

MAT SWITCHES

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With the spread of factory automation (FA), the interiors of factories are increasingly becoming hazardous to us because of the presence of the large number of industrial robots and large-scale machines, requiring us to do what we can to eliminate the identified hazards as responsible members

OJIDEN's mat switches use tape switch elements of **Teperwitch**. Known for their safety performance and high reliability, you may choose them with confidence.

Applications and Features

The characteristics of mat switches may be brought to full play in various ways in eliminating hazards; e.g., by creating an off-limits zone around an industrial robot, NC tooling machine, and the like, installing them in automatic doors, or using them as part of crime-prevention systems.

1. Contains a long-life, high-reliability built-in tape switch.
2. Excels in resisting impact as from a dropping object. Permits repairs in the event of damage or line disconnection.
3. Manufactured of high-quality rubber. Both oil-resisting (NBR) and non oil-resisting (NR) types designed against slippage (block/rib texture).

◆ A 4-wire control circuit (open circuit detector) for use in combination is recommended as part of standard specifications. (P13-15)

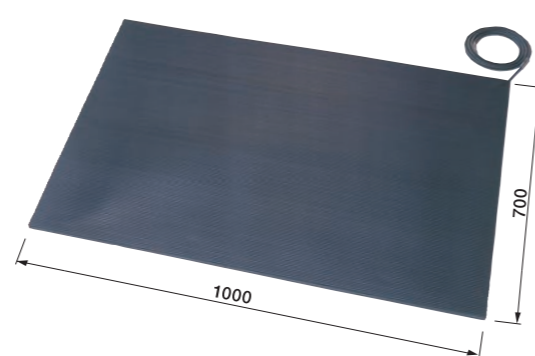
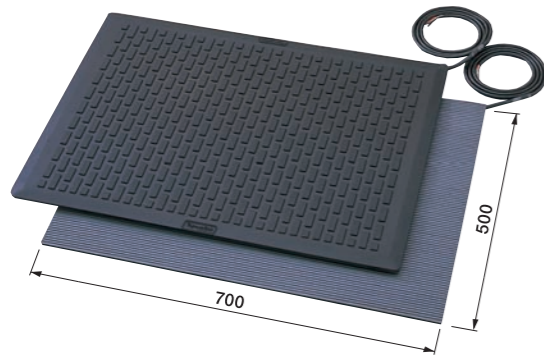
■ Ratings

Rated voltage/current	AC/DC28V-1A
Withstand voltage	AC 500V (1 min)
Contact life	1,000,000 activations (tested with relay; 24 V, 0.3 A load)
Operating force	40 N (4000 gf) to 60 N (6000 gf) approx. (under φ90 pressing plate)
Insulation resistance	100 MΩ or more (by 500 VDC insulation tester)
Contact resistance	0.05 to 1.6 MΩ or less (if under operating force or more)
Withstand load	1960 N (200 kgf; under φ100 pressing plate for 1 min)
Exterior sheathing (rubber)	available in 2 types: oil-resisting (NBR), non oil-resisting (NR)
Lead wire	w/ S-VCTF (0.75 mm2, 4 strands, 1.5 m)

4-Wire Mat Switch for Creation of a Safety Zone

- **OM-754** block-texture rubber (black), oil-resisting (NBR)
- **OM-7541** rib-texture rubber (gray), non oil-resisting (NR)

- **OM-1074** rib-texture rubber (black), oil-resisting (NBR)

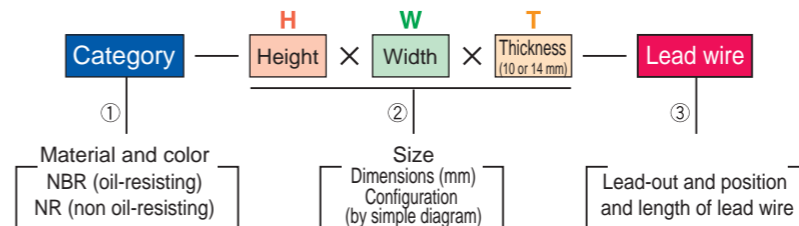


■ Table of Mat Switch Models

Model	Size (mm) H×W×t	Surface pattern (color)	Material	Operating force	Operating temperature range (°C)	Waterproof property (IP)	Weight (kg, approx.)	Inventory designation
OM-754	500×700×14	Block (black)	Oil-resisting rubber (NBR)	50 N (approx.)	-10~+60°C	Drip-tight (IP-54 equivalent)	5.0	○
OM-7541	500×700×10	Rib (gray)	Non oil-resisting rubber (NR)	50 N (approx.)			4.0	○
OM-1074	700×1000×14	Rib (black)	Oil-resisting rubber (NBR)	50 N (approx.)			8.5	○

◆ Inventory designation: if ○, available in stock.

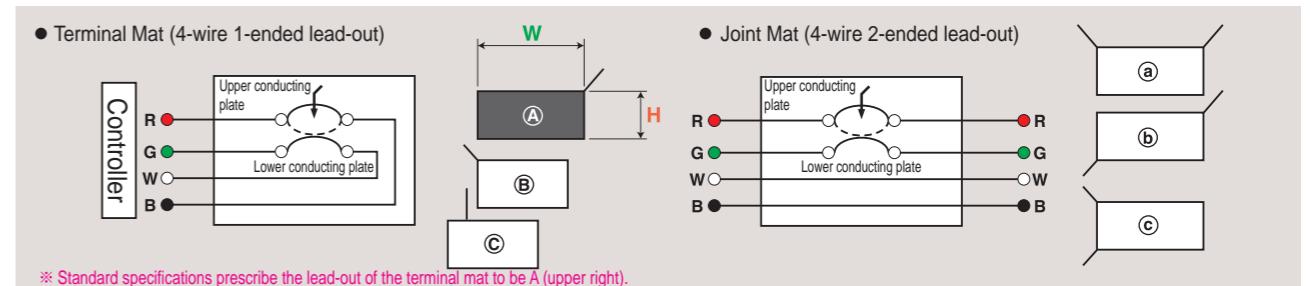
Placing Orders for Custom-size Mat Switches



- ◆ **Maximum Size Per Mat**
1200 H x 3000 W x 10 or 14 T
※ If orange, 1000 H x 2000 W x 15 T.
- ◆ Provide appropriate information (1 through 3 on left).
- ◆ If a custom-size mat switch is desired, its use in combination with a fail-safe controller is recommended.
- ◆ The orders will be filled with a short lead time.

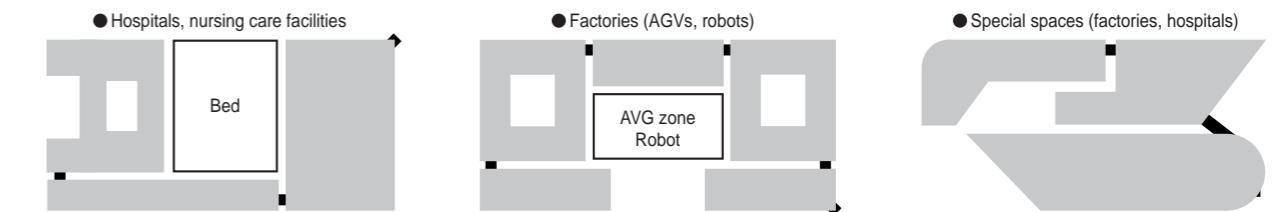
Specifications	Standard	Optional
Upper rubber	Oil-resisting (NBR) Black (rib-texture rubber)	Black (flat) Orange (flower pattern) ※ 15 T (thickness) only.
	Non oil-resisting (NR) Gray (rib-texture rubber)	Green (rib-texture rubber) Yellow (rib-texture rubber) Red (rib-texture rubber) Black (rib-texture rubber) Black (flat)

Dimensions (configuration) and Lead Wire Lead-out Position/Color Coding (R: red, G: green, W: white, B: black)



Custom/Multi-zone Mat Switch

◆ The mats may be of a combination of different colors, altered (shape), hollowed out, and joined.



Basic Construction and Parts

