

- Compact through hollow shaft encoders
- M23, M12 connector or cable output
- Ø15 or Ø14 mm shaft, other diameters with reduction sleeves
- Universal output circuit PP/LD



C60 • C58 • C59

ENVIRONMENTAL SPECIFICATIONS

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|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shock: | 250 g, 6 ms acc. to CEI EN 60068-2-27 |
| Vibrations: | 10 g, 5-2000 Hz acc. to CEI EN 60068-2-6 |
| Protection: | IP64 |
| Operating temperature range: | -25°C +85°C (-13°F +185°F) |
| Storage temperature range: | -25°C +85°C (-13°F +185°F) (98% R.H. without condensation) |
| Options: | <ul style="list-style-type: none"> • Operating temperature range: -40°C +100°C (-40°F +212°F) • IP65 Protection (3000 rpm max, torque 1 Ncm) |

MECHANICAL SPECIFICATIONS

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|--------------------------------|---------------------------------------------------------------------------------------------|
| Dimensions: | see drawing |
| Hollow shaft diameter: | Ø 14, 15 mm |
| Shaft loading (axial, radial): | 30 N max. |
| Shaft rotational speed: | 6000 rpm max. |
| Starting torque at 20°C: | 1 Ncm (typical) |
| Bearings life: | 400 x 10 ⁶ rev. min. (10 ⁹ rev. min. with 20 N shaft loading max.) |
| Electrical connections: | M12, M23 plug or cable output 1 m (3.3 ft) |
| Weight: | ~ 150 g (5,2 oz) |
| Option: | • additional cable |

ELECTRICAL SPECIFICATIONS

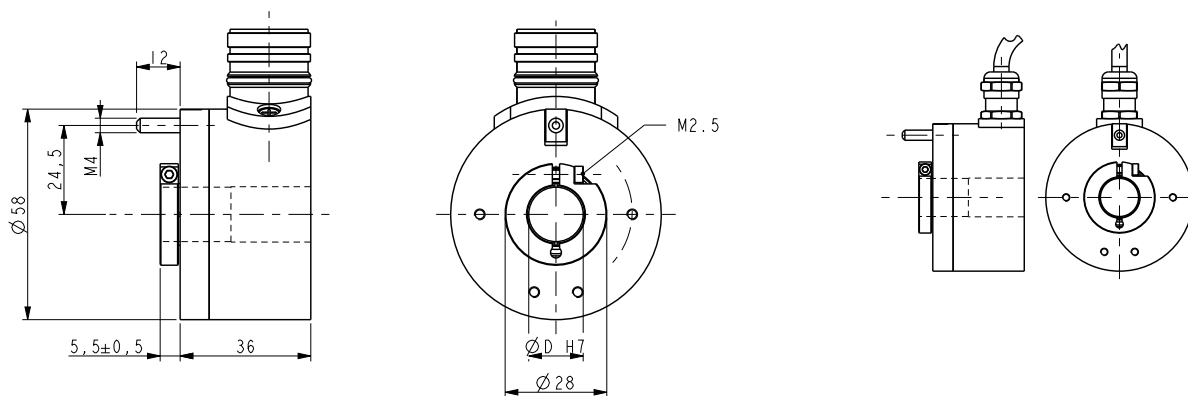
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|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Resolution (PPR): | 50, 100, 200, 250, 300, 360, 400, 500, 512, 600, 720, 900, 1000, 1024 1200, 1250, 1440, 1800, 2000, 2048, 2500, 3600, 4096, 5000 |
| Counting frequency: | 150 kHz max. |
| Output circuits: | Push-Pull, Line Driver, Universal circuit |
| Power supply: | +5V±5%, +10V +30V, +5V +30V |
| Consumption: | 70 mA (typical) |
| Output current (per channel): | 40 mA max. |
| Protection: | against inversion of polarity and short-circuit |
| EMC: | electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4 |

MATERIALS

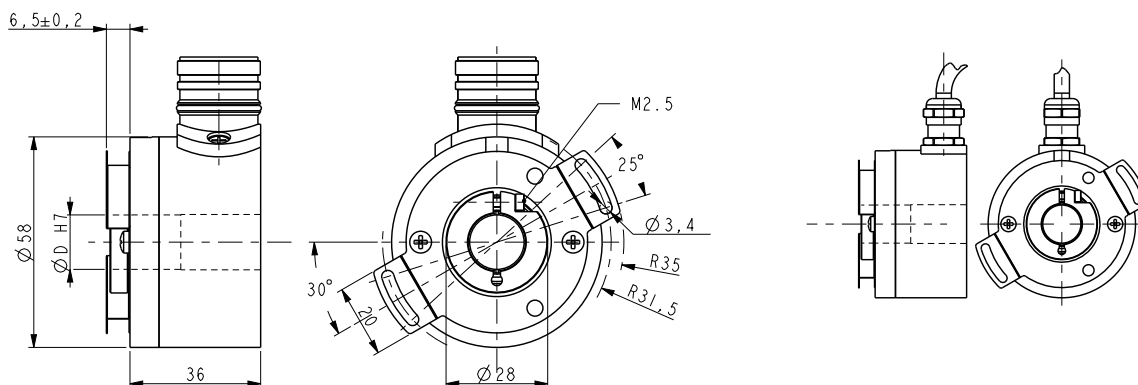
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|-----------|---------------------------------------------|
| Flange: | anticorodal, UNI EN AW-6082 |
| Housing: | zamac die cast |
| Bearings: | ABEC 5 |
| Shaft: | stainless steel, non-magnetic - UNI EN 4305 |

ACCESSORIES

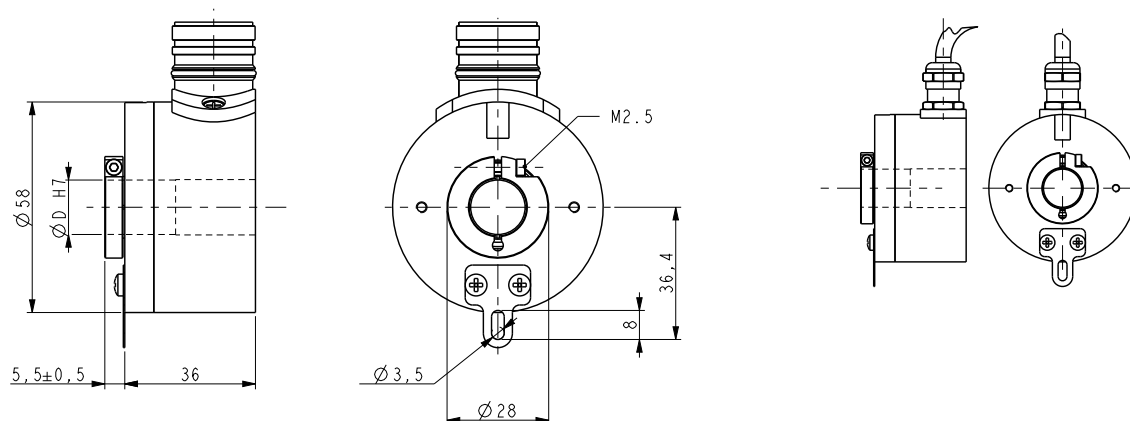
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|----------------------|----------------------------------|
| E-M12F8: | M12 8 pin mating connector |
| EC-M12F8-LK-M8-L050: | cordset 5 m with M12 connector |
| EC-M12F8-LK-M8-L100: | cordset 10 m with M12 connector |
| EPFL 121: | 12 pin M23 mating connector |
| EC-C12F-LK-I8-L050: | cordset 5 meters, M23 connector |
| EC-C12F-LK-I8-L100: | cordset 10 meters, M23 connector |
| EDE 9S: | 9 pin DSub mating connector |
| BR1-xx: | Reducing sleeves |



C58



C59



C60

Order code

| | | | | | | | | | | | | | | | |
|-----|---|-----|---|------|---|-----|---|-----|---|-----|-----|---|-----|------|-------|
| C58 | - | XX | - | XXXX | - | XXX | - | XX | - | X | X | - | X | XXXX | /Sxxx |
| C59 | | (a) | | (b) | | (c) | | (d) | | (e) | (f) | | (g) | (h) | (i) |
| C60 | | | | | | | | | | | | | | | |

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| <p>(a) OUTPUT CIRCUITS / SUPPLY VOLTAGE Y2 = Push Pull, +10V÷ +30V L1 = Line Driver (RS422), +5V±5% H4 = PP/LD universal circuit, +5V÷ +30V L2 = Line Driver (RS422), +10V÷ +30V</p> <p>(b) RESOLUTION (PPR) See electrical specifications</p> | <p>(c) OUTPUT SIGNALS / CONNECTIONS BNF = AB cable output BCU = AB, /AB cable output ZNF = ABO cable output ZCU = ABO, /ABO cable output BCZ = AB /AB, M23 12 pin plug ZCZ = ABO /ABO, M23 12 pin plug ZCM = ABO /ABO, M12 8 pin plug</p> <p>(d) SHAFT DIAMETER 14 = 14 mm 15 = 15 mm</p> | <p>(e) PROTECTION S = IP64 (standard) P = IP65</p> <p>(f) OPERATING TEMPERATURE T = -25°C +85°C (-13°F +185°F) (standard) K = -40°C +100°C (-40°F +212°F)</p> <p>(g) CONNECTION POSITION R = radial</p> | <p>(h) CABLE LENGTH (not with BCZ, ZCZ, ZCM) L010 = cable output 1 m (standard) L020 = cable output 2 m Lxxx = cable output x m (max. length 10m) Cxxx = x m cable with DSub 9 pin inline plug</p> | <p>(i) CUSTOM VERSION</p> |
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| Document release | Date | Description |
|------------------|--------------|-------------------|
| 1.1 | 01.10.2024 | Resolution update |
| 1.0 | October 2023 | New order code |