

■ Features

- Built-in device suitable for touch detection of amusement and game equipment.
- A touch switch tailored to the application can be realized by simply screwing the electrodes of the product directly onto the conductive material.
- Utilizing the FG terminal makes it easy to prevent static electricity from entering the electrodes from the human body.
- 5 to 15 VDC compatible, open collector output.



■ Model Number Legend

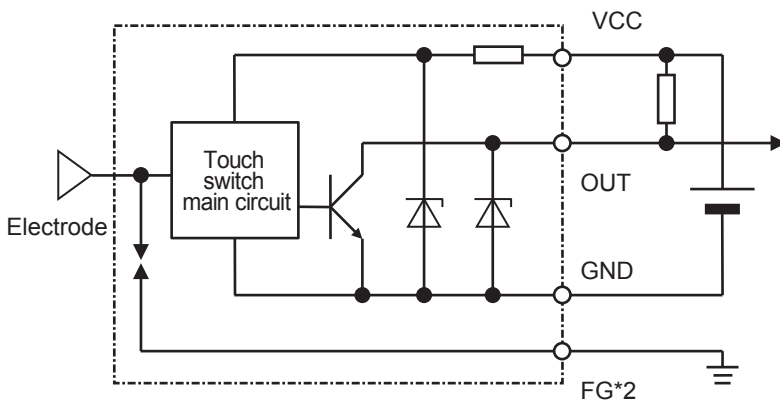
W2GJ - L6 (1) Touch switch
 (1) (2) (2) Series name

■ Ratings / Performance

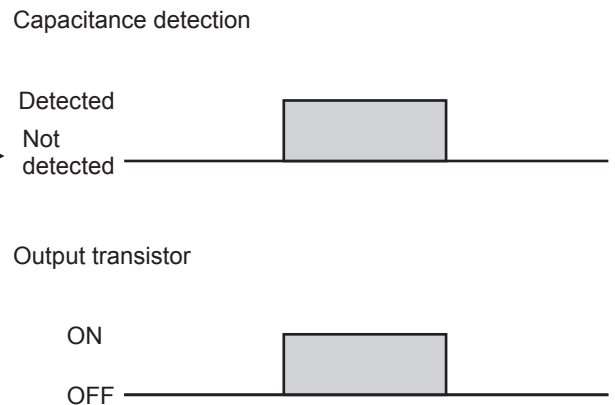
Item	Ratings / Performance
Detection capacitance (*1)	35 ± 7 pF
Power supply voltage	5 (-10%) to 15 (+10%) VDC
Output	Open collector (max. output current: 10 mA)
Operation mode	When detecting capacitance (human touch detected): Output transistor ON When not detecting capacitance (no human touch detected): Output transistor OFF
Current consumption	10 mA or less
Influence of voltage	Within the range of ±10% of the rated power supply voltage, the rate of change of the detection capacitance relative to the rated power supply voltage must be within ±10%.
Influence of temperature	Within the ambient temperature range during operation, the rate of change relative to the detection capacitance at +23°C must be within ±10%.
Ambient temperature	Operating: -10 to 60°C (with no icing or condensation) Storage: -20 to 70°C (with no icing or condensation)
Ambient humidity	25 to 85% RH

*1 Detection capacitance means the capacitance value at which the detection state is reached when a capacitance is added between the electrode and the GND terminal of the touch switch circuit.

■ Output Stage Circuit Diagram

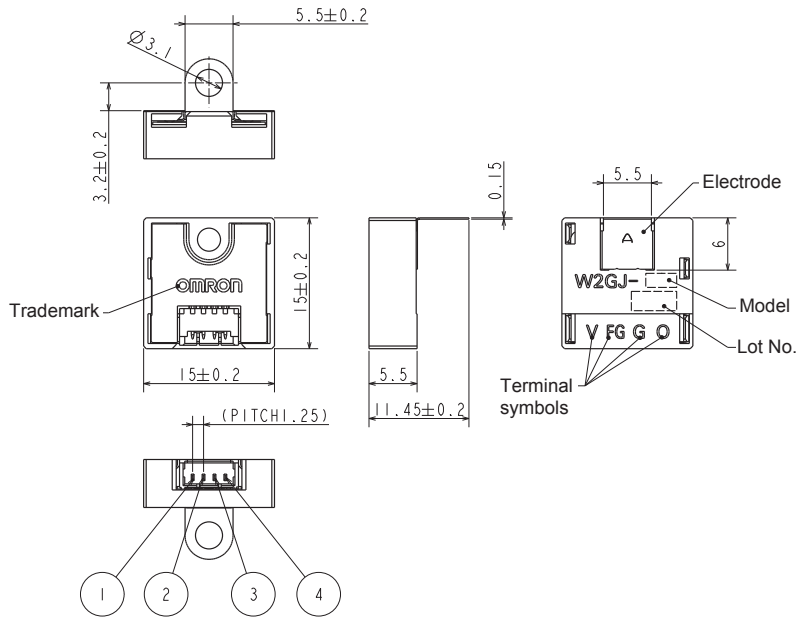


■ Operation Chart



*2 We recommend that the FG (frame ground) terminal be connected to a stable potential such as the frame ground of the equipment.

External Dimension



Note1. Details of connector terminal symbols are shown below.

Connector terminal No.	Terminal symbols	Name
1	O	Output (OUT)
2	G	Ground (GND)
3	FG	Frame ground (GND)
4	V	Power supply (VCC)

- The housing that fits the connector section must be the 51021-04□□ series manufactured by Molex Japan LLC.
- The lot number must be indicated in 4 digits at the specified position in the figure.

* The dimensional tolerance must be IT16 unless otherwise specified [Unit: mm]

Instructions for Use

(1) How to use

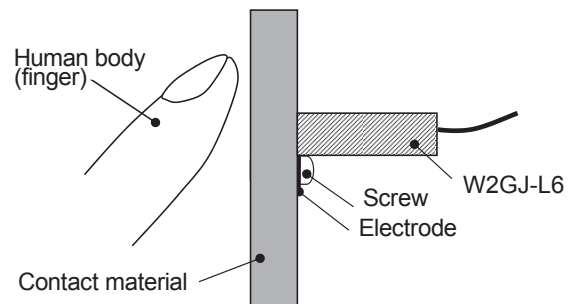
By fixing the electrode of this product in contact with the touch material (metal material or metal plated material), a touch switch with specifications suited to the application can be configured.

The electrode has a through-hole so that it can be fixed with a screw, etc.

(2) FG terminal

Due to the nature of a touch switch, there is a possibility that static electricity from the human body may flow into the touch switch from the electrodes.

The FG terminal is provided as a path for discharging this static electricity. To use the FG terminal effectively as a static electricity countermeasure, we recommend connecting it to a stable potential such as the frame ground of the equipment using a short, thick wire.



Precautions for Use

- Use a conductive material such as a metal or metal-plated material for the touch material.
- The touch material and the electrodes of this product must be insulated from the earth ground.
- The steadily added capacitance varies depending on the size of the touch material and the conditions of the metal surrounding the material. etc., so make sure that the added capacitance with the touch material installed is less than the rated detection capacitance before use.
- Use without applying any stress that may cause bending of the electrode.

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