

PIEZO FILM SLEEP TRACKING SENSOR

- Provide comprehensive sleep data with more precise sleep quality analysis
- Enable continuous sleep monitoring with no external power or bias required



Modern medical knowledge tells us that good sleep is just as important as eating healthy and exercising and, consequently, healthcare professionals and consumers are paying more attention to sleep quality. TE Connectivity's (TE) non-contact piezo sleep monitoring sensor is designed to measure sleep quality in multiple means including heart rate, respiration rate, body motion, and bed entry and exit monitoring.

TE Connectivity's sleep tracking sensors are manufactured with thin PVDF film and are placed onto a mattress. It monitors vital signs and can provide comprehensive sleep data for more precise sleep quality analysis. The sensor requires no external power or bias voltage and enables continuous monitoring without disturbing the patient. It offers a safe and comfortable sleep monitoring experience. As an industry leader of piezo film sensors, TE has the capacity for high volume and high-quality sleep tracking sensors for a growing global market.

APPLICATIONS

- Heart rate
- Heart rate variability
- Respiration rate
- Sleep studies
- Baby monitoring
- Patient bed monitoring including exit monitoring
- Elderly care and assisted living

KEY BENEFITS

- Monitor vital sign including respiratory rate, heart rate, body motion, and bed exit and provide comprehensive sleep data with more precise sleep quality analysis.
- Enable safe and comfortable sleep monitoring experience with no external power or bias required making it ideal for use with battery-operated devices.
- Offer piezo film sensor with good mechanical toughness and can be placed onto any fully-assembled mattress.
- Minimize the potential concerns with prolonged exposure to energized devices making sleep monitoring safer.
- Enable design flexibility with sensors manufactured in variety of thicknesses and sizes, including pattern arrays.
- Ensure proven performance with high volume and high-quality piezo film sleep tracking sensors.

PERFORMANCE

- Overall length: 800.0 mm, excluding solder tabs
- Overall width: 8.0 mm
- Active electrode length: 698.5 mm
- Active electrode width: 3.0 mm
- Capacitance: 7.3 nF@1 kHz
- Dissipation Factor: 0.02 @1 kHz
- Strain Sensitivity (V): 0.015 V/ $\mu\epsilon$
- Strain Sensitivity (Q): 110 pC/ $\mu\epsilon$
- Base film thickness: 30 μm

TARGET MARKETS

- Medical

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