# elcis encoder s.r.i.



elcis

encoder



10/01/2012

### **Positioning problems** are solved with... ELCIS

Being a specialist in a specific industrial field means to know customers problems, thus yielding devices that actually comply with the hardest requirements.

**ELCIS ENCODER is a specialist in the position-transducers field.** The technical knowledge and experience of Elcis in positiontransducers, **acquired since 1974**, allows to produce an extremely wide and complete range of these devices.

**ELCIS ENCODER** has patented many technologic solutions which give the possibility to attain high qualitative levels, both in precision and reliability.

More than 10000 customers are proudly using **ELCIS ENCODER** products.

## **Positioning problems** are solved with... ELCIS

**ELCIS philosophy** towards his Customers is not limited to supply a reliable standard encoder, but **also** to design, at no extra cost, **customized units based on Customers specific requirements**.

Thanks to the **extremely wide model range**, **proved quality** and **sturdiness**, ELCIS encoders are thus world-wide used.







#### elcis encoder

Incremental optical encoders Fieldbuss absolute encoders Kit encoders

Incremental Magnetic encoders

Linear transducers Rotary handwheels Linear potentiometers Boards for splitting signals produces:

Absolute optical encoders Custom encoders Low-cost encoders

Absolute Magnetic encoders

Cable transducers Portable handwheels Couplings Wide range of accessories

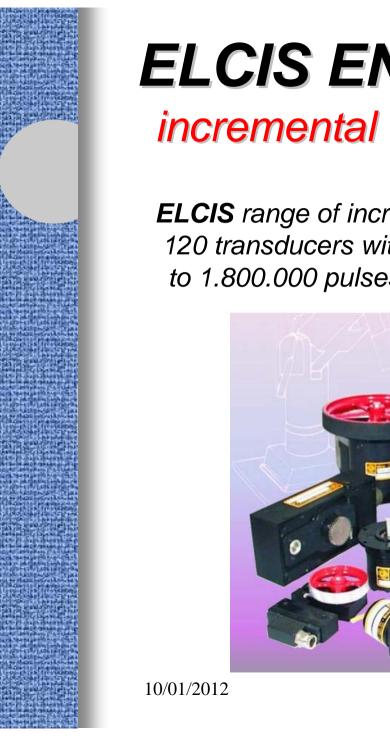
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encoder

**ELCIS encoder** products, thanks to their wide range of models, quality and toughness, are applied with great success in all the World on:

Industrial process controlsIndustrial robotsMachine toolsMeasuring instrumentsPlotters, dividersSheet treatment machinesScales and balancesAntennas and telescopesEcologic plantsWind turbinesGlass, marble, cement, wood, etc. processing machinesTextile, pelt processing machinesCranes, bridge cranes, pressing machinesPrinting machines, packaging, plastic, etc.



incremental encoders for any appliance

**ELCIS** range of incremental encoders is composed of more than 120 transducers with  $\emptyset$  22  $\div$   $\emptyset$  250 mm, with resolutions from 1 to 1.800.000 pulses/revolution according to the model chosen.



### ELCIS ENCODER produces: ATEX encoders for gas and dust

**ELCIS** explosion-proof encoders are suitable for use in working environments with potentially explosive atmosphere (Zone 1, 2, 21, 22).

The encoders can be provided with the following characteristics:

CE Ex II 2 G Ex d IIC T6 Gb CE Ex II 2 D Ex tb IIIC T85°C Db IP6x

CE Ex II 2 G Ex d IIC T5 Gb CE Ex II 2 D Ex tb IIIC T100°C Db IP6x



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### ELCIS ENCODER produces: ATEX encoders for gas and dust

**ELCIS** explosion-proof encoders are available as:

Incremental (with square waveforms)

Incremental + phases

Singleturn absolute

Multiturn absolute

**Potentiometer** 

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Incremental

(sinusoidal output)

### ELCIS ENCODER produces: incremental encoders for motors

This range of incremental encoders with hollow shaft spreads from models with Ø 4 mm to Ø 120 mm hollow shaft .



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#### incremental encoders for motors

### ELCIS know-how on these transducers is evidenced by the number of patents having been registered.

These encoders are equipped with an internal special coupling allowing for compensation of both axial and radial slack of the motor shaft to which they are coupled.

A confirmation of the product validity is given by the fact that many motor manufacturers standardized the fitting of these encoders on their motors: several fitting flanges are available for installation of these encoders on any kind of motor.

**ELCIS** development department will study particular "custom" versions on request.



#### Heavy Duty encoders

A almost infinite new range of sturdy encoders for heavy duty application is available.

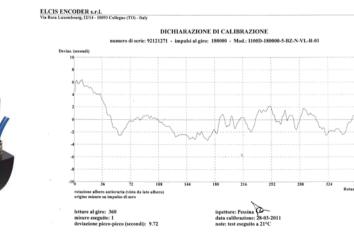


### ELCIS ENCODER produces: high resolution incremental encoders

The high resolution, matched to high operating frequency (up to 1 MHz), opens the way to new possibilities in the dividers and angular positioners fields, at low prices and noticeable precision.

The high resolution encoders can be supply with metrological accuracy declaration.







#### low-cost incremental encoders

A wide range of low cost encoders and in kit products is available in the SICOD product lines.



#### custom encoders

#### ELCIS ENCODER

is specialized in encoders' manufacturing upon specific features without project extra charges.



electronic handwheels for any appliance

**ELCIS ENCODER** electronics handwheels are special incremental hand-controlled encoders.

Designedly developed as an auxiliary control for hand positioning on C.N.C. machine tools, they yield a noticeable sturdiness matched with a graceful aesthetic appearance.

ELCIS produces different handwheel types **for panel** installation or **portable** box, with or without display, with spiral cable.

Every portable handwheel has a control device that allows the instant stop of the machine tools in dangerous situations.



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# ELCIS ENCODER produces:

### electronic handwheels for any appliance

ELCIS portable handwheels are extremely sturdy and thanks to different operating voltages and many output electronics they can be interfaced with any CNC.



absolute Singleturn and Multiturn encoders

**ELCIS ENCODER** absolute encoders are designed for industrial and professional duties thanks to their sturdiness high quality and reliability.



### absolute Singleturn and Multiturn encoders

Many different models are available in Singleturn, Multiturn or "Double function" (absolute + incremental) version.

They are available with SSI, programmable SSI or Parallel output with Gray or Binary or BCD code, etc.

The range of absolute encoders is made up of more than 30 Singleturn encoders with  $\emptyset$  45 ÷  $\emptyset$  115 mm and more the 20 Multiturn encoders with  $\emptyset$  58 ÷ 115 mm.

The "Double function" encoders are special transducers with two matched encoders: absolute and incremental. Typical application is the keying on "Brushless" motors where the "absolute" section describes the motor's strokes.

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#### absolute encoders with Field Busses

This new range of Singleturn and Multiturn absolute encoders (max 30 bits) is available with the following field busses:

PROFIBUS-DP CANopen DeviceNet Ethernet TCP-IP



Upon request, special custom versions can be developed.10/01/2012ELCIS ENCODER srl

#### magnetic encoders

#### **Magnetic encoders**

are suitable for any kind of applications and for environments where the standard optical encoders can't be used.



### ELCIS ENCODER produces: linear transducers and cable transducers

CR80/85 linear transducers, in ENCODER-PINION-RACK version, are made of a steel support on which high quality and precision rack bars are installed and a microminiaturized incremental "PINION-ENCODER" slides as a "cursor" on the rack.

RV linear transducers are "GLASS" version. RV linear transducer are very thin (just from 18 mm) and for short length are cheaper than mod. CR80/CR85.





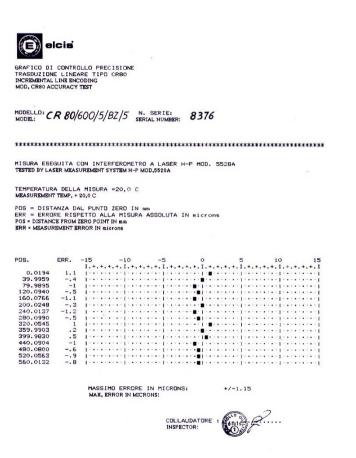
linear transducers and cable transducers

**ELCIS ENCODER srl** 

The **CR80** linear transducers are provided together with an Accuracy Declaration since they are aligned in a standard room by means of a hp laser interferometer.

The measuring error is not cumulative and then indipendent from transducer length!

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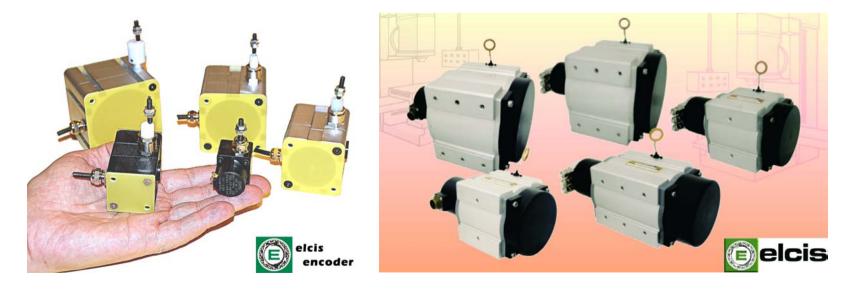


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#### linear transducers and cable transducers

"CABLE" linear transducers are suitable for applications that can't be fitted by CR80 and RV for dimensions, installation or cost grounds, but only when the max. resolution required is 0,1 mm.

Their working is based on the measurement of the extension of a stainless steel cable, self-winding up inside of the transducer.



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#### linear potentiometers

#### "Potentiometric" linear transducers,

with resistive element made of conductive plastic, are suitable for applications on hydraulic and pneumatic cylinders, plastic moulding- packaging, textile machines etc.



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## ELCIS ENCODER Quality

Quality and reliability are the most important points for **ELCIS ENCODER** in encoders manufacturing.



Since 1994 ELCIS ENCODER is certified according to ISO 9001.

*Since 2004 ELCIS ENCODER* products are approved by *UL/CSA in accordance with UL 508 and CSA C22.2 No.14-M95 Standards.* 

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## ELCIS ENCODER Quality

Each lot of encoders is followed by a working sheet listing all the requested operations and checks; the operator must sign each of them, writing aside the obtained results.

Then the working sheet is placed in archives in order to certify the occurred quality.

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### This series of operations gives to the Customer the warranty of an error free product.

10/01/2012

## ELCIS ENCODER Quality

**ELCIS ENCODER** products are provided with instructions sheet and Conformity Declaration.





**ELCIS ENCODER** products have **2 Years Warranty**. Upon request, the warranty may be extended.

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