Ordering Information

General-purpose Switches

Standard Switches

Switches with Roller Lever Actuators

Basic Switches

Actuator	Roller lever: R38 	Roller lever: R50 	Roller lever: R63 
Pretravel (PT)	Model	Model	Model
15±5°	WLCA2-N	WLCA2-7-N	WLCA2-8-N
25±5°	WLCA2-2-N	—	—
20° max.	WLCA2-2N-N	—	—

Actuator	Adjustable roller lever 	Adjustable rod lever: 25 to 140 mm 	Adjustable rod lever: 350 to 380 mm 	Rod spring lever 
Pretravel (PT)	Model	Model	Model	Model
15±5°	WLCA12-N	WLCL-N	WLCAL4-N	WLCAL5-N
25±5°	WLCA12-2-N	WLCL-2-N	—	—
20° max.	WLCA12-2N-N	WLCL-2N-N	—	—

High-sensitivity Switches

Actuator	Roller lever: R38 	Adjustable roller lever 	Adjustable rod lever: 25 to 140 mm 
Load	Model	Model	Model
Standard load	WLG2	WLG12	WLGL
Microload	WL01G2	WL01G12	WL01GL

High-precision Switches

Actuator	Roller lever: R38 
Load	Model
Standard load	WLGCA2
Microload	WL01GCA2

Switches with Plunger Actuators

Basic Switches

Actuator	Sealed Top Plunger 	Sealed Top-roller plunger 	Sealed Top-ball plunger 	Top-roller plunger 
Pretravel (PT)	Model	Model	Model	Model
1.7 mm max.	WLD18-N	WLD28-N	WLD38-N	WLD2-N

Actuator	Horizontal plunger 	Horizontal-roller plunger 	Horizontal-ball plunger 
Pretravel (PT)	Model	Model	Model
2.8 mm max.	WLSD-N	WLSD2-N	WLSD3-N

Switches with Flexible Rod Actuators

Basic Switches

Actuator	Coil spring (spring diameter: 6.5) 	Coil spring (spring diameter: 4.8) 
Pretravel (PT)	Model	Model
20±10 mm	WLNJ-N	WLNJ-30-N

Actuator	Resin rod (rod diameter: 8) 	Steel wire (wire diameter: 1) 
Pretravel (PT)	Model	
40±20 mm	WLNJ-2-N	WLNJ-S2-N

Switches with Fork Lock Lever Actuator

Retention type Switches

Actuator	Fork lock lever 	Fork lock lever 	Fork lock lever 	Fork lock lever 
Pretravel (PT)	Model	Model	Model	Model
55° max.	WLCA32-41-N	WLCA32-42-N	WLCA32-43-N	WLCA32-44-N

General-purpose Switches

Operation indicator Switches

Switches with Roller Lever Actuators

Basic Switches

Actuator		Roller lever: R38 	Roller lever: R50 	Roller lever: R63 
Indicator *	Pretravel (PT)	Model	Model	Model
Neon lamp	15±5°	WLCA2-LE-N	WLCA2-7LE-N	WLCA2-8LE-N
	25±5°	WLCA2-2LE-N	—	—
	20° max.	WLCA2-2NLE-N	—	—
LED	15±5°	WLCA2-LD-N	WLCA2-7LD-N	WLCA2-8LD-N
	25±5°	WLCA2-2LD-N	—	—
	20° max.	WLCA2-2NLD-N	—	—

Actuator		Adjustable roller lever 	Adjustable rod lever: 25 to 140 mm 	Adjustable rod lever: 350 to 380 mm 	Rod Spring Lever 
Indicator *	Pretravel (PT)	Model	Model	Model	Model
Neon lamp	15±5°	WLCA12-LE-N	WLCL-LE-N	WLCAL4-LE-N	WLCAL5-LE-N
	25±5°	WLCA12-2LE-N	WLCL-2LE-N	—	—
	20° max.	WLCA12-2NLE-N	WLCL-2NLE-N	—	—
LED	15±5°	WLCA12-LD-N	WLCL-LD-N	WLCAL4-LD-N	WLCAL5-LD-N
	25±5°	WLCA12-2LD-N	WLCL-2LD-N	—	—
	20° max.	WLCA12-2NLD-N	WLCL-2NLD-N	—	—

High-sensitivity Switches

Actuator		Roller lever R38 
Indicator *	Pretravel (PT)	Model
Neon lamp	10° $^{+2°}_{-1°}$	WLG2-LE
LED		WLG2-LD

Actuator		Adjustable roller lever 	Adjustable rod lever: 25 to 140 mm 
Indicator *	Pretravel (PT)	Model	Model
Neon lamp	10° $^{+2°}_{-1°}$	WLG12-LE	WLGL-LE
LED		WLG12-LD	WLGL-LD

High-precision Switches

Actuator		Roller lever R38 
Indicator *	Pretravel (PT)	Model
Neon lamp	5° $^{+2°}_{0°}$	WLGCA2-LE
LED		WLGCA2-LD

Switches with Fork Lock Lever Actuator

Retention type Switches

Actuator		Fork lock lever 	Fork lock lever 	Fork lock lever 
Indicator *	Pretravel (PT)	Model	Model	Model
Neon lamp	55° max.	WLCA32-41LE-N	WLCA32-42LE-N	WLCA32-43LE-N
LED		WLCA32-41LD-N	—	WLCA32-43LD-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).

Specifications

General-purpose/Environment-resistant Switches

Ratings

Wiring Specifications

Screw terminal types

Standard-load Switches (excluding micro-load Switches)

Item	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
Basic	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 High-precision *1	AC 125	5		—		—		—	
	250	5							
	DC 125	0.4		—		—		—	
	250	0.2							

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.

Inrush current	NC	30 A max. (15 A max. *1)
	NO	20 A max. (10 A max. *1)

*1. For High-sensitivity and High-precision Switches.

Operating characteristics	Minimum applicable load
Basic	5 VDC 1 mA, resistive load, P level
High-sensitivity, High-precision	5 VDC 160 mA, resistive load, N level reference value

Direct-wired connector and Pre-wired Connector type

Item	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
Basic	AC 115	3		3	1.5	3		3	2.5
	DC 12	3		3		3		3	
	24	3		3		3		3	
	115	0.8		0.2		0.8		0.2	
High-sensitivity High-precision *1	AC 115	3		—		—		—	
	DC 115	0.4		—		—		—	

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.

Inrush current	NC	3 A max.
	NO	3 A max.

Operating characteristics	Minimum applicable load
Basic	5 VDC 1 mA, resistive load, P level
High-sensitivity, High-precision	5 VDC 160 mA, RESISTIVE Load, N level reference value

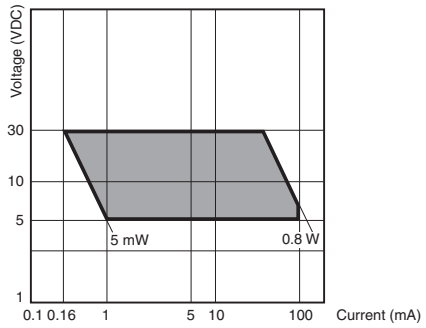
Micro-load Switches (Refer to these ratings before using the product.)

Rated voltage (V)	Rated current (A) - Resistive load
AC125	0.1
DC 30	

Note: The load is a resistive load.

Operation in the following ranges will produce optimum performance.

Recommended load range	5 to 30 VDC 0.16 to 100 mA



Operating characteristics	Minimum applicable load
High-sensitivity, High-precision	5 VDC 1 mA N level reference value

Operation indicator Switches

Operation Indicator

Model		Max. rated voltage (V)	Leakage current (mA)
WL-LE-N WL-LE	Neon lamp	125 VAC	Approx. 0.6
		250 AC	Approx. 1.9
WL-LD-N WL-LW-N WL-LD	LED	10 to 24 VAC/DC	Approx. 0.4
		115 VAC/DC	Approx. 0.5

Characteristics

Degree of protection		IP67
Durability *1	**Mechanical**	15,000,000 operations min. *2
	Electrical	750,000 operations min. (3 A at 250 VAC, resistive load) *3
Operating speed		1 mm to 1 m/s (for WLCA2-N)
Operating frequency	**Mechanical**	120 operations/minute min.
	Electrical	30 operations/minute min.
Rated frequency		50/60 Hz
Insulation resistance		100 MΩ min. (at 500 VDC)
Contact resistance		25 mΩ max. (initial value for the built-in switch when tested alone)
Dielectric strength	**Between terminals of the same polarity**	1,000 VAC (600 VAC) 50/60 Hz 1 min
	Between currentcarrying metal part and ground	2,200 VAC (1,500 VAC) 50/60 Hz 1 min *5
	Between each terminal and non-currentcarrying metal part	2,200 VAC (1,500 VAC) 50/60 Hz 1 min *5
Vibration resistance	**Malfunction**	10 to 55 hz, 1.5-mm double amplitude *6
Shock resistance	**Destruction**	1,000 m/s² max.
	Malfunction	300 m/s² *6
Ambient operating temperature		-10 to +80°C (with no icing) *7
Ambient operating humidity		35% to 95% RH
Weight		Approx. 255 g (for WLCA2-N)

Note: 1. The above figures are initial values.
2. The figures in parentheses for dielectric strength are those for the high-sensitivity and high-precision switches models.

*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. High-sensitivity models and Flexible Rod models: 10 million operations min.
500,000 operations min. for Weather-resistant models.
*3. High-sensitivity models, High-precision models, and Weather-proof models are 500,000 operations min.
Micro-load models are 1 million operations min.
Contact your OMRON representative for information on Airtight models and Hermetic models.
*4. Micro-load models and Weather-proof models are 50 mΩ or less (default value, built-in switch only).
*5. Sensor I/O connector type is 1,500 V.
*6. Except Flexible Rod models. Micro-load models are 200 m/s² max.
*7. For low-temperature models this is –40°C to +40°C (with no icing). For heat-resistant models the range is +5°C to +120°C.