



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

## MODELS

- EGON 36 - Analog single-turn absolute single or redundant encoder.
- EGON 36-RS - Digital multiturn magnetic absolute encoder.
- EGON 36-AL - Analog single-turn absolute single or redundant encoder.
- EGON 58-D - Multi-turn angular encoder.
- EGON 58-V - Multi-turn angular encoder.

## FEATURES

- Compact and flexible, they are designed for easy assembly and wiring together with standard sets of cams or as an alternative to the use of potentiometric transducers.
- IP protection degree:
  - Egon 36 and Egon 36-RS are classified IP65, IP67 and IP69K (pending)
  - Egon 36-AL is classified IP42
  - Egon 58-D and Egon 58-V are classified IP65, IP67 and IP69K.
- Extreme temperature resistance: from -25°C to +80°C, depending on the encoder model.
- High quality materials and components guarantee long mechanical life, precision and repeat accuracy 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 installation on Fox, Oscar and Top rotary limit switches and on Hercules joysticks to control multi-revolutions rotors (depending on the model).

## CERTIFICATIONS

- CE marking (pending)

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

## EGON 36

- Single-turn absolute single or redundant angular encoder with magnetic technology, emulating a traditional potentiometer thanks to the resulting analog output, featuring 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 con cable clamp or with connector.
- Available in configuration with shaft or with contactless magnet and bush.
- Maximum level of safety guaranteed by the double stage redundant scheme (redundant version).
- Featuring 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 CE Standards</b>	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60947-1 Low-voltage switchgear and controlgear
	EN 60947-5-1 Low-voltage switchgear and controlgear - Control circuit devices and switching elements - Electromechanical control circuit devices
	EN 60529 Degrees of protection provided by enclosures
	EN 61000-6-2 , EN 61000-6-4 , EN 61000-4-2 , EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6 Electromagnetic compatibility
<b>Markings and homologations</b>	CE pending

## GENERAL TECHNICAL SPECIFICATIONS - EGON 36

Ambient temperature	Storage -25°C/+80°C
	Operational -25°C/+80°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 clamp M8 with cable
	Cable with male connector M12 - 5 PIN

## ELECTRICAL SPECIFICATIONS - EGON 36

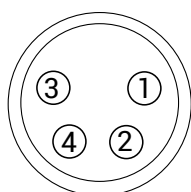
Power supply	12...30 Vdc
	Current 4...20 mA
Analog output	Voltage 1...5 V
	Voltage 2...10 V
Consumption	35 mA simple version
	55 mA redundant version
Single-turn resolution	12 bit (4096 points per revolution)
Protection against input/output over-current	Yes
Protection against input/output over-voltage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

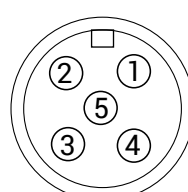
## MALE CONNECTOR ASSIGNMENT - EGON 36

### 4 PINs connector



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

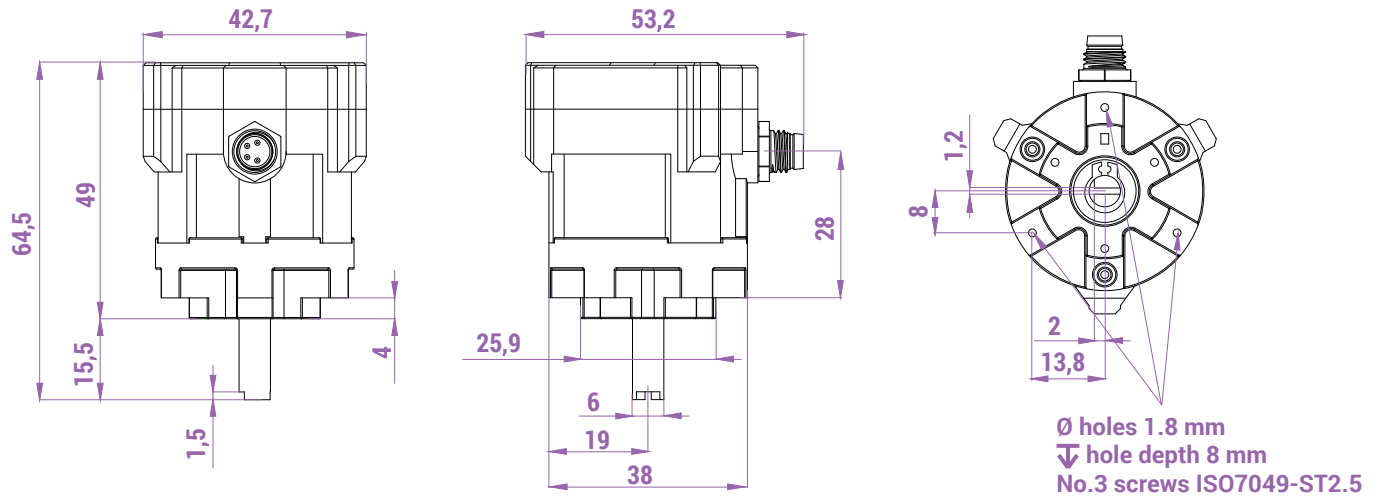
### 5 PINs connector (cable output)



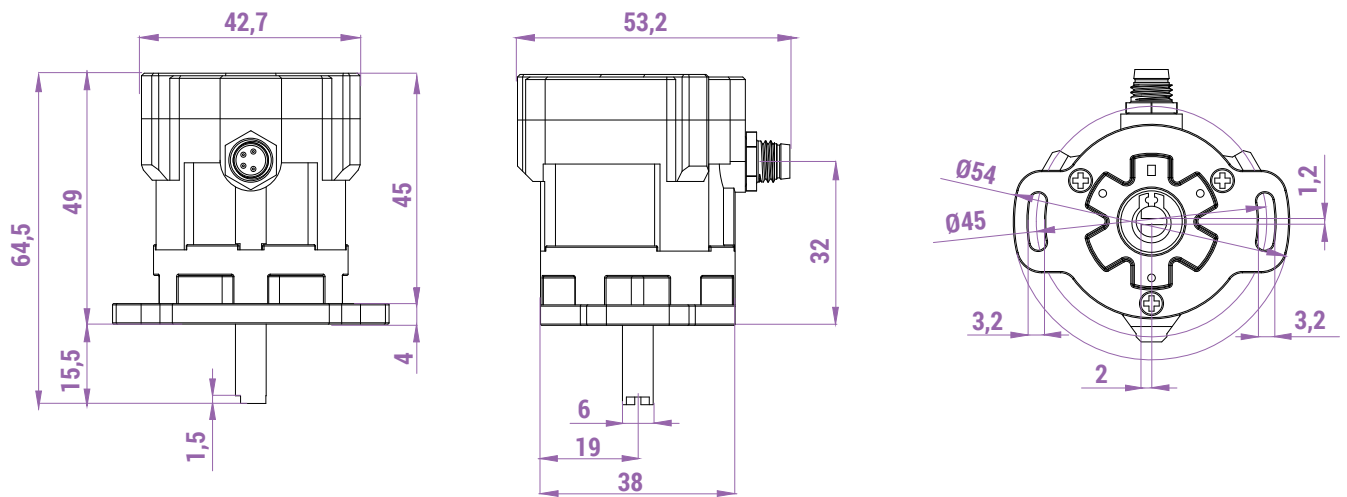
PIN	Signal
1	12...30 Vdc
2	IOut 1 / VOut1
3	IOut 2 / VOut 2
4	GND
5	/

## OVERALL DIMENSIONS (mm) - EGON 36

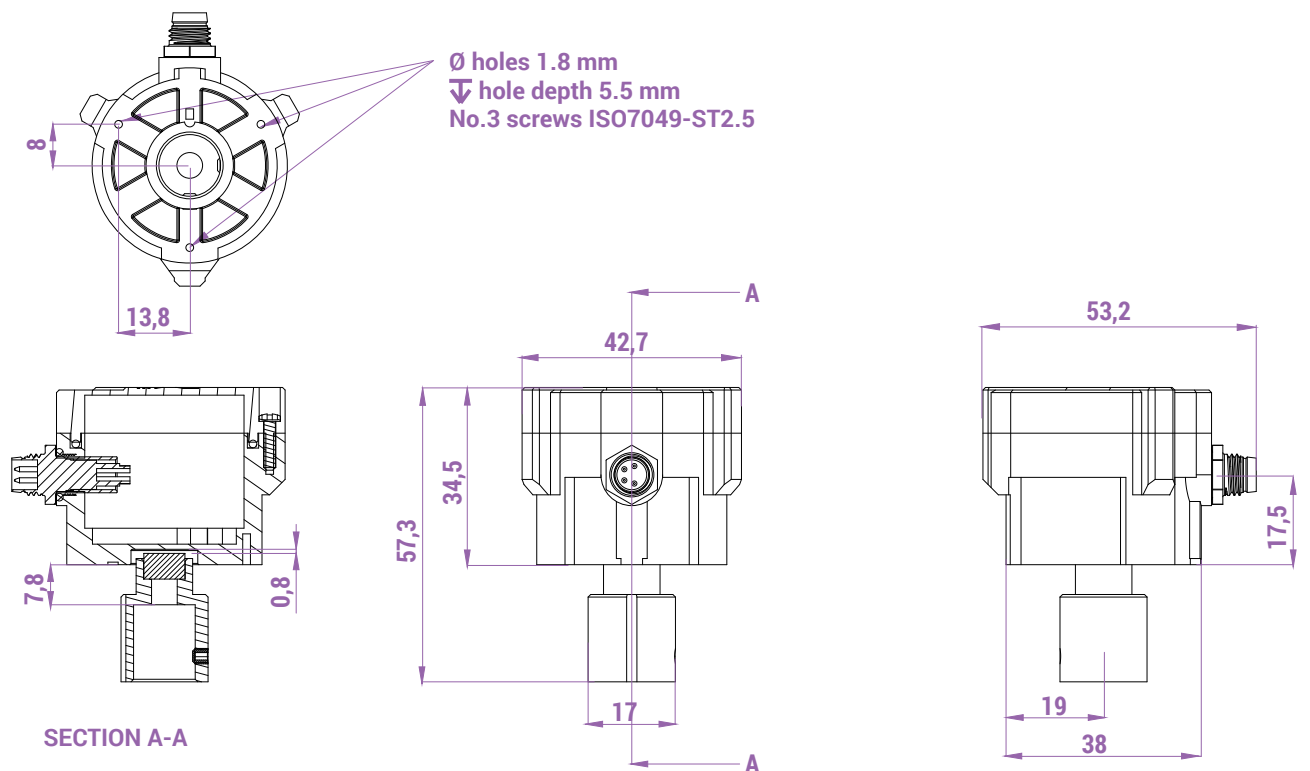
With shaft



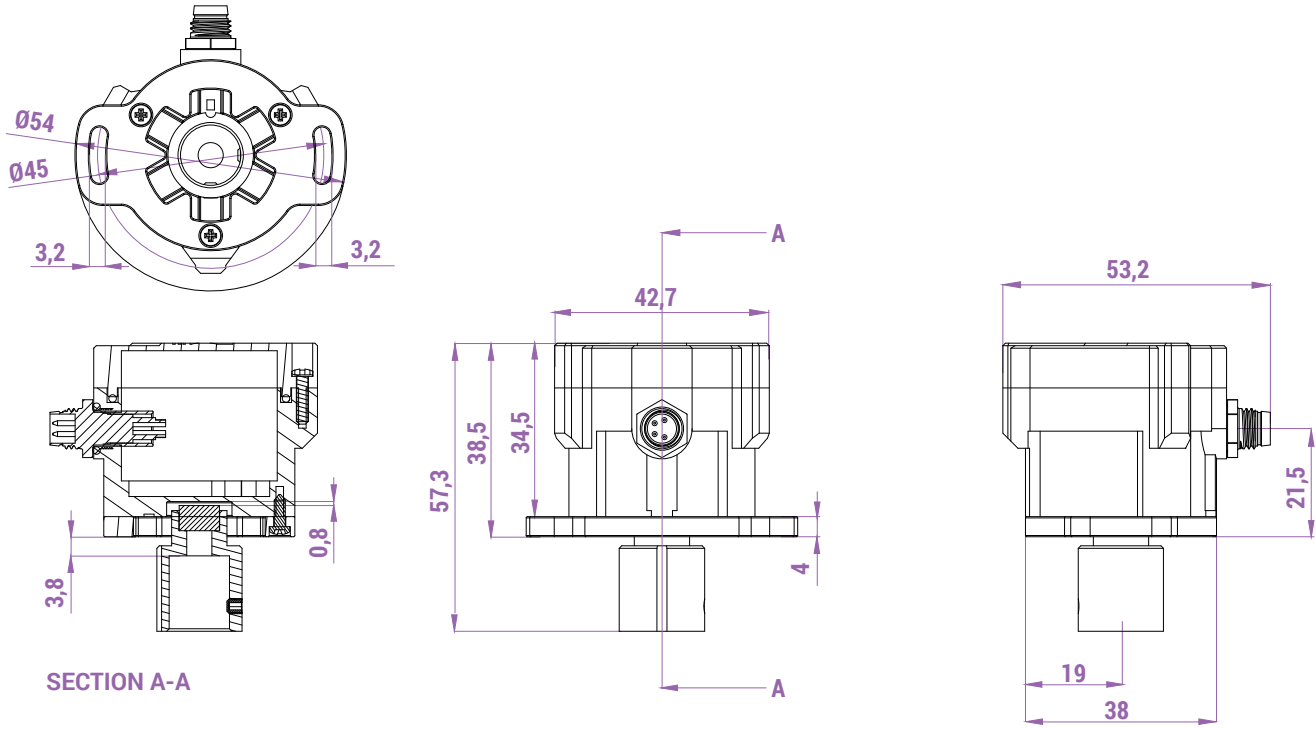
With shaft and flange



Contactless version



Contactless version with flange



EGON 36 - REQUEST FORM FOR ENCODER

Instructions

- 1 **Encoder type:** 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 clamp 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 if the flange is required.
- 6 **Adapter coupling:** tick the preferred box if the adapter coupling is required.

Encoder type 1

- Not redundant
- 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 clamp 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 multiturn encoder, suitable for counting the shaft revolutions and working even without power supply thanks to the backup battery that intervenes when the encoder detects the shaft rotation.
- Equipped with output with Modbus RTU protocol over RS-485 bus.
- Extremely reduced power consumption guarantees highest efficiency.
- Available with con cable clamp or with connector.
- Available in configuration with shaft or with contactless magnet and bush.
- Featuring 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 CE Standards</b>	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60947-1 Low-voltage switchgear and controlgear
	EN 60947-5-1 Low-voltage switchgear and controlgear - Control circuit devices and switching elements - Electromechanical control circuit devices
	EN 60529 Degrees of protection provided by enclosures
	EN 61000-6-2 , EN 61000-6-4 , EN 61000-4-2 , EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6 Electromagnetic compatibility
<b>Markings and homologations</b>	CE pending

## GENERAL TECHNICAL SPECIFICATIONS - EGON 36-RS

Ambient temperature	Storage -25°C/+80°C
	Operational -25°C/+80°C
IP protection degree	IP65, IP67, IP69K (pending)
Rated rotation speed	800 rev/min
Maximum rotation speed	1500 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 clamp M8 with cable
	Cable with male connector M12 - 5 PIN

## ELECTRICAL SPECIFICATIONS - EGON 36-RS

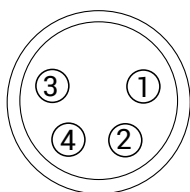
Power supply	12...30 Vdc
Output	Modbus RTU protocol over RS-485 bus
Consumption	~20 mA
Single-turn resolution	10 bit (1024 points per revolution)
	12 bit (4096 points per revolution)
Multi-turn resolution	14 bit (16384 revolutions)
	16 bit (65535 revolutions)
Back-up time	~5 years non-stop
Protection against input/output over-current	Yes
Protection against over-voltage and reverse polarity	Yes
Accuracy	± 0.5%
Linearity	± 0.25%

## 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)

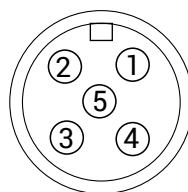
## MALE CONNECTOR ASSIGNMENT - EGON 36-RS

### 4 PINs connector



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

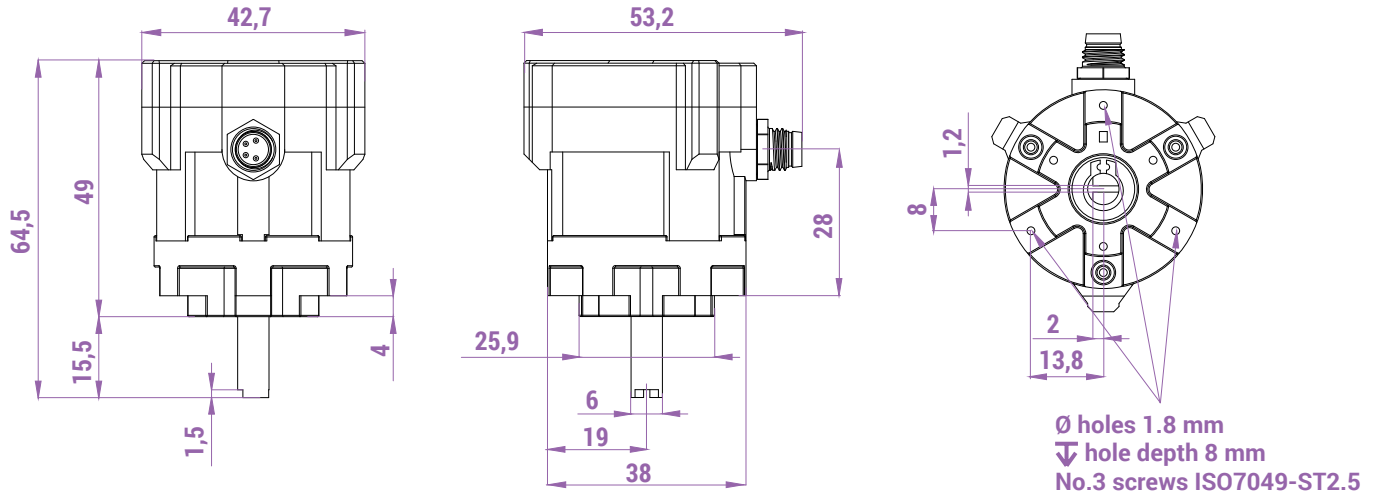
### 5 PINs connector (cable output)



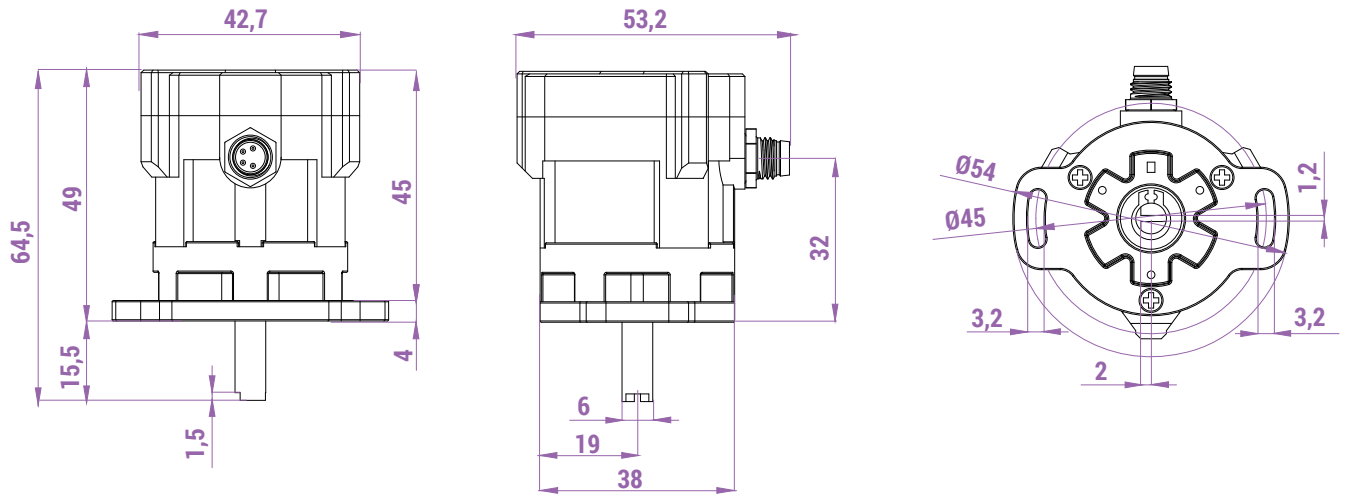
PIN	Signal
1	12...30 Vdc
2	RS-485 B
3	RS-485 A
4	GND
5	/

OVERALL DIMENSIONS (mm) - EGON 36-RS

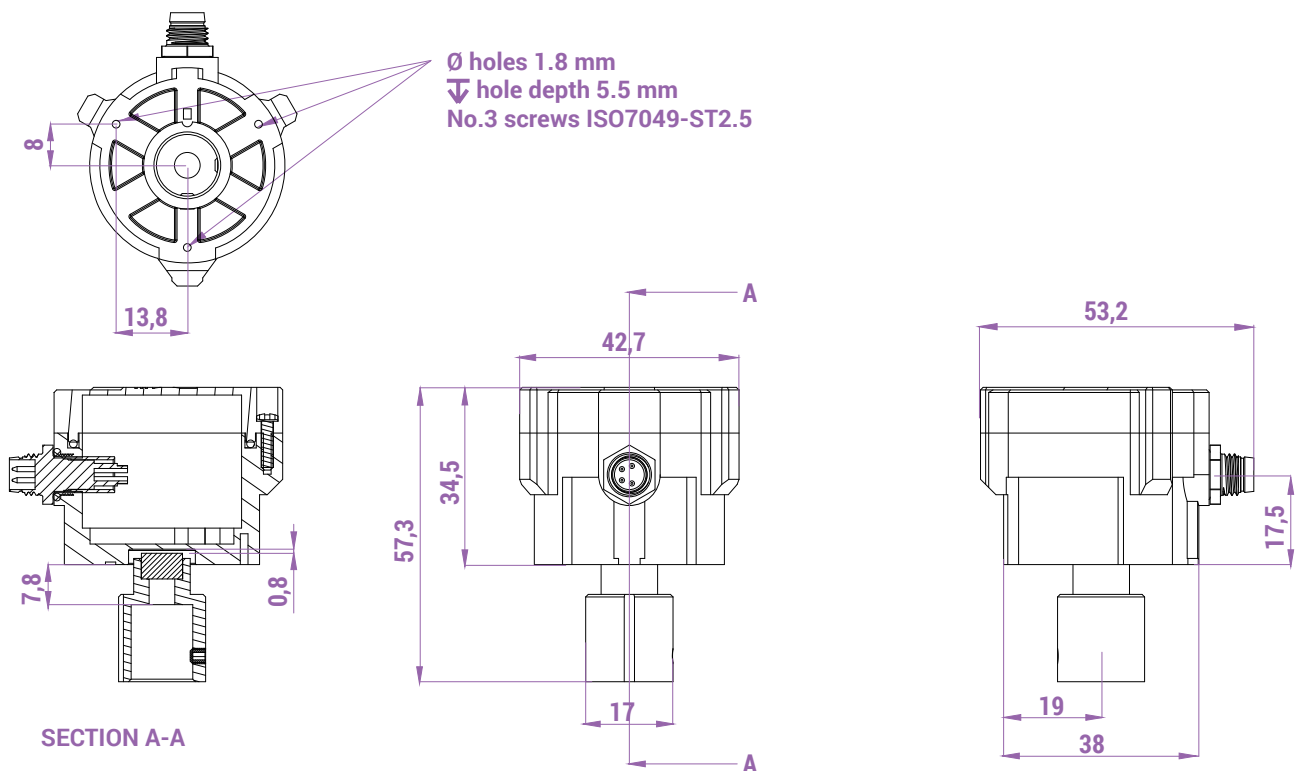
With shaft



With shaft and flange

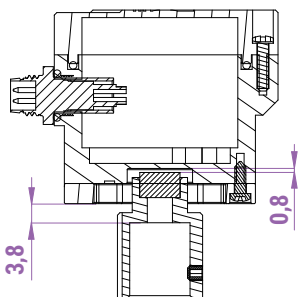
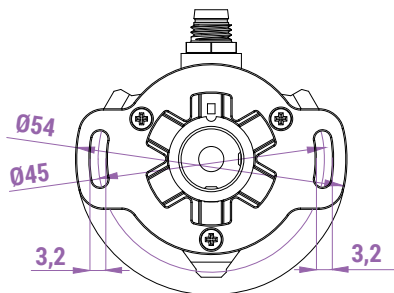


Contactless version

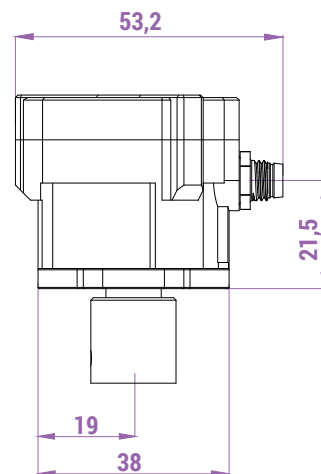
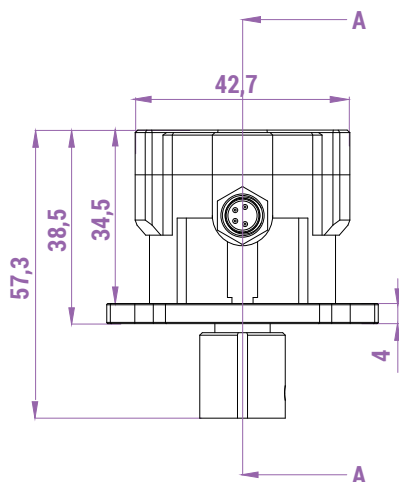




Contactless version with flange



SECTION A-A



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 clamp 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 if the flange is required.
- 4 **Adapter coupling:** tick the preferred box if the adapter coupling is required.

Flange 3

Adapter coupling 4

- Ø 6-6
- Ø 6-8
- Ø 6-10

Version 1

- With shaft Ø6 mm
- Contactless

Connections 2

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

## EGON 36-AL

- Single-turn absolute single or redundant angular encoder with magnetic technology, emulating a traditional potentiometer thanks to the resulting analog output, featuring immunity to disturbances.
- It reads the shaft position withing a range of 0°... 360°, transforming it into the corresponding 4-20 mA 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).
- Featuring aluminum housing and stainless steel AISI 303 shaft.
- Suitable for installation 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 CE Standards	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60947-1 Low-voltage switchgear and controlgear
	EN 60947-5-1 Low-voltage switchgear and controlgear - Control circuit devices and switching elements - Electromechanical control circuit devices
	EN 60529 Degrees of protection provided by enclosures
	EN 61000-6-2 , EN 61000-6-4 , EN 61000-4-2 , EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6 Electromagnetic compatibility
Markings and homologations	CE pending

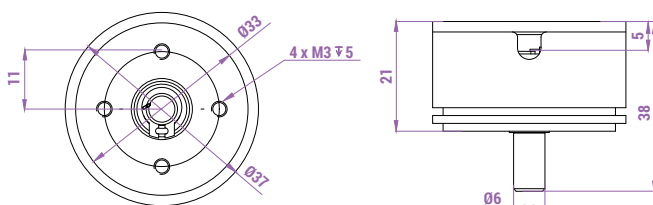
### GENERAL TECHNICAL SPECIFICATIONS - EGON 36-AL

Ambient temperature	Storage -25°C/+80°C
	Operational -25°C/+80°C
IP protection degree	IP42
Shaft diameter	6 mm

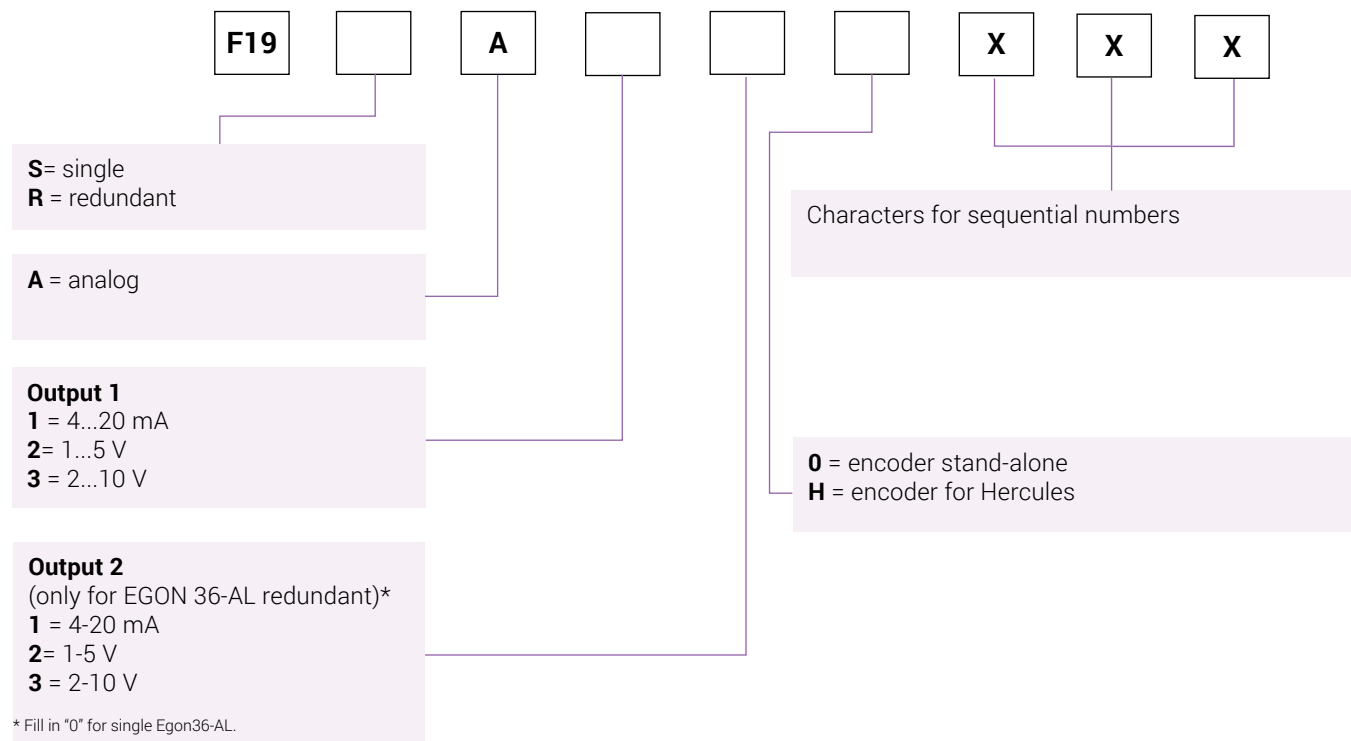
## ELECTRICAL SPECIFICATIONS - EGON 36-AL

<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

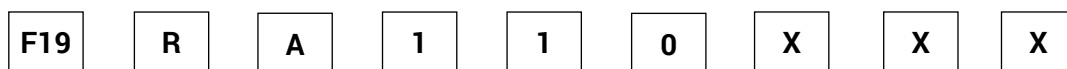


## EGON 36-AL - REQUEST FORM FOR ENCODER



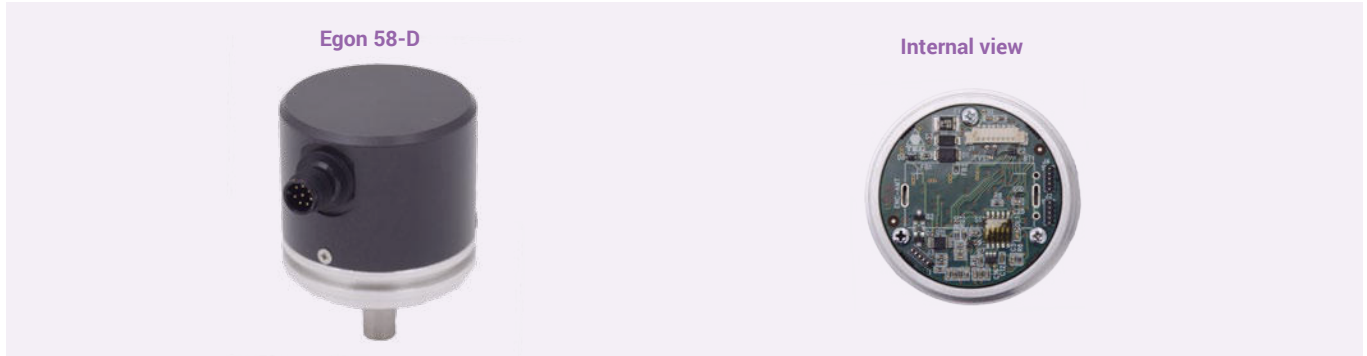
### Instructions

Fill in the boxes with the numbers 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 position of a shaft within a programmable range, transforming it into the corresponding analog 4...20 mA or CAN-bus signal.
- Equipped with analog 4...20 mA interface or digital CAN-bus interface, it guarantees immunity to disturbances, and the possibility of using long cables without causing instability.
- The output can be used as a percentage on the revolutions or as an absolute angle.
- Featuring aluminum housing and stainless steel AISI 303 shaft.



### CERTIFICATIONS - EGON 58-D

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 CE Standards	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60947-1 Low-voltage switchgear and controlgear
	EN 60947-5-1 Low-voltage switchgear and controlgear - Control circuit devices and switching elements - Electromechanical control circuit devices
	EN 60529 Degrees of protection provided by enclosures
	EN 61000-6-2 , EN 61000-6-4 , EN 61000-4-2 , EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6 Electromagnetic compatibility
Markings and homologations	CE pending

### GENERAL TECHNICAL SPECIFICATIONS - EGON 58-D

Ambient temperature	Storage -25°C/+80°C
	Operational -25°C/+80°C
IP protection degree	IP65 - IP67 - IP69K
Maximum rotation speed	1500 rev/min
Shaft diameter	Ø 10 mm
Connections	Code A male connector M12 - 8 PIN (digital version)

### ELECTRICAL SPECIFICATIONS - EGON 58-D

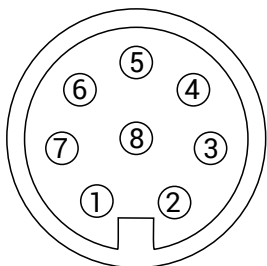
Power supply	12...30 Vdc
Output	Analog 4...20 mA
	Digital CAN-bus with proprietary application protocol
Consumption	50 mA @ 24Vdc
Single-turn resolution	12 bit (4096 points per revolution)
Multi-turn resolution	± 15 bit (± 32768 revolutions)
Analog output resolution	14 bit (16384 points)
Autonomia back 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	$\geq 100 \text{ M}\Omega$
Contacts	Gold plated zinc-copper alloy
Mating	Female connector M12 - 8 PIN (Amphenol LTW12P-08BFFA-SL8001)

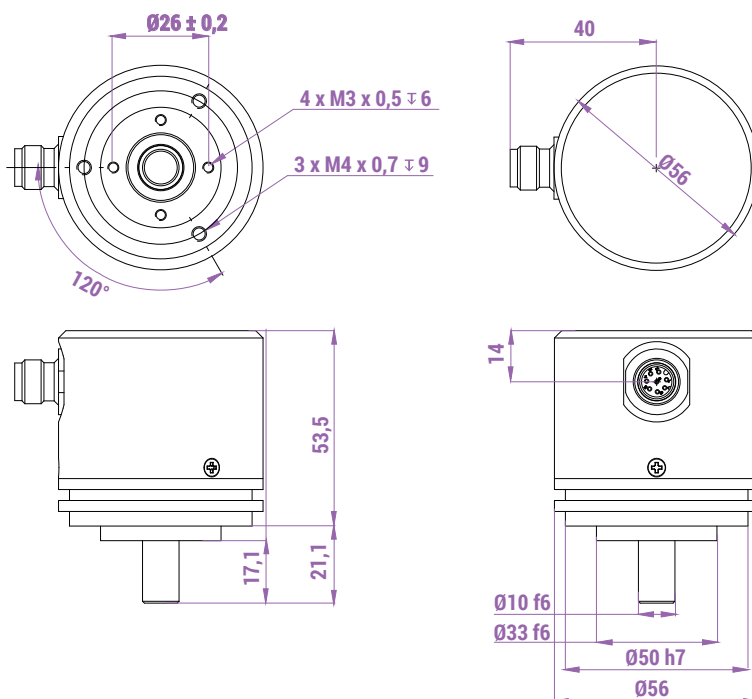
## MALE CONNECTOR ASSIGNMENT - EGON 58-D

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

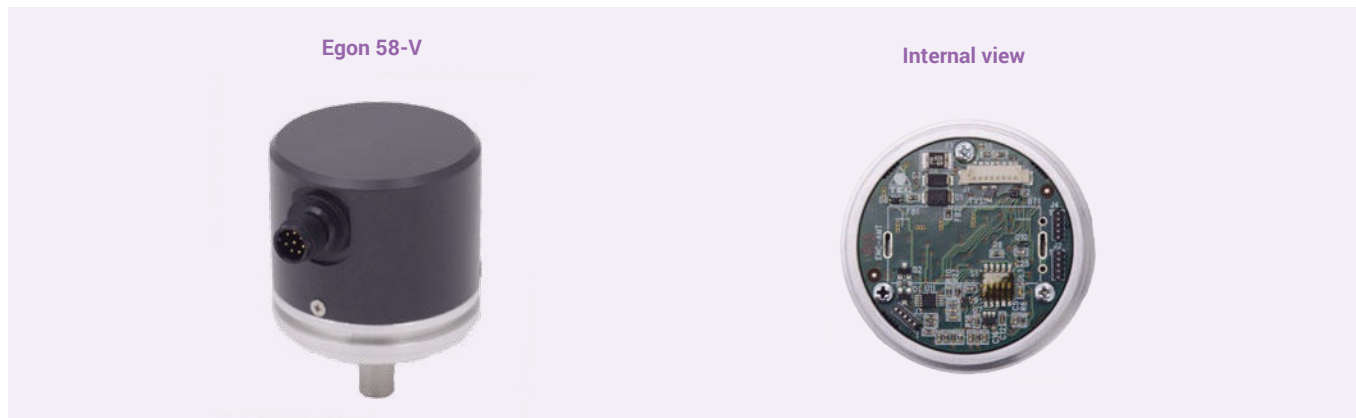


## ENCODER EGON 58-D

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

## EGON 58-V

- Multi-turn magnetic angular encoder that detects the position of a shaft, transforming it into the corresponding output CAN-bus signal.
- Equipped with digital CAN-bus interface on connector.
- Featuring aluminum housing and stainless steel AISI 303 shaft.



### CERTIFICATIONS - EGON 58-V

<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 CE Standards</b>	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60947-1 Low-voltage switchgear and controlgear
	EN 60947-5-1 Low-voltage switchgear and controlgear - Control circuit devices and switching elements - Electromechanical control circuit devices
	EN 60529 Degrees of protection provided by enclosures
	EN 61000-6-2, EN 61000-6-4, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6 Electromagnetic compatibility
<b>Markings and homologations</b>	CE pending

### CERTIFICATIONS - EGON 58-V

<b>Ambient temperature</b>	Storage -25°C/+80°C
	Operational -25°C/+80°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

### ELECTRICAL SPECIFICATIONS - EGON 58-V

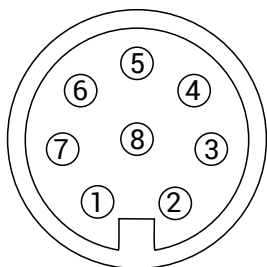
<b>Power supply</b>	12...30 Vdc
<b>Output</b>	Digital CAN-bus with proprietary application protocol
<b>Consumption</b>	35 mA @ 24Vdc
<b>Single-turn resolution</b>	12 bit (4096 points per revolution)
<b>Multi-turn resolution</b>	± 15 bit (± 32768 revolutions)
<b>Autonomia back up</b>	6 years
<b>Protection 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%

## MALE CONNECTOR SPECIFICATIONS - EGON 58-V

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

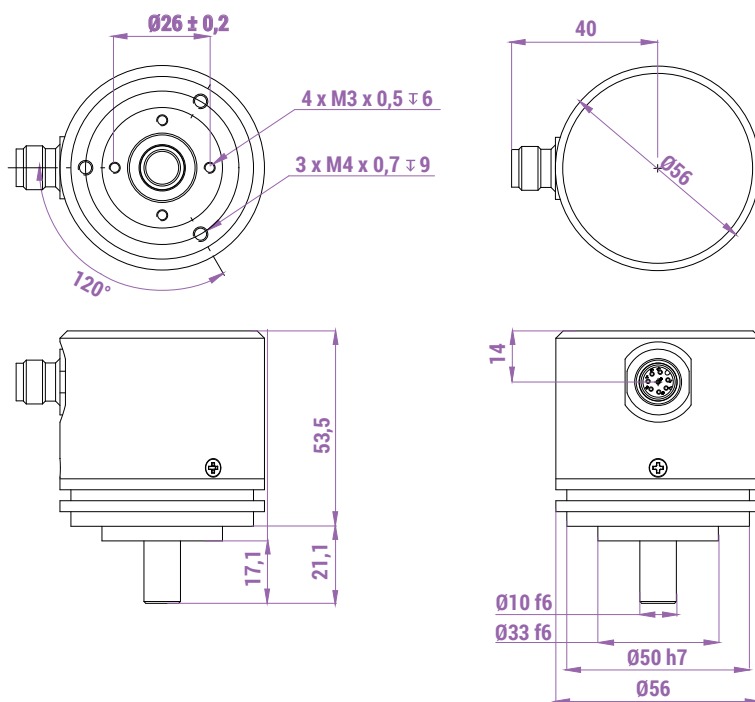
## MALE CONNECTOR ASSIGNMENT - EGON 58-V

Male connector 8 PIN



PIN	Signal
1	+Vcc
2	Node ID 13
3	Node ID 12
4	Node ID 11
5	Termination resistor 120R
6	CAN-B
7	CAN-A
8	GND

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



## ENCODER EGON 58-V

Description	Code
Encoder Egon58-V	F14SD100001

