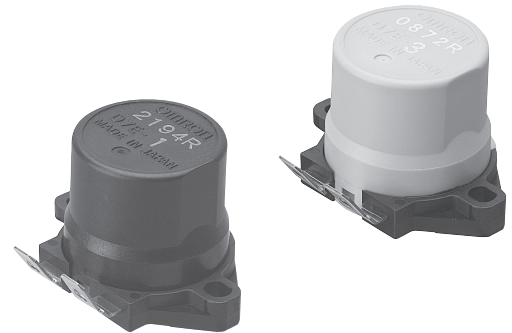


# D7E

## Sealed Vibration Sensors and Tilt Sensor

### Quickly Detect Vibration or Tilting to Help Prevent Secondary Disasters. Affordable Vibration/Tilt Sensors with Sealed Structure

- Sealing performance to IP67 degree of protection (switch section).
- Applicable to stoves, oil heaters, and other applications that require resistance to harsh environments.
- A Tilt Sensor is also provide in the lineup.



RoHS Compliant

### Ordering Information

| Type              | Model |
|-------------------|-------|
| Vibration Sensors | D7E-1 |
|                   | D7E-2 |
|                   | D7E-5 |
| Tilt Sensor       | D7E-3 |

### Performance

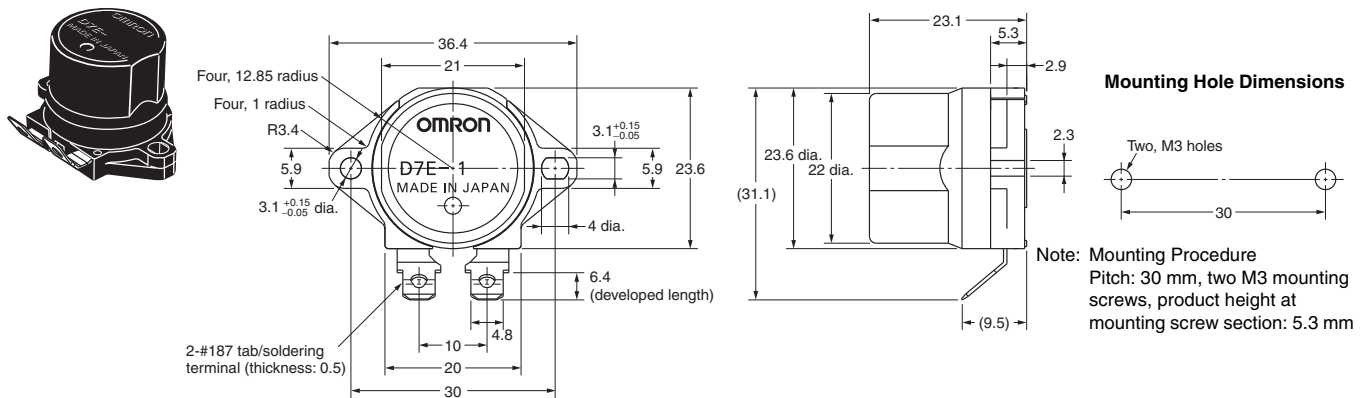
| Item                     |                            | Model | D7E-1   | D7E-2            | D7E-5            | D7E-3                                       |
|--------------------------|----------------------------|-------|---|------------------|------------------|---|
|                          |                            | Type  | Vibration Sensors   |                  |                  | Tilt Sensor                                 |
| Operating characteristic | Acceleration range         |       | 130 to 200 gals*  | 100 to 170 gals* | 120 to 195 gals* | ---   |
|                          | Operating angle            |       | ---   |                  |                  | 50° to 80°                                  |
|                          | Off time                   |       | 50 ms min. (for periods of 0.3 s, 0.5 s, and 0.7 s at 200 gals for the D7E-1, 170 gals for the D7E-2, and 195 gals for the D7E-5) |                  |                  | ---   |
|                          |                            |       |   |                  |                  |   |
| Output                   | Contact form               |       | SPST-NC   |                  |                  |   |
|                          | Electrical ratings         |       | 0.1mA at 5 VDC to 100mA at 30 VDC, resistive load   |                  |                  |   |
|                          | Contact resistance         |       | Initial value: 100mΩ max.   |                  |                  |   |
| Basic specifications     | Electrical life expectancy |       | 5,000 operations (at 10 to 20 operations/min with resistive load of 100 mA at 30 VDC)   |                  |                  |   |
|                          | Degree of protection       |       | IP67 (switch section)   |                  |                  |   |
|                          | Operating temperature      |       | -25 to 60°C (with no icing or condensation)   |                  |                  |   |
|                          | Storage temperature        |       | -25 to 60°C (with no icing or condensation)   |                  |                  | -25 to 70°C (with no icing or condensation) |
|                          | Operating humidity         |       | 45% to 95%  |                  |                  |   |
|                          | Dielectric strength        |       | 250 VAC, 50/60 Hz for 1 min   |                  |                  |   |

\* These are the accelerations for operation at periods of 0.3 s, 0.5 s, and 0.7 s measured with the horizontal vibration method. Mounting standard: ±30' (±0.5°).

Note: Ask your OMRON representative for details.

## ■ Dimensions (Unit: mm)

D7E-□



## ■ Safety Precautions

- If the mounting surface is not level, deformation from mounting may adversely affect operating characteristics. Do not use a mounting surface with warpage of more than 0.3 mm. Use M3 mounting screws and tighten them to 0.39 to 0.59 N·m. Use washers or other means to prevent loosening of the screws when mounting.
- Do not subject the Sensor to direct sunlight.
- Also, OMRON is not responsible for the deterioration of functions caused by washing with water, submersion in water, oil leaks, or contact with organic solvents.
- Do not use the Sensor in any location where vibration would adversely affect the operating acceleration or other mechanical characteristics (such as locations affected by opening and closing of doors, locations with passing vehicles, or other locations that are subject to vibration or shock from equipment or other sources).

• Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.  
 • Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

**Note: Do not use this document to operate the Unit.**