

BEISENSORS

We focus on your applications !

**INCREMENTAL
& ABSOLUTE
ENCODERS**

*Adapted
Standard
Modular*

*Rotative
& Linear*

INCLINOMETERS

**MECHANICAL
& ELECTRICAL
ACCESSORIES**



www.beisensors.com

Founded in 1979, BEI IDEACOD is the specialist of industrial sensor.

BEI IDEACOD distinguishes itself by its flexible approach and ability to react to customers needs, with us no limit exists; we shall always try to supply you the product offering the best solution to your specifications. If the product does not exist within our standard range, although very broad, we shall design a product especially for you; our company thrives on taking up challenges of this order.



With BEI IDEACOD, you are certain to find your ideal sensor !



BEI IDEACOD **encoders** convert any position, movement, speed or acceleration into digital information which can be read by a machine controller or a PLC. An encoder is an intelligent mix of mechanical, reading system (**optical or magnetic**) and electronic components. Thirty years of experience has enabled us to excel in each of these fields. Each field has been mastered by all of our departments, from development to conception.

They are available in various types of assembly configuration: solid shaft, blind shaft, hollow shaft. BEI IDEACOD offers a large range of encoders from compact encoders of diameter **30 mm** to special heavy-duty up to **200 mm** diameter.

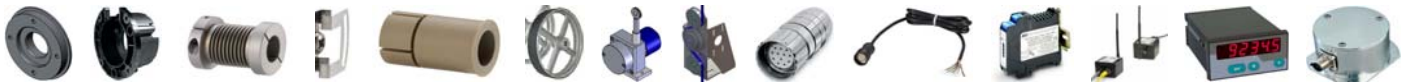
The code is either relative, incremental through generation of pulses or absolute made through generation of codes. All industrial standards are available: **TTL, HTL, Sine/Cosine** for the incremental encoders, **analog, parallel, SSI, RS232, PWM or fieldbus (CANopen, Profibus & DeviceNet)** for the absolute encoder.

The **tacho-encoders and optotachos** provide an analogue output, proportional to the frequency of disk reading and to the rotational speed of the encoder shaft.

Programmable encoders DIGISINE™ et POSI+™ offer programming of the different signals given by the encoder.

The **ATEX** range provides solutions for explosive environments in all of our encoder technologies (incremental, absolute, tachos encoders), with intrinsically safe and explosion proof designs.

The various possible combinations of optical disk resolutions, Hall effect capability, communication interfaces, output connections, shaft diameters and couplings qualify BEI IDEACOD as one of the broadest encoders range on the market.



Standard **mechanical accessories** are available for all of the encoder range, but if you need a specific mechanical mounting, we are able to manufacture it especially for you.

Also in our offer: the **draw wire** - offers a simple and cost-effective solution to measure linear speed and position (relative or absolute). Made up with a neighbouring coil drum onto which the cable winds / unwinds, it converts the cables linear movement into rotary movement which can be measured by the sensor : incremental or absolute.

In addition to our range of incremental and absolute sensors, we offer a complete range of **electrical accessories** : extension cables, interfaces & displays.

Discover our new range of **inclinometers**, sturdy and compact conception for harshest applications.

BEI IDEACOD answers to the OEM (Original Equipment Manufacturer) and the Maintenance market.

THE INDUSTRIAL SENSOR SPECIALIST

Development team devoted to OEM projects:

- Co-engineering with your team;
- Solutions to improve:
 - Reliability,
 - Cost,
 - Time to market of your products.



We focus on your applications .

Our speciality: the customised encoder - ideal for your application. You are in a development phase / you are looking for the integration of a precision rotary sensor on your system, whatever your specifications / your constraints (Mechanical interface / specific electronics, extra flat, extreme temperature, high IP, high speed of rotation, etc.), we know how to offer you an ideal solution, we can develop it for you and manufacture the prototype answering your needs, accompanied with 3D drawings, wiring plans, assembly cautions etc ...

We can also provide you with the assembly of a complete subset to be equipped, this guarantees you an optimal assembly which can be easily integrated into your manufacturing process.

Then discover the extent of our range and test our innovational spirit, we are sure that your demand will be satisfied!

THE SENSOR SPECIALIST AT YOUR SIDE FOR YOUR MAINTENANCE

SERVICE :

- Dedicated encoder manufacturer,
- Direct contact with our technicians,
- International network,

PRODUCT :

- Cross reference encoder service,
- We offer an assembly and connections compatibility service

REACTIVITY :

- Express diagnostic, repair,
- Replacement unit with best delivery time,
- Stock : delivered within 24h.



SOLUTIONS FOR ALL APPLICATIONS

We have solution for all applications:

30 - 40mm

- Forestry,
- Hydraulic,
- Solar panel...

58mm

- Motors,
- Robotics,
- Printing...

90 - 200mm

- Steel mills,
- Paper mills,
- Wood...

Mechanic:

- Food industry,
- Lift,
- Dams...

Field-bus

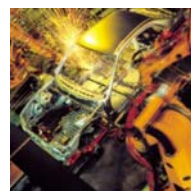
- Process,
- Automotiv,
- Medical...

ATEX

- Off Shore,
- Mines,
- Paint...

Inclinometer

- Construction,
- Handling,
- Vehicle...



STANDARD INCREMENTAL ENCODERS, OPTO-TACHOS AND TACHO-ENCODERS

Incremental range				Tacho-encoders/Opto-tachos
30mm	40mm	58mm	90mm	90mm
<ul style="list-style-type: none"> • Compact – extremely robust • Developed for harshest applications • IP65 to IP69K • Encoder T°C : -40° to +125°C possible • Power supply : 5 – 30V • Push-pull electronic • Optical or magnetic encoder. 	<ul style="list-style-type: none"> • Compact encoder • For simple applications • Encoder T°C : -20° to +80°C • IP52 (Through shaft) • IP54 (Solid shaft) • Unbreakable disk 	<ul style="list-style-type: none"> • Universal standard encoder • Encoder T°C: -40° to +125°C possible • IP65 to IP69K • Programmable resolution • Flexibility of use • Universal electronic • Standard 300kHz electronic • Magnetic or optical encoder 	<ul style="list-style-type: none"> • For extreme loads, shocks, vibrations • Encoder T°C: -20° to +80°C (Option -40°C to +100°C) • IP65 (Through shaft) • IP67 (Solid shaft) • Unbreakable disk • MAXCONTROL®: self monitoring 	<ul style="list-style-type: none"> • For heavy industry • Opto-tachos : only analog output (proportional to the speed) • Tacho-encoders : incremental and analog outputs • IP65 (Through shaft) • IP67 (Solid shaft) • Unbreakable disk

Nota: Series D, G, I & N are optical - Serie H is magnetic

All ranges are available in ATEX version – zone 2 & 22 upon request



Incremental	Shaft	Electronic	Resolution	Connection
30mm GHM3 HHM3	Solid 4 to 6 mm	·4,5-5,5V supply, out: 5V RS422/TTL ·5-30Vdc push-pull	max. 1024 ppr.	Radial & axial : ·PVC cable ·PUR cable Axial: ·M8
30mm GHK3 HHK3	Blind 4 mm	·4,5-5,5V supply, out: 5V RS422/TTL ·5-30Vdc push-pull	max. 1024 ppr.	Radial & axial : ·PVC cable ·PUR cable Axial: ·M8
40mm GHM4	Solid 6 mm	·4,5-5,5V supply, out: 5V RS422/TTL ·11-30 V push-pull (HTL) ·5-30Vdc push-pull	max. 2500 ppr.	Radial & axial : ·PVC cable Axial : ·DIN
40mm GZT4 – GHT4	Through 4 to 6 mm	·4,5–5,5V supply, out: 5V RS422/TTL ·11-30Vdc push-pull (HTL) ·5-30Vdc push-pull	max. 2500 ppr.	Radial : ·PVC cable
58mm DHM5 HHM5	Solid 6 to 10 mm	·4,5–5,5V supply, out: 5V RS422/TTL ·4,75-30V supply, out: 5V RS422/TTL ·5-30V push-pull ·11-30V push-pull (HTL) transistorized ·sine/cosine 1V peak to peak	max. 80 000 ppr Option : Programmable resolution	Radial & axial : ·PVC cable ·PUR cable ·M23
58mm DHO5 HHK5	Through & blind 6 to 15 mm	·4,5–5,5V supply, out: 5V RS422/TTL ·5-30V supply, out: 5V RS422 /TTL ·5-30V push-pull ·11-30V push-pull (HTL) transistorized ·sine/cosine 1V peak to peak	max. 80 000 ppr Option : Programmable resolution	Radial : ·PVC cable ·PUR cable ·M23
90mm GHM9 – DHM9 NHM9	Solid 11 & 12 mm	·4,5–5,5V supply, out: 5V RS422/TTL ·4,75-30V supply, out: 5V RS422/TTL ·5-30V push-pull ·11-30V push-pull (HTL) transistorized ·sine/cosine 1V peak to peak ·0-10Vdc, 4-20mA	max. 80000 ppr Option : Programmable resolution	Radial & axial : ·terminal boxe ·PVC cable ·PUR cable ·M23
90mm GHU9 NHU9	Through 10 to 30 mm	·4,5–5,5V supply, out: 5V RS422/TTL ·11-30V supply, out: 5V RS422/TTL ·11-30V push-pull (HTL) ·11-30V push-pull (HTL) transistorized ·0-10Vdc, 4-20mA	max. 10000 ppr.	Radial : ·terminal box ·PVC cable ·PUR cable ·M23

ATEX certified incremental encoders for hazardous environments

Intrinsically safe encoders, M1 certification available (mines)
EX II 1 G/D, EEx ia IIC/B T4, Category 1, Zone 0 (Gas) and 20 (Dusts),

Explosion proof encoders, M1 certification available (mines)
EX II 2 G/D, EEx d IIC T6 or T5 or T4
Category 2, Zone 1 (Gas) and 21 (Dusts)



58mm IHM5	Solid shaft 6 to 10 mm	·5V RS422 ·8-12V push-pull max. 80 000 ppr		116 mm GAMX NAMX	Solid shaft 12 mm	·HTL/TTL Electronic ·0-10Vdc, 4-20mA
58mm IHO5	Through shaft 14mm	Option : Programmable resolutions				Axial connection: ·PVC cable ·PUR cable
	5V	Ref. : 924-60004-002		109mm GAUX	Through shaft 30 mm	·Electronique HTL / TTL Radial connection: ·PVC cable ·PUR cable
	Push-pull	Ref. : 924-60004-003				
	NPN O.C.	Ref. : 924-60004-004				

ABSOLUTE SINGLE-TURN AND MULTI-TURNS STANDARD ENCODERS

30mm Single-turn	58mm Single-turn	90mm Single-turn	30 & 36mm Multi-turn	58mm Multi-turn	90mm Multi-turn
<ul style="list-style-type: none"> Compact – extremely robust Developped for harshest applications IP65 to IP69K Encoder T°C : -40° to +125°C possible 5 – 30V supply SSI, CANopen, analog Magnetic technology 	<ul style="list-style-type: none"> Standard european encoder Encoder T°C : -40° to +125°C possible IP65 to IP69K 5-30V supply High resolutions available Direction input (LATCH option) Optical and magnetic technologies 	<ul style="list-style-type: none"> For extreme loads, shocks, vibrations Developped for heavy-duty applications Encoder T°C : -20° to +90°C IP65 (Through shaft) IP67 (Solid shaft) 	<ul style="list-style-type: none"> Compact – extremely robust conception Developped for harshest applications IP65 to IP69K Encoder T°C : -40° to +125°C possible 5 – 30V supply SSI, CANopen Magnetic technology 	<ul style="list-style-type: none"> European standard encoder Encoder T° : -20° to +85°C (-40°C option) IP65 to IP69K SSI – programmable option: resolution, code, frame, limit switches CANopen, Profibus DP, DeviceNet Standard resolutions 13x12bits 	<ul style="list-style-type: none"> For extreme loads, shocks and vibrations Encoder T° : -20° to +85°C IP65 (through shaft) IP67 (solid shaft) SSI, CANopen, Profibus DP, Parallel : 11-30V Standard resolution 13x12 bits

Nota: Series C, P and M & optical - Series A & T magnetic All ranges are available in ATEX version – zone 2 & 22 upon request



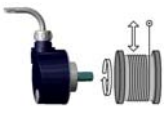

Single-turn	Shaft	Interface	Code	Resolution	Connection	
	30mm AHM3	Solid 4 to 6 mm	·SSI ·CANopen ·Analog : 0-10V & 4-20mA	·Binary ·Gray	Max. 12 bits	Diagonal : ·PUR & PVC cable Axial: ·M8
	30mm AHK3	Blind 4 mm	·SSI ·CANopen ·Analog : 0-10V & 4-20mA	·Binary ·Gray	Max. 12 bits	Diagonal : ·PUR & PVC cable Axial: ·M8
	58mm CHM5 AHM5	Solid 6 to 10 mm	·SSI & BISS ·RS232 ·CANopen & Profibus ·Parallel : push-pull 5-30V ·Analog : 0-10V & 4-20mA	·Binary ·Gray	Max. 16 bits (SSI) Max. 15 bits (Parallel) Max. 13 bits (Bus) Max. 12 bits (analog)	Radial & axial : ·M23 & M12 ·PUR & PVC cable
	58mm CHO5 AHK5	Through & blind 6 to 15 mm	·SSI & BISS ·RS232 ·CANopen & Profibus ·Parallel : push-pull 5-30V ·Analog : 0-10V & 4-20mA	·Binary ·Gray	Max. 16 bits (SSI) Max. 15 bits (Parallel) Max. 13 bits (Bus) Max. 12 bits (analog)	Radial & axial : ·M23 & M12 ·PUR & PVC cable
	90mm CHM9	Solid shaft 11 & 12 mm	·SSI & BISS ·RS232 ·CANopen & Profibus ·Parallel : push-pull 5-30V	·Binary ·Gray	Max. 16 bits (SSI) Max. 15 bits (Parallel) Max. 13 bits (Bus)	Radial & axial : ·M23 ·PUR & PVC cable ·terminal box
	90mm CHU9	Through 10 to 30 mm	·SSI ·RS232 ·CANopen & Profibus ·Parallel : driver 5V & Push-pull 11-30V	·Binary ·Gray	Max. 13 bits Max. 14 bits (Parallel)	Radial: ·M23 ·PUR & PVC cable ·Terminal box (Profibus)
	116 mm CAMX	Solid 12 mm	·Parallel : Driver 5V & Push-pull 11-30V	·Binary ·Gray	Max. 13 bits	Axial: ·PUR & PVC cable
Multi-turns	Shaft	Interface	Code	Resolution	Connection	
	30mm THM3	Solid 6mm	·SSI ·CANopen	·Binary	12 bits max. X 16 bits max.	Diagonal : ·cable
	30mm THK3	Blind 4mm	·SSI ·CANopen	·Binary	12 bits max. X 16 bits max.	Diagonal : ·cable
	36mm THM4	Solid 6mm	·SSI ·CANopen ·Analog	·Binary	12 bits max. X 13 bits max.	Axial: M12
	36mm THK4	Blind 4mm	·SSI ·CANopen ·Analog	·Binary	12 bits max. X 13 bits max.	Axial M12
	58mm PHM5 THM5	Solid 6 to 10 mm	·SSI ·RS232 ·CANopen & Profibus ·Parallel : 11-30V	·Binary ·Gray	13 bits max. x 16 bits max. Option : SSI programmable	Radial & axial : ·M23 – M12 ·PUR & PVC cable
	58mm PHO5 THK5	Through & blind 6 to 15 mm	·SSI ·RS232 ·CANopen & Profibus ·Parallel : 11-30V	·Binary ·Gray	13 bits max. x 16 bits max. Option : SSI programmable	Radial : ·M23 – M12 ·PUR & PVC cable
	58mm MHM5	Solid 6 & 10 mm	·CANopen ·Profibus ·DeviceNet	·Binary	16 x 14 bits max. 13 x 12 bits Standard	Terminal box with 3 cable glands
	58mm MHK5	Blind 6 à 15 mm	·CANopen ·Profibus ·DeviceNet	·Binary	16 x 14 bits max. 13 x 12 bits Standard	Terminal box with 3 cable glands
	90mm PHM9	Solid 11 & 12 mm	·SSI ·RS232 ·CANopen & Profibus ·Parallel : 11-30V	·Binary ·Gray	13 bits max. x 16 bits max. Option: SSI programmable	Radial & axial : ·M23 ·PUR & PVC cable ·terminal box
	90mm PHU9	Through 10 to 30 mm	·SSI ·RS232 ·CANopen & Profibus ·Parallel : 11-30V	·Binary ·Gray	13 bits max. x 16 bits max. Option: SSI programmable	Radial : ·M23 ·PUR & PVC cable ·terminal box
	109mm PAUX	Through 30 mm	·SSI ·CANopen	·Binary ·Gray	13 bits max. x 16 bits max. also available in single-turn	Radial : ·PUR & PVC cable

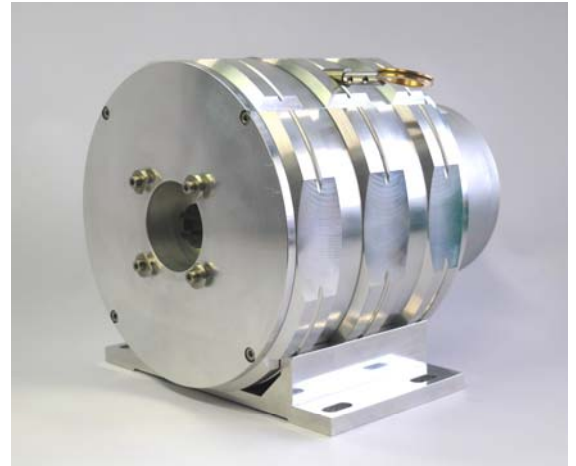


Certification M1 (mines) also available


DRAW WIRE

The draw wire offers a simple and cost effective solution to measure linear speed and position (relative or absolute).

Draw wire	Length (mm)	Interfaces		
	CD 050	1200	Incremental	·5V RS422 – TTL ·1Vpp – 11µA ·5-30 V push-pull
	CD 060	1 500		
	CD 080	2 500		
	CD 115	3500		
	CD 150	5 000		
	CD S12	8 000 to 12 000	Absolute	·SSI ·RS232 ·Profibus ·CANopen ·DeviceNet ·Parallel ·0-10Vdc ·4-20mA ·0-10kOhms
	CD S18	15 000 to 50 000		



ACCESSOIRES: MOUNTING - CONNECTION – ELECTRONIC

Mounting flange		Solenoid valve type 4 pinouts
Square flange		DIN 5 – 8-pinouts
Anti-rotation system		M23 12-, 16-, 17-pinouts
Coupling		M8, M12
Reduction hub		DB 9, DB25, DB37
		Junction box
		Cable and extension cable

The **PRO-020S001** permits a simple connection between the programmable POSI+™ and your PC.



BEI IDEACOD has developed a friendly software, easy to use, with which it's possible to program your encoder via Windows in only 2 minutes. With a simple connection to the serial connector of you PC, you can:

- configure : the number of points per revolution, the number of turns, the code type, the SSI frame bit number, the parity, a preset value.
- read : the type of selected encoder, the serial number of the encoder, the position, the temperature, the speed of rotation, the level of inputs & outputs.

Swift comm™
wireless industrial sensor interface

Swiftcomm interface: now the machine designer is free to install sensor equipment without the expense and constraints of a hard-wired system. Available in ATEX version.



High load coupling device (for high radial and axial loads)



For 58mm solid shaft :
ref. MPAL58



For 90mm solid shaft :
ref. MPAL 11/12



MAXX™ mechanic

Dedicated product offer for automation and movement control, a complete large range of electrical accessories.



- Numeric process indicators for incremental and absolute encoders,
- Measure and display of angular positions,
- Linear movement,
- Positioning,
- Cut length,
- Rotation speed and linear speed,
- Ratiometer (elongation),
- Conditioning and converters signals,
- Multi-channel amplification,
- Converters D/A,
- etc...

REDUNDANT SIGNALS APPLICATIONS

Signal redundancy solutions to ensure the continuous operation of the installation, provide commutation channels or different signals to several subsequent electronics...

Incremental / absolute encoders with double optical / electronic systems	Shaft	Electronics	Connection
 58mm & 90mm	Solid & Through	Incremental encoders & Absolute encoders	Double output · M23 · PVC cable · PUR cable

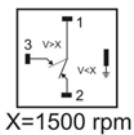
Double / triple mounting

 58mm encoders – solid shaft mounting Solid shaft version: Standards : 6 to 10 mm	 90mm encoders – solid shaft mounting Solid shaft version: Standards : 11 & 12 mm
 58mm encoders - through shaft mounting Through shaft version: Standards : 6 to 14 mm	 90mm encoders – through shaft mounting Through shaft version: Standards : 12 to 30 mm



58 mm encoders combination : incremental, absolute single-turn, absolute multi-turn

90 mm encoders combination : incremental, absolute single-turn, absolute multi-turn, tacho-encoders, opto-tacho, overspeed switch system

OVERSPEED FUNCTION WITH CENTRIFUGAL SWITCH



- Sturdy assembly of encoder and mechanical overspeed switch,
- Modular mounting,
- Security overspeed system, works without power supply,
- Radial commutation centrifugal switch without permanent contact,
- Excellente repeatability,
- Adapted to incremental or absolute encoders.

Encoders with overspeed option	Shaft	Overspeed	Encoder	Connection
 90mm Mounting	Solid 11 mm 12 mm	800-4000 rpm	Encoders : · Incrementals, · Opto-tachos & Tacho-encoders, · Absolute single-turns, · Absolute multi-turns.	· M23 · PVC cable · PUR cable · terminal box · 4 pinouts solenoid valve connector for the overspeed
 90mm Mounting	Through 16 to 20mm	800-4000 rpm	Encoders : · Incrementals, · Opto-tachos & Tacho-encoders, · Absolute single-turns, · Absolute multi-turns.	· M23 · PVC cable · PUR cable · terminal box · 4 pinouts solenoid valve connector for the overspeed

A COMPLETE NEW RANGE OF INCLINOMETERS

Sturdy and compact conception,
 Standard IP67 protection,
 Measures on 2 axes : X & Y,
 Measuring ranges : +/- 5°, +/- 15° or +/- 30°,
 High resolutions : up to 0.001°,
 Linearisation and automatic correction in function of the temperature,
 M12 or cable connection.

Interfaces :
 - Fieldbus : CANopen – Profibus,
 - Analog : 4-20mA ou 0-10Vdc,
 - PWM (Pulse Width Modulation),
 - RS232,
 - limit switches.



CUSTOMIZED PRODUCTS: OUR SPECIALTY

If you haven't found the right product in our standard catalogue, never mind, send us your specifications, we will be able to propose you the solution which will answer best to your needs:

- single manufacture possibility on the base of a standard encoder,
- complete customized product for small batches.

Do not hesitate to send us your mechanical drawings, wiring plans or software, we will do the study with you.



If your application is different , our solution is unique.

BEI IDEACOD is recognised for supplying the most appropriate solution whatever the industry sector. The company consists of a number of brands that offer a wide range of fully adaptable standard products. The added value of BEI IDEACOD is the quick and reliable installation of its products, even in the most non-standard applications.

Present in a number of industrial markets for more than thirty years, BEI IDEACOD brands offer proven value. Their products boast a superior level of quality, and its dedicated, customised service ensures an effective working relationship with both OEMs and manufacturers.



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We focus on your applications !