



TE Connectivity- Company Profile

EVERY CONNECTION COUNTS



A WORLD LEADER IN CONNECTIVITY

- \$13.9 billion global company
- Solving connectivity challenges with the broadest range of products
- Engineering driven, customer focused
- Leveraging technology innovations across industries



TE
connectivity

GLOBAL SCALE AND STRENGTH

\$4.5B
AMERICAS

\$4.5B
EMEA

\$2.5B
ASIA
(excluding China)

\$2.4B
CHINA

10 design centers
38 mfg. sites
2,375 engineers

5 design centers
33 mfg. sites
1,700 engineers

3 design centers
12 mfg. sites
950 engineers

3 design centers
16 mfg. sites
1,880 engineers

\$13.9B SALES WORLDWIDE



TE Medical

EVERY CONNECTION COUNTS



Medical Applications

Devices that Enable Diagnosis

Devices that Deliver Treatment

Diagnostic Imaging

Diagnostic Monitoring

Surgical

Interventional

Therapeutic



Ultrasound Cable
Cable Assembly
Ultrasound

Cable Assembly
Lead wires
Trunk Cables

Endoscopy Cable
Surgical Cables
Surgical Contacts
Power Cables

Balloon Catheter
Stent Delivery

Defibrillator Cable
AED Paddles

TE Medical-Focus on Vertical Market

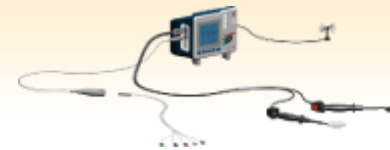
Imaging

Surgical

Diagnostic, Patient Monitor and Therapeutic

Interventional

Market



Application

Ultrasound
MRI
CT

Endoscopy
Powered Headpiece
RF
Robot

ECG, IBP
Temp, SpO₂
EEG, TENS
Defibrillator

IVUS/ICE Imaging
EP MAPPING
Ablation

TE Value

- ✓ Ergonomics
- ✓ Integrated Solution
- ✓ Application Engineering
- ✓ FDA Registered Facility

- ✓ Quality System Control
- ✓ Process Atomization
- ✓ Material Technology-
Sterilization and
Compatibility

- ✓ Creativity
- ✓ Custom Solution
- ✓ Global Resource
- ✓ Consumer Product

- ✓ Wire and tubing technology
- ✓ Technology leadership
- ✓ Manufacturing Engineering
- ✓ Engineering Support

TE Medical Capabilities

Concept

Confirmation

Design

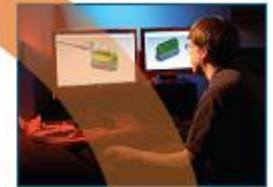
Production

Assembly

Test & Verification

Supply and Partner

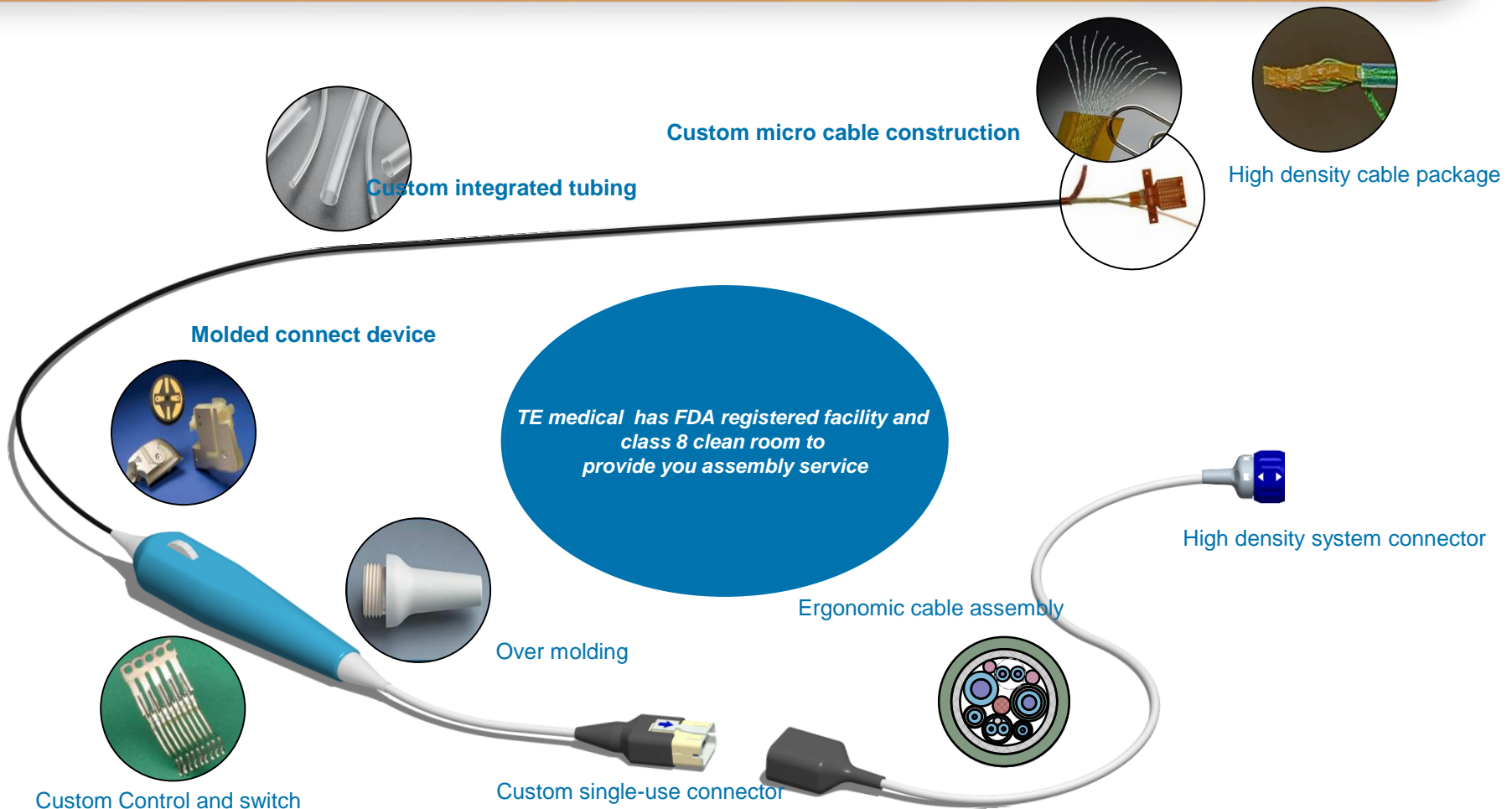
Manufacturing



Our Mission:
To provide innovative
"Concept to Production"
solutions for the
medical market



TE Medical—From Concept to Production



TE Medical-Core Capabilities

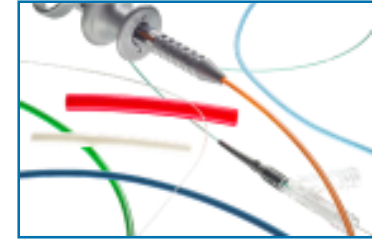
Core Capabilities



Wire & cable Solution



Custom Connector



Medical Tubing



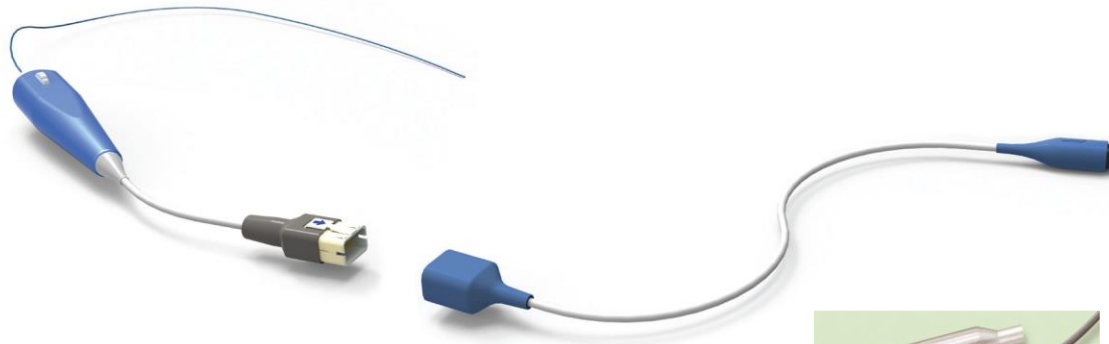
Plastic Molding



*Precision Mechanical
Stamping*

TE Medical, with dozens of years' experience in developing state-of-art product, technology and manufacturing process, providing high value added solutions for medical device market.

Interventional, AdvancedCath



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- catheter assembly
- fine wire catheter assemblies
- high-density, microscopic electrical termination
- custom connectors
- molded/overmolded parts & assemblies
- braided/coiled shafts
- guidewire assembly
- medical balloons
- extrusion
- laser plastic ablation & machining
- laser welding & cutting
- medical-grade heat-shrink tubing

- TE Medical builds advanced catheter and guidewire systems for medical device OEMs.
- Focus on the peripheral vascular, structural heart, electrophysiology, endovascular and neurovascular markets.
- End products include IVUS, ICE, Endoscopic Imaging, EP Mapping and

Surgical



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video endoscopy

power handpieces

rf ablation

robotics

handpiece and distal
cable termination

reusable surgical cable

proximal connector

- Technology driven, reliable solutions built for high performance and reduced time to market
- TE Medical's integrated connector and cable solutions are designed to your specifications for your application's interconnect systems that withstand your sterilization requirements

Single-Use, High-Volume Assemblies



- Optimized solutions for high-volume design and manufacturing
- TE Medical engineers work with you to design and optimize disposable cables and connectors to precision stamped and plated components and more. Our single-use products are high-performing, lightweight, and designed for ergonomics.



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.....
control circuits

.....
disposable cable
assemblies

.....
contract manufacturing

.....
value-added

mechanical or electrical
assemblies

.....
electronics ID &
communication

Imaging



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.....
ultrasound:

- COMFORT+
- COMFORT EX

- zero insertion force (ZIF)
connectors

LIF connector.....

digital ultrasound.....

custom connector design.....

custom PCB/PCBA.....

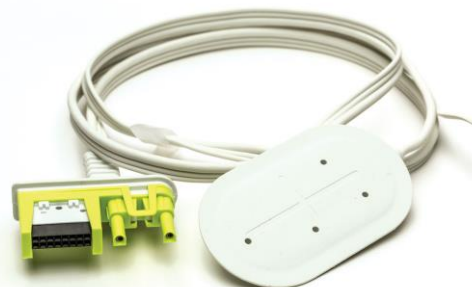
full probe assembly.....

- Market-leading, integrated solutions — portable, small, ergonomic, cart based or handheld
- TE Medical's innovative designs combine light, flexible cable with precision wire terminations and highly-reliable system ZIF connectors

Diagnostic & Therapeutic



- TE Medical designs and manufactures custom and standard solutions to solve your simple to complex challenges
- Our expertise in cable, molding, and assembly allows us to design for biocompatibility, high voltage, and flexibility requirements



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.....
patient-end connectors
.....

patient lead wires
.....

cable yokes
.....

trunk cables
.....

system connectors
.....

high-energy therapeutic
cable assembly

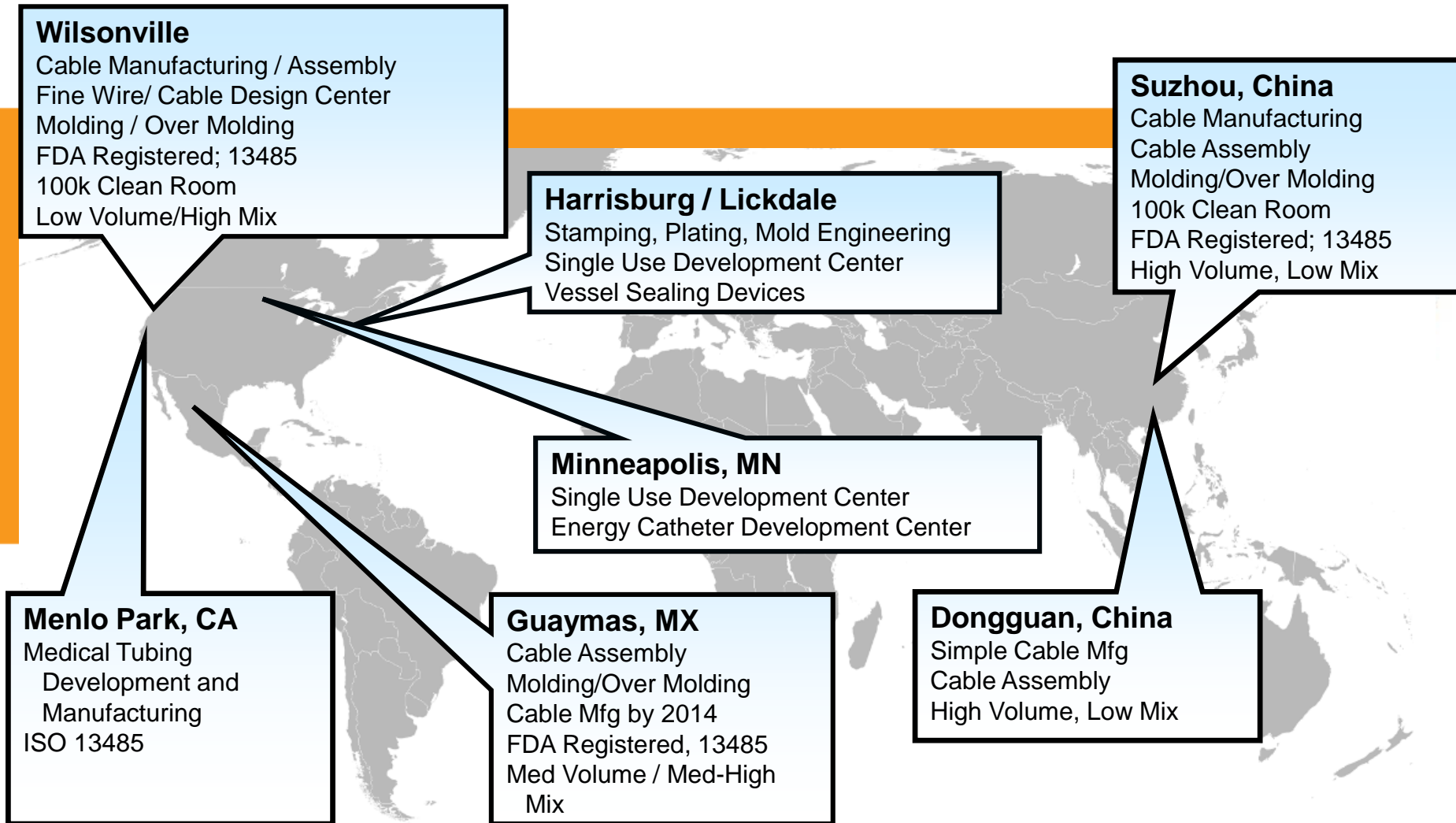
- handpieces

- electrodes

- cables

- connectors
.....

TE Medical Global Engineering and Manufacturing Capability



TE Medical – Suzhou Plant

- Development Engineering and Manufacturing Center for Asia Pacific
- Opened December 2013
- 7000 m² Manufacturing Space 1200 m²
- ISO Class 8 Clean Room
- 2000 m² Additional Expansion Area
- ISO 13485 certified; FDA registered
- Reliability testing and validation lab
- Production, Migration, New Product Development

Staffing:

- Current Manufacturing Employees: 204
- Planned Manufacturing Employees: 530
- Current Engineering Employees: 13
- Planned Engineering Employees: 17



Why TE Medical

- ❑ Competitive pricing – committed to solving for target
- ❑ Optimized value engineering solution
- ❑ Leading technology, product roadmaps
- ❑ Proven performance and providing total solutions
- ❑ Collaborative supply chain and solution provider
- ❑ Global resources, regional engineering and local delivery support
- ❑ ISO13485 certified, FDA registered facilities
- ❑ Broad medical product portfolio and coverage

Sensor Solutions For Medical

Pressure

Load Cell

Position

Humidity

Piezoelectric

Temperature

Optical

Diversified & Integrated

Acquired brands are core to growth/technology expansion...



Piezofilm Sensors



Encoderdevices



YSI Temperature



...integration is key to present one face to the customer.



"One Company, One Brand, One Team"

Patient Monitoring

Application 1:

Core body & skin temperature

MEAS Product- NTC temperature sensor

Application 2:

SPO2 monitoring

MEAS Product- Optics sensor

Application 3:

Disposable blood pressure

MEAS product -1620 pressure sensor



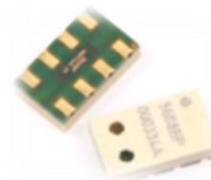
Ventilators, Respirators

- Application 1:
- Measure airflow and ambient pressure
- MEAS Product – silicon MEMS , 4525, 5525

- Application 2:
- Monitor flow and patient airway temperature
- MEAS Product – Temperature sensors RTD Probe (P/N G-NIMO-002)

- Application 3:
- Humidity sensors to measure RH levels of supplied air/gas
- MEAS Product- Humidity sensors

- Application 6:
- Fall down alarm (Lifeline)
- MEAS Product :MS5611 barometric sensor

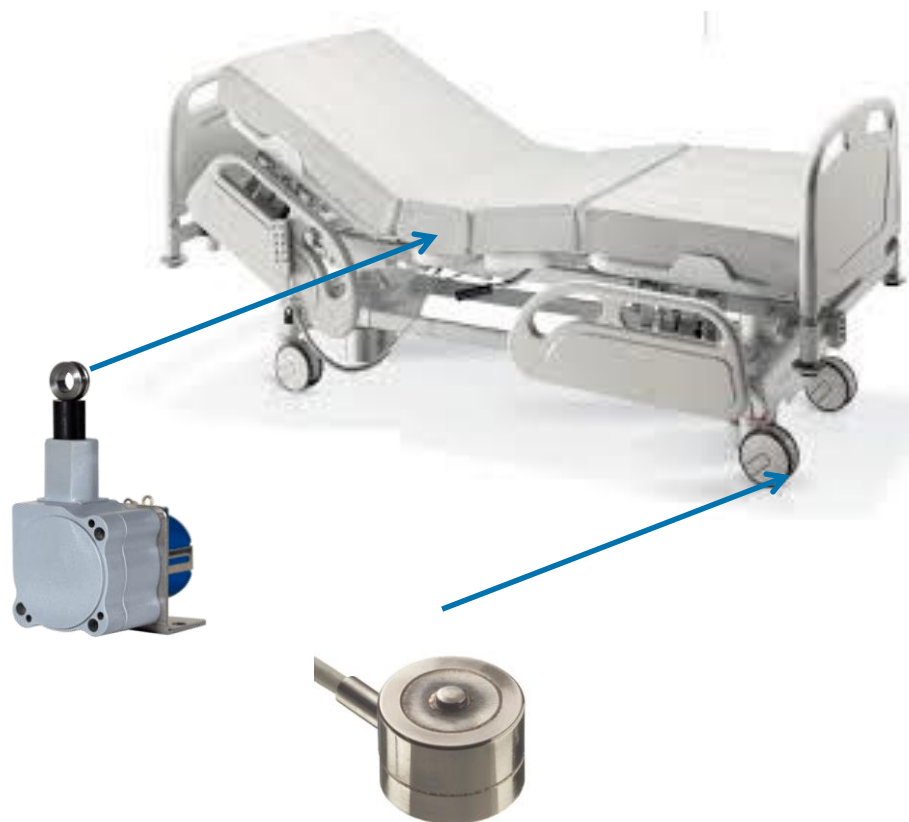


Hospital bed

- **Application 1:**
 - Weigh the patient while in the bed
 - Detect patient getting out of the bed
- **MEAS Product – Force Sensors**

Application 2:

- Monitor position of the bed sections
 - Motion feedback to the control system
- **MEAS Product -- Cable Extension Position Sensors**



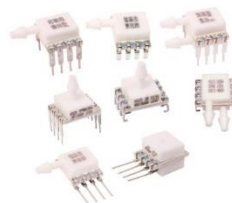
Sleep Apnea treatment CPAP

Application#1

Sleep Apnea is medical condition that can be controlled using CPAP (Continuous Positive Airway Pressure)

MEAS Product

- typically utilize a low pressure Differential Sensor similar to 1210 Sub PSI 10in H2O and Barometric Pressure Sensor like a 4426-016A
- 4425 /5525
- Application#2
- MEAS Product- Humidifier
- Measure & Control temperature of humidified, treated air output of respiratory therapy machines.



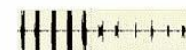
Sleep monitoring

- Application 1:
- The sensor detects the movements caused by respiration & heart beats and turns them into useful sleep and wellness information and guidance.

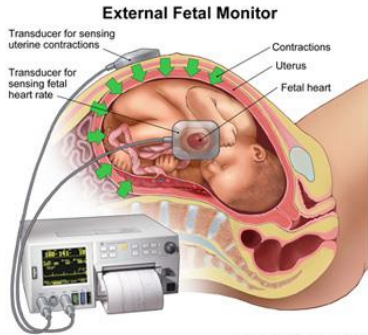
MEAS Product – Piezo Value Added Assembly

- Application 2: The sensor is used for REM detection, respiration, and snore detection

MEAS Product – Piezo



Sensor Solutions for Medical Applications- More.....

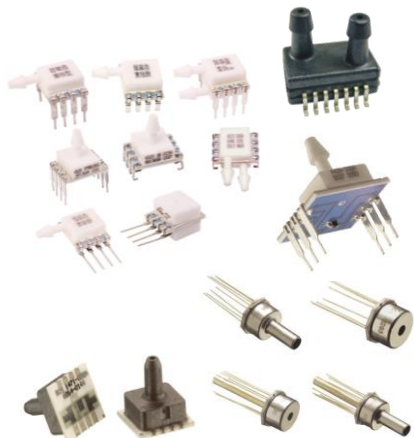


Sensor Solutions for Medical Applications



Pressure Board Level

T0-8
1210/1230
1220/1240
1451
4425/4426
4515/4525
5525



Pressure Transducer/Transmitter

MSP100
MSP300
MSP340
US300
M5100
U5100
M7100
U7100
US10000

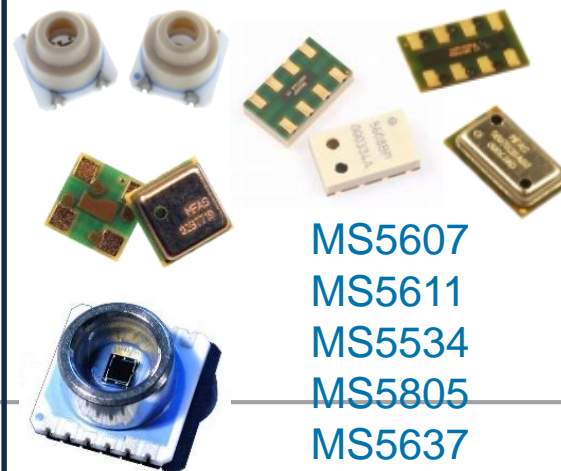


Pressure Capsule Element

Model 82, 85, 86, 86BSD, 89, 154



Pressure SMD



MS5607
MS5611
MS5534
MS5805
MS5637

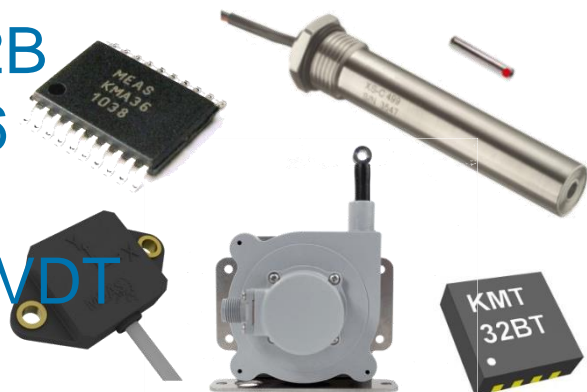


Sensor Solutions for Medical Applications



Position

KMT32B
KMA36
DOG1
MHR LVDT
SM-1



Force

FX1901
FC22
FC23
FS20



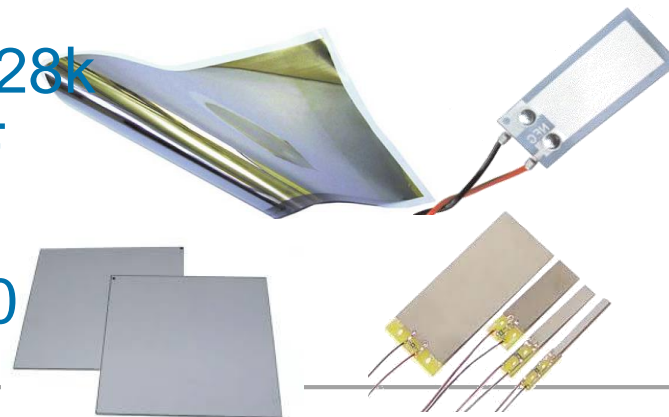
Humidity

HS1101
HTG3500
HTM2500
THU21D



Piezoelectric

LDT028K
PVDF
PZT
M-100



Technologies for Temperature Sensing

NTC Thermistor (Negative Temp Coefficient)



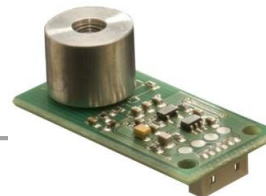
RTD (Resistance Temperature Device or Detector)



Thermocouple



Thermopile (non-contact)



Technologies for Optical Sensing

LED Emitters



LED Detectors



SpO₂ Probes

