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Product Datasheet

# Vibration Detector

# BP-VIBD01




## Specifications

- 3-axis acceleration sensor and piezoelectric vibration sensing
- Detects vibration, impact and change of inclination
- Detection range: 5 m radius (manufacturer specification)
- Operating voltage: 9-15 V DC
- Current: monitoring <=25 mA; alarm <=15 mA
- Alarm output: N.C./N.O. passive dry contact, 30 V DC / 1 A
- Tamper output: N.C. passive dry contact, 30 V DC / 1 A
- Communication: polarized RS-485 interface (BUS A / BUS B)
- Operation: tilt only, vibration only or combined detection
- Sensitivity: 4 user levels; 16 engineering-mode levels
- Configuration via DIP switches, set key or RS-485 commands
- Automatic shaft-balance correction; built-in temperature sensor
- Temperature event: change >5 C within 30 s
- LED indications for detection, alarm, tilt and calibration
- Operating temperature: -10 C to +55 C; humidity: 10-95% RH
- Dimensions (L x W x H): 60.9 x 41.5 x 27.2 mm
- Mounting: wall or horizontal; non-condensing environment

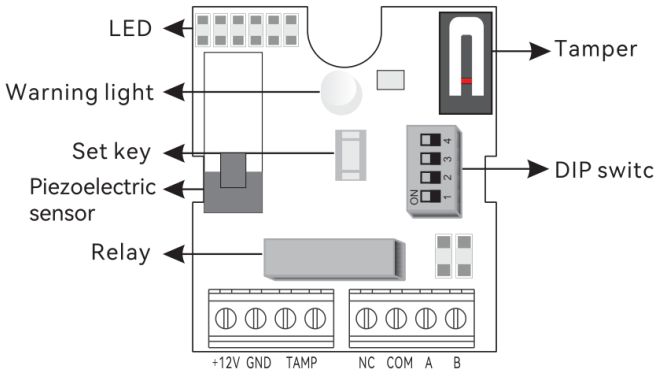
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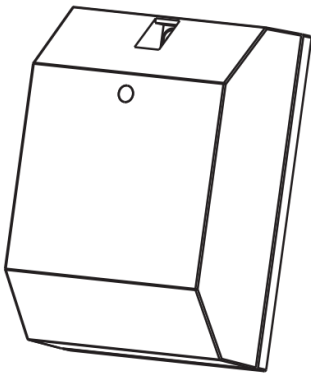
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## Dimensions and Electrical Data

| | |
|---|---|
| Device type | Vibration and tilt detector |
| Dimensions (L x W x H) | 60.9 x 41.5 x 27.2 mm |
| Operating voltage | 9-15 V DC |
| Current consumption | Monitoring <=25 mA / alarm <=15 mA |
| Detection radius | 5 m |
| Alarm relay | N.C. / N.O. dry contact, 30 V DC / 1 A |
| Tamper relay | N.C. dry contact, 30 V DC / 1 A |
| Operating environment | -10 to +55 C; 10-95% RH (non-condensing) |

## PCB Layout and Wiring



Overall appearance

### Terminal Definitions

| PIN | SYMBOL | FUNCTION | PIN | SYMBOL | FUNCTION |
|---|---|---|---|---|---|
| 1 | +12V | DC input | 5 | COM | Alarm common |
| 2 | GND | Ground | 6 | NC | Alarm contact |
| 3 | TAMP | Tamper contact | 7 | BUS A | RS-485 A |
| 4 | TAMP | Tamper contact | 8 | BUS B | RS-485 B |

*RS-485 bus is polarized and must not be connected in reverse.*

## Detection Modes

User mode: tilt only / vibration only (default) / tilt + vibration

Engineering mode: gyroscope / piezoelectric / combined (default)

*Source: BP-VIBD01 User Manual, pages 2-3.*