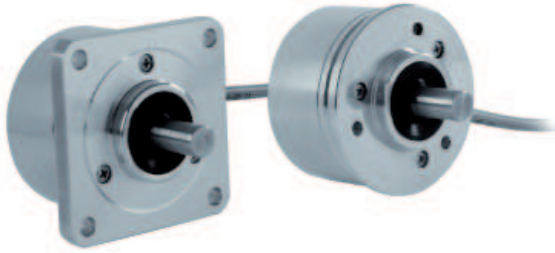




# EMI 63 A / D

## MAGNETIC INCREMENTAL SOLID SHAFT ENCODER



### Specifications

Thanks to the magnetic technology, the EMI 63 series is suitable for harsh environment applications such as marble and glass working machines, washing systems, metal working machines and all the applications where high temperature resistance is required.

- 3 channel encoder (A / B / Z) up to 2048 ppr
- Power supply up to +28 VDC with several electronic interfaces available
- Up to 300 kHz output frequency
- Cable or M12 connector output, other connectors available on cable end
- Solid shaft diameter up to 10 mm
- Mounting by synchronous or centering 2,5" square flange
- Sturdy construction due to separated chambers design
- Wide operating temperature -25° ... +100°C (-13° ... +212°F)

| ORDERING CODE | EMI | 63A | 1024 | Z | 5 | L | 10 | X | 6 | P | R | .XXX |
|---------------|-----|-----|------|---|---|---|----|---|---|---|---|------|
|---------------|-----|-----|------|---|---|---|----|---|---|---|---|------|

**SERIES**  
magnetic incremental encoder series EMI

**MODEL**  
synchronous flange ø 31,75 mm 63A  
centering square flange ø 31,75 mm 63D

**RESOLUTION**  
ppr from 2 to 2048  
see table for pulses availability

**ZERO PULSE**  
without zero pulse S  
with zero pulse Z

**POWER SUPPLY**  
(with L electronic interface) 5 V DC 5  
(with L or PC electronic interface) 8 ... 24 V DC 8/24  
5 ... 28 V DC 5/28

**ELECTRONIC INTERFACE**  
push-pull P  
push-pull protected (AEIC-7272) PC  
line driver L  
power supply 5/28 V - output RS-422 RS

**SHAFT DIAMETER**  
9,52 (3/8") mm 9  
mm 10

**ENCLOSURE RATING**  
IP 64 X  
IP 66 S

**MAX ROTATION SPEED**  
(IP 66) 3000 rpm 3  
(IP 64) 6000 rpm 6

**OUTPUT TYPE**  
cable (standard length 0,5 m) P  
M12 connector M12

female connector included, without female please add 162 as variant code

**DIRECTION TYPE**  
axial A  
radial R

**VARIANT**  
custom version XXX

کانون ابزار

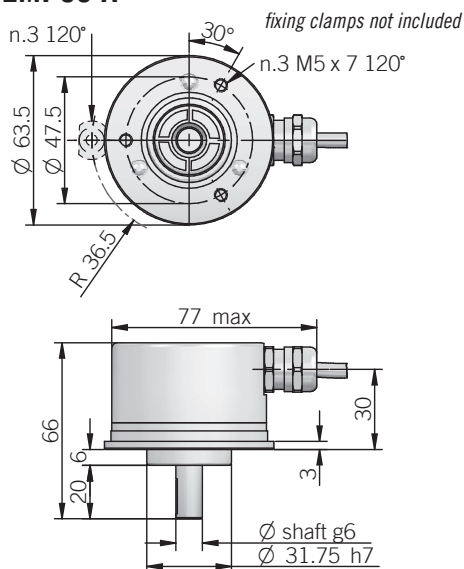
تلفن :

021 66 39 39 00

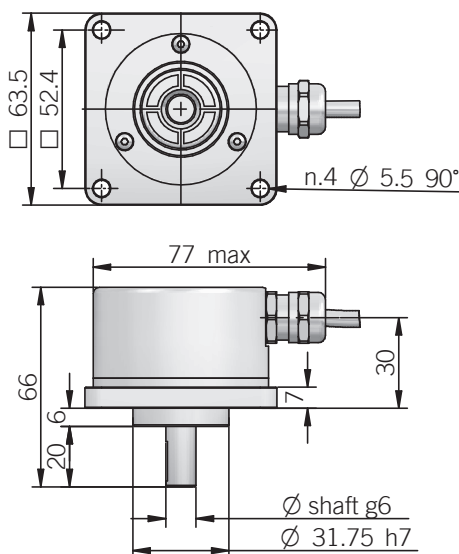
0912 147 3023

ali5.ir

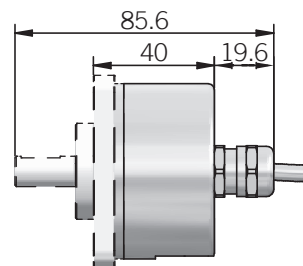
### EMI 63 A



### EMI 63 D



### Dimensions with axial output



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: تلفن

02166 39 39 00

0912 147 3023

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dimensions in mm

#### ELECTRICAL SPECIFICATIONS

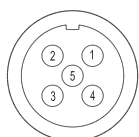
|                                      |   |
|--------------------------------------|---|
| <b>Resolution</b>                    | from 2 to 2048 ppr  |
| <b>Power supply</b>                  | 5 = 4,5 ... 5,5 V DC<br>5/28 = 4,75 ... 29,4 V DC<br>8/24 = 7,6 ... 25,2 V DC (reverse polarity protection) |
| <b>Power draw without load</b>       | 800 mW max  |
| <b>Max load current</b>              | 15 mA / channel   |
| <b>Output type*</b>                  | push-pull / line driver   |
| <b>Max output frequency</b>          | 205 kHz   |
| <b>Counting direction</b>            | A leads B clockwise (shaft view)  |
| <b>Accuracy</b>                      | ± 0,35° typical / ± 0,50° max   |
| <b>Electromagnetic compatibility</b> | IEC 61000-6-2<br>IEC 61000-6-4  |

\*output levels according to power supply, for further details please see under Technical basics section

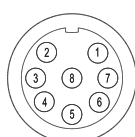
#### CONNECTIONS

| Function | Cable output | 5 pin M12 output Push-pull | 8 pin M12 output Line Driver |
|----------|--------------|----------------------------|------------------------------|
| 0 Volt   | black        | 4                          | 1                            |
| +V DC    | red          | 2                          | 7                            |
| Ch. A    | green        | 3                          | 6                            |
| Ch. B    | yellow       | 1                          | 4                            |
| Ch. Z    | blue         | 5                          | 2                            |
| Ch. A-   | brown        | /                          | 5                            |
| Ch. B-   | orange       | /                          | 3                            |
| Ch. Z-   | white        | /                          | 8                            |
| ⊥        | shield       | housing                    | housing                      |

M12 connector (5 pin)  
M12 A coded  
solder side view FV



M12 connector (8 pin)  
M12 A coded  
solder side view FV



#### MECHANICAL SPECIFICATIONS

|   |  |
|---|--|
| <b>Shaft diameter</b>                     | ∅ 9,52 (3/8") / 10 mm                          |
| <b>Enclosure rating</b>                   | X = IP 64 (IEC 60529)<br>S = IP 66 (IEC 60529) |
| <b>Max rotation speed</b>                 | 3000 rpm (IP 66)<br>6000 rpm (IP 64)           |
| <b>Shock</b>                              | 50 G, 11 ms (IEC 60068-2-27)                   |
| <b>Vibration</b>                          | 10 G, 10 ... 2000 Hz (IEC 60068-2-6)           |
| <b>Moment of inertia</b>                  | 0,5 x 10 <sup>-6</sup> kgm <sup>2</sup>        |
| <b>Starting torque (at +20°C / +68°F)</b> | < 0,01 Nm (IP 64)<br>< 0,08 Nm (IP 66)         |
| <b>Body material</b>                      | EN-AW 2011 aluminum                            |
| <b>Shaft material</b>                     | 1.4305 / AISI 303 stainless steel              |
| <b>Housing material</b>                   | EN-AW 2011 aluminum                            |
| <b>Bearings</b>                           | 2 ball bearings                                |
| <b>Bearing lifetime</b>                   | 10 <sup>9</sup> revolutions                    |
| <b>Operating temperature</b>              | -25° ... +100°C (-13° ... +212°F)              |
| <b>Storage temperature</b>                | -25° ... +85°C (-13° ... +185°F)               |
| <b>Weight</b>                             | 350 g (12,35 oz)                               |

#### RESOLUTIONS

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

please directly contact our offices for other pulses

#### ACCESSORIES

set n.3 fixing clamps for model 63 A  
P/N 94080001

