



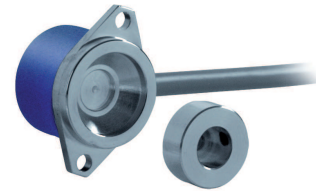
EMI 22 A

MAGNETIC INCREMENTAL KIT ENCODER

MAIN FEATURES

EMI series encoders are suitable for several application fields like electric motors marine industry, iron and steel industry, textile machines, wood-working, paper-working, glass working, marble-working machinery and, more generally, automation and process control fields.

- 3 channel encoder (A / B / Z) up to 2048 ppr
- Cable output, connector available on cable end
- Compact dimensions
- No wear due to no contact magnetic technology
- Bore shaft diameter up to 10 mm
- IP 67 enclosure rating
- Wide operating temperature -40° ... +125°C (-40° ... +257°F)



| ORDERING CODE | EMI | 22A | 1024 | Z | 5 | P | 6 | S | 10 | P | R | .XXX |
|---|-----|-----|------|---|---|---|---|---|----|---|---|------|
| SERIES magnetic incremental encoder series EMI | | | | | | | | | | | | |
| MODEL clamping flange ø 22 mm 22A for anodized version please directly contact our offices | | | | | | | | | | | | |
| RESOLUTION ppr from 2 to 2048 see table for pulses availability | | | | | | | | | | | | |
| ZERO PULSE without zero pulse S with zero pulse Z | | | | | | | | | | | | |
| POWER SUPPLY 5 V DC S | | | | | | | | | | | | |
| ELECTRICAL INTERFACE push-pull P line driver RS-422 L | | | | | | | | | | | | |
| MAGNET-ACTUATOR BORE DIAMETER mm 6 mm 8 (3/8") 9,52 mm 9 mm 10 | | | | | | | | | | | | |
| ENCLOSURE RATING IP 67 S | | | | | | | | | | | | |
| MAX ROTATION SPEED 10000 rpm 10 | | | | | | | | | | | | |
| OUTPUT TYPE cable (standard length 0,5 m) P preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after DIRECTION TYPE (eg. PR5) | | | | | | | | | | | | |
| DIRECTION TYPE axial A radial R | | | | | | | | | | | | |
| VARIANT custom version XXX | | | | | | | | | | | | |

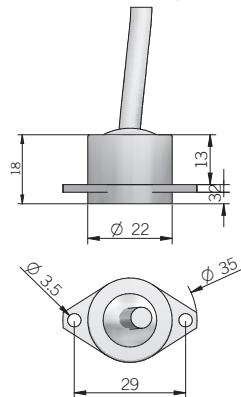


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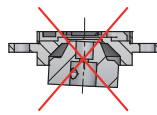
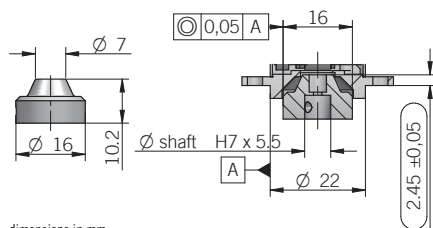
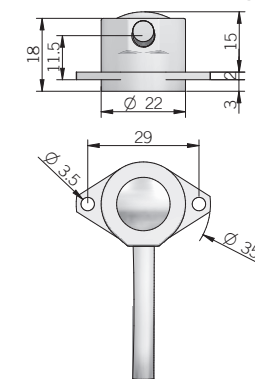
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MAGNETIC INCREMENTAL ENCODERS | EMI 22 A

22 A axial cable output



22 A radial cable output



dimensions in mm

ELECTRICAL SPECIFICATIONS

| | |
|---|--|
| Resolution | from 2 to 2048 ppr |
| Power supply | 4,5 ... 5,5 V DC |
| Current consumption without load | 100 mA max |
| Max load current | 15 mA / channel |
| Output type* | push pull / line driver RS-422 (AELT-5000 or equivalent) |
| Max output frequency | 205 kHz |
| Counting direction | A leads B with clockwise rotation (magnet-actuator view) |
| Accuracy | ± 0,35° typical / ± 0,50° max |
| Electromagnetic compatibility | according to 2014/30/EU directive |
| RoHS | according to 2011/65/EU directive |
| UL / CSA | certificate n. E212495 |

* for further details please see OUTPUT LEVELS under TECHNICAL BASICS section

MECHANICAL SPECIFICATIONS

| | |
|--|---|
| Bore diameter (magnet-actuator) | ø 6 / 8 / 9,52 (3/8") / 10 mm |
| Enclosure rating | IP 67 (IEC 60529) |
| Max rotation speed | 10000 rpm |
| Shock | 50 G, 11 ms (IEC 60068-2-27) |
| Vibration | 10 G, 10 ... 2000 Hz (IEC 60068-2-6) |
| Moment of inertia (magnet-actuator) | 0,1 x 10 ⁻⁶ kgm ² (2,4 x 10 ⁻⁶ lbfm ²) |
| Bearing stage material | EN-AW 2011 aluminum |
| Housing material | EN-AW 2011 aluminum |
| Magnet-actuator material | EN-AW 2011 aluminum |
| Operating temperature | -40° ... +125°C (-40° ... +257°F) |
| Storage temperature | -25° ... +85°C (-13° ... +185°F) |
| Weight | 30 g (1,06 oz) |
| Magnet actuator mounting tolerances (to get best electrical performances) | ± 0,2 mm (axial) ± 0,1 mm (radial) |

CONNECTIONS

| Function | Cable P | Cable L |
|----------|---------|---------|
| +V DC | red | red |
| 0 V | black | black |
| Ch. A | green | green |
| Ch. A- | / | brown |
| Ch. B | yellow | yellow |
| Ch. B- | / | orange |
| Ch. Z | blue | blue |
| Ch. Z- | / | white |
| ⊕ | shield | shield |

RESOLUTIONS

2 - 4 - 8 - 10 - 16 - 20 - 32 - 40 - 64 - 80 - 100 - 125 - 128 - 200 - 250 - 256 - 400 - 500 - 512 - 1024 - 2048



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97

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