EGON
Encoders

Single-turn or multi-turn magnetic angular encoders, which measure and convert mechanical rotations into scaled electrical signals or digital outputs, 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 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 IP 65.
  - Egon 58-D is classified IP 65 / IP 67 / IP 69K.
- Extreme temperature resistance: from -25°C to +85°C.
- 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 marking.

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.
- Maximum level of safety guaranteed by the double stage redundant scheme (redundant version).
- Wear-resistant technopolymer housing and stainless steel AISI 303 shaft.

Egon 36

Internal view

CERTIFICATIONS - EGON 36

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 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

GENERAL TECHNICAL SPECIFICATIONS - EGON 36

Ambient temperature	Storage -25°C/+85°C
	Operational -25°C/+85°C
IP protection degree	IP 65
Rated rotation speed	800 rpm
Maximum rotation speed	1500 rpm
Mechanical life	> $30x10^6$ revolutions
Shaft diameter	6 mm
Connections	Male connector M8 - 4 PIN
	Cable gland M8 with cable

ELECTRICAL SPECIFICATIONS - EGON 36

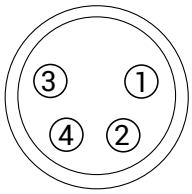
Power supply	12...30 Vdc
Analog output	Current 4...20 mA Voltage 1...5 V Voltage 2...10 V
Consumption	35 mA simple version 55 mA redundant version
Single-turn resolution	12 bit (4096 points per revolution)
Protection against input/output over-current	Yes
Protection against input/output over-voltage	Yes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

MALE CONNECTOR SPECIFICATIONS - EGON 36

Number of PINs	4
Insulation resistance	≥100 MΩ
Contacts	Gold plated copper alloy
Mating	Female connector M8 - 4 PIN (Amphenol 8P-04AFFM-SL7A01)

MALE CONNECTOR ASSIGNMENT - EGON 36

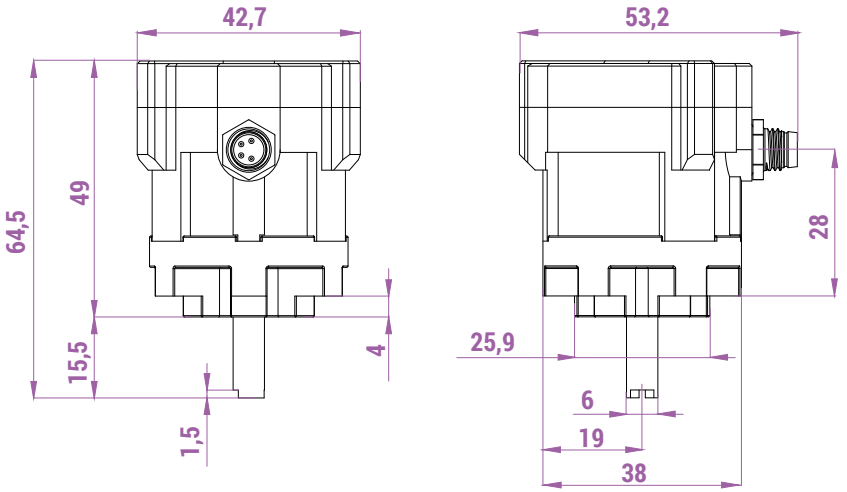
4 PINs connector



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

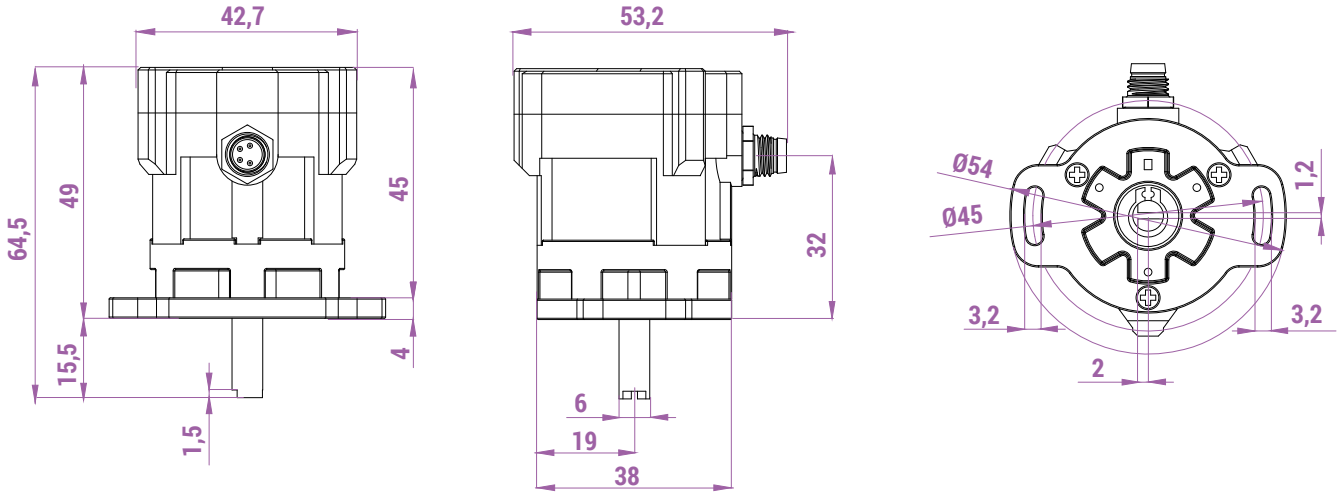
OVERALL DIMENSIONS (mm) - EGON 36

Egon 36



Ø holes 1.8 mm
↧ hole depth 8 mm
No.3 screws ISO7049-ST2.5

Egon 36 with flange



ADAPTER COUPLINGS

Codice	Descrizione
VV000060	Adapter coupling Ø 6 - 6 mm
VV000061	Adapter coupling Ø 6 - 8 mm
VV000062	Adapter coupling Ø 6 - 10 mm

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. **Flange**: tick the box when the flange is required.
4. **Connections:** tick the box corresponding to connection required.

Type of encoder 1

☐ Simple

☐ Redundant

Output 2

☐ Current 4...20 mA

☐ Voltage 1...5 V

☐ Voltage 2...10 V

☐ Flange 5

Connections

☐ Male connector M8 - 4 PIN

☐ Cable gland M8 with cable

- ☐ 1 m cable
- ☐ 2 m cable
- ☐ 3 m cable

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.
- Wear-resistant technopolymer housing and stainless steel AISI 303 shaft.

Egon 36-RS

Internal view

CERTIFICATIONS - EGON 36-RS

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 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

GENERAL TECHNICAL SPECIFICATIONS - EGON 36-RS

Ambient temperature	Storage -25°C/+85°C
	Operational -25°C/+85°C
IP protection degree	IP65
Rated rotation speed	800 rpm (powered)
	100 rpm (battery)
Maximum rotation speed	1200 rev/min
Mechanical life	> $30x10^6$ revolutions
Shaft diameter	6 mm
Connections	Male connector M8 - 4 PIN
	Cable gland M8 with cable

ELECTRICAL SPECIFICATIONS - EGON 36-RS

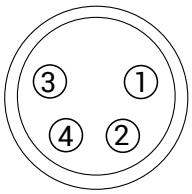
Power supply	12...30 Vdc
Output (only with power supply)	Modbus RTU protocol over RS-485 bus
	RS-485 PTP basic protocol
Consumption	~20 mA
Single-turn resolution	10 bit (1024 points per revolution) (standard version)
	12 bit (4096 points per revolution) (max speed 200 rev/min)
Multi-turn resolution	14 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
Insulation resistance	≥100 MΩ
Contacts	Gold plated copper alloy
Mating	Female connectors M8 - 4 PIN (Amphenol 8P-04AFFM-SL7A01)

MALE CONNECTOR ASSIGNMENT - EGON 36-RS

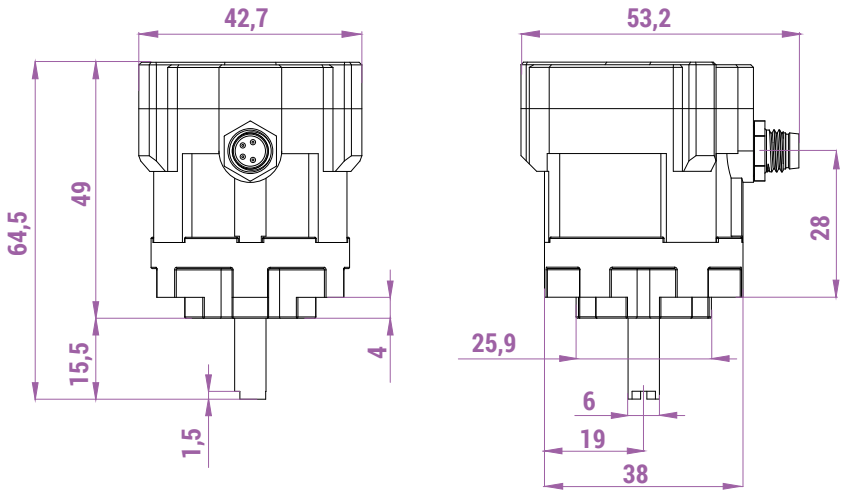
4 PINs connector



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

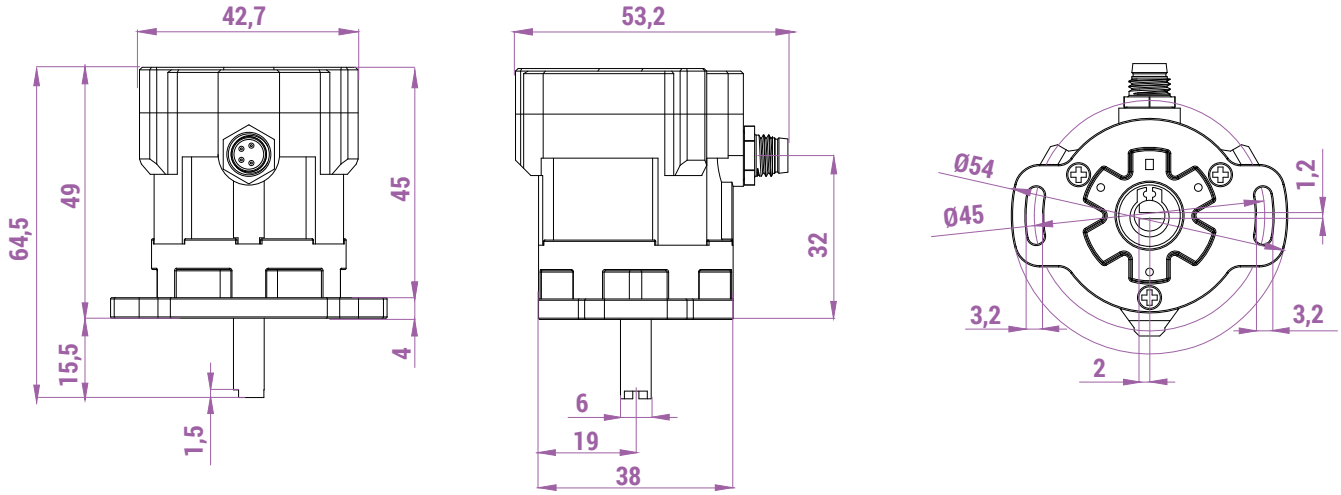
OVERALL DIMENSIONS (mm) - EGON 36-RS

Egon 36-RS



Ø holes 1.8 mm
↧ hole depth 8 mm
No.3 screws ISO7049-ST2.5

Egon 36-RS with flange



ADAPTER COUPLINGS

Codice	Descrizione
VV000060	Adapter coupling Ø 6 - 6 mm
VV000061	Adapter coupling Ø 6 - 8 mm
VV000062	Adapter coupling Ø 6 - 10 mm

EGON 36-RS - REQUEST FORM FOR ENCODER

Instructions

1. **Protocol:** tick the box corresponding to the protocol required.
2. **Flange**: tick the box when the flange is required.
3. **Connections:** tick the box corresponding to connection required.

Protocol 1

☐ Modbus RTU over RS-485 bus

☐ RS-485 PTP basic

☐ Flange 2

Connections 3

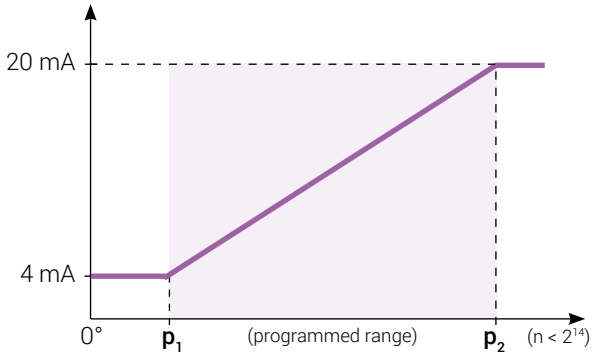
☐ Male connector 4 PIN

☐ Cable gland M8 - 4 PIN with cable

- ☐ 1 m cable
- ☐ 2 m cable
- ☐ 3 m cable

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.



Egon 58-D

Internal view

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
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Markings and homologations	CE

GENERAL TECHNICAL SPECIFICATIONS - EGON 58-D

Ambient temperature	Storage -25°C/+85°C
	Operational -25°C/+85°C
IP protection degree	IP 65 / IP 67 / IP 69K
Maximum rotation speed	1500 rpm
Shaft	Ø 10 mm
	Ø 10 mm flat
Connections	Code A male connector M12 - 8 PIN (digital version)

ELECTRICAL SPECIFICATIONS - EGON 58-D

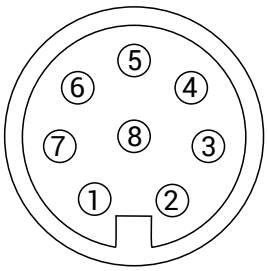
Power supply	12...30 Vdc
Output	Analog 4...20 mA
	Digital CAN-bus with proprietary protocol
Consumption	50 mA @ 24Vdc
Single-turn resolution	12 bit (4096 points per revolution)
Multi-turn resolution	± 15 bit (± 32768 revolutions)
Analog output resolution	14 bit (16384 points)
Back-up autonomy	~ 6 years
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 PRVV9523PE (Amphenol LTW12P-08BFFA-SL8001)
	Female connector M12 - 8 PIN PIN PRVV9505PE (Phoenix Contact 1513347)

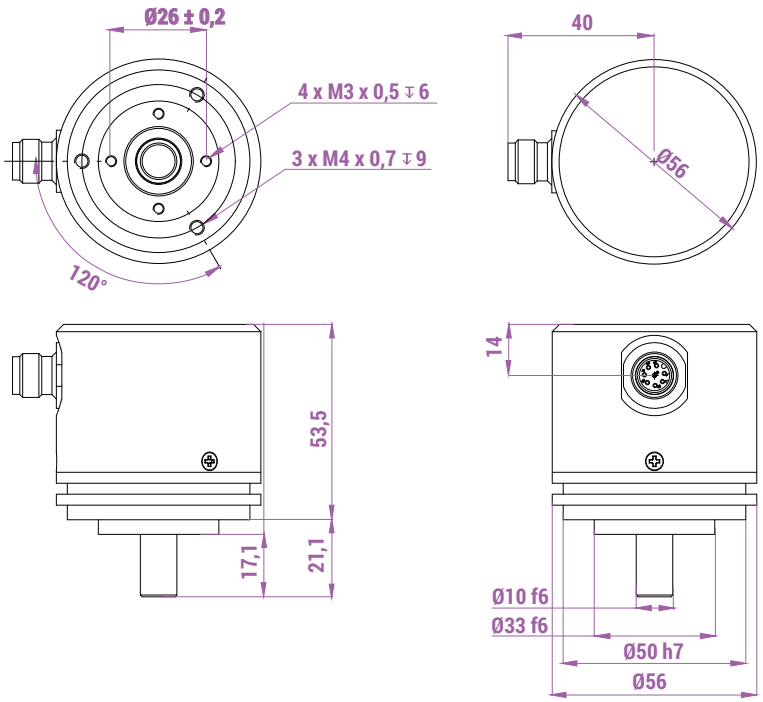
MALE CONNECTOR ASSIGNMENT - EGON 58-D

Male connector 8 PIN

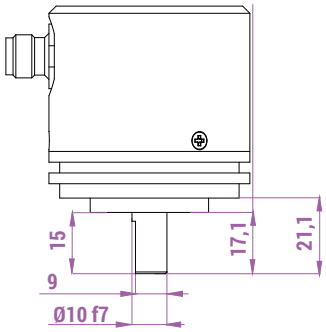


PIN	Signal
1	+Vcc
2	TEACH
3	LED
4	Analog/CAN selector
5	I-Out
6	CAN-B (only digital output)
7	CAN-A (only digital output)
8	GND

OVERALL DIMENSIONS (mm) - EGON 58-D



Egon 58-D with flat shaft Ø 10 mm



ENCODER EGON 58-D

Description	Code
Analog 4...20 mA encoder with shaft Ø 10 mm	F18A043E1X00
Analog 4...20 mA encoder with flat shaft Ø 10 mm	F18A043E2X00
Digital Can-open encoder with shaft Ø 10 mm	F18N044E1X00
Digital Can-open encoder with flat shaft Ø 10 mm	F18N044E2X00