

OMRON

Model WL

Two-circuit Limit Switch

Instruction Sheet

Please read all instructions to ensure proper use and application of the switch.
Keep this instruction sheet for future reference.



0685886-9H

OMRON Corporation

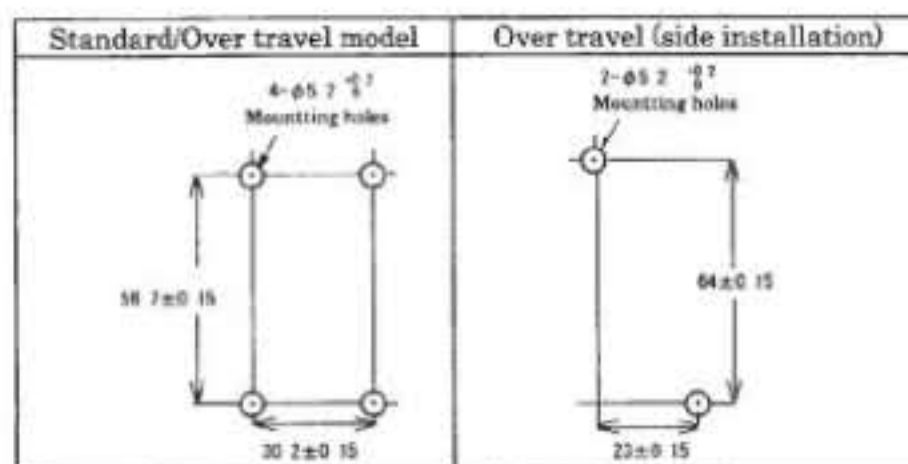
- Never wire to the wrong terminals.
- Do not drop the switch and disassemble the internal switch.

Usage

Environment

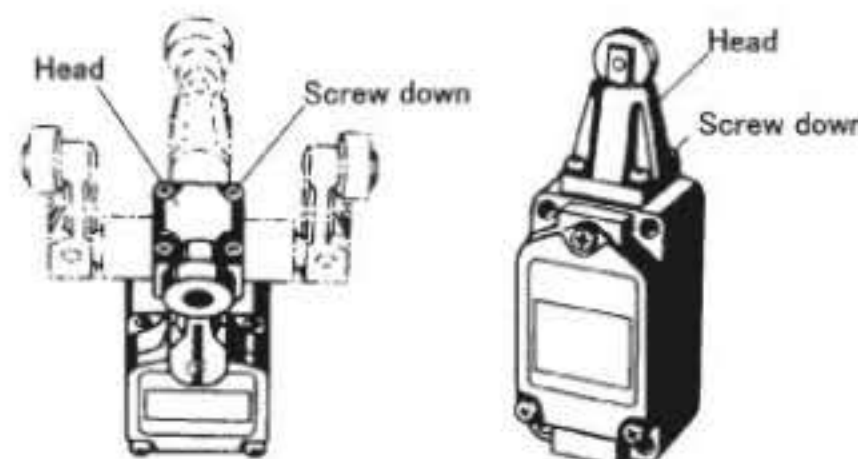
- (1) Make sure to check influence of the environment upon the switch when using the ambient condition of oil and chemicals. Certain kinds of oil and chemicals may bring sealing degradation, which may cause faulty contact, faulty insulation, electric leakage or burnout.
- (2) Do not use the switch under any of the conditions mentioned below.
 - Frequent temperature changes.
 - High humidity or where dew condensation may be generated.
 - Where the switch is exposed to severe vibration.

Mounting



Changing direction of the head

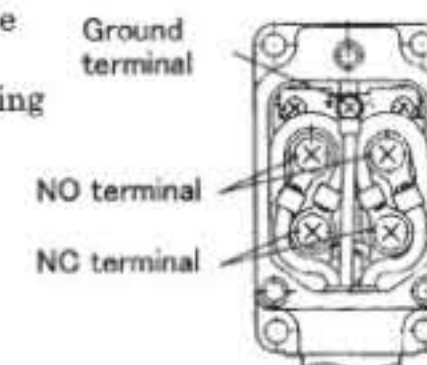
- By removing the screws in the four corners of the head, the head can be set any of four directions. Be sure to change the plunger for internal operations at the same time.
(The operational plunger does not need to be change on overtravel general-purpose and high-sensitivity models.)
The roller plunger model can be set in either two positions at 90°.
WLCA2-2N and WL01CA2-2N can only be set in either the forward or backward direction.



Built-in Switch

- Do not remove or replace the built-in switch. If the position of the built-in switch moves, it can cause reduce performance, and if the insulation(separator) sheet moves, the insulation may become ineffective.

To keep insulation distance and prevent sealing gap, wire according to right wiring figure.

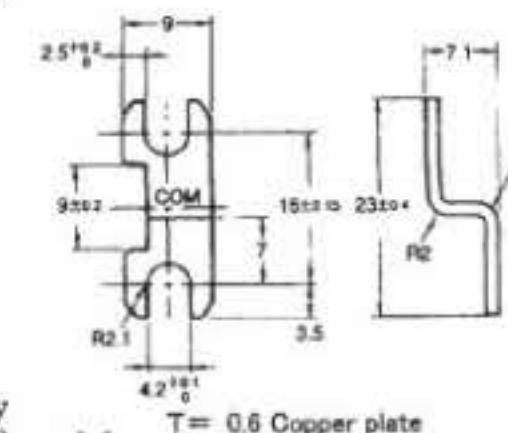


Connectors

- Tighten the connector with the appropriate torque to prevent deformation.
- Use the OMRON type SC connector series, which is prepared separately, suitable for outer diameter of cable and inner diameter of seal rubber.
- Make sure to wrap the connector with the seal tape, except the connector which has O-ring, to keep the sealability.
- To conform to CSA, use a CSA certified water tight treated conduit hub.

Terminal Plate

- By using short circuit plate as shown, the switch can be fabricated into a Single-Polarity Double-Throw(SPDT) model.
(Part Number: WL Terminal Plate)



Cautions

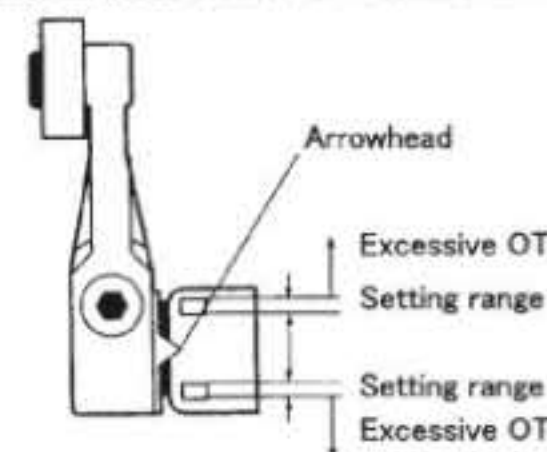
- Be sure to ground the ground terminal through an appropriate wire. If not, there is the possibility that electrical shock occurs.
- Do not touch charged switch terminals while the switch has carry current, otherwise there is the possibility that electrical shock occurs.
- Do not disassemble the limit switch or touch inside of it under supplying power, otherwise there is the possibility that electrical shock occurs.
- Do not touch the wire or rod type actuator in order to prevent injury.
- Connect a fuse which has 1.5 to 2 times higher breaking current than the switch rated current to the switch in series in order to prevent the switch from short-circuit damage. On the occasion when using the switch with EN ratings, use a 10A fuse that complies IEC269, either type gI or gG.
- Do not use the switch in place with explosive or flammable gas.
- Be sure to keep the load current less than the rated value.
- The limit switch life expectancy varies with switching conditions. Before using limit switch, be sure to test the switch under actual conditions. Make sure that the number of switching operations is within the permissible range.

Correct Tightening Torque

Type	Torque	Screw size
Head mounting screw	0.78 to 0.88N·m	M3.5
Allen-head bolt(for securing the roller lever)	4.90 to 5.88N·m	M5
Allen-head bolt(for securing the adjustable rod lever)	8.04 to 9.22N·m	M8
Cover mounting screw	1.18 to 1.37N·m	M4
Terminal screw	0.59 to 0.78N·m	M4
Unit mounting screw	4.90 to 5.88N·m	M5
Connector	1.77 to 2.16N·m	G1/2 or 1/2-14NPT or PG13.5

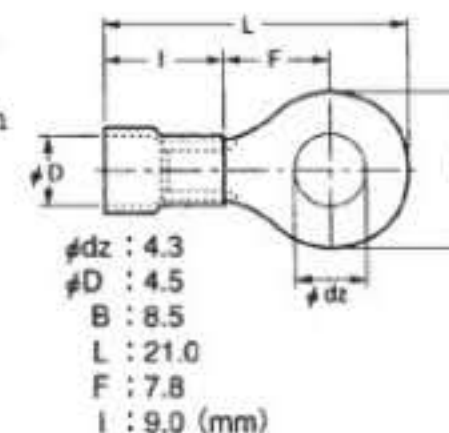
Overtravel Markers

- To allow the roller lever type actuator to travel properly, set the roller lever according to the dog or cam stroke so that the arrowhead of the lever is positioned within overtravel markers as shown. For WLD2(plunger type), the proper setting range is between two scratched lines of plunger.



Wiring

- Use 1.25mm² lead wire in size and M4 crimp terminals with insulation tube for wiring.



Crimp terminal Dimensions

Suitability for Use

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of the products in the customer's application or use of the product. Take all necessary steps to determine the suitability of the product for the systems, machines, and equipment with which it will be used. Know and observe all prohibitions of use applicable to this product. NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM. See also Product catalog for Warranty and Limitation of Liability.

Local support office:

Contact the following sales offices about product information.

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