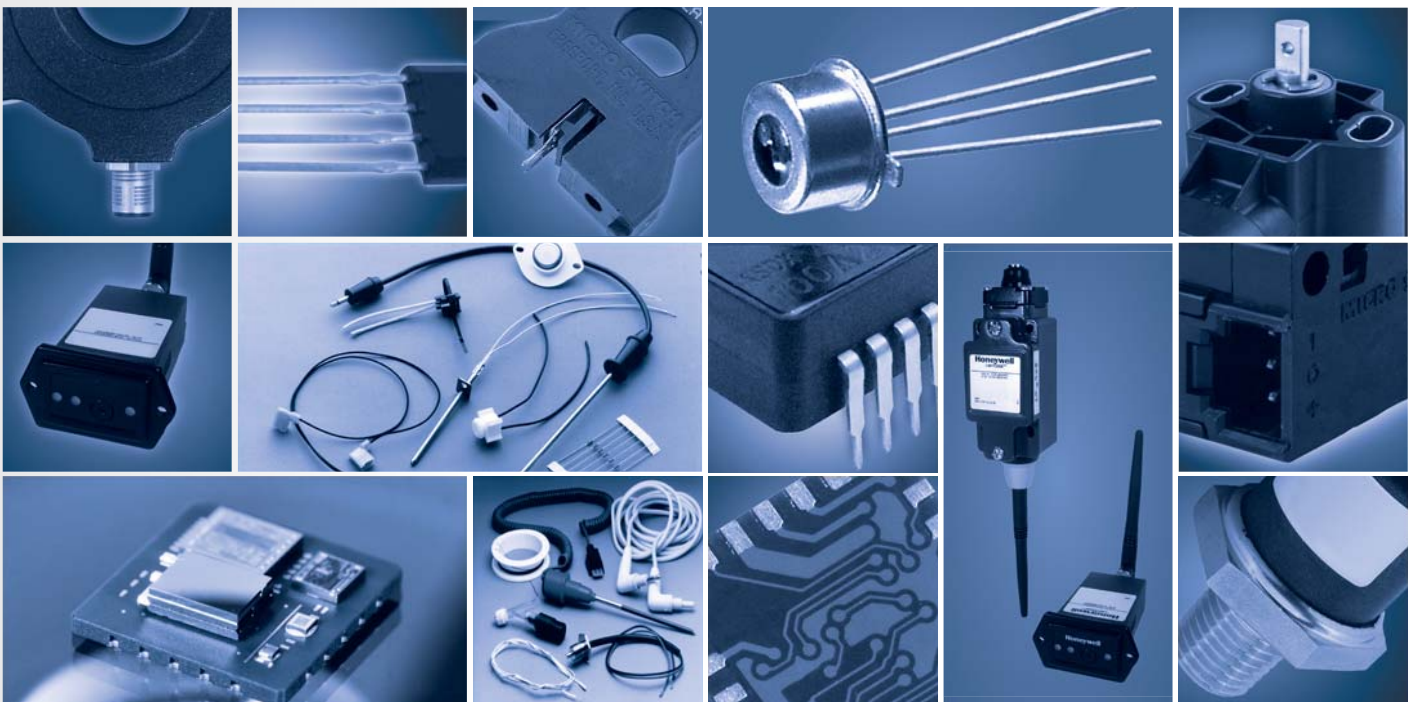


Sensors

European leader in advanced technology solutions



About Acal BFi

Acal BFi are Europe's leading provider of advanced technology solutions, operating in 12 countries throughout Europe.

We offer products across specialist technology areas, each with a dedicated pan-European sales team. Customers use our design-led expertise and expert consultation services to find the best technology solutions for their design, prototype and production needs.

Get in touch

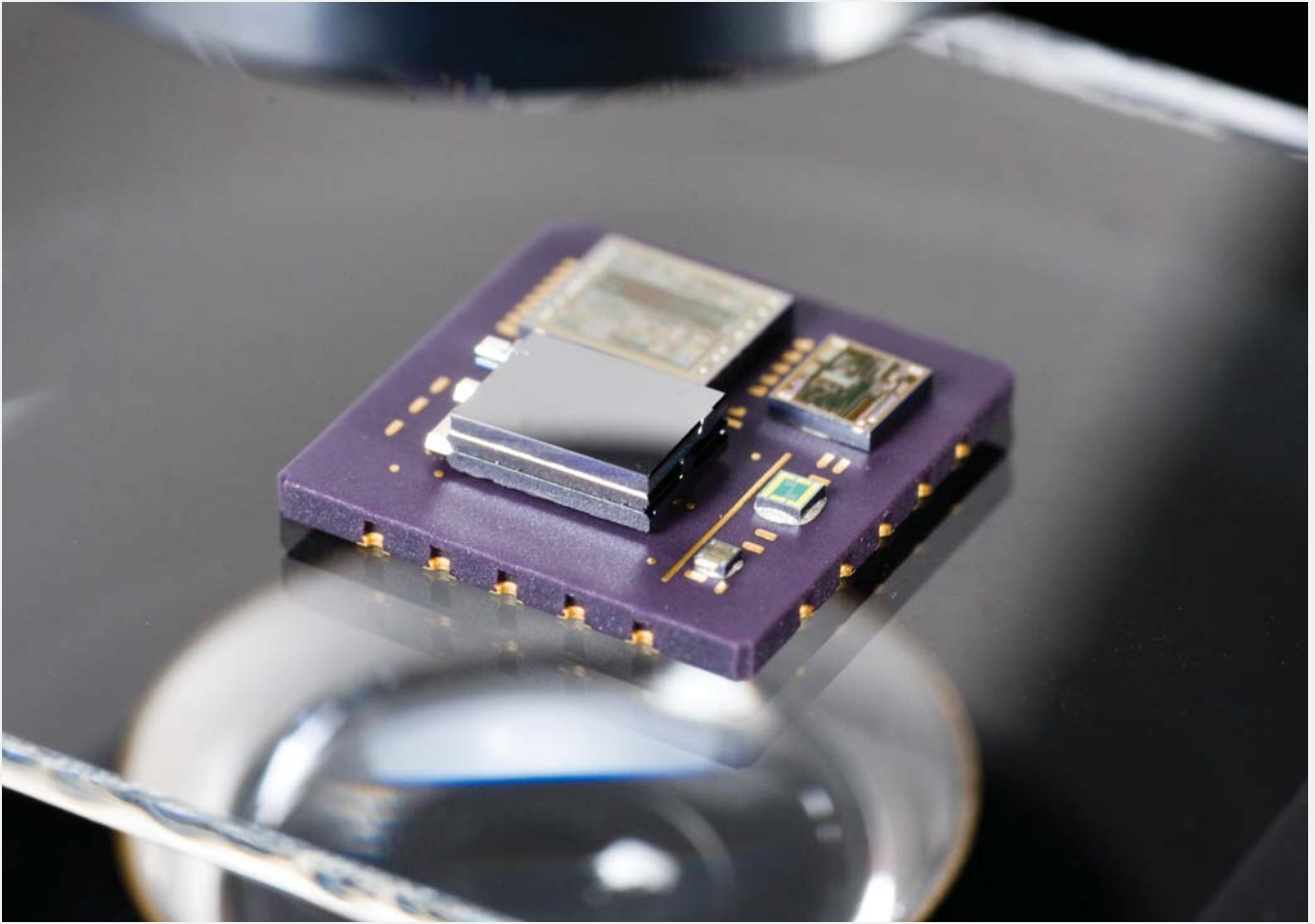
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Products and support

- Cables and Connectors
- Electromechanical
- Embedded computing
- Fibre optics
- Imaging
- M2M and Wireless modules
- Magnetic components
- Photonics
- Power
- RF and Frequency control
- Semiconductors
- Sensors**



A wide choice and expert support to choose the right sensor

By combining many of the world's most established and innovative sensor manufacturers in a single linecard, Acal BFi can help you detect, measure and monitor just about anything. Our sensors range from the smallest MEMS devices for interactive gaming, to platinum sensors which can measure temperatures from -196°C to 1,000°C.

Sensors are a key enabler in the realisation of an Internet of Things (IoT). Many of the objects we associate with the IoT are either sensor-based systems, containing sensors as key components (such as buildings, vehicles, appliances), or require sensors in order to be located. In fact, anything can connect with anything else on the IoT, including things which have never before featured electronics.

With over 50,000 different sensor products from Honeywell alone, there are so many decisions to be made when narrowing down your choice to the one which is right for your application. That is why our sensor specialists work in partnership with many of the world's leading sensor manufacturers to help you make informed sensing decisions.

consult. design. integrate.

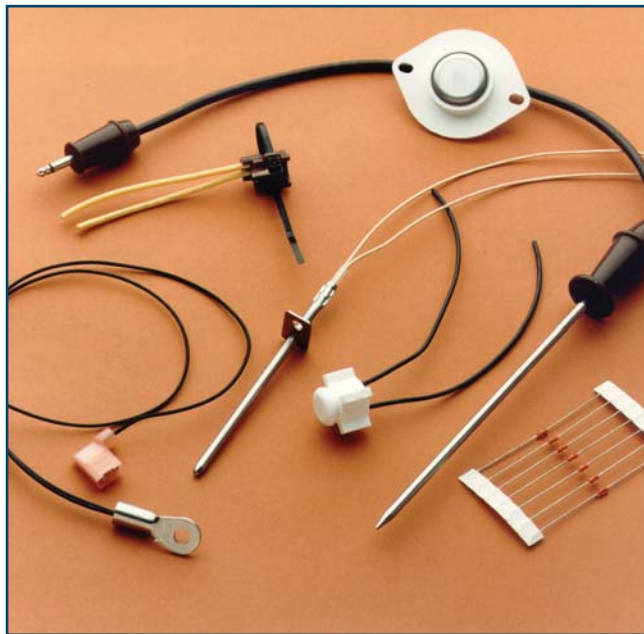
Custom sensors

Our sensor probe development team draws on more than 25 years' experience and expertise designing customised sensor probes and assemblies for a diverse range of applications. We work with your engineers to understand which sensor element is required for your needs, design a suitable housing for the application, and add the appropriate cable and connectors, providing you with a bespoke sensor probe that is ideally suited and ready to use in your environment.

Custom sensing assemblies are particularly useful in harsh or high-end applications such as industrial, military and aerospace, medical, and transport systems. Regardless of whether our specialists are helping to develop sensors to guide the world's first iPhone-controlled drone, for specialist environmental monitoring equipment, or for medical ventilators, our objectives are the same – to help you increase sensing accuracy and reliability, whilst carefully controlling the overall cost of your end product.

Custom probes

When you know what you want to measure, but selecting the right combination of sensing element and housing is a challenge, we can help by designing sensing probes to meet your specific requirements.



Custom sensor housings

We work with you to understand the environment the sensor is to be used in and design a suitable housing and add the appropriate cable and connectors to ensure you have the best bespoke probe for your application.



Our expertise means you can leave sensor development in our hands, knowing you will get the best possible solution for your needs.

Key partners overview

Acal BFi work with the leading manufacturers in their field, offering you a complete solution for your sensor needs.



Acal BFi's sensors team provide a range of customised sensing solutions.



Amphenol Advanced Sensing provide sensing elements, devices, instruments and systems that enable customers to monitor, protect, control and validate their critical processes and applications with the use of their range of pressure, humidity, gas and CO₂ range of specialist sensors.



Avago are a leading designer, developer and global supplier of a broad range of motion control encoder devices.



Bosch Sensortec have been at the forefront of MEMS technology since it first emerged, and are the world's leading supplier in this extremely dynamic market. Since the start of production in 1995, Bosch have manufactured more than four billion MEMS sensors. These sensors measure pressure, acceleration, rotary motion, mass flow, and the earth's magnetic field.



Colibrys are a world-leading supplier of standard and semi-custom MEMs based accelerometers, inertial systems, tilt sensors and vibration sensors for harsh environment (energy, military and aerospace), industrial and instrumentation markets.



Heraeus are a market and technology leader for micro-structured thin- and thick-film temperature sensors in noble metals. They have an expertise that is unique throughout the world in the manufacture of high-temperature film connections in ceramics, metal and glass.



Honeywell have more than 50,000 products, ranging from pressure, humidity and airflow sensors to Hall-effect sensors and value-add sensor-assembly solutions.



MEMSIC design and manufacture CMOS MEMS IC products that have on-chip mixed signal processing. They are the first and the only company which integrate a MEMS inertial sensor with mixed signal processing circuitry onto a single chip using a standard CMOS IC process.



NEL Photonics are a division of NTT Electronics which specialises in the design and manufacture of DFB laser modules which can be used in gas sensing applications.



Sangshin produce low-cost, high-quality, miniature, highly responsive polymer and capacitive humidity sensors suitable for HVAC, medical, agricultural and building applications.



Shibaura are a world-leading developer and manufacturer of temperature-based products, producing thermistor chips, elements, temperature sensors, humidity sensors and thermometers for all key manufacturers throughout the world.



Shinyei Kaisha have long been a pioneer of hygrometer development, including the establishment of a traceability system using a primary standard humidity generator. They have also developed and commercialised a dust sensor using optical technology, as well as other instruments designed to contribute to environmental improvement.



Silicon Sensing are a gyroscope sensors and inertial systems engineering development and manufacturing company with a global presence. They provide solutions for the military and aerospace market with their cutting-edge sensor range.



TEWA are a leading NTC thermistor and temperature probe manufacturer offering standard and custom-designed products, with fast turnaround on custom designs and competitive pricing.

Key technologies and suppliers

The Acal BFi sensors portfolio



Acceleration

- Accelerometer
- Gyroscope / angular rate
- Inertial sensing



Air flow

- Flow and differential pressure
- Amplified and unamplified



Current

- Closed loop
- Open loop
- Digital

Honeywell



Custom

- Sensors
- Sensor assemblies
- Probes
- Probe assemblies

acal^{bfi}



Force

- Force / pressure transducer
- Piezoresistive
- Amplified or unamplified
- 0 to 1500g

Honeywell



Gas sensing

- CO₂
- DFB laser
- Oxygen



Infrared

- Detectors
- Emitters
- Optosmitt sensor
- Reflective
- Transmissive encoder
- Transmissive sensor

Honeywell



Hall effect

- Bipolar
- Omnipolar
- Ratiometric
- Unipolar

Honeywell



Humidity

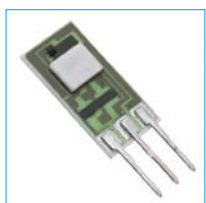
- Capacitive
- Heat conductive
- Resistive – elements and modules



Liquid level

- Optical
- Submersible
- Stainless steel sensor
- Ceramic sensor

Honeywell



Magnetic

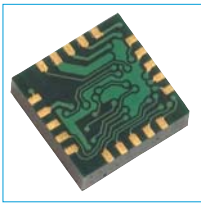
- Magnetoresistive
- Nanopower
- Wheatstone bridge



Particle / dust

- Aerosol monitor
- Aerosol sensor unit
- Compact low cost PM sensor
- Particle sensor units





Position

- Electronic compass / magnetometer
- Encoders
- Linear position
- Proximity
- Rotary position
- Ultrasonic



Pressure

- Board mounted
- Media isolated
- Pressure sensing crystal
- Pressure transmitter



Speed

- Hall effect speed and direction
- Speed sensor building block
- Variable reluctance



Temperature

- Custom probe assembly
- Platinum RTD
- Thermistors / thermopiles
- Thermostats



Tilt

- Variable capacitance
- 2G single axis high resolution
- 1G Single axis analogue
- Accelerometer
- Harsh environment
- Integrated temperature sensor



Vibration

- Variable capacitive
- Single axis accelerometer
- Single axis vibration
- ±2G to ±200G
- Harsh environment
- Integral temperature sensor



	Acceleration	Air flow	Current	Custom	Force	Gas sensing	Hall effect	Humidity	Infrared	Liquid level	Magnetic fields	Particle / dust	Position	Pressure	Speed	Temperature	Tilt	Vibration
Acal BFi Sensors				•														
Amphenol Advanced Sensing						•		•						•		•		
Avago													•					
Bosch Sensortec	•													•				
Colibrys	•																•	•
Heraeus																		•
Honeywell		•	•		•	•	•	•	•	•	•		•	•	•	•		
MEMSIC	•	•									•							
NEL Photonics						•												
Sangshin								•										
Shibaura																	•	
Shinyei Kaisha								•				•						
Silicon Sensing	•																	
TEWA																		•



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