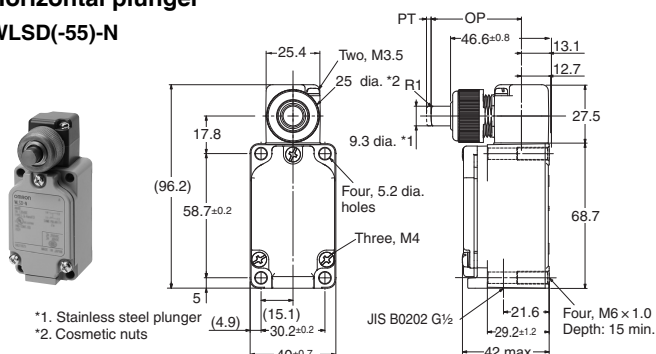
Note: Unless otherwise indicated, a tolerance of ± 0.4 mm applies to all dimensions.

Operating characteristics

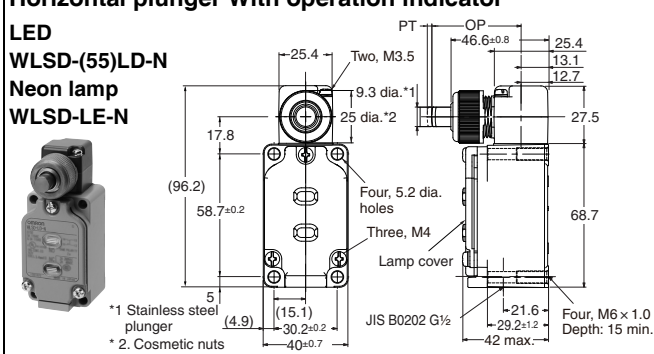
		Model	WLD28(-55)-N WLD28(-55)LD-N WLD28(-55)LE-N	WLD2(-55)-N WLD2(-55)LD-N WLD2(-55)LE-N	WLD18-N WLD18-LD-N WLD18-LE-N	WLD38-N WLD38-LD-N WLD38-LE-N
Operating force	OF	max.	16.67 N	26.67 N	26.67 N	16.67 N
Release force	RF	min.	4.41 N	8.92 N	8.92 N	4.41 N
Pretravel	PT	max.	1.7 mm	1.7 mm	1.7 mm	1.7 mm
Overtravel	OT	min.	5.6 mm	5.6 mm	6.4 mm	5.6 mm
Movement Differential	MD	max.	1 mm	1 mm	1 mm	1 mm
Operating position	OP		44±0.8 mm	44±0.8 mm	34±0.8 mm	44.5±0.8 mm
Total travel position	TTP	max.	39.5 mm	39.5 mm	29.5 mm	41 mm

Screw terminals

Horizontal plunger
WLS(55)-N

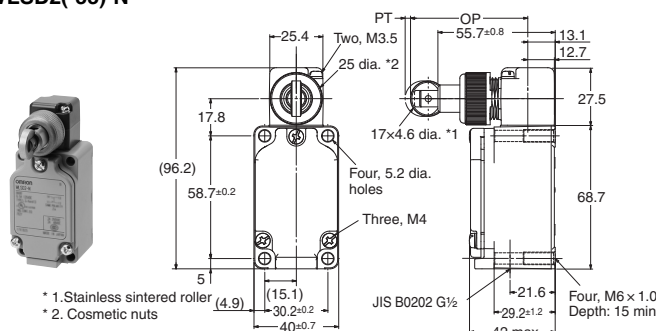


Horizontal plunger With operation indicator
LED
WLS(55)LD-N
Neon lamp
WLS(55)-LE-N

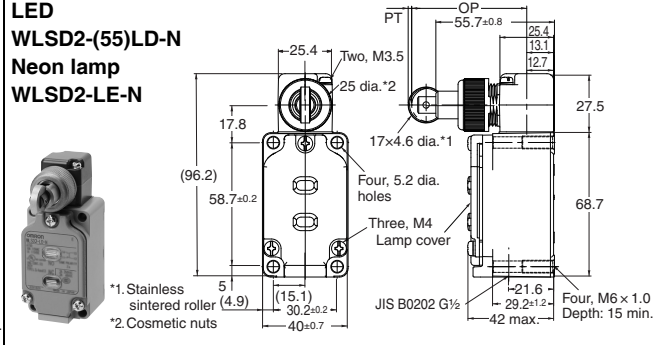


Note: The photo shows the WLS(55)-LD-N model.

Horizontal-roller plunger
WLS(2-55)-N

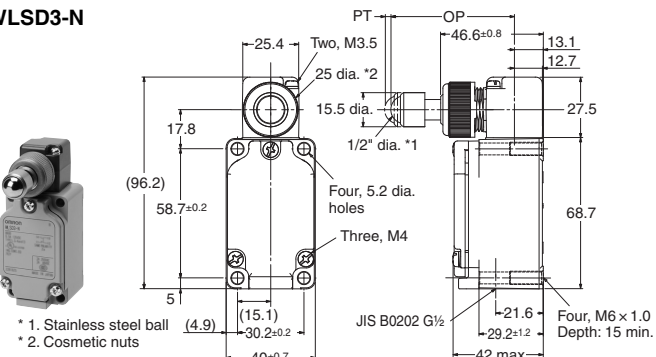


Horizontal-roller plunger With operation indicator
LED
WLS(2-55)LD-N
Neon lamp
WLS(2-55)-LE-N

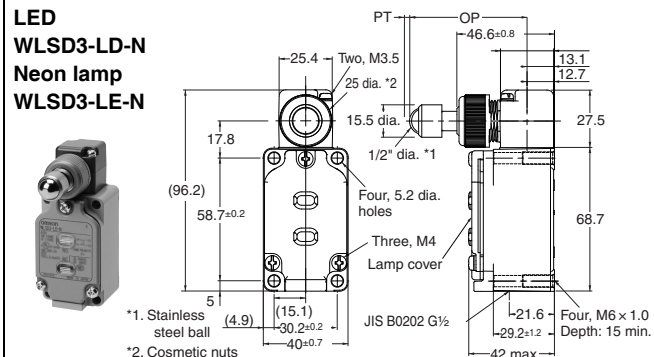


Note: The photo shows the WLS(2-55)-LD-N model.

Horizontal-ball plunger
WLS(3)-N



Horizontal-ball plunger With operation indicator
LED
WLS(3)-LD-N
Neon lamp
WLS(3)-LE-N



Note: The photo shows the WLS(3)-LD-N model.

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

Operating characteristics

		Model	WLS(55)-N WLS(55)LD-N WLS(55)-LE-N	WLS(2-55)-N WLS(2-55)LD-N WLS(2-55)-LE-N	WLS(3)-N WLS(3)-LD-N WLS(3)-LE-N
Operating force	OF	max.	40.03 N	40.03 N	40.03 N
Release force	RF	min.	8.89 N	8.89 N	8.89 N
Pretravel	PT	max.	2.8 mm	2.8 mm	2.8 mm
Overtravel	OT	min.	5.6 mm	5.6 mm	4 mm
Movement Differential	MD	max.	1 mm	1 mm	1 mm
Operating position	OP		40.6±0.8 mm	54.2±0.8 mm	54.1±0.8 mm

General-purpose Switches

Environment-resistant Switches

Spatter-prevention Switches

Long-life Switches

Accessories

Safety Precautions

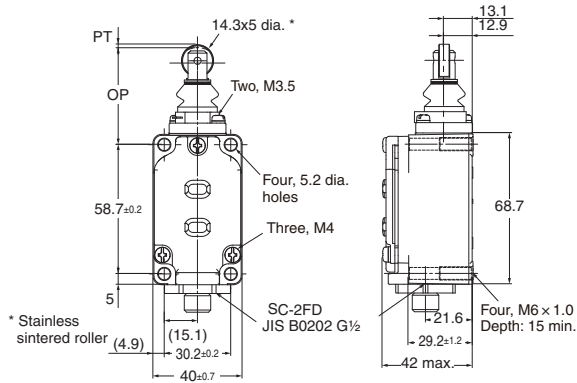
WL-N/WLG

Direct-wire connector

Sealed top-roller plunger With operation indicator

LED

WLD28-(55)LDK13-N
WLD28-(55)LDK43-N



Note: The photo shows the WLD28-LDK13-N model.

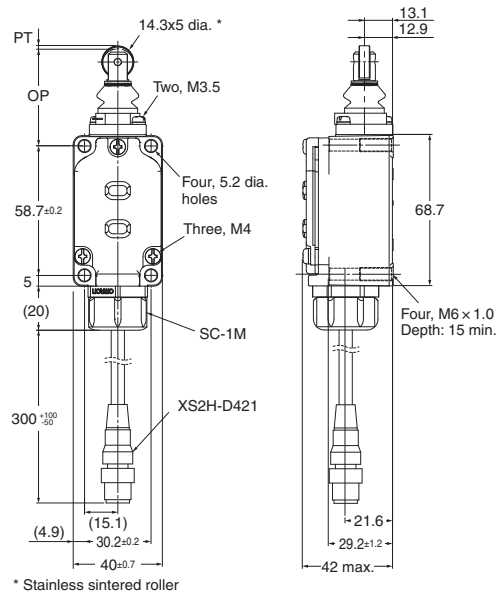
Pre-wired connectors

Sealed top-roller plunger With operation indicator

Threaded (M12)

LED

WLD28-(55)LD-M1J-N
WLD28-(55)LD-M1GJ-N
WLD28-(55)LD-DGJ-N



Note: The photo shows the WLD28-LD-M1J-N model.

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

Operating characteristics

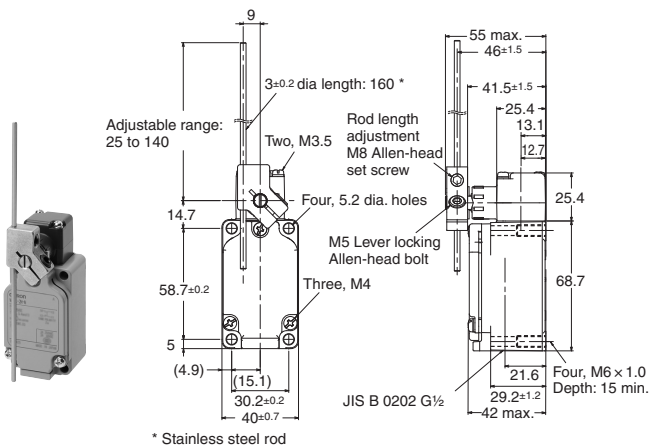
Model		WLD28-(55)LDK13-N WLD28-(55)LDK43-N WLD28-(55)LD-M1J-N WLD28-(55)LD-M1GJ-N WLD28-(55)LD-DGJ-N WLD28-(55)LD-DK1EJ-N
Operating force	OF max.	16.67 N
Release force	RF min.	4.41 N
Pretravel	PT max.	1.7 mm
Overtravel	OT min.	5.6 mm
Movement Differential	MD max.	1 mm
Operating position	OP	44±0.8 mm
Total travel position	TTP max.	39.5 mm

Flexible Rod

Screw terminals

Adjustable rod lever (25 to 140 mm)

WLCL(-55)-N
WLCL-2-N
WLCL-2N-N



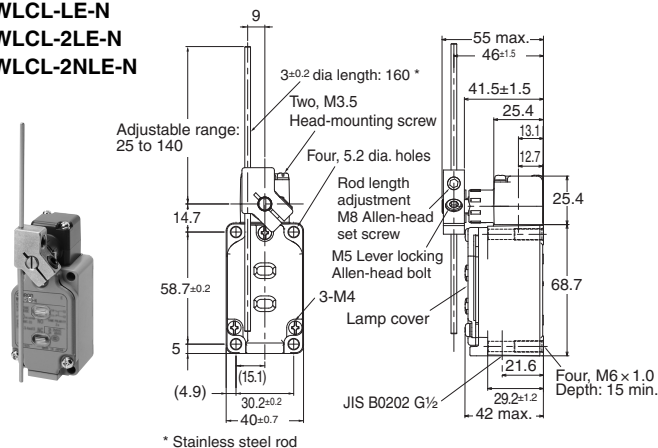
* Stainless steel rod

Note: The photo shows the WLCL-2N-N model.

Adjustable rod lever (25 to 140 mm)

With operation indicator

LED
WLCL(-55)LD-N
WLCL-2LD-N
WLCL-2NLD-N
Neon lamp
WLCL-LE-N
WLCL-2LE-N
WLCL-2NLE-N

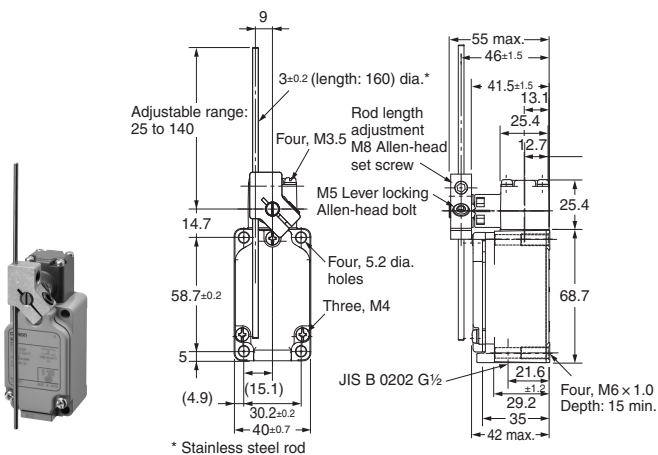


* Stainless steel rod

Note: The photo shows the WLCL-2LD-N model.

Adjustable rod lever (25 to 140 mm)

WLGL



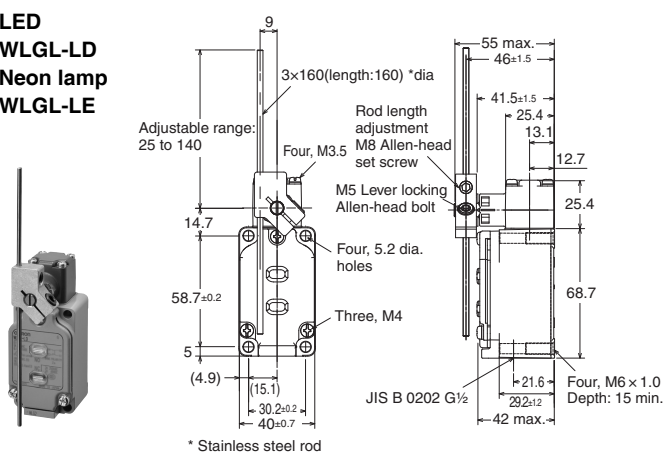
* Stainless steel rod

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

Adjustable Roller Lever (25 to 140 mm)

With operation indicator

LED
WLGL-LD
Neon lamp
WLGL-LE



* Stainless steel rod

Operating characteristics

Model		WLCL(-55)-N * WLCL-LD-N * WLCL-LE-N *	WLCL-2-N * WLCL-2LD-N * WLCL-2LE-N *	WLCL-2N-N * WLCL-2NLD-N * WLCL-2NLE-N *	WLGL * WLGL-LD * WLGL-LE *
Operating force	OF max.	1.39 N	1.39 N	1.39 N	2.84 N
Release force	RF min.	0.27 N	0.27 N	0.27 N	0.25 N
Pretravel	PT	15±5°	25±5°	20° max.	10° ^{+2°} _{-1°}
Overtravel	OT min.	70°	60°	70°	65°
Movement Differential	MD max.	12°	16°	10°	7°

* This is the value when the rod length is 140 mm.

General-purpose Switches

Environment-resistant Switches

Spatter-prevention Switches

Long-life Switches

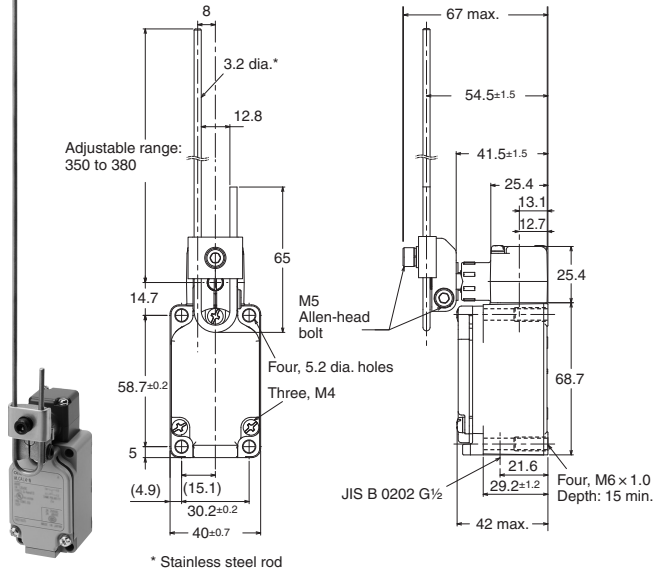
Accessories

Safety Precautions

Screw terminals

Adjustable rod lever (350 to 380 mm)

WLCAL4-N



Adjustable Roller Lever (350 to 380 mm)

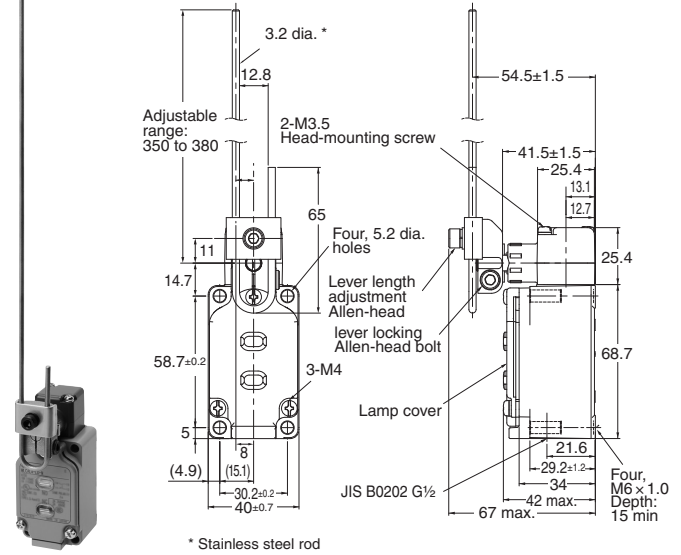
With operation indicator

LED

WLCAL4-LD-N

Neon lamp

WLCAL4-LE-N



Note: The photo shows the WLCAL4-LD-N model.

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

Operating characteristics

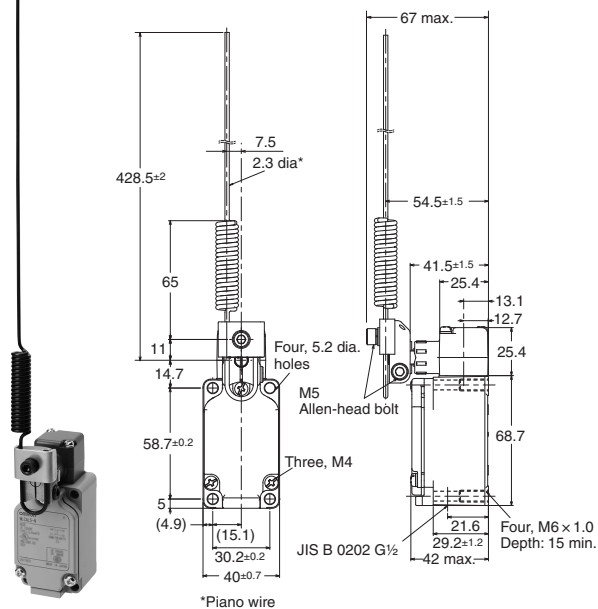
	Model	WLCAL4-N * WLCAL4-LD-N * WLCAL4-LE-N *
Operating force	OF max.	0.98 N
Release force	RF min.	0.15 N
Pretravel	PT	15±5°
Overtravel	OT min.	70°
Movement Differential	MD max.	12°

Note: With WLCAL4-N, WLCAL4-LD-N and WLCAL4-LE-N the actuator's tare is large, so depending on the installation direction, they may not be properly reset. Always install so that the actuator is facing downwards.

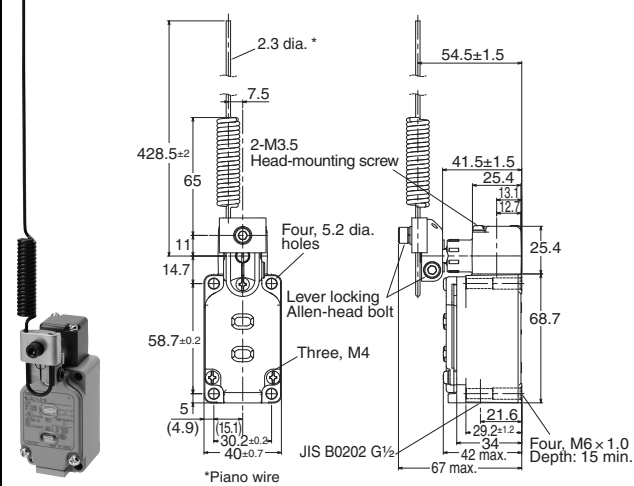
* This is the value when the rod length is 380 mm.

Screw terminals

Rod spring lever
WLCAL5-N



Rod spring lever With operation indicator
LED
WLCAL5-LD-N
Neon lamp
WLCAL5-LE-N



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

Model		WLCAL5-N *	WLCAL5-LD-N *	WLCAL5-LE-N *
Operating force	OF max.	0.9 N		
Release force	RF min.	0.09 N		
Pretravel	PT	15±5°		
Overtravel	OT min.	70°		
Movement Differential	MD max.	12°		

Note: With WLCAL5-N, WLCAL5-LD-N, and WLCAL5-LE-N, the actuator's tare is large, so depending on the installation direction, they may not be properly reset. Always install so that the actuator is facing downwards.

* This is the value when the rod length is 380 mm.

General-purpose Switches

Environment-resistant Switches

Spatter-prevention Switches

Long-life Switches

Accessories

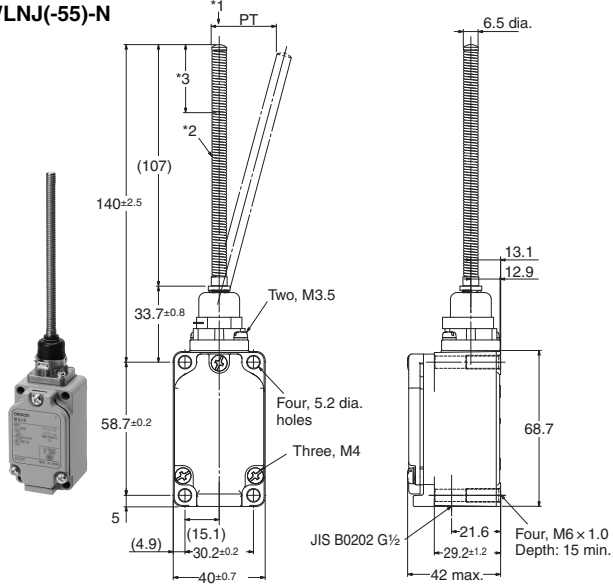
Safety Precautions

Flexible Rod

Screw terminals

Coil spring

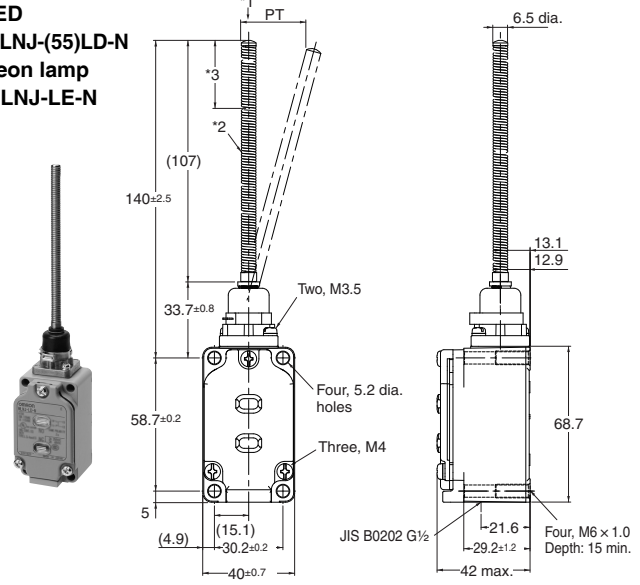
WLNJ(-55)-N



- *1. Do not operate the Switch in the direction of the axial center.
- *2. Stainless steel coil spring.
- *3. The range for operation is 1/3rd of the overall spring length from the end of the spring.

Coil spring With operation indicator

LED
WLNJ(-55)LD-N
Neon lamp
WLNJ-LE-N

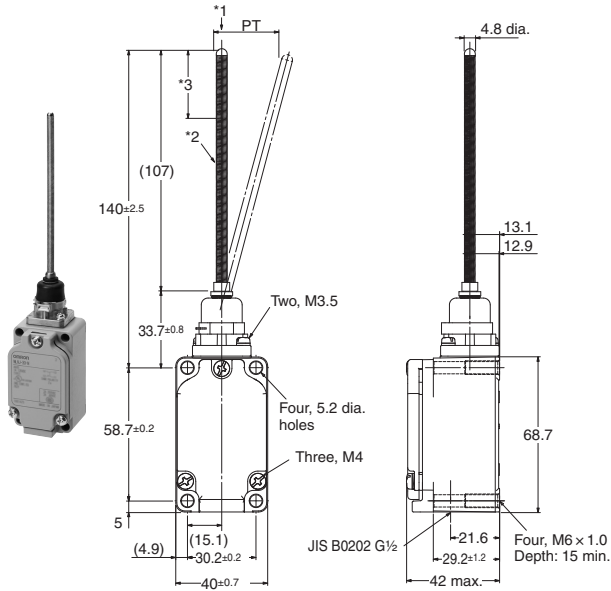


Note: The photo shows the WLNJ-LD-N model.

- *1. Do not operate the Switch in the direction of the axial center.
- *2. Stainless steel coil spring.
- *3. The range for operation is 1/3rd of the overall spring length from the end of the spring.

Coil Spring (Multi-wire)

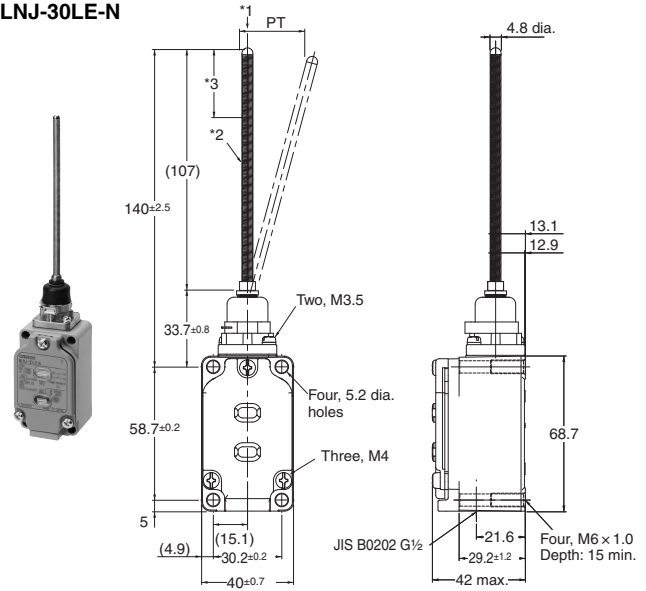
WLNJ-30-N



- *1. Do not operate the Switch in the direction of the axial center.
- *2. Piano wire coil spring.
- *3. The range for operation is 1/3rd of the overall spring length from the end of the spring.

Coil Spring (Multi-wire) With operation indicator

LED
WLNJ-30LD-N
Neon lamp
WLNJ-30LE-N



Note: The photo shows the WLNJ-30LD-N model.

- *1. Do not operate the Switch in the direction of the axial center.
- *2. Piano wire coil spring.
- *3. The range for operation is 1/3rd of the overall spring length from the end of the spring.

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

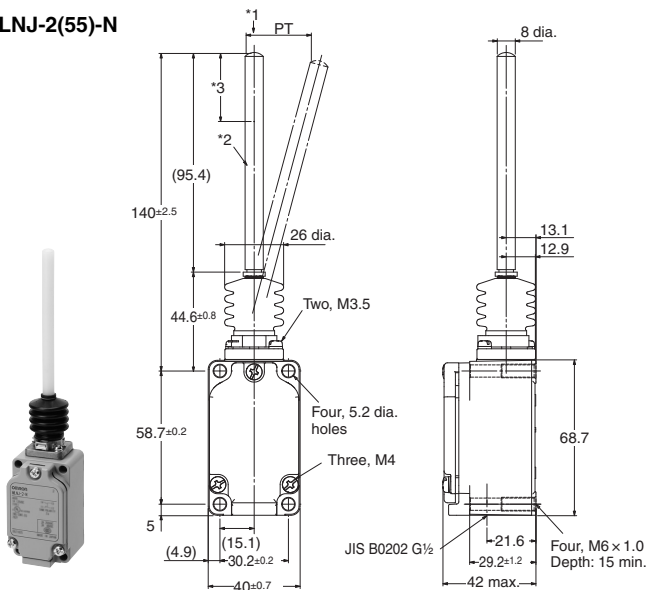
Operating characteristics

Model		WLNJ(-55)-N * WLNJ(-55)LD-N * WLNJ-LE-N *	WLNJ-30-N * WLNJ-30LD-N * WLNJ-30LE-N *
Operating force	OF	1.47 N	1.47 N
Pretravel	PT	20±10 mm	20±10 mm

* These values are for the top end of the spring, rod, or wire.

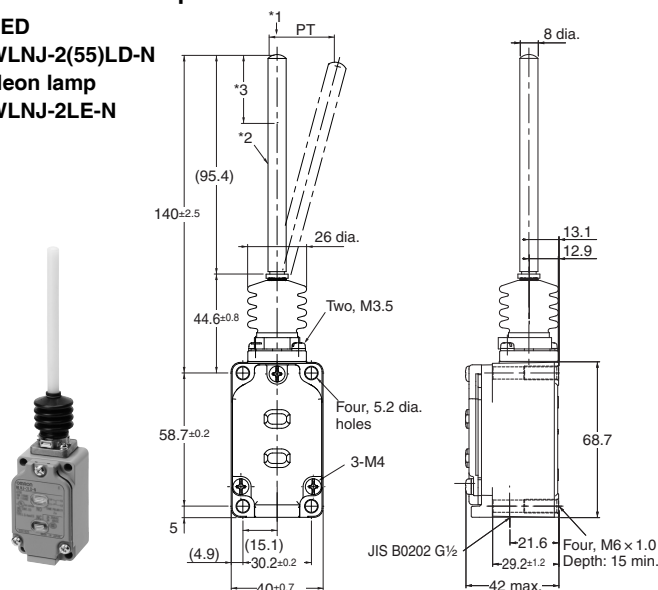
Flexible Rod
Screw terminals

Resin rod
WLNJ-2(55)-N



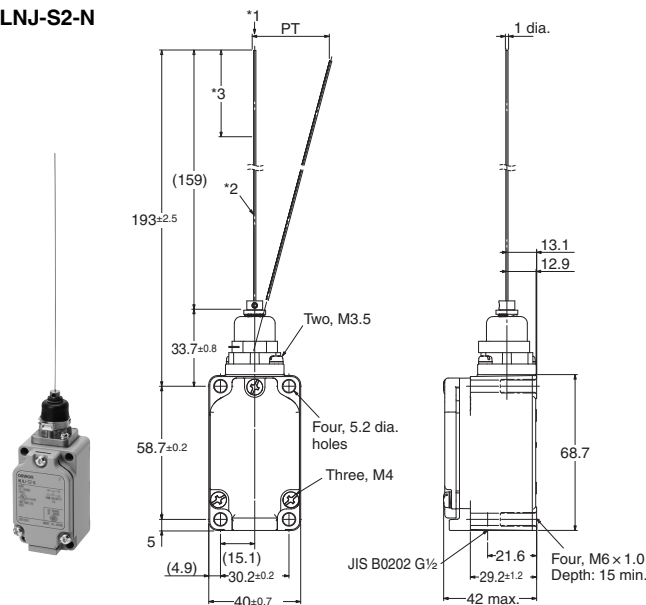
- *1. Do not operate the Switch in the direction of the axial center.
- *2. Polyamide Resin Rod.
- *3. The range for operation is 1/3rd of the overall rod length from the end of the rod.

Resin rod With operation indicator
LED
WLNJ-2(55)LD-N
Neon lamp
WLNJ-2LE-N



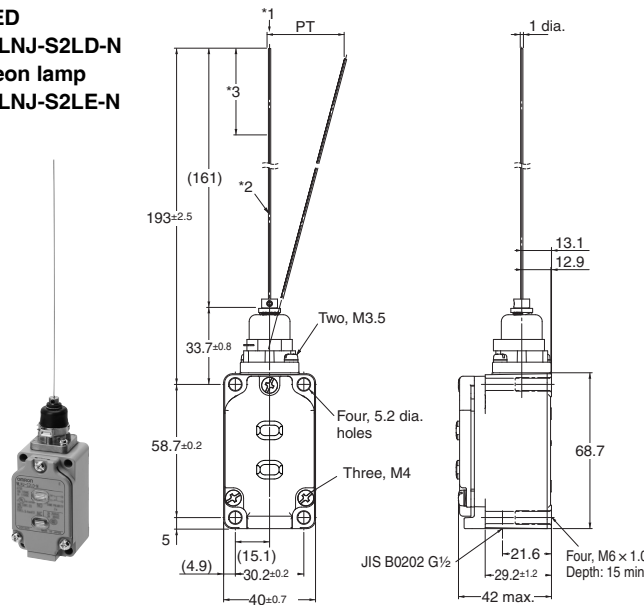
- Note:** The photo shows the WLNJ-2LD-N model.
- *1. Do not operate the Switch in the direction of the axial center.
 - *2. Polyamide Resin Rod.
 - *3. The range for operation is 1/3rd of the overall rod length from the end of the rod.

Steel wire
WLNJ-S2-N



- *1. Do not operate the Switch in the direction of the axial center.
- *2. Stainless steel wire.
- *3. The range for operation is 1/3rd of the overall wire length from the end of the wire.

Steel wire With operation indicator
LED
WLNJ-S2LD-N
Neon lamp
WLNJ-S2LE-N



- Note:** The photo shows the WLNJ-S2LD-N model.
- *1. Do not operate the Switch in the direction of the axial center.
 - *2. Stainless steel coil spring.
 - *3. The range for operation is 1/3rd of the overall spring length from the end of the spring.

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

Operating characteristics

Model		WLNJ-2(55)-N * WLNJ-2(55)LD-N * WLNJ-2LE-N *	WLNJ-S2-N * WLNJ-S2LD-N * WLNJ-S2LE-N *
Operating force	OF	1.47 N	0.28 N
Pretravel	PT	40±20 mm	40±20 mm

* These values are for the top end of the spring, rod, or wire.

General-purpose Switches

Environment-resistant Switches

Spatter-prevention Switches

Long-life Switches

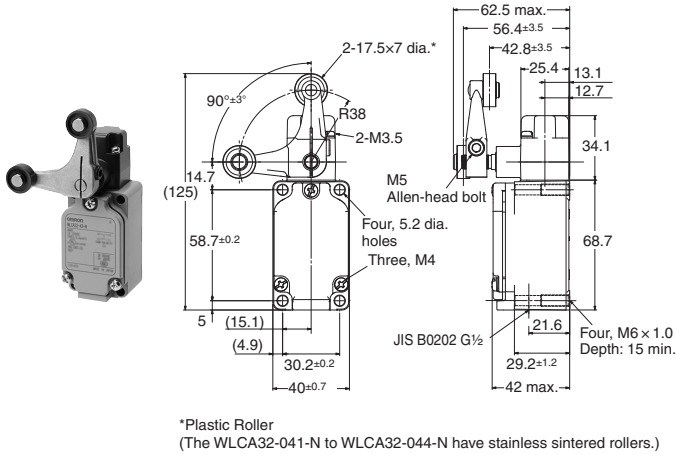
Accessories

Safety Precautions

Fork Lock Lever Screw terminals

WLCA32-41-N
WLCA32-42-N
WLCA32-43-N
WLCA32-44-N

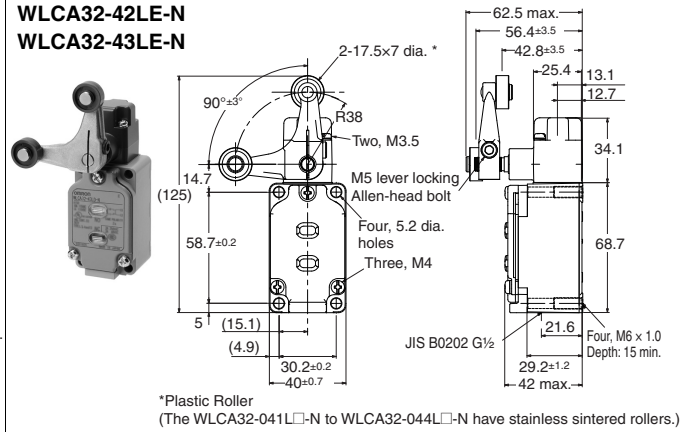
The WLCA32-41-N is shown in the following diagram.



Note: The photo shows the WLCA32-43-N model.

With operation indicator
LED
WLCA32-41LD-N
WLCA32-43LD-N
Neon lamp
WLCA32-41LE-N
WLCA32-42LE-N
WLCA32-43LE-N

The WLCA32-41□-N is shown in the following diagram.



Note: The photo shows the WLCA32-43LD-N model.

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

Operating characteristics

	Model	WLCA32-41 to WLCA32-44-N
Force necessary to reverse the direction of the lever	max.	11.77 N
Movement until the lever reverses		$50 \pm 5^\circ$
Movement until switch operation	max.	55°
Movement after switch operation	min.	35°