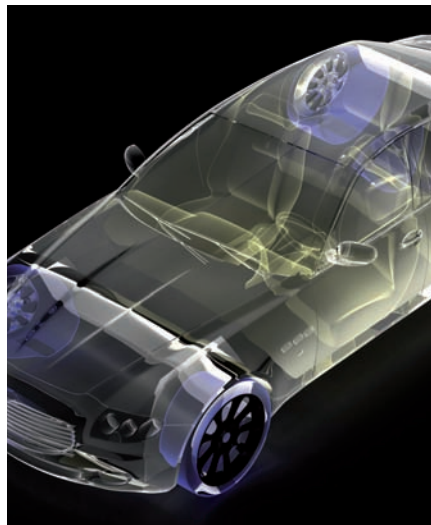
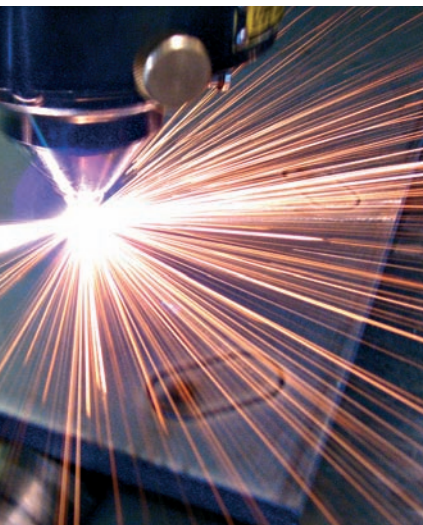


process parameters

TEMPERATURE MEASUREMENT SPECIALISTS



Industrial Temperature Solutions

After time, temperature is the most frequently measured parameter. It affects every aspect of our lives and determines whether we are comfortable or even healthy. More than that, temperature is now of paramount importance in industrial applications. Poor temperature control has a direct impact on the quality of your product. In these times of rising energy costs, it could even mean you are wasting money.

Process Parameters, a privately owned UK company founded in 2004, has become one of the most highly respected names in the temperature sensing and measurement industry.

We bring together some of the finest industrial measurement and control products available. Carefully selected by our engineers for quality, reliability and most of all, value for money.

Our priority is to deliver excellent service and develop long lasting customer relationships.

Process Parameters manufactures bespoke temperature probes to order, on site here in Maidenhead. As the UK distributor for Optris, we also supply the highest quality Infrared sensors and thermal imaging cameras. This means that whatever you want to measure, we can do it.

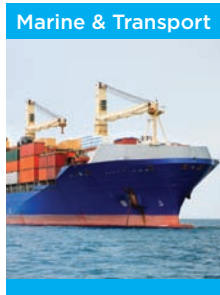
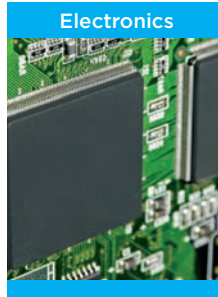
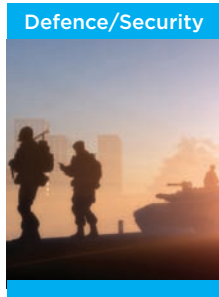
Our team has a wealth of application knowledge and is expert in specifying, designing, manufacturing and sourcing sensors for all types of industrial processes.

With our engineering expertise and technical knowledge, we are able to help you identify the very best industrial temperature solution.

- **Integrity**
- **Flexibility**
- **Engineering excellence**
- **Expert advice**
- **Friendly approach**



Process Parameters has years of application knowledge and experience of manufacturing industrial temperature sensors, as well as supplying non-contact Infrared sensors and thermal imaging cameras. We work with clients across a broad range of industries.



Temperature Probes

Temperature Probes are often the lowest cost part of your control system and can be given little consideration. However their design and the way they are made has a direct impact on the quality of the measurements taken.

With a proven track record, we understand the pitfalls of temperature probe design and know how to get the best from your sensor by applying modern assembly techniques.

No two applications are the same so we don't offer a one size fits all product. All Process Parameters temperature probes are assembled by us to meet the demands of your application, and regardless of the size of your requirement, we will make what you need.

There are many standard designs of probe that have become commonplace, and Process Parameters certainly manufactures these every single day. However, we are also able to offer a bespoke manufacturing service where the design of the probe is made to your exact specifications. This may mean a special process connection, material of construction, or even an electrical connection to interface with existing equipment. All are possible.

Our in house expertise enables us to give impartial application-specific advice ensuring that you get the most from your sensors.



All of our temperature sensors are manufactured by us in the UK using the finest components and our own fully trained staff. We have a policy of continuous improvement in our techniques and procedures in line with our UKAS accredited ISO 9001 Quality Management System.

We supply standard replacements for your process or OEM integration. Our probes are always fully assembled and tested, and are shipped ready for fitting.

- **Ex-stock and custom made**
- **Built to customer specifications**
- **Calibration service**
- **Supplier to OEM's, end users and resellers**

All Process Parameters Temperature Probes comply with the relevant British and International Standards which means that our sensors are interchangeable with those of your existing supplier. Our comprehensive portfolio of specialist temperature products can be configured with a multitude of options including thermowells and pockets.

Process Parameters offers a full range of standard and made to measure fabricated and mineral insulated temperature probes utilising Platinum Resistance, Thermocouple or Thermistor technology. We can supply any style or design of sensor for all industrial process engineering applications.

- **Specialist process connection—threads, flanges, hygienic**
- **Materials of construction—various Stainless Steels, Inconel, PTFE, Aluminium etc**
- **Electrical output—direct sensor output, 4-20mA, 0-5V and 0-10V, HART®, Profibus®**
- **Electrical connection—standard terminal housing, cable or connector to meet your needs**

We are pleased to offer technical advice and assistance both before and after your purchase. Whatever your temperature measurement needs, Process Parameters will help you find the right solution.



Infrared Temperature Measurement

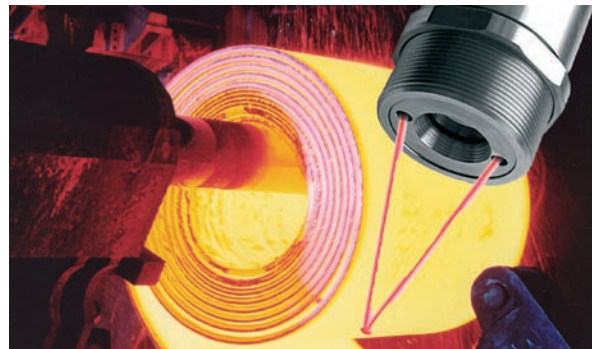
Infrared Temperature Measurement has many advantages over the use of contact probes. They are ideal in moving applications where a contact probe is impractical. They have very fast response times making them excellent for applications that change quickly, or when there is only a short opportunity to measure temperature. They can also measure very high temperatures reliably, from a safe distance.

Process Parameters is the UK distributor for Optris, the proven German manufacturer of Infrared Non-Contact Temperature Sensors, Thermometers, and Thermal Imaging Cameras.

The extensive range of Optris Infrared sensors come with state of the art technology, and are ideal for use in high speed production processes where it is not possible to use contact probes.

- Measure up to 2200°C
- No energy loss or damage to process
- Robust designs
- Fast response time, as fast as 1ms
- OEM solutions

The Optris Compact Infrared pyrometers, comprising the CS, CSmicro and CT product ranges, have the smallest sensing heads in the industry making them perfect for use where space is at a premium. They can also be used in very high ambient temperatures, and their low cost makes them highly suitable for OEM applications.



Optris High Performance sensors including the CSLaser, CTlaser and CTratio products take performance to the next level. They incorporate a dual laser aiming system enabling precise aiming of the measuring spot. The two lasers also pinpoint the size of the spot on the object being measured. Very high grade optics allow for the smallest of measuring spots. The CSvideo and CTvideo models provide simultaneous video alignment and double laser sighting for when viewing conditions are poor.



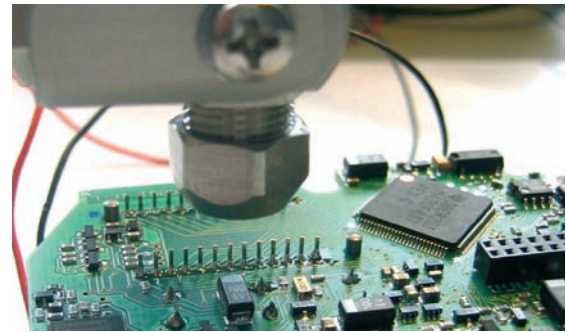
The range of Optris Infrared temperature sensors enable you to measure almost anything. We offer sensors with a fully configurable range of settings which allow you to achieve the most reliable readings in your process.

All sensors include adjustable emissivity as standard, not available with all manufacturers. This single setting is the most critical to ensuring the most accurate of measurements.

In addition, we offer sensors that are sensitive to specific parts of the Infrared spectrum. This allows you to overcome the difficulties of measuring some materials such as metals, plastic films, glass and even flames.

Optris pyrometers are available with optional interfaces and Windows PC software to enable on screen measurement and recording whilst making configuration of your sensor simple and intuitive. We can also supply other interfaces such as Profibus® and RS485 to fully integrate with your existing control system.

The Optris range also includes Handheld Infrared Thermometers for demanding portable measurement tasks such as preventative electrical maintenance, HVAC defect analysis and even molten metals in foundry applications. They offer internal data storage and analysis via USB interface and software. They are available with dual switchable lenses, laser sighting arrangements and in short wavelength versions.

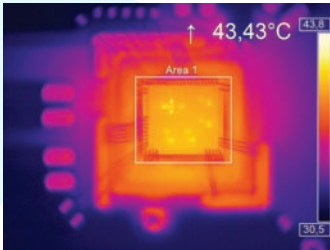


Thermal Imaging Cameras

Thermal Imaging Cameras used to be reserved for only the most demanding of applications, and their prohibitively high cost prevented them from being used in more day to day areas. This has now changed and the Optris PI series of Thermal Imaging Cameras give you the opportunity to utilise affordable leading edge temperature measurement technology in your own process or project.

There are many ways of using a thermal imager, some perhaps surprising. The most obvious is during the R&D process but, as the cost and versatility of the cameras has improved, it is now possible to use cameras continuously within your process as part of your existing measurement and control system.

Optris PI cameras are designed for industrial applications and their very small size and IP67 rating makes them suitable for mounting almost anywhere.



Unlike many cameras, the PI models have the benefit of recording full frame video at speeds of up to 120Hz, making them ideal for use in fast moving processes.

- Measure up to 1850°C
- Real time thermal images and video
- High resolution
- High temperature sensitivity
- Portable & fixed applications



The Optris PI series spans a range of thermal imaging cameras with 160 x 120 pixels up to 382 x 288 pixels. The bi-spectral version can display an Infrared image with a visual image, particularly suited to locating hot spots on complex equipment.

The Optris high resolution Infrared cameras include a model with high temperature sensitivity which is ideal for research projects where the slightest temperature change is important.

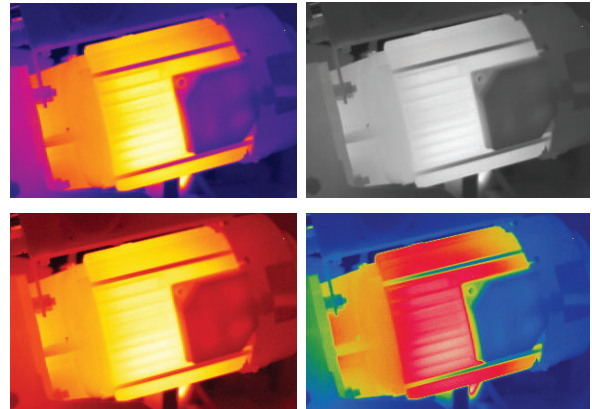
Lightweight versions of the cameras are available for UAV applications. Optris are one of the first to provide fully radiometric thermal imaging camera solutions for this use.

Behind each of the Optris PI Thermal Imaging Cameras is a fully featured software analysis package, PI Connect, that is supplied as standard with your camera. The software gives full flexibility for you to gather data from your process either live or with recorded data.

The Optris PI cameras are connected to a PC via a USB connection which provides both the power to the camera and data transfer to the PC. A stand alone alternative can be achieved by connecting the camera to an Optris PI NetBox miniaturised computer. Full integration with your existing Ethernet network is also easily achievable.

- Automatic hot and cold spot identification
- Output data as full frame video, stills or raw temperature data
- Download data for temperature traceability / quality records
- Line scanning function for conveyor applications
- Alarm facility
- Integration with other applications such as LabVIEW

In order to meet the varied requirements of close, standard and long distances, Optris cameras come with a choice of interchangeable lenses and adjustable focus. We also offer a full range of accessories allowing for use in hostile environments and high ambient temperatures.



Instrumentation and Calibration

Process Parameters provides a complete Temperature Measurement and Control Solution complementing our contact probes, non-contact Infrared products and thermal imaging cameras. This range includes Temperature Controllers, Transmitters, Temperature Indicators and Displays, Temperature Gauges and Float Switches.

Fully configurable PID temperature controllers and electronic thermostats, with single or double display, can precisely control temperature with programmable alarm and optional communication interface.

Process Parameters sensors with terminal heads are available with a range of in head smart temperature transmitters. They accept Pt100 or Thermocouple input, and convert the sensor output over a configured temperature range, to a standard industrial 4 to 20 mA transmission signal, or 0-10V. DIN Rail Mounted Transmitters and signal conditioners are also included in the range.

A selection of stainless steel gas filled temperature gauges, including rigid stem and capillary models are available in a choice of sizes and with various mounting options. The high quality nature of the product lends itself to applications with the highest demands including the food, pharmaceutical and oil and gas industries.

To enable you to get the best from your sensors and instrumentation we can provide a complete portfolio of accessories such as pockets, compression fittings, extension cables and interconnects.

Process Parameters really is your single source for temperature measurement!



To support our manufacturing capability we have our own high quality temperature calibration facility operated by our experienced team of technicians. Process Parameters offers a prompt and efficient calibration service at very competitive prices for both our own probes and most other makes and models of temperature instruments. We are able to provide 3 point or 5 point calibration with traceability to National Standards in the range -25°C to $+200^{\circ}\text{C}$ using stable fluid baths and high accuracy independent reference thermometers. All our equipment is calibrated regularly by independent UKAS laboratories. We are also able to outsource calibration that is required outside of the range we offer, or if full UKAS accreditation is required.

Calibration Certificates as well as Certificates of Conformity are available on request for all new products purchased from Process Parameters. Thereafter, annual calibration is recommended for most devices to ensure your equipment is working reliably.

As well as contact probes, we also offer a calibration service for non-contact Infrared sensors in the range $+35^{\circ}\text{C}$ to $+400^{\circ}\text{C}$, using our in house black body. This form of calibration with a heat source of known emissivity is the only way to give reliable calibration of Infrared sensors. Calibration of Optris Infrared sensors above 400°C and Optris thermal imaging cameras is provided by the Optris calibration facility.





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