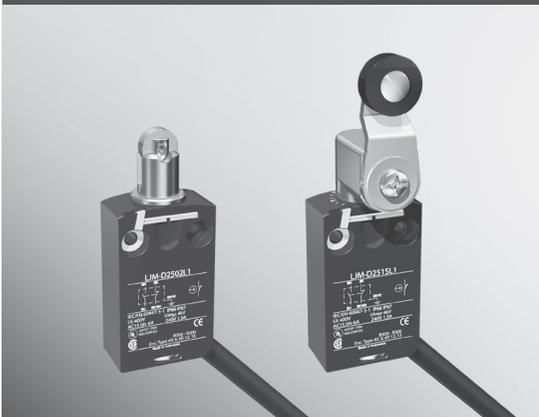


Compact Die-Cast Limit Switches with Positive Opening Mechanism



LJM-D Series

EN-compliant switches, meeting global standards. Switches certified to meet EN, UL and CSA standards



- With UL/CSA/CE marking (excluding some models)
-  Positive opening mechanism (N.C. contact only)
- Compact size
- Superior IP67 seal
- Preleaded
- Cabling both lengthwise and crosswise from the switch is possible, allowing reduced stress on the cable.

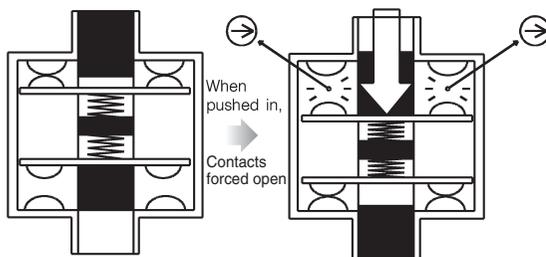
ORDER GUIDE

Actuator type	Cable length	Catalog listing
Metal roller plunger 	1 m	LJM-D2502L1
	3 m	LJM-D2502L3
Resin roller lever 	1 m	LJM-D2515L1
	3 m	LJM-D2515L3

INTERNAL SWITCH

Internal switches in the LJM-D Series have an N.C./N.O. electrically independent contact (Zb) structure.

The positive opening mechanism is used to forcibly open the contacts (N.C. contacts only) even if they are fused accidentally.

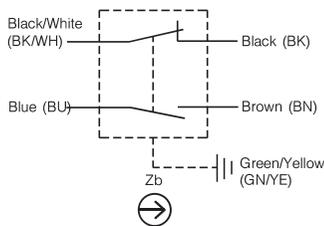


SPECIFICATIONS

Standards	Compliance	Product related: IEC 60947-5-1☞, EN 60947-5-1☞, Machine related: IEC 60204-1, EN 60204-1
	Certification	UL 508, CSA C22-2No.14
Structure	Ingress protection	IP66, IP67 (IEC 60529, JIS C 0920)
	Electrical shock protection	class I (IEC 61140)
	Pollution degree	3
	Internal switch	Slow action: 1N.C.+1N.O.(BBM)
Electrical performance	Electrical rating	AC-15; B300 (Ue=240V, Ie=1.5A) DC-13; R300 (Ue=250V, Ie= 0.1A)
	Insulation resistance	Between same-polarity terminals: 100 MΩ or more Between each terminal and non-live metal part: 100 MΩ or more
	Rated thermal current (Ith)	6A
	Short-circuit protection	6A breaking fuse, type gG (gl)
	Rated insulation voltage (Ui)	400V IEC 60947-5-1, 300V UL508
	Conditional rated short-circuit current	1,000A
	Rated impulse withstand voltage (Uimp)	4,000V
Mechanical performance	Impact resistance	250 m/s ² (18 ms) IEC 60068-2-27
	Vibration resistance	250 m/s ² (10 to 500 Hz) IEC 60068-2-6
	Allowable operating speed (with 30° dog)	Minimum operating speed: LJM-D2502L ☐0.1 m/s, LJM-D2515L ☐0.3 m/s Maximum operating speed: LJM-D2502L ☐0.5 m/s, LJM-D2515L ☐1.5 m/s
	Product life	Mechanical 10 million operations or more Electrical 2 million operations (at up to 3,600 operations/hour)
Ambient conditions	Operating temperature	25 to +70°C (without freezing)
	Operating humidity	Max. 85%RH
	Storage temperature	-40 to +70°C
Tightening torque	Switch body	1.2 to 1.5 N·m (M4 hexagon socket head cap bolt)

		LJM-D2502L☐		LJM-D2515L☐
		Vertical operation	Dog (30°) operation	
Operating characteristics	O.F. (max. operating force needed for N.C. operation)	8.5 N	7.0 N	0.1 N·m
	P.O. (min. travel to positive opening position)	3.1 mm	5.6 mm	45°
	P.O.F. (minimum force for positive opening)	42.5 N	35 N	0.5 N·m
	PT1 (pretravel for N.C. operation)	(1.8 mm)	(3.1 mm)	(25°)
	PT2 (pretravel for N.O. operation)	(2.6 mm)	(4.6 mm)	(36°)
	T.T. (total travel)	(5 mm)	—	(90°)

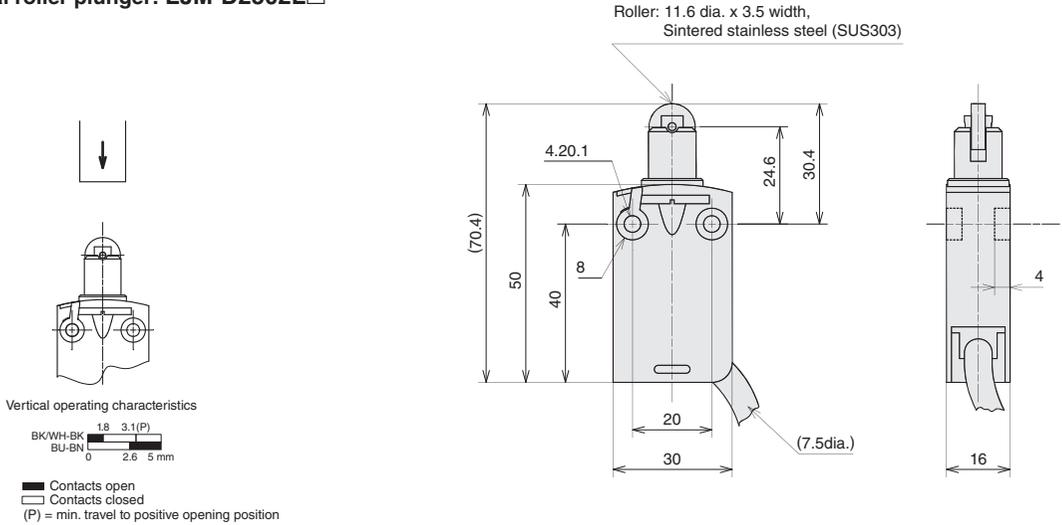
CONTACT FORM AND WIRING



OPERATING CHARACTERISTICS AND EXTERNAL DIMENSIONS

(unit: mm)

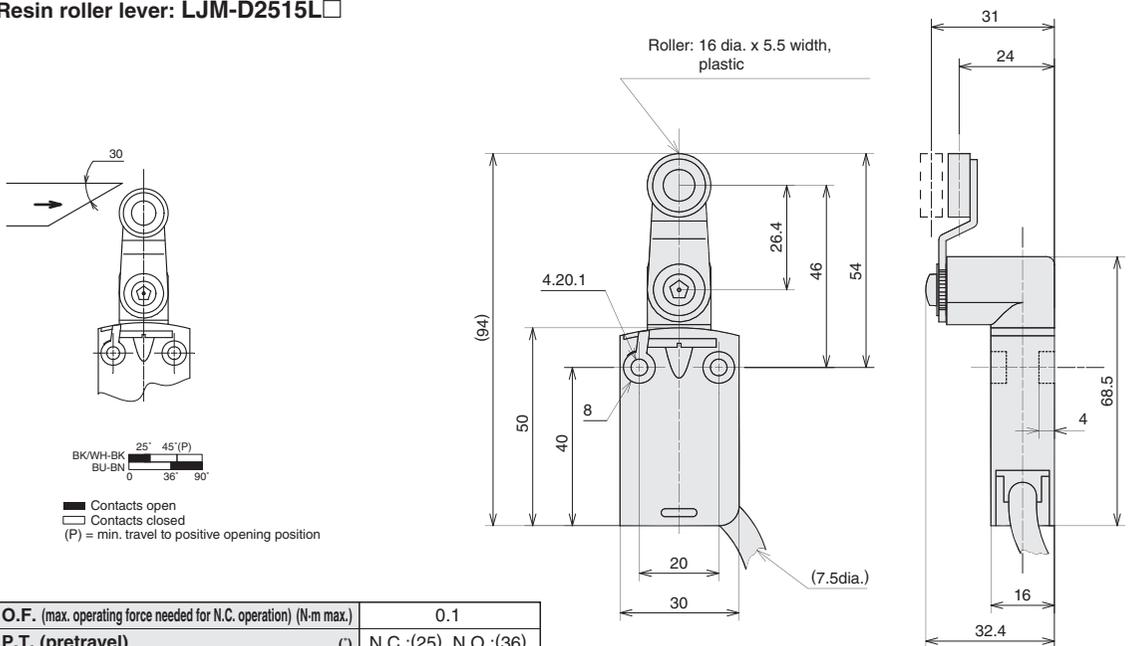
Metal roller plunger: LJM-D2502L□



O.F. (max. operating force needed for N.C. operation)	(N max.)	8.5
P.T. (pretravel)	(mm)	N.C.:(1.8), N.O.:(2.6)
T.T. (total travel)	(mm)	(5)
P.O. (min. travel to positive opening position)	(mm min.)	3.1
P.O.F. (min. force for positive opening)	(N min)	42.5

- Note 1. Housing is made of zinc alloy painted blue.
 Note 2. Cable is oil-resistant vinyl round cable, 0.75 mm², 5-core wire. Outside dia.: approx. 7.5 mm. Sheath color: black.
 Note 3. Dimensional tolerance is ±0.4 unless otherwise specified.

Resin roller lever: LJM-D2515L□



O.F. (max. operating force needed for N.C. operation)	(N-m max.)	0.1
P.T. (pretravel)	(°)	N.C.:(25), N.O.:(36)
T.T. (total travel)	(°)	90
P.O. (min. travel to positive opening position)	(° min.)	45
P.O.F. (min. force for positive opening)	(N-m min.)	0.5

- Note 1. Housing is made of zinc alloy painted blue.
 Note 2. Cable is oil-resistant vinyl round cable, 0.75 mm², 5-core wire. Outside dia.: approx. 7.5 mm. Sheath color: black.
 Note 3. Dimensional tolerance is ±0.4 unless otherwise specified.

PRECAUTIONS FOR USE

1. Mounting the switch

- Always tighten each part of the safety switch to the tightening torque recommended in the product specifications. Tightening any part excessively, might damage the threads and/or other parts.
- Mount the dog so that no force is directly applied to the actuator in the free state.
- Do not use silicone adhesive or silicone grease. Doing so might result in faulty electrical contact.

2. Wiring

- Do not do wiring work with the power ON. Doing so might cause an electrical shock or cause the device to operate unexpectedly.

3. Adjustment

- Do not apply excessive force (5 times larger than the O.F.) to the actuator when it is beyond the operating limit position. Doing so might break the switch.
- Adjust the actuator motion so that it exceeds the specified P.O. (travel to positive opening position) value but not the operating limit position.

4. Environment

- Do not use the switch in an environment where strong acid or alkali is directly splashed onto it.

Before use, thoroughly read the "Precautions for use" and "Precautions for handling" in the Technical Guide on pages D-111 to D-122 as well as the instruction manual and product specification for this switch.