Zettlex



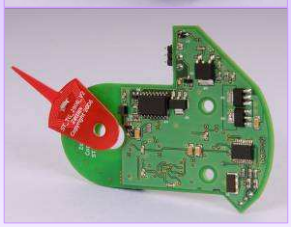




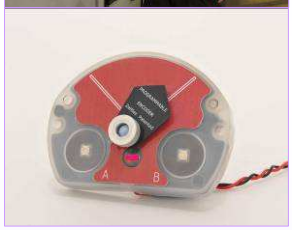





Precision in the Extreme



Flow metering



Plant monitoring

Pan & tilt controls

Zettlex

Precision in the Extreme

Zettlex is a sensors company. We design, make and sell sensors & sensor components for position or speed measurement.

Our company motto is **'Precision in the Extreme**' – signifying that even in harsh environments, our sensors remain accurate and reliable.

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

Extreme precision might mean, for example, measuring 16 million steps over one revolution of a rotary encoder or measuring sub-micron displacements of a linear sensor.

Zettlex's unique non-contact technology measures displacement using a patented inductive technique. This enables **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 which enables us to produce lightweight, compact designs that can be readily shaped to tight or unusual space envelopes.

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.

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

Radar

IncOder

IncOders are precision angle encoders. They are ideally suited to applications that need reliable operation in harsh environments where electrical contacts, optical or capacitive devices may prove unreliable. Low profile and a large through bore makes it easy to accommodate shafts, slip rings, optic fibres, pipes or cables.

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

IncOders offer a highly 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 250mm 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.

Weapons Systems

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 potentiometers or magnetostrictive devices.

Linear Actuators

Custom & Semi-custom Products

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

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

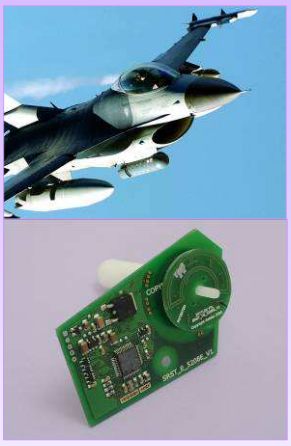
- Long term immersion
- Extended life-time
- Chemical attack
- Potentially explosive (ATEX) environments
- Temperatures from -55 to 85, 125 or 230^{o}C
- Aggressive vibration including mechanical shock to 1000g
- Lightning strike, over voltage and reverse polarity.

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.

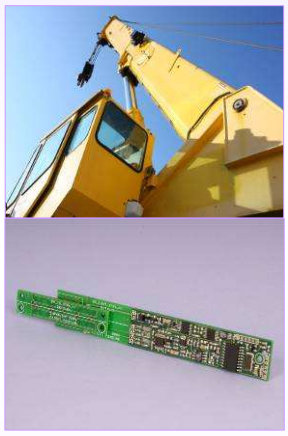
Absolute or incremental outputs are available including 0-5V, 0-10V, 4..20mA, SSI, SPI, PWM, $I^{2}C$, RS232, RS485, MODBUS etc.

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

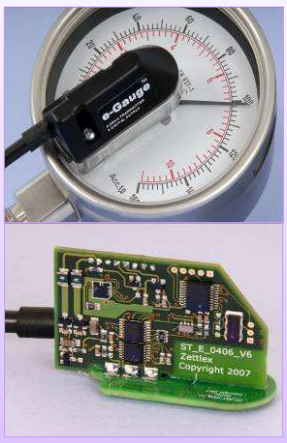
In safety applications, electrically redundant sensors can be supplied with on-board monitoring & diagnostics. For aerospace and safety critical applications, sensors can be provided with software approved to D0178B or, alternatively, without software.



Flight controls



Actuator controls



Dial instrumentation

The Company

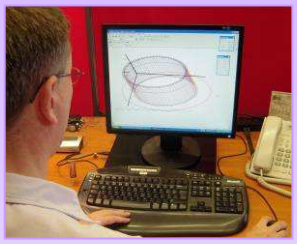
Zettlex is an independent company based in Cambridge, UK. Our European office is near Bratislava, Slovakia.

Our expertise and facilities include:-
- electromagnetic design - using our proprietary CAD system
- electronics design & development
- software engineering
- mechanical design & development (SOLIDWORKS)
- mechanical & electrical prototyping
- component inspection and stores
- low, medium & high volume sensor production
- rotary sensor calibration & accuracy testing
- linear sensor calibration & accuracy testing
- environmental testing.

All our engineering, prototyping, production, sales and customer support are run to rigorous 1SO9001:2008 quality management standards. We also carry certification 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 and DO-254.

Zettlex has global reach for sales, technical support and service through our international network of partners in all industrialized nations.

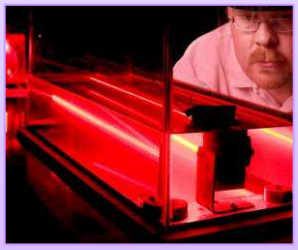

Electromagnetic design


Mechanical design


Inspection & stores


Prototyping


Low & Mid Volume Production


Product Test

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QUALITY ASSURANCE BS EN ISO 9001:2008 BS EN 13980