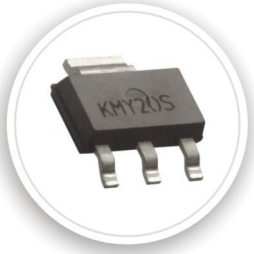
measurement SPECIALTIES™
sensing your world

Sensor Solutions for Home Healthcare Applications

MEAS supports products that offer similar extensive care therapies that patients would otherwise receive in a hospital setting. Allowing for this replication of security and treatment, sensors offered by MEAS can be used in a variety of medical apparatuses that are appropriate for the home healthcare market:

Quality Certifications:

- ISO 13485
- ISO 9001
- ISO 14001
- AS 9100
- TS 16949
- CE-MDD
- FDA Registered
- NASA Certified
- EST Certified
- NIST Traceability

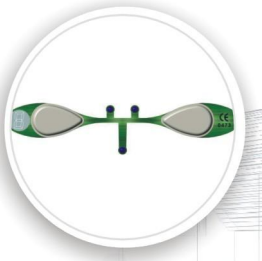


Smart Beds – MEAS' piezo film sheets allow devices to pick up the heartbeat and respiration rate of a patient. Thermopile sensors can continuously monitor the body temperature and pulse oximetry sensors are used to record blood oxygen levels. Optical encoders define the tilt angle of the back rest and load cells can be placed on the four legs of the bed for patient weight measurements.

Heart Rhythm & Defibrillator – To provide a safety mechanism prior to administering an electric shock for resuscitation, a patch of piezo film is attached to the electrodes of the defibrillator to monitor and check the heartbeat before launching a jolt.

Ear and Forehead Thermometry – Non-contact temperature readings are measured through the use of digital thermometers for the ear or forehead with the addition of MEAS' thermopile sensors.

Blood Pressure Cuff – Piezoresistive pressure sensors integrated into a wristband or cuff are used to monitor a patient's blood pressure. Invasive technologies are also available at MEAS designed for hospitals and ICU applications.



Sleep Apnea Patch – Attaching a piezoelectric film onto a patch placed under or on the nose of a patient can detect vibration and breathing patterns due to snoring. By measuring the magnitude and frequency of these parameters, doctors can determine the severity of the problem and decide on an appropriate treatment.

Respiratory Humidification – Placing one of MEAS' humidity sensors in humidification products can monitor and control safety levels in respirator systems that provide critical airway therapies for both adults and infants.

Infusion, Insulin and Syringe Pumps — Placement of one of MEAS' force cells can detect occlusion in various medical pumps. Piezo film sensors are used to monitor bubbles, fluid level, empty bag and flow rates to keep automation of IV drips in a safe working condition. In addition, these film sensors respond if the equipment were to accidentally be dropped.

Pulse Oximetry — MEAS offers both disposable and non-disposable pulse oximetry sensors to monitor oxygen levels in the blood. Both transmissive and reflective technologies are currently offered. LED with optical detectors are used to observe wavelengths and determine normalcy from abnormalities.

Spirometer — With the ability to measure the airflow in both directions using MEMS pressure technology, flow chips applied to spirometers are used to measure lung capacity in asthmatic patients.

Oxygen Tanks — MEAS' Microfused™load cells enable oxygen tanks to conserve twice as much air by detecting the inhalation sequence of a patient's breathing and releasing the flow of oxygen at appropriate rates. Tension load cells can also be applied to oxygen tanks to determine the quantity of gas still in reserve.

CPAP, Ventilators — High sensitivity pressure sensors and CO2 sensors integrated into sleep apnea and respirator equipment monitor the positive air pressures and CO2 levels in a patient's exhalation patterns. Sensors are versatile in that they accommodate both light and heavy assisted breathing.

Parkinson Study — Lightweight miniature accelerometer sensors improve the research study for Parkinson's disease by allowing the measurement of tremor levels of a patient to be taken without altering natural motions.

400 Series Temperature Probes — NTC thermistors placed in industry standard NTC probes (skin, esophageal and rectal) are used with patient monitoring equipment worldwide.

In addition to offering homecare product advancement, MEAS also supports medical devices used in hospitals and ambulances. We provide sensor versatility in different mediums such as disposable, non-disposable, implantable, invasive through incision or body cavities, and external use.

- Piezo film sensors in pacemaker for patient activity monitoring
- Invasive, disposable blood pressure sensors during surgical procedure and ICU
- Intrauterine pressure sensors for pressure/frequency monitoring during child birth
- Force/pressure sensors in suction cup for baby delivery assistance
- Humidity, temperature and CO_2 sensors on incubators for child monitoring
- Pressure sensors in angioplasty inflation pumps for balloon activation
- Media-compatible pressure/flow sensors for blood transfusion
- Fully assembled disposable blood pressure sensors for organ transportation
- Calibrated pressure sensors for monitoring fluid pressures during eye surgery
- Piezo film-based ultrasonic sensors to measure bone density
- Thermo-dilution sensors for blood flow measurements in heart compartments

As medical therapies continue to be developed for chronic disease, an aging population, and increasing hospital costs, MEAS has the design and manufacturing experience to quickly bring your products to the marketplace.

Please feel free to view our other brochure.
Choosing Sensors for Medical Applications at www.meas-spec.com/medical.aspx

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