OUR COMPANY
We are a leading provider of sensor technology

Short facts

- Founded 1991 in Berlin, Germany
- 1,000 employees
- € 155.1 m sales revenues in 2018
- Stock-listed in Germany

Capabilities

- 7 clean room production sites: chip design and production, microelectronic packaging
- Automotive, medical and aerospace certifications
- Complete sensor value chain in one company

Markets & Products

- 3 target markets: industry, automotive, medical
- Know-how in photonics, pressure and advanced electronics
- Development and production of customized solutions and standard sensors
OUR PRESENCE

We are internationally positioned

First Sensor is headquartered in Berlin and represented at six locations in Germany and also operates sales and production sites in the USA, Canada, China, UK, France, Denmark, Sweden and the Netherlands as well as a global network of partners.
OUR LOCATIONS
First Sensor AG – Berlin-Oberschöneweide

Short profile

- Headquarters of First Sensor AG with central company departments
- Certification in accordance with IATF 16949

Production

- Specialized in the semiconductor production with over 2,000 square meters of clean room space
- Silicon chips on 4 inch and 6 inch silicon wafers for optical sensors and MEMS pressure sensors
OUR LOCATIONS
First Sensor AG – Berlin-Weißensee

Short profile
- Focus on packaging technologies
- Certification in accordance with ISO 9001 and EN ISO 13485

Production
Specialized in the packaging of electronic microsystems for pressure sensors, flow sensors and optical sensors
OUR LOCATIONS
First Sensor Microelectronic Packaging GmbH – Dresden-Klotzsche

Short profile
- Focus on design and connection technology of electronic microsystems
- Certification in accordance with IATF 16949

Production
- Customer-specific miniaturization of optical sensors and MEMS pressure sensors
- Integrated Manufacturing Services (IMS) for packaging microelectronic products
OUR LOCATIONS
First Sensor AG – Munich

Short profile

- Focus on the distribution of standard products
- Certification in accordance with ISO 9001 and EN ISO 13485

Production

- Focus on pressure sensors
- Over 30 years of experience in respiration and pneumology, dialysis and infusion as well as diagnostic methods
OUR LOCATIONS
First Sensor Lewicki GmbH – Oberdischingen near Ulm

Short profile

- Focus on packaging technologies
- Certification in accordance with ISO 9001, EN 9100 and EN ISO 13485

Production

- Specialist for hybrid circuits, electronic modules, power electronics and power semiconductors for high-reliability circuits in space flight
- Focus on aerospace, industrial security technology, medical technology and industrial applications
OUR LOCATIONS
First Sensor Mobility GmbH – Dresden-Albertstadt

Short profile

– Specialized in the automotive industry
– Focus on the on-site manufacture of automotive products with special expertise in customer-specific system development
– Certification in accordance with IATF 16949

Production

– Pressure sensors
– Flow sensors
– Optical sensors
– System solutions
OUR LOCATIONS
Klay Instruments BV – Dwingeloo (Netherlands)

Short profile
– Many years of experience in process measuring technology and process instrumentation
– Focus on the process industry as well as the marine and shipbuilding sectors
– Certification in accordance with ISO 9001, EHEDG und 3A

Production
– Pressure transmitters
– Fill level transmitters
– Temperature transmitters
– Submersible sensors
OUR LOCATIONS

First Sensor Corp. – Montreal (Canada)

Short profile

- Development and production location
- Certification in accordance with ISO 9001 and EN ISO 13485

Production

Specialized on flow sensors and ultra-low pressure sensors based on the patented micro-flow-technology
OUR LOCATIONS

First Sensor Inc. – Westlake Village (USA)

Short profile

– Development and production location
– Certification in accordance with ISO 9001

Production

Focus on optical sensor solutions such as PIN, quadrant and position-sensitive photodiodes and modules
OUR GROWTH
We are clearly on a path of growth

Going Public
Acquisition Lewicki Micro-electronic GmbH
Acquisition Microelectronic Packaging Dresden GmbH
Foundation Silicon Micro Sensors GmbH
Acquisition First Sensor Technology GmbH
Acquisition Sensortechnics GmbH & MEMSfab GmbH
All companies merge under the umbrella of the First Sensor brand

revenues in € million

3.0  5.7 10.7 11.6 12.0 13.8 16.0 32.6 37.0 38.5 30.2 45.2 65.1 111.9 108.5 124.0 137.7 150.1 147.5 155.1 160-170
OUR SHAREHOLDER STRUCTURE
FS Technology Holding is our core investor

Stock fundamentals

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OUR RANGE OF SERVICES
We develop and produce standard products and sensor solutions
OUR RANGE OF SERVICES

We offer integrated development and manufacturing services

- Design & Development
- Manufacturing Processes
- Functional test / Calibration
- Qualification
- Serial production
OUR COMPETITIVE ADVANTAGE
We cover the entire value chain of sensor technology

Sensor chip
- Silicon based
- Converts physical parameters into electrical signals

Packaging
- Connecting microelectronic and non-electronic micro components to a housing

Sensor
- Consists of a sensor chip, housing and if appl. electronics
  - The measurement signal can be calibrated

Sensor system
- Measures, interprets and preprocesses complex data
- Communicates bidirectionally with other systems

Detect

Detect & Understand
OUR COMPETENCE
We are an expert for semiconductor production
OUR COMPETENCE
We possess extensive experience in micro systems technology
OUR COMPETENCE

We combine these competences with profound system expertise

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**Energy Storage Module**
- Battery
- Energy Harvester

**Power Management Module**
- Power Management Circuit
- Power Circuit Management

**Communication Module**
- Radio Transceiver Module
- Signal Processing ULP
- Wi-Fi Module
- Bluetooth
- ZigBee

**Sensing Module/Sensorfusion**
- Accelero
- Gyro
- Light Sensor
- Image Sensor
- Temp. Sensor
- Pressure Sensor
- Magnet o.

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Form factor
OUR TARGET MARKETS
We focus on the growth markets Industrial, Medical and Mobility

First Sensor® Industrial
Innovative solutions for the automation of industry

First Sensor® Medical
Reliable technology whenever it is needed

First Sensor® Mobility
New ideas for intelligent mobility
We are there when smart things become standard.
INDUSTRIAL
Applications in our target market Industrial

Industrial Process Control
Liquid level measurement, laser alignment systems, filter control, leak detection, pressure detection

Radiation And Security
Container and baggage scanners, radiation detectors

Smart Building
Filter and condition monitoring, room pressure, volumetric flow controllers

Length Measurement
Laser rangefinders, laser scanners/LiDAR, laser alignment systems, encoders

Aerospace
Laser alignment systems, cabin air pressure, navigation
With the help of our radiation sensors, millions of passengers, luggage items and containers pass through airports and seaports across the world every day.
Modern building automation coordinates energy generation, energy distribution and air conditioning as a way of using energy efficiently. Our pressure sensors for ventilation systems support this process.
Thanks to a patented technology our inertial sensors can detect minute deviations, making them indispensable for structural health monitoring.
In aviation, our pressure sensors regulate the climate in the cabin, register any drops in cabin pressure and activate the emergency oxygen supply.
Staying One Step Ahead Together

STArre K Series

Our standard piezoresistive components are used in industry and medical technology. Pressure sensor chips based on STArre technology ensure their long-term stability and precision.
Thinking Joined-Up Together

LMI Multi-Sensor System

On a tailored printed circuit board, this solution combines electronic components with four of our LMI differential pressure sensors that can detect the smallest differences in pressure.
We are there when little miracles start being taken for granted.
MEDICAL
Applications in our target market Medical

Diagnostics
Blood sugar measuring devices, pulse oximeters, computer tomographs, gamma probes, endoscopy

Respiration And Pneumology
Respiratory equipment, anesthesia devices, sleep diagnostic devices, sleep apnea therapy devices, spirometers, oxygen concentrators

Dialysis And Infusion
Dialysis machines, infusion pumps
Thanks to modern mounting and connection technology, hundreds of silicon PIN photodiodes in computed tomography scanners ensure razor-sharp images.
Our innovative pressure and flow technology has become a lifesaver in medical respiratory devices and for dialysis.
Irreplaceable Together

H Series
Our standard piezo-resistive pressure sensors measure extremely low pressures in dry, non-corrosive gases. Their applications include fields such as medical technology, measurement technology and air conditioning technology.
Assembly of Arrays

When building large detector arrays, we mount sensor chips on a backing using state-of-the-art flip chip technology to achieve the best possible fitting accuracy with this solution.
We are there when mobility is redefined.
MOBILITY
Applications in our target market Mobility

Passenger Cars
Speed control, tank leak detection, fuel delivery modules, measurement of tank pressure, measurement of temperature, sun and rain detection, automatic start-stop systems

Smart Cars
Adaptive cruise control, parking sensors, lane departure warning, pedestrian recognition, traffic sign recognition, collision avoidance systems, blind spot detection

Utility And Special Vehicles
Pressure sensors, distance detection, tank leak detection
Our cameras guarantee safety and convenience when driving by detecting road signs and dangers as well as providing assistance when parking.
With our pressure sensors for brake boosters we enable drivers across the world to brake safely with little breaking effort.
Going into Series Production Together

Avalanche Photodiodes

Our high-performance diodes measure light pulses in the nanosecond range. As one of the leading manufacturers, First Sensor also develops and produces array solutions for LIDAR systems.
Responsibility Together

sensEdge Pressure Sensors
High-pressure sensors based on sensEdge technology are suitable for pressure changes up to 3,000 bar. Our solutions are used in steer-by-wire systems, for example.
OUR SALES MARKETS
We grow in our core market as well as in high potential sales regions.
Thank you