General-purpose Limit Switch

HL-5000

CSM_HL-5000_DS_E_3_2

Economical, Miniature Limit Switch Boasting Rigid Construction

- The Head, Box, and Cover mate with ridged surfaces to maintain strength.
- A unique Head structure provides a large OT for smooth operation.
- Easy-to-wire conduit opening design.
- Ideal for application in printing machines, forming machines, and light machines.
  (High Switches with high sealing characteristics, such as WL or D4C Switches, in locations subject to oil, water, or precipitation.)
- Models with grounding terminals conform to the CE marking.
- Approved by CCC (Chinese standard).
  (Ask your OMRON representative for information on approved models.)

⚠ Be sure to read *Safety Precautions* on page 4 to 5 and *Safety Precautions for All Limit Switches*.

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

Model Number Structure

Model Number Legend

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

HL-5□□
(1)(2)

(1) Actuators

000: Roller lever
030: Adjustable roller lever
050: Adjustable rod lever
100: Sealed plunger
200: Sealed roller plunger
300: Coil spring

(2) Ground Terminal Specifications

Blank : Without ground terminal
G : With ground terminal/M5 tapping on the rear side

Ordering Information

Actuator	Model
Roller lever	HL-5000 *
Adjustable roller lever	HL-5030 *
Adjustable rod lever	HL-5050 *
Sealed plunger	HL-5100 *
Sealed roller plunger	HL-5200
Coil spring	HL-5300

* HL-5000 Limit Switches are offered with a choice of ground terminal/M5 tapping on the rear side conforming to various standards. When placing an order, add the code to the model number to indicate if ground terminal/M5 tapping on the rear side is required.
-G: with ground terminal/M5 tapping on the rear side.

Specifications

Approved Standards

Agency	Standard	File No.
CCC (CQC)	GB14048.5	2003010303077624

Note: Ask your OMRON representative for information on approved models.

Ratings

Rated voltage	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	5		1.5	0.7	3		2	1
250 VAC	5		1	0.5	3		1.5	0.8
12 VDC	5		3		4		3	
24 VDC	5		3		4		3	
125 VDC	0.4	0.2	–		–		–	
250 VDC	0.4	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. Lamp load has an inrush current of 10 times the steady-state current.
4. Motor load has an inrush current of 6 times the steady-state current.

Inrush current	NC	24 A max.
	NO	12 A max.

Approved Standard Ratings

CCC (GB14048.5)

Applicable category and ratings
AC-15 3 A/250 VAC

Characteristics

Degree of protection		IP65
Durability *	**Mechanical**	10,000,000 operations min. (under rated conditions)
	Electrical	See the following *Electrical Durability*.
Operating speed		5 mm/s to 0.5 m/s
Operating frequency	**Mechanical**	120 operations/min
	Electrical	30 operations/min
Insulation resistance		100 MΩ min. (at 500 VDC)
Contact resistance		25 mΩ max. (initial value)
Dielectric strength		1,000 VAC, 50/60 Hz for 1 min between terminals of the same polarity
		1,500 VAC, 50/60 Hz for 1 min between current-carrying metal parts and ground
		1,500 VAC, 50/60 Hz for 1 min between each terminal and non-current-carrying metal part
Rated frequency		50/60 Hz
Vibration resistance	**Malfunction**	10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	**Destruction**	1,000 m/s² max.
	Malfunction	300 m/s² max.
Ambient operating temperature		–5°C to +65°C (with no icing)
Ambient operating humidity		35% to 95%RH
Weight		Approx. 130 to 190 g

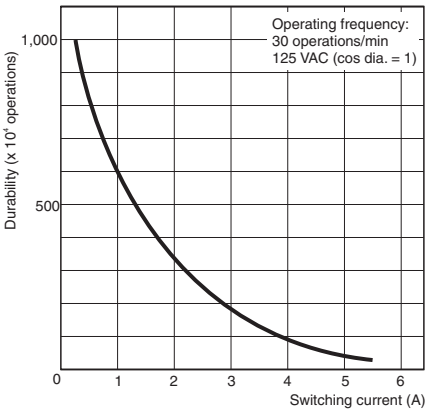
Note: 1. The above figures are initial values.
2. The above characteristics may vary depending on the model. For further details, contact your OMRON sales representative.

* 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.

Engineering Data

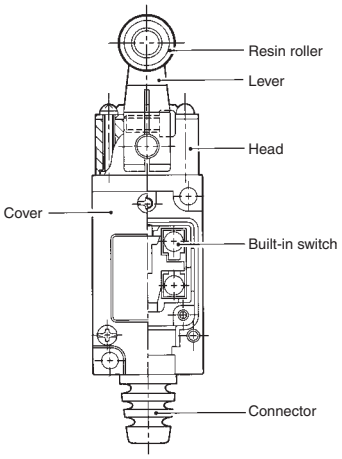
Electrical Durability (cos dia. =1)

(Operating temperature: +5°C to +35°C, Operating humidity: 40% to 70%RH)



Structure and Nomenclature

Structure



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