



Single-turn or multi-turn magnetic angular encoders, which measure and convert mechanical rotations into scaled electrical signals, suitable to enable the detection of the position in motion control systems. They are used in a variety of industrial sectors, from automation to robotics, from medical to marine equipment, from stage technology to automotive

## MODELS

- EGON 36 - Analog single-turn absolute simple or redundant encoder.
- EGON 36-RS - Digital multi-turn absolute encoder.
- EGON 36-AL - Analog single-turn absolute simple or redundant encoder.
- EGON 58-D - Multi-turn angular encoder.

## FEATURES

- Compact and flexible, they are designed for easy assembly and wiring, in combination with standard sets of cams or as an alternative to potentiometers.
- IP protection degree:
  - Egon 36 and Egon 36-RS are classified IP65 / IP67 / IP69K (pending)
  - Egon 36-AL is classified IP42
  - Egon 58-D is classified IP65 / IP67 / IP69K.
- Extreme temperature resistance: from -25°C to +85°C, depending on the type of encoder.
- High quality materials and components guarantee maximum mechanical life, precision and repeatability even in extreme conditions.

## OPTIONS

- Featuring protection against input/output over-current and over-voltage and against reverse polarity.
- Available with clamping flange, interface female connector and adapter coupling (Ø 6-6, Ø 6-8, Ø 6-10).
- Suitable for assembly on Fox, Oscar and Top rotary limit switches and on Hercules joysticks to control multi-revolution rotors (depending on the encoder).

## CERTIFICATIONS

- CE and UKCA markings and EAC certification.

*Fill in the "request form" to configure properly the product.*

## EGON 36

- Single-turn absolute simple or redundant angular encoder with magnetic technology, emulating a traditional potentiometer thanks to the resulting analog output, guaranteeing immunity to disturbances.
- It reads the shaft position within a range of 0°... 360°, transforming it into the corresponding analog signal.
- Possibility of using long cables without causing instability.
- Current or voltage calibrated output.
- Available with cable gland or connector.
- Available with shaft or with contactless magnet and bush.
- Maximum level of safety guaranteed by the double stage redundant scheme (redundant version).
- Wear-resistant technopolymer housing and stainless steel AISI 303 shaft.



## CERTIFICATIONS - EGON 36

<b>Conformity to Community Directives</b>	2014/35/UE Low Voltage Directive (LVD)
	2014/30/UE Electromagnetic Compatibility (EMC) Directive
	2006/42/CE Machinery Directive
<b>Conformity to UKCA Directives</b>	Supply of Machinery (Safety) Regulations 2008
	Electrical Equipment (Safety) Regulations 2016
<b>Conformity to CE Standards</b>	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60529 Degrees of protection provided by enclosures
	EN 61326-1 Electrical equipment for measurement, control and laboratory use - EMC requirements - General requirements
	EN 61326-2-3 Electrical equipment for measurement, control and laboratory use - EMC requirements - Particular requirements - Test configurations, operational conditions and performance criteria for transducers with integrated or remote signal conditioning
<b>Conformity to CE Standards</b>	EN 61326-3-1 Electrical equipment for measurement, control and laboratory use - EMC requirements – Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) – General industrial applications
<b>Markings and homologations</b>	CE UKCA EAC

## GENERAL TECHNICAL SPECIFICATIONS - EGON 36

Ambient temperature	Storage -25°C/+85°C
	Operational -25°C/+85°C
IP protection degree	IP65 / IP67 / IP69K (pending)
Rated rotation speed	800 rev./min
Maximum rotation speed	1500 rev./min
Mechanical life	Egon 36 with shaft > 30x10 <sup>6</sup> revolutions
	Egon 36 contactless ∞
Shaft diameter	6 mm
Connections	Male connector M8 - 4 PIN
	Cable gland M8 with cable
	Cable with male connector M12 - 5 PIN

## ELECTRICAL SPECIFICATIONS - EGON 36

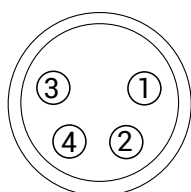
Power supply	12...30 Vdc
	Current 4...20 mA
Analog output	Voltage 1...5 V
	Voltage 2...10 V
Consumption	35 mA simple version
	55 mA redundant version
Single-turn resolution	12 bit (4096 points per revolution)
Protection against input/output over-current	Yes
Protection against input/output over-voltage	Yes
Accuracy	± 0.5%
Linearity	± 0.25%
Redundancy	2 complementary outputs (analog)

## MALE CONNECTOR SPECIFICATIONS - EGON 36

Number of PINs	4	5 (Code A)
Insulation resistance	≥100 MΩ	
Contacts	Gold plated copper alloy	
Mating	Female connector M8 - 4 PIN (Amphenol 8P-04AFFM-SL7A01)	Code A female connector M12 - 5 PIN (Amphenol LTW12-05BFFA-SL8001)

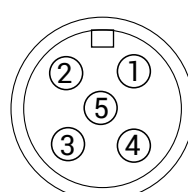
## MALE CONNECTOR ASSIGNMENT - EGON 36

### 4 PINs connector



PIN	Signal
1	12...30 Vdc
2	IOut 1 / VOut1
3	IOut 2 / VOut 2
4	GND

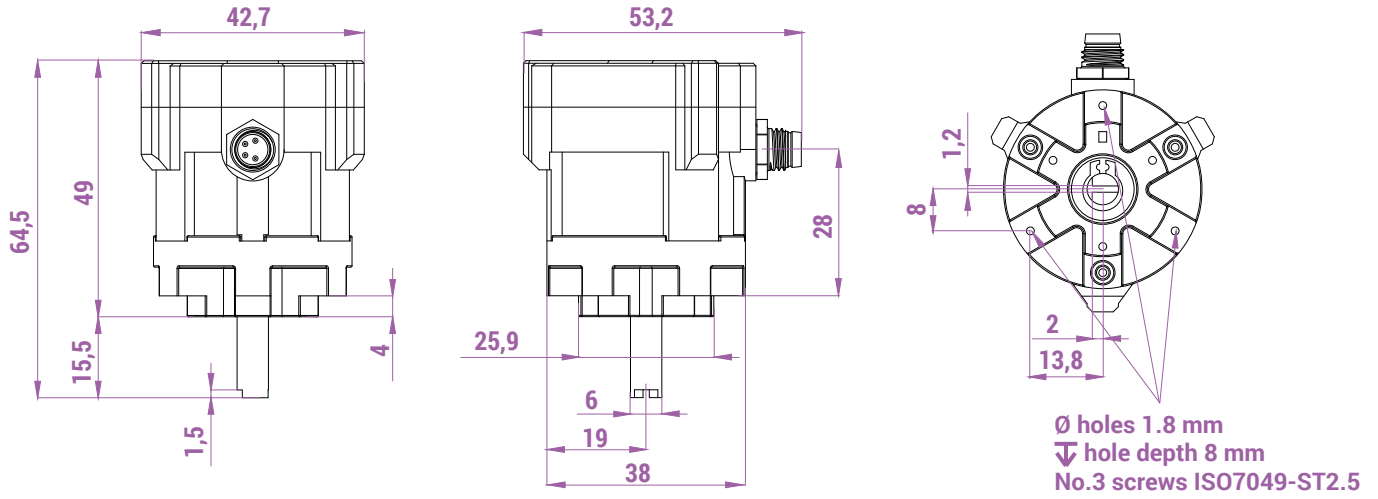
### 5 PINs connector (cable output)



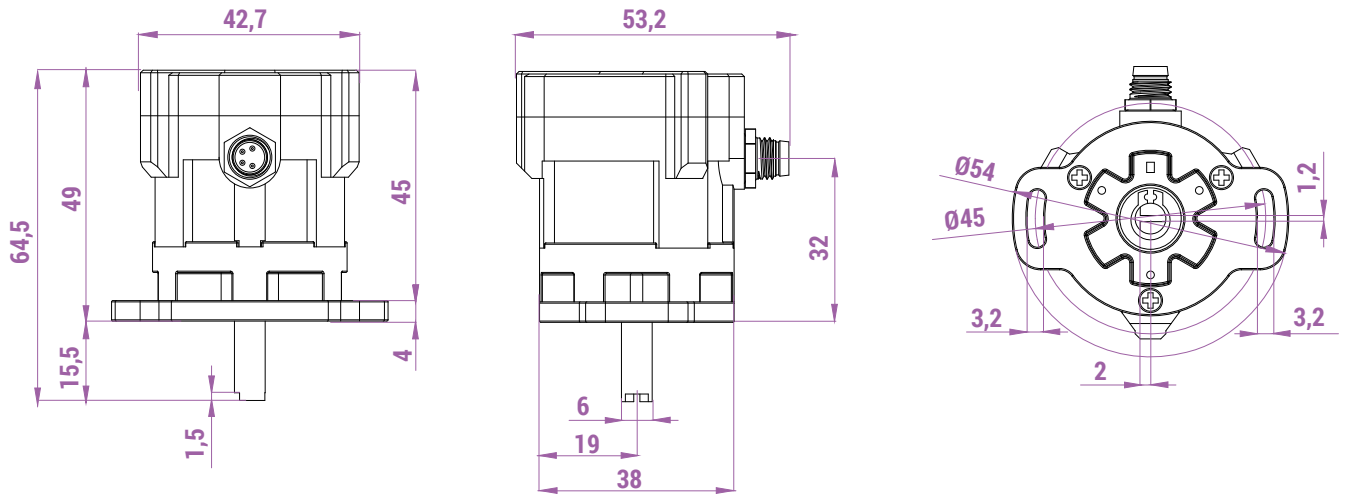
PIN	Signal
1	12...30 Vdc
2	IOut 1 / VOut1
3	IOut 2 / VOut 2
4	GND
5	/

OVERALL DIMENSIONS (mm) - EGON 36

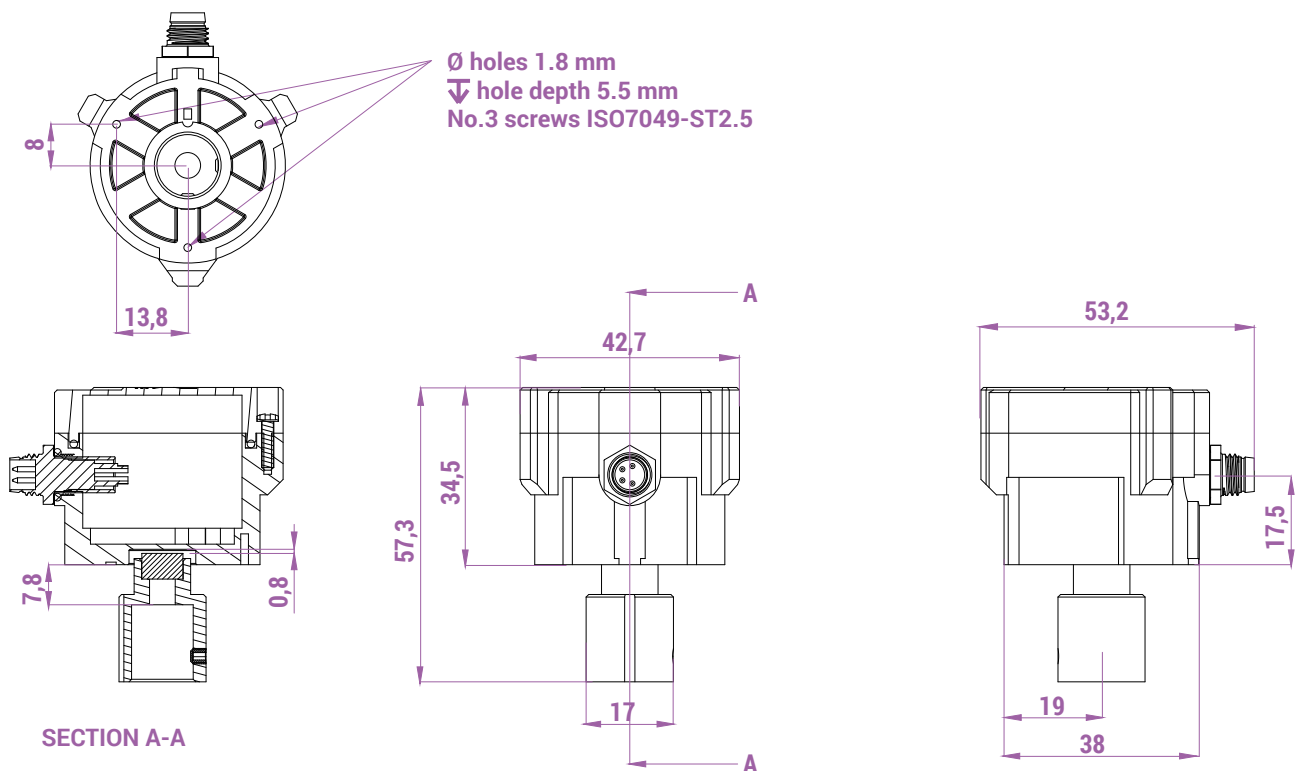
With shaft



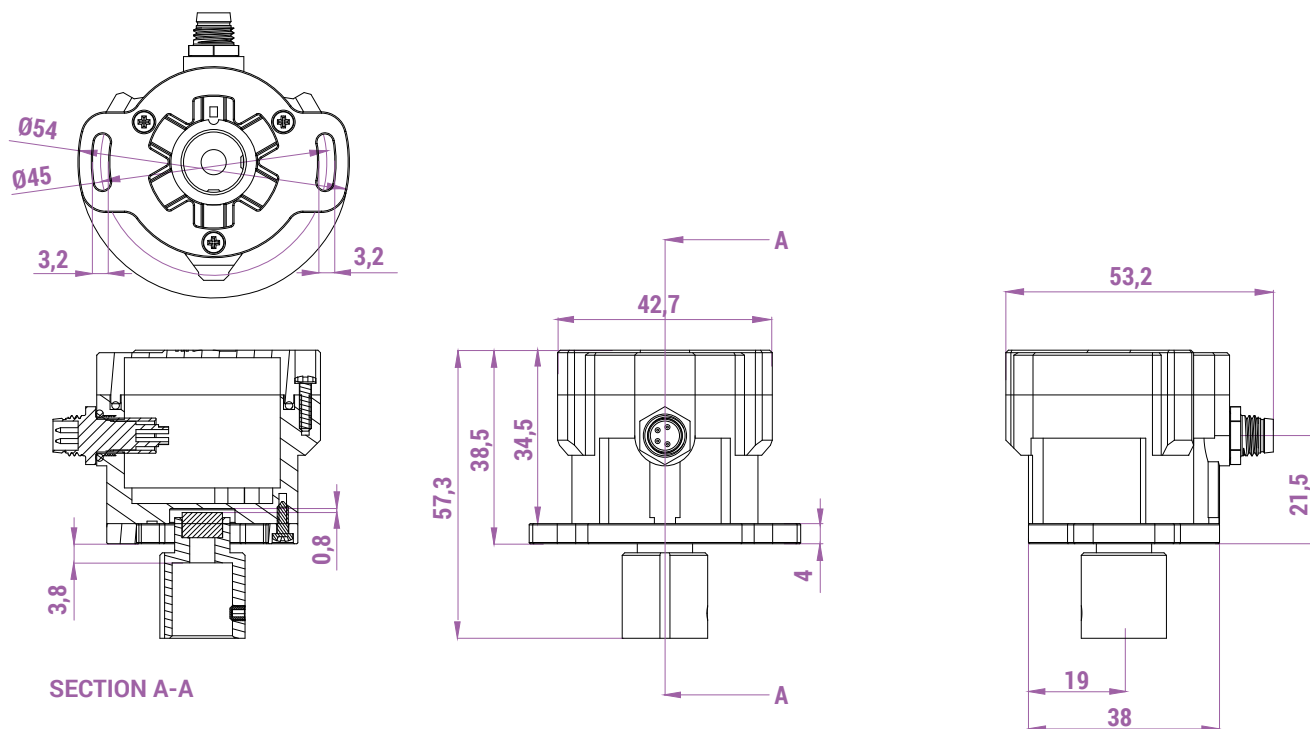
With shaft and flange



Contactless version



## Contactless version with flange



## EGON 36 - REQUEST FORM FOR ENCODER

## Instructions

- 1 **Type of encoder:** tick the box corresponding to the type of encoder required.
- 2 **Output:** tick the box corresponding to the output required.
- 3 **Version:** tick the box corresponding to the version required.
- 4 **Connections:** tick the box corresponding to connection required. When the «cable gland M8 with cable» or «cable with male connector M12 - 5 PIN» is required, write the length of the cable (in meters).  
ATTENTION: the length must be an integer number.
- 5 **Flange:** tick the box when the flange is required.
- 6 **Adapter coupling:** tick the appropriate box when the adapter coupling is required.

## Type of encoder 1

- Simple
- Redundant

## Output 2

- Current 4...20 mA
- Voltage 1...5 V
- Voltage 2...10 V

## Version 3

- With shaft Ø6 mm
- Contactless

## Connections

- Male connector M8 - 4 PIN
- Cable gland M8 with cable  
- Cable length \_\_\_\_\_ meters
- Cable with male connector M12 - 5 PIN  
- Cable length \_\_\_\_\_ meters

 Flange 5

## Adapter coupling 6

- Ø 6-6
- Ø 6-8
- Ø 6-10

## EGON 36-RS

- Magnetic multi-turn absolute encoder, suitable for counting the shaft revolutions even without power supply thanks to the backup battery that intervenes when the encoder detects the shaft rotation.
- Featuring output with Modbus RTU protocol over RS-485 bus or with RS-485 PTP basic protocol.
- Extremely reduced power consumption guarantees highest efficiency.
- Available with cable gland or connector.
- Available with shaft or with contactless magnet and bush.
- Wear-resistant technopolymer housing and stainless steel AISI 303 shaft.



## CERTIFICATIONS - EGON 36-RS

<b>Conformity to Community Directives</b>	2014/35/UE Low Voltage Directive (LVD)
	2014/30/UE Electromagnetic Compatibility (EMC) Directive
	2006/42/CE Machinery Directive
<b>Conformity to UKCA Directives</b>	Supply of Machinery (Safety) Regulations 2008
	Electrical Equipment (Safety) Regulations 2016
<b>Conformity to CE Standards</b>	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60529 Degrees of protection provided by enclosures
	EN 61326-1 Electrical equipment for measurement, control and laboratory use - EMC requirements - General requirements
	EN 61326-2-3 Electrical equipment for measurement, control and laboratory use - EMC requirements - Particular requirements - Test configurations, operational conditions and performance criteria for transducers with integrated or remote signal conditioning
	EN 61326-3-1 Electrical equipment for measurement, control and laboratory use - EMC requirements – Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) – General industrial applications
<b>Markings and homologations</b>	CE UKCA EAC

## GENERAL TECHNICAL SPECIFICATIONS - EGON 36-RS

Ambient temperature	Storage -25°C/+85°C
	Operational -25°C/+85°C
IP protection degree	IP65 / IP67 / IP69K (pending)
Rated rotation speed	800 rev/min
Maximum rotation speed	1100 rev/min
Mechanical life	Egon 36-RS with shaft > 30x10 <sup>6</sup> revolutions
	Egon 36-RS contactless ∞
Shaft diameter	6 mm
Connections	Male connector M8 - 4 PIN
	Cable gland M8 with cable
	Cable with male connector M12 - 5 PIN

## ELECTRICAL SPECIFICATIONS - EGON 36-RS

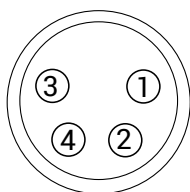
Power supply	12...30 Vdc
Output	Modbus RTU protocol over RS-485 bus
	RS-485 PTP basic protocol
Consumption	~20 mA
Single-turn resolution	10 bit (1024 points per revolution) (standard version)
	12 bit (4096 points per revolution) (max speed 200 rev/min)
Multi-turn resolution	14 bit (16384 revolutions) (standard version)
	16 bit (65535 revolutions)
Back-up time	~10 years non-stop
Protection against input/output over-current	Yes
Protection against over-voltage and reverse polarity	Yes
Accuracy	± 0.5%
Linearity	± 0.4%

## MALE CONNECTOR SPECIFICATIONS - EGON 36-RS

Number of PINs	4	5 (Code A)
Insulation resistance	≥100 MΩ	
Contacts	Gold plated copper alloy	
Mating	Female connectors M8 - 4 PIN (Amphenol 8P-04AFFM-SL7A01)	Code A female connectors M12 - 5 PIN (Amphenol LTW12-05BFFA-SL8001)

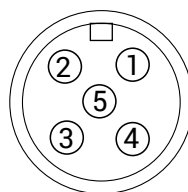
## MALE CONNECTOR ASSIGNMENT - EGON 36-RS

### 4 PINs connector



PIN	Signal
1	12...30 Vdc
2	RS-485 B
3	GND
4	RS-485 A

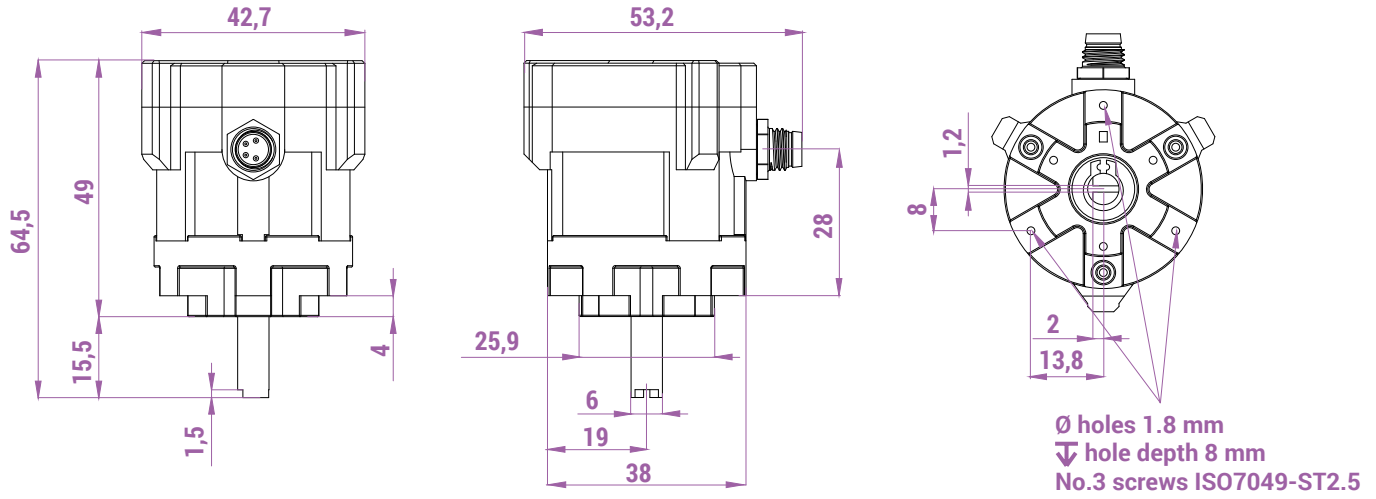
### 5 PINs connector (cable output)



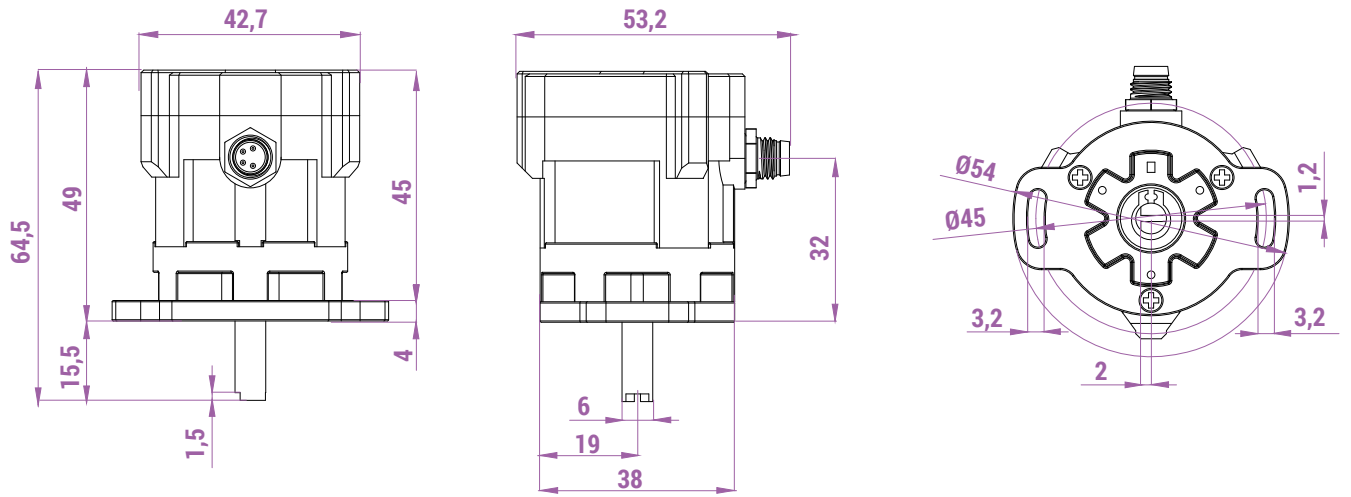
PIN	Signal
1	12...30 Vdc
2	RS-485 B
3	RS-485 A
4	GND
5	Termination resistor 100 Ω

OVERALL DIMENSIONS (mm) - EGON 36-RS

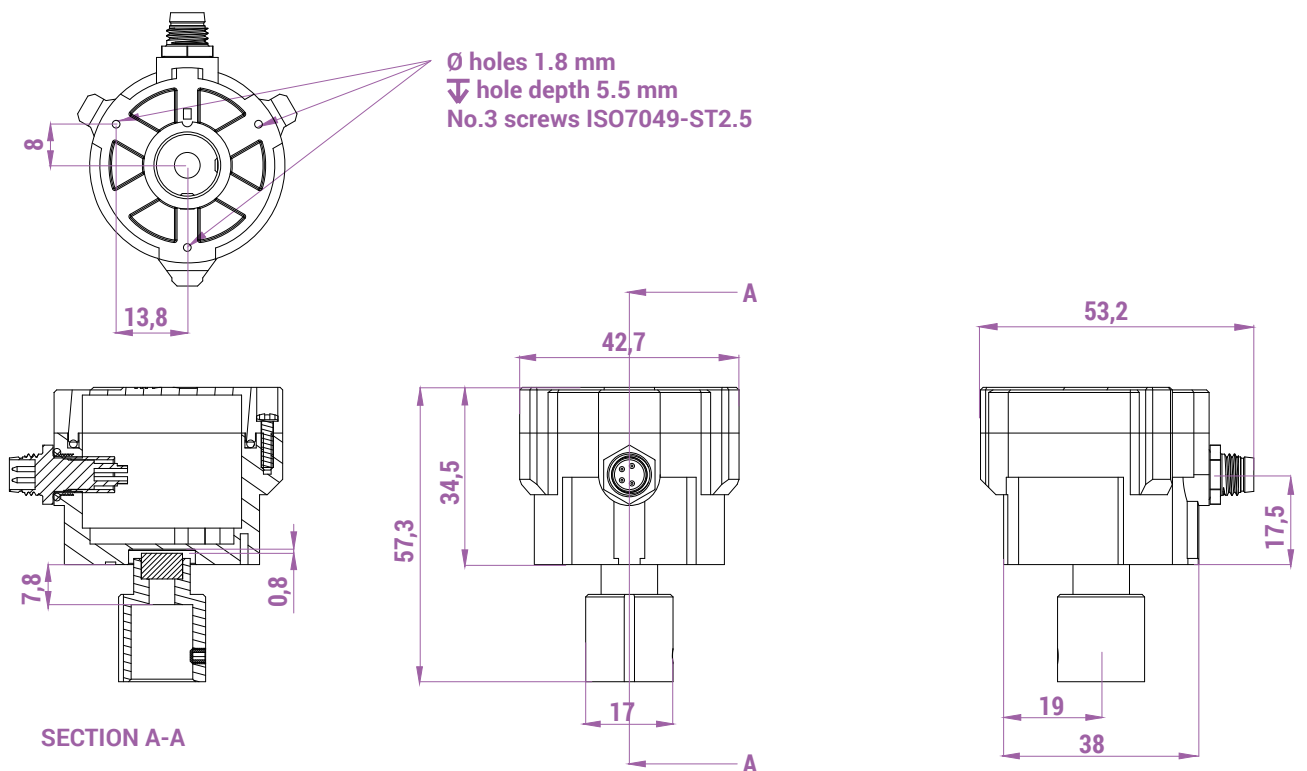
With shaft



With shaft and flange

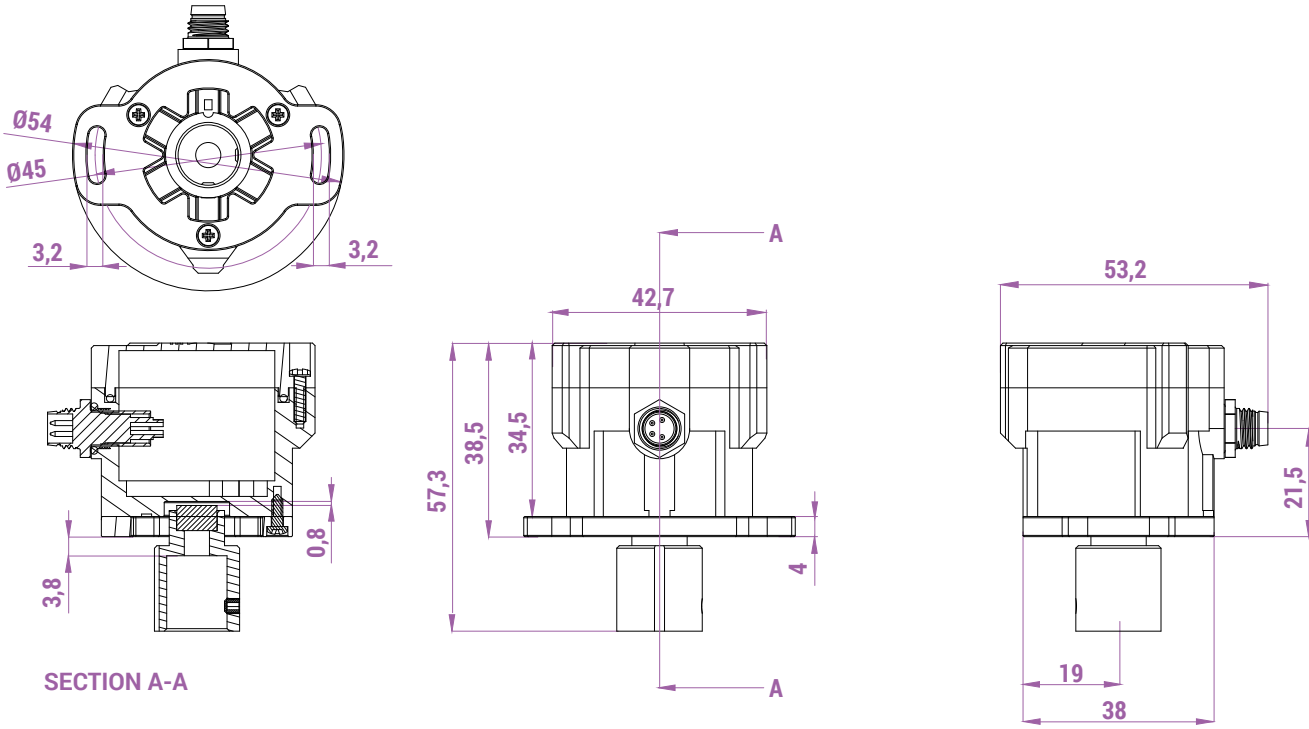


Contactless version





Contactless version with flange



EGON 36-RS - REQUEST FORM FOR ENCODER

**Instructions**

**1 Version:** tick the box corresponding to the version required.

**2 Connections:** tick the box corresponding to connection required. When the «cable gland M8 with cable» or «cable with male connector M12 - 5 PIN» is required, write the length of the cable (in meters).  
ATTENTION: the length must be an integer number.

**3 Flange:** tick the box when the flange is required.

**4 Adapter coupling:** tick the appropriate box when the adapter coupling is required.

**Protocol:** tick the box corresponding to the protocol required.

- Version** **1**
- With shaft Ø 6 mm
  - Contactless

- Connections** **2**
- Male connector 4 PIN
  - Cable gland M8 - 4 PIN with cable  
- Cable length \_\_\_\_\_ meters
  - Cable with male connector M12 - 5 PIN  
- Cable length \_\_\_\_\_ meters

Flange **3**

**Adapter coupling** **4**

- Ø 6-6
- Ø 6-8
- Ø 6-10

**Protocol** **5**

- Modbus RTU over RS-485 bus
- RS-485 PTP basic

## EGON 36-AL

- Single-turn absolute simple or redundant angular encoder with magnetic technology, emulating a traditional potentiometer thanks to the resulting analog output, guaranteeing immunity to disturbances.
- It reads the shaft position with a range of 0°... 360°, transforming it into the corresponding analog signal.
- Possibility of using long cables without causing instability.
- Current or voltage calibrated output.
- Maximum level of safety guaranteed by the double stage redundant scheme (redundant version).
- Aluminum housing and stainless steel AISI 303 shaft.
- Suitable for assembly on Fox, Oscar and Top rotary limit switches and on Hercules joysticks.



### CERTIFICATIONS - EGON 36-AL

Conformity to Community Directives	2014/35/UE Low Voltage Directive (LVD)
	2014/30/UE Electromagnetic Compatibility (EMC) Directive
	2006/42/CE Machinery Directive
Conformity to UKCA Directives	Supply of Machinery (Safety) Regulations 2008
	Electrical Equipment (Safety) Regulations 2016
Conformity to CE Standards	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60529 Degrees of protection provided by enclosures
	EN 61326-1 Electrical equipment for measurement, control and laboratory use - EMC requirements - General requirements
	EN 61326-2-3 Electrical equipment for measurement, control and laboratory use - EMC requirements - Particular requirements - Test configurations, operational conditions and performance criteria for transducers with integrated or remote signal conditioning
	EN 61326-3-1 Electrical equipment for measurement, control and laboratory use - EMC requirements - Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) - General industrial applications
Markings and homologations	CE UKCA EAC

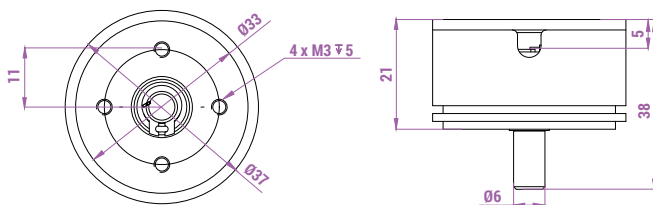
### GENERAL TECHNICAL SPECIFICATIONS - EGON 36-AL

Ambient temperature	Storage -25°C/+85°C
	Operational -25°C/+85°C
IP protection degree	IP42
Shaft diameter	6 mm

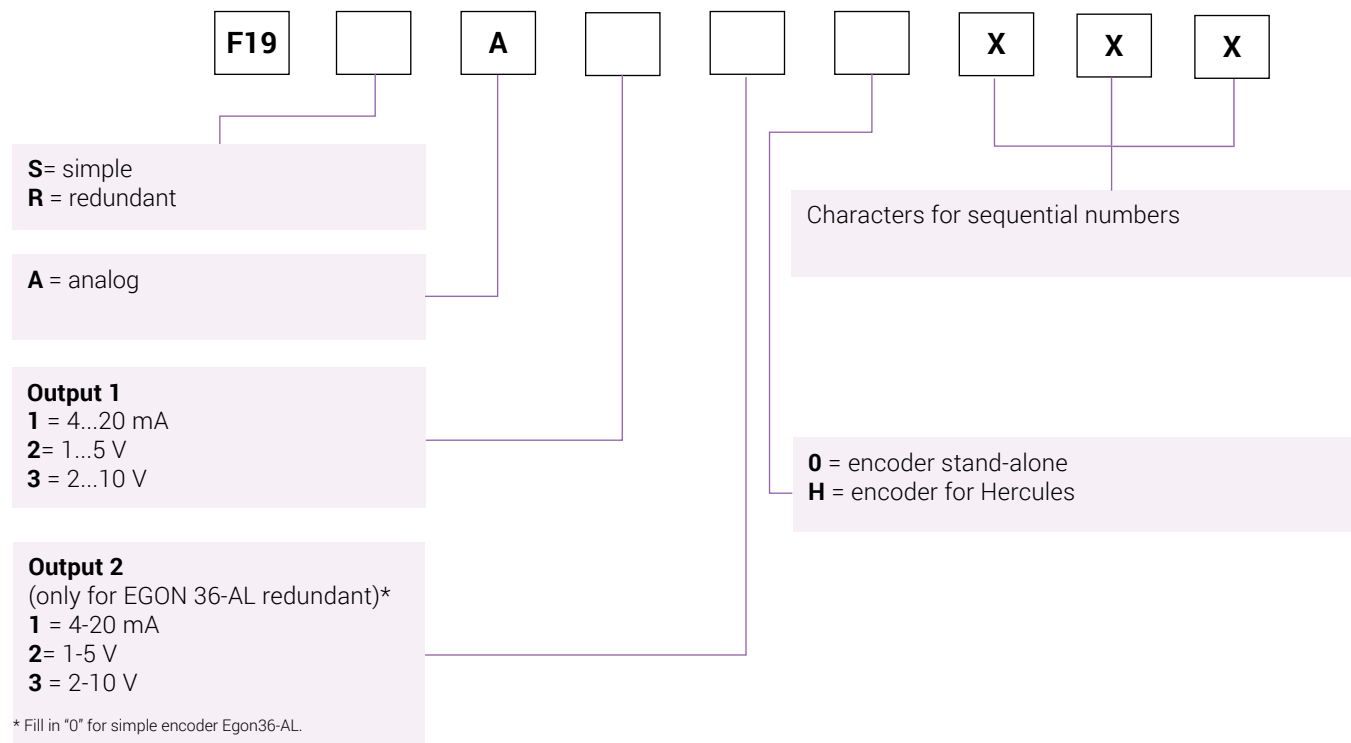
## ELECTRICAL SPECIFICATIONS - EGON 36-AL

<b>Power supply</b>	12..30 Vdc
	Current 4..20 mA
<b>Analog output</b>	Voltage 1..5 V
	Voltage 2..10 V
<b>Consumption</b>	35 mA simple version
	55 mA redundant version
<b>Single-turn resolution</b>	12 bit (4096 points for revolution)
<b>Protection against input/output over-current</b>	Yes
<b>Protection against input/output over-voltage</b>	Yes
<b>Accuracy</b>	± 0.5%
<b>Linearity</b>	± 0.25%
<b>Redundancy</b>	2 complementary outputs (analog)

## OVERALL DIMENSIONS (mm) - EGON 36-AL

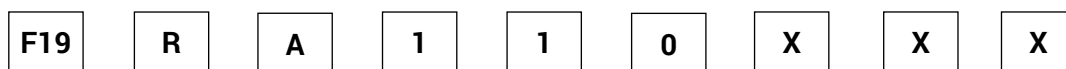


## EGON 36-AL - REQUEST FORM FOR ENCODER



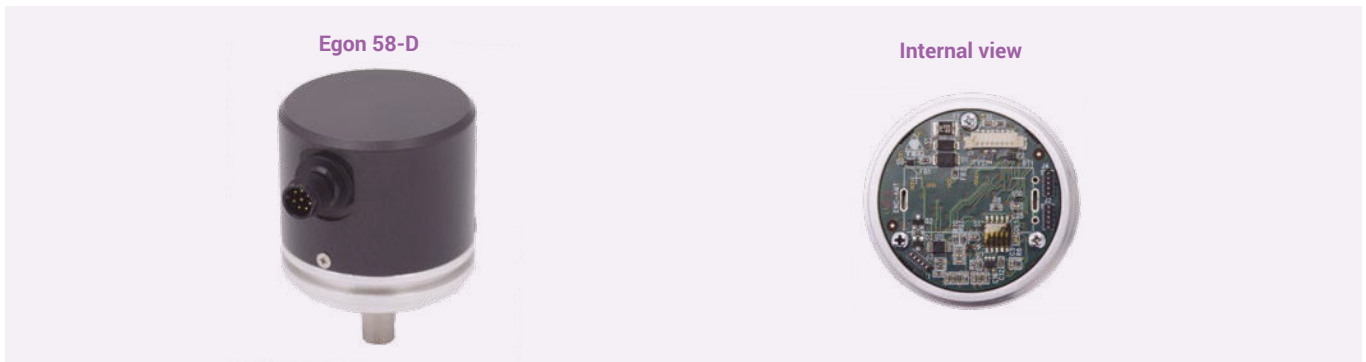
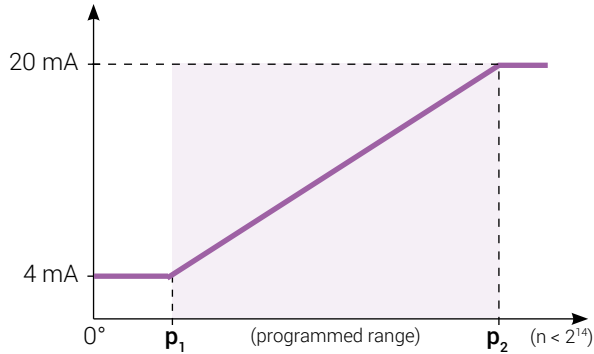
### Instructions

Fill in the boxes with the numbers/letters corresponding to the specifications required, thus obtaining the encoder code, as shown in the example below.



## EGON 58-D

- Multi-turn magnetic angular encoder that detects the angular position of the shaft within a programmable range, transforming it into the corresponding 4...20 mA analog or CAN-bus signal.
- Equipped with 4...20 mA analog interface or CAN-bus digital interface, it guarantees immunity to disturbances and the possibility of using long cables without causing instability.
- Aluminum housing and stainless steel AISI 303 shaft.
- The current output acquires a value proportional to the number of revolutions (shaft rotations expressed in degrees) within the programmed range.



## CERTIFICATIONS - EGON 58-D

<b>Conformity to Community Directives</b>	2014/35/UE Low Voltage Directive (LVD)
	2014/30/UE Electromagnetic Compatibility (EMC) Directive
	2006/42/CE Machinery Directive
<b>Conformity to UKCA Directives</b>	Supply of Machinery (Safety) Regulations 2008
	Electrical Equipment (Safety) Regulations 2016
<b>Conformity to CE Standards</b>	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60529 Degrees of protection provided by enclosures
	EN 61326-1 Electrical equipment for measurement, control and laboratory use - EMC requirements - General requirements
	EN 61326-2-3 Electrical equipment for measurement, control and laboratory use - EMC requirements - Particular requirements - Test configurations, operational conditions and performance criteria for transducers with integrated or remote signal conditioning
<b>Conformity to CE Standards</b>	EN 61326-3-1 Electrical equipment for measurement, control and laboratory use - EMC requirements - Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) - General industrial applications
<b>Markings and homologations</b>	CE UKCA EAC

## GENERAL TECHNICAL SPECIFICATIONS - EGON 58-D

<b>Ambient temperature</b>	Storage -25°C/+85°C
	Operational -25°C/+85°C
<b>IP protection degree</b>	IP65 / IP67 / IP69K
<b>Maximum rotation speed</b>	1500 rev/min
<b>Shaft diameter</b>	Ø 10 mm
<b>Connections</b>	Code A male connector M12 - 8 PIN (digital version)

## ELECTRICAL SPECIFICATIONS - EGON 58-D

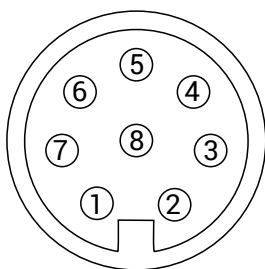
Power supply	12...30 Vdc
Output	Analog 4...20 mA Digital CAN-bus with proprietary protocol
Consumption	50 mA @ 24Vdc
Single-turn resolution	12 bit (4096 points per revolution)
Multi-turn resolution	± 15 bit (± 32768 revolutions)
Analog output resolution	14 bit (16384 points)
Autonomia back up	~ 6 years
Protection against input/output over-current	Yes
Protection against input/output over-voltage	Yes
Accuracy	± 0.5%
Linearity	± 0.25%
Output programmable range	± 32767 revolutions (default 10 revolutions)

## MALE CONNECTOR SPECIFICATIONS - EGON 58-D

Number of PINs	8
Insulation resistance	≥ 100 MΩ
Contacts	Gold plated zinc-copper alloy
Mating	Female connector M12 - 8 PIN (Amphenol LTW12P-08BFFA-SL8001)

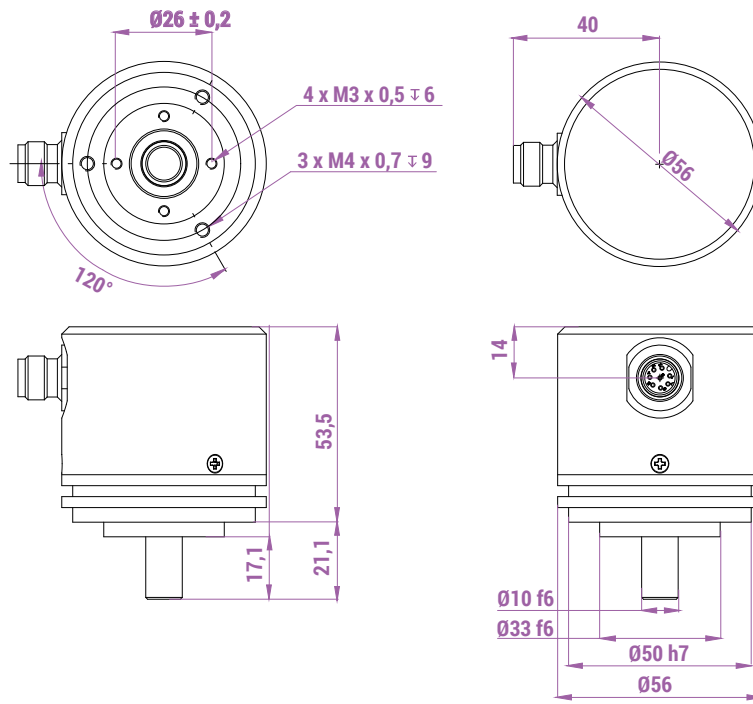
## MALE CONNECTOR ASSIGNMENT - EGON 58-D

### Male connector 8 PIN



PIN	Signal
1	+Vcc
2	TEACH
3	LED
4	Analog/CAN
5	I-Out
6	CAN-B
7	CAN-A
8	GND

## OVERALL DIMENSIONS (mm) - EGON 58-D



## ENCODER EGON 58-D

Description	Code
Analog encoder Egon 58-D	F18SA100001
Digital encoder Egon 58-D	F18SD100001