

elcis encoder s.r.l.



***Our best advertising is the satisfied
Customer that passes the word.***



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 position-transducers, **acquired since 1974**, allows to produce an extremely wide and complete range of these devices.*

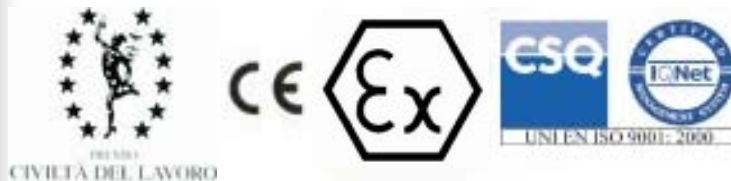
ELCIS ENCODER has patented many technologic solutions which give the possibility to attain high qualitative levels, both in precision and reliability.

*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.*



CANopen

DeviceNet.

EtherNet





**elcis
encoder**

produces:

Incremental optical encoders

Fieldbuss absolute encoders

Kit encoders

Incremental Magnetic encoders

Linear transducers

Rotary handwheels

Linear potentiometers

Boards for splitting signals

Absolute optical encoders

Custom encoders

Low-cost encoders

Absolute Magnetic encoders

Cable transducers

Portable handwheels

Couplings

Wide range of accessories



elcis 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 controls

Machine tools

Plotters, dividers

Scales and balances

Ecologic plants

Glass, marble, cement, wood, etc. processing machines

Textile, pelt processing machines

Cranes, bridge cranes, pressing machines

Printing machines, packaging, plastic, etc.

Industrial robots

Measuring instruments

Sheet treatment machines

Antennas and telescopes

Wind turbines

ELCIS ENCODER produces: ***incremental encoders*** for any appliance

ELCIS range of incremental encoders is composed of more than 120 transducers with $\varnothing 22 \div \varnothing 250$ 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



ELCIS ENCODER produces:

ATEX encoders for gas and dust

ELCIS explosion-proof encoders are available as:

***Incremental
(with square waveforms)***

***Incremental
(sinusoidal output)***

***Incremental
+ phases***

***Singleturn
absolute***

***Multiturn
absolute***

Potentiometer



ELCIS ENCODER produces: ***incremental encoders*** for motors

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



ELCIS ENCODER produces:

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.

ELCIS ENCODER produces:

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.

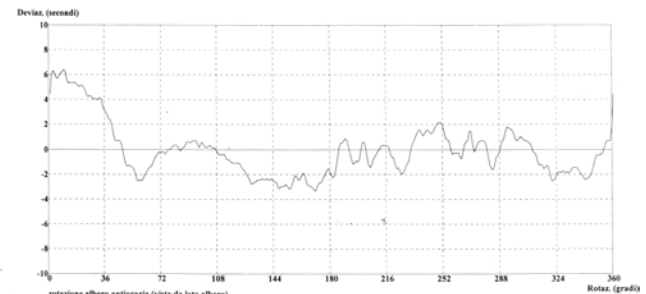
The high resolution encoders can be supply with metrological accuracy declaration.



ELCIS ENCODER s.r.l.
Via Rosa Luxembourg, 12114 - 10093 Colleao (TO) - Italy

DICHIARAZIONE DI CALIBRAZIONE

numero di serie: 92121271 - impulsi al giro: 180000 - Mod.: 1100D-180000-5-RZ-N-VL-R-01



rotazione albero antioraria (vista da lato albero)
origine misure su impulso di zero

letture al giro: 360
misure eseguite: 1
deviazione picco-picco (secondi): 9.72

ispettore: Pessina
data calibrazione: 28-03-2011
note: test eseguito a 21°C

ELCIS ENCODER produces:

*low-cost **incremental encoders***

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



ELCIS ENCODER produces: *custom encoders*

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





ELCIS ENCODER produces: ***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.

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.



ELCIS ENCODER produces: ***absolute Singleturn and Multiturn encoders***

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



ELCIS ENCODER produces: ***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 $\varnothing 45 \div \varnothing 115$ mm and more the 20 Multiturn encoders with $\varnothing 58 \div 115$ 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.

ELCIS ENCODER produces:

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

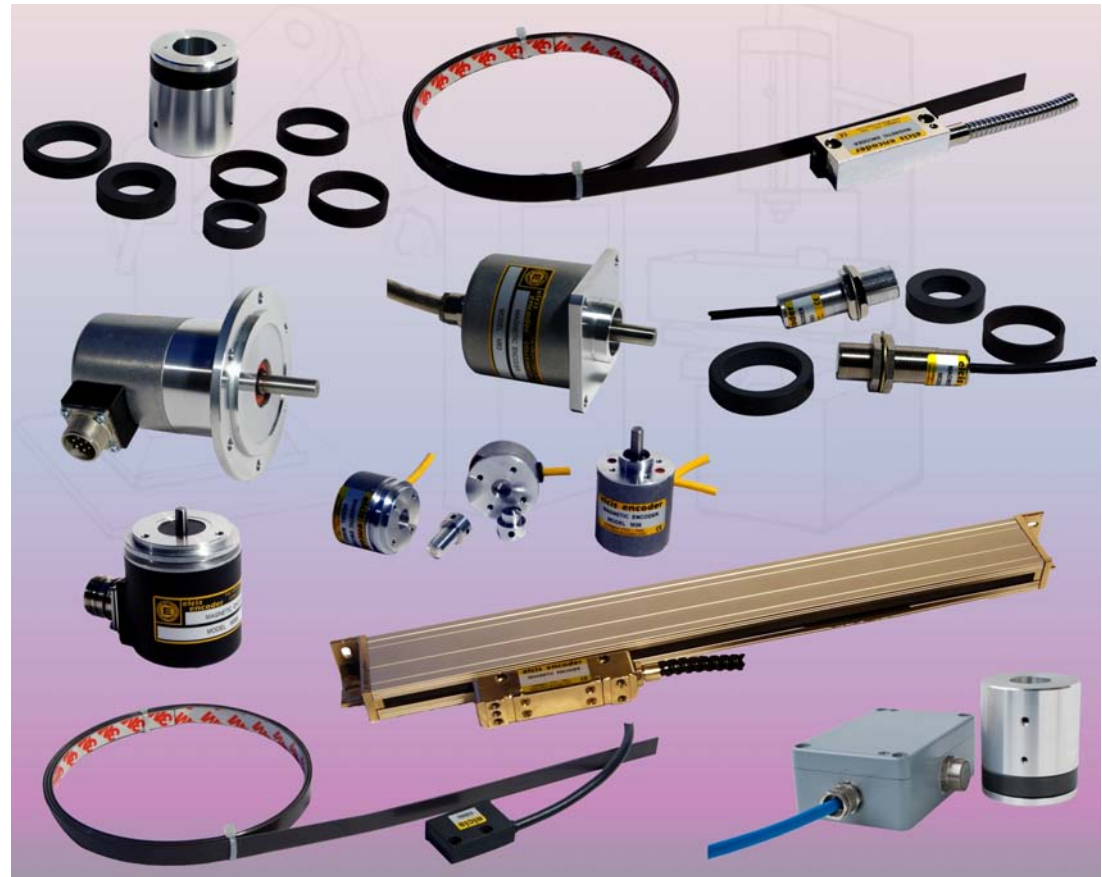
Ethernet TCP-IP



Upon request, special custom versions can be developed.

ELCIS ENCODER produces: ***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.



ELCIS ENCODER produces: *linear transducers and cable transducers*

*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 independent from transducer length!



GRAFICO DI CONTROLLO PRECISIONE
TRASDUZIONE LINEARE TIPO CR80
INCREMENTAL LINE ENCODING
MOD. CR80 ACCURACY TEST

MODELLO: *CR 80/600/5/BZ/5* N. SERIE: *8376*
MODEL: *CR 80/600/5/BZ/5* SERIAL NUMBER: *8376*

MISURA ESEGUITA CON INTERFEROMETRO A LASER H-P MOD. 5528A
TESTED BY LASER MEASUREMENT SYSTEM H-P MOD.5528A

TEMPERATURA DELLA MISURA =20,0 C
MEASUREMENT TEMP. = 20,0 C

PDS = DISTANZA DAL PUNTO ZERO IN mm
ERR = ERRORE RISPETTO ALLA MISURA ASSOLUTA IN microns
POS = DISTANCE FROM ZERO POINT IN mm
ERR = MEASUREMENT ERROR IN microns

| PDS. | ERR. | -15 | -10 | -5 | 0 | 5 | 10 | 15 |
|----------|------|-----|-----|----|---|---|----|----|
| 0.0194 | 1.1 | I | + | + | + | + | + | + |
| 39.9959 | -1.4 | I | . | . | . | . | . | . |
| 79.9835 | -1 | I | . | . | . | . | . | . |
| 120.0940 | -1.5 | I | . | . | . | . | . | . |
| 160.0766 | -1.1 | I | . | . | . | . | . | . |
| 200.0248 | -1.3 | I | . | . | . | . | . | . |
| 240.0137 | -1.2 | I | . | . | . | . | . | . |
| 280.0990 | -1.5 | I | . | . | . | . | . | . |
| 320.0545 | 1 | I | . | . | . | . | . | . |
| 359.9903 | -1.2 | I | . | . | . | . | . | . |
| 399.9890 | -1.5 | I | . | . | . | . | . | . |
| 440.0904 | -1 | I | . | . | . | . | . | . |
| 480.0800 | -1.6 | I | . | . | . | . | . | . |
| 520.0563 | -1.9 | I | . | . | . | . | . | . |
| 560.0132 | -1.8 | I | . | . | . | . | . | . |

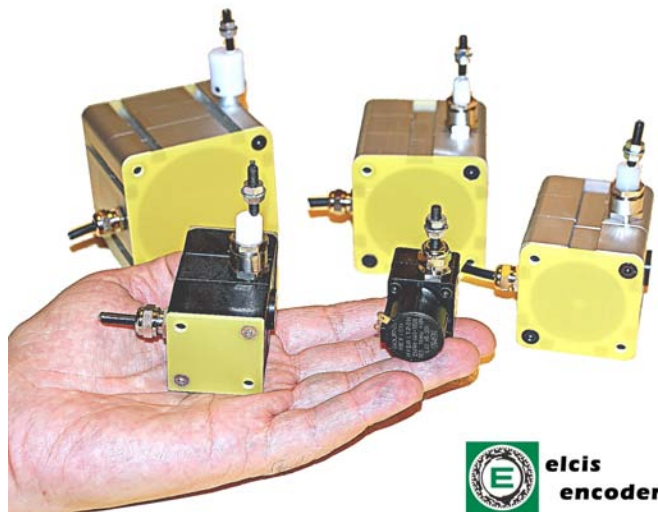
MASSIMO ERRORE IN MICRONS: +/-1.15
MAX. ERROR IN MICRONS:

COLLAUDATORE : 
INSPECTOR:

ELCIS ENCODER produces: ***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.



ELCIS ENCODER produces: ***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.



ELCIS ENCODER

Quality

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



UNI EN ISO 9001: 2008

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.

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.

| N. | PR | OPERAZIONI | CONTROLLI PREVENTIVI | ESEC. | DATA | REP. |
|----|-------|---|--|-------|------|------|
| 1 | 12.1 | Avviamento stabilizzatore. | Isolare mica posizionata bene - piedini equivalenti - avvit. OK. | 3 | 8-3 | RME |
| 2 | 12.2 | Avviamento forcella. | | 3 | 8-3 | RME |
| 3 | 12.3 | Splinteratura mozzo - soffiature trucioli. | Assenza trucioli dopo lavorazione. | 3 | 8-3 | ROM |
| 4 | 12.4 | Pulita perimetri - Innebbiamento disco e base - centratura disco - tesa su lauer. | Qualità disco - rotazione DK - altro con disco inserito. | 3 | 8-3 | RME |
| 5 | 12.5 | Incolaggio disco. | Giusta infiltrazione colla nel lauer. | 3 | 8-3 | RME |
| 6 | 12.6 | Avviamento forcella led. | Presenza colla su LED. | 4 | 10-3 | RME |
| 7 | 12.19 | Avviamento stampato. | Deti eschetta concordi con C.S. - Alcantara e wex. C.S. - rotazione. | 4 | 10-3 | RME |
| 8 | 12.8 | Celebaggio forcella - stabilizzatore fili uscite. | Calore di accendi del elicetta - controllo visivo a filo lauer. | 4 | 10-3 | RME |
| 9 | 12.9 | Taglio piste versioni 624 - 1028 ecc. - infilatura e pulitura mozzo collaggio. | Pulire generale encoder. | 4 | 10-3 | RME |
| 10 | 12.10 | Collatura e taratura - verniciatura trimmer e viti - fili legatura - counter. | Rotazione albero - dall'elicetta - ebordatura C.S. - pulita disco. | 4 | 10-3 | RCT |
| 11 | 12.11 | Forno a 75° C. | | 4 | 10-3 | RCT |
| 12 | 12.12 | Collato e caldo. | Controlli simmetria - alimentazione - gioco albero - ecc. | 4 | 10-3 | RCT |
| 13 | 12.13 | Collato e freddo - verifica tutti i parametri - filo su forcella. | Controllo verniciatura - legatura - pulita. | 4 | 10-3 | RCT |
| 14 | 12.14 | Chiusura taratura ingranaggio lauer (copertina e pulita interna) - etichet. mat. | Controllo taratura - ingranaggio - polvere - ecc. - eccesso grasso. | 4 | 10-3 | RCE |
| 15 | 12.15 | Collato finale con test corto-circuito. | Controllo generale visivo ed elettrico. | 4 | 10-3 | RCE |
| 16 | 12.17 | Pulita esterna encoder - controllo visivo estetico - sm. cortico o accessori se rich. | | 7 | 11-3 | RCE |
| 17 | 18.2 | Inballaggio di ogni encoder con istruzioni di montaggio su escheta. | Controllo dati foglio lavoro e scatola con etichetta. | 7 | 11-3 | RIS |
| 18 | 18.4 | Preparazione DOT con controllo su ordine e foglio lavoro. | Aggiungere eventuali riparazioni. | 7 | 11-3 | USD |
| 19 | 18.5 | Preparazioni accessori. | | 7 | 11-3 | RIS |
| 20 | 18.3 | Inballaggio finale - accessori e controllo estetica su DOT. | Non lasciare i pacchi per giorni sugli scaffali | 7 | 11-3 | RIS |
| 21 | | Spedizione tramite: | DHL | | | |
| 22 | | Chiamata cortese o avviso Cliente. | Chiamare prima ore 12 se possibile! | | | |

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

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.