



Precision in the Extreme



Precision in the Extreme

Zettlex is a sensors company. We design, make and sell non-contact sensors which measure position and speed..

Our company motto is '**Precision in the Extreme**' – signifying that our sensors are highly accurate and reliable even in extreme environments.

Extreme environments include high or low temperatures, tight spaces, high pressures, immersion in fluids, chemical attack, vibration, shock, limited weight, low power, electromagnetic noise, radiation, aggressive or extended duty cycles.

Extreme precision might mean, for example, measuring 16 million steps per revolution or measuring sub-micron linear displacements.

Zettlex's unique non-contact technology measures displacement using a patented inductive technique. This enables sensors with **no contacts, no bearings, no bushes, no seals, no fine wires, no delicate components.....just reliable measurements all day, every day.**

The main parts of our sensors are laminar, printed circuits. This enables lightweight, compact devices that can be readily tailored for tight or unusual spaces.

Zettlex sensors are available in a wide range of shapes & sizes including rotary, annular, linear, curvi-linear, 2D and multi-axis. Linear sensors range from 0.1 to 2700mm and rotary units measure continuously over 360 degrees or multiple rotations.

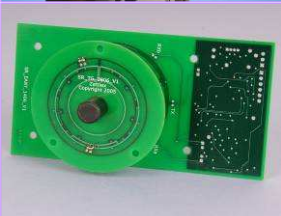
Rotary units are also used as high speed motor encoders or wireless torque transducers.



Flow metering



Plant monitoring



Pan & tilt controls

As well as a wide range of custom and semi-custom products, we offer 2 standard ranges – IncOder rotary units and LINTRAN linear units.

IncOder

IncOders are designed for precision measurement of angle. They are ideally suited to high-reliability applications in harsh environments where potentiometers, optical encoders or capacitive sensors will prove unreliable. IncOder's low profile and large bore make it easy to accommodate through-shafts, slip rings, optic fibres, pipes or cables.

Applications include rotary joints, gimbals, electro-optic equipment, weapons systems, robotics and automation.

IncOders offer an economical, accurate and lightweight alternative to slab and pancake resolvers.

The standard IncOder range has over 600 different product variants ranging in size from 75 to 570mm and with various voltage supplies, data outputs and mechanical fittings.

IncOders have a long track record of reliable operation in demanding applications in industrial, defence, aerospace and medical sectors.

IncOders use no ITAR restricted components and no export license is required for defence applications.

LINTRAN

LINTRAN linear units provide a simple and robust method for linear position measurement over 200 – 1000mm.

Field programmable without the need for a PC, LINTRANS offer a cost effective alternative to LVDTs, potentiometers or magnetostrictive devices.



Radar



Weapons Systems



Linear Actuators

Custom & Semi-custom Products

We have a library of hundreds of sensor designs which can be readily customized to suit specific requirements.

Our in-house CAD/CAM systems allow us to design, build and test a sensor virtually before we make any hardware. This enables us to produce customized solutions much more quickly and efficiently than traditional techniques.

Typically, specific technical requirements are met by combining elements from existing designs. Sensors can be designed to withstand :

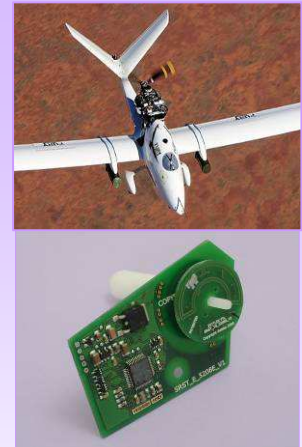
- Long term immersion
- Extended life-time
- Chemical attack
- Potentially explosive (ATEX) environments
- Temperatures from -55 to 230°C
- Aggressive vibration and shock to 1000g
- Lightning strike, over voltage and reverse polarity.

Generally, sensor accuracy is unaffected by mounting offsets or tolerances. Pathways for cables or shafts can be provided through the sensors for easy installation. The sensor's environmental operating envelope can be expanded by remote location of electronics.

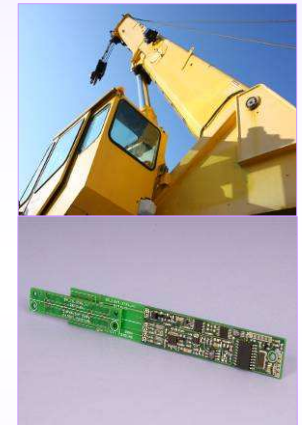
Absolute or incremental outputs are available including 0-5V, 0-10V, 4..20mA, SSI, SPI, PWM, I²C, RS232, RS485, MODBUS etc.

In some applications, unit costs can be reduced with a single electronics module controlling multiple sensors.

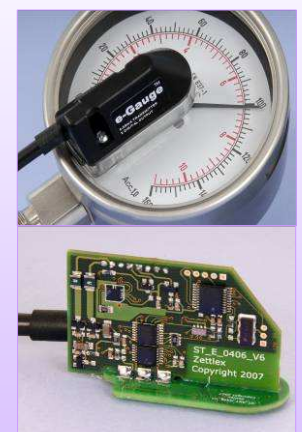
In safety applications, electrically redundant sensors can be supplied with on-board monitoring & diagnostics. For aerospace and safety critical applications, sensors can be provided with software approved to D0178B or, alternatively, without software.



Flight controls



Actuator controls



Dial instrumentation

The Company

Zettlex is an independent, privately owned company based in Cambridge, UK. Our European office is in Bratislava, Slovakia.

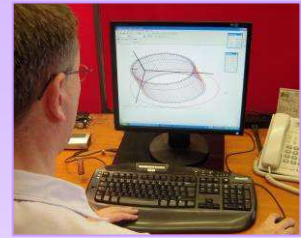
Our expertise and facilities include:-

- electromagnetic design - using our proprietary CAD system
- electronics design & development
- software engineering
- mechanical design & development (SOLIDWORKS)
- mechanical & electrical prototyping
- traceable component purchasing, inspection & storage
- low, medium & high volume sensor production
- sensor calibration & accuracy testing
- environmental & performance testing.

All our engineering, prototyping, production, sales and customer support are run to rigorous ISO9001:2008 quality standards. We are certified to BS EN 13980 for the design and manufacture of ATEX products for potentially explosive environments.

We are familiar with defence and aerospace quality requirements regarding DO-178, DO-254 & DO-160.

Zettlex has global reach for sales, technical support and service through our international partner network. Your local representative is listed overleaf.



Electromagnetic design



Mechanical design



Inspection & stores



Prototyping



Production



Product Test

QUALITY ASSURANCE



BS EN ISO 9001:2008



BS EN 13980



Precision in the Extreme

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All products available from your local representative or from the Zettlex web-site at
www.zettlex.com



Message from Mark Howard, Zettlex General Manager:

Ours is a simple business ethic: hard work, honesty & great customer service. I hope you will find our products useful.

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