

### MAIN FEATURES

Thanks to the magnetic technology, the EMI 38 series is suitable for harsh environment applications such as marble and glass working machines, washing systems and generally for industrial automation.

- Up to 2048 ppr
- Several output types available
- Up to 100°C working temperature
- Radial cable output
- Up to IP 66 as protection grade



MAGNETIC INCREMENTAL ENCODERS

### ORDERING CODE

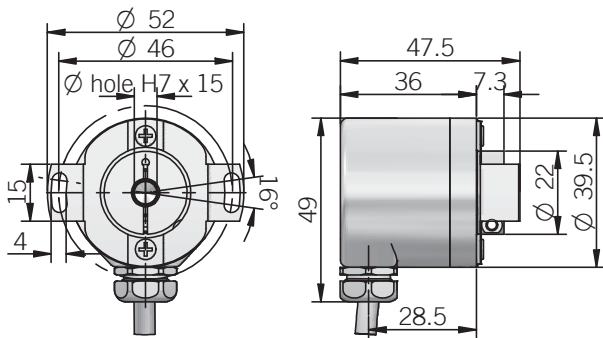
**EMI 38 F 1024 Z 5 L 6 X 6 PR . XXX**

<b>SERIES</b> magnetic incremental encoder <b>EMI</b>	<b>SIZE</b> mm <b>38</b>	<b>TYPE</b> blind hollow shaft with spring <b>F</b> blind hollow shaft with antirotation pin <b>G</b>	<b>RESOLUTION</b> (only powers of 2) ppr from <b>2</b> to <b>2048</b> ppr <b>10 / 20 / 25 / 40 / 50 / 80 / 100 / 125 / 200 / 250 / 400 / 500</b>	<b>ZERO PULSE</b> without zero pulse <b>S</b> with zero pulse <b>Z</b>	<b>POWER SUPPLY</b> (available only with L electronic output) <b>5 V DC 5</b> (available only with L or PC electronic output) <b>8 ... 24 V DC 8/24</b> <b>5 ... 28 V DC 5/28</b>	<b>VARIANT</b> <b>XXX</b> custom version	<b>OUTPUT TYPE</b> <b>PR</b> cable output radial with cable gland (standard length 0.5 m)	<b>MAX ROTATION SPEED</b> <b>3</b> 3000 rpm (with IP66) <b>6</b> 6000 rpm (with IP64)	<b>ENCLOSURE RATING</b> <b>X</b> IP 64 <b>S</b> IP 66	<b>SHAFT DIAMETER</b> <b>6</b> mm <b>8</b> mm <b>9</b> mm $\varnothing$ 9,52 (3/8") <b>10</b> mm	<b>ELECTRONIC INTERFACE</b> <b>P</b> push-pull <b>PC</b> protected push-pull (AEIC-7272) <b>L</b> line driver
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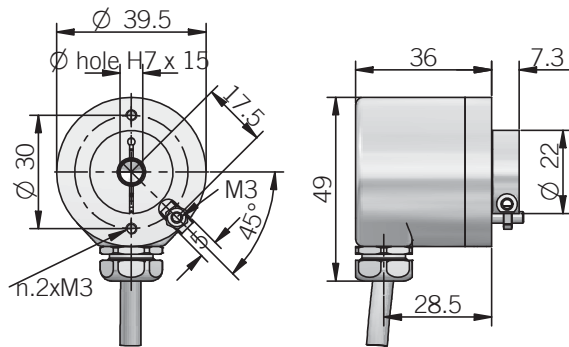
*N.B.: please directly contact our offices for pulses availability*

EMI 38 F / G

## EMI 38 F



## EMI 38 G



### EMI38F mounting instructions

1. Couple encoder shaft with motor shaft
2. Fix spring to motor flange without tightening it
3. Fix encoder shaft on motor shaft
4. Turn encoder for electrical adjustment (phasing)
5. Fix spring

### EMI38G mounting instructions

1. Fix anti-rotation pin on motor flange
2. Couple encoder shaft with motor shaft, making sure pin is inserted in the hole on the front part of the encoder (maintaining a minimum distance of 0.5 mm).
3. Fix encoder shaft on motor shaft

### Mechanical specifications

<b>Shaft diameter</b>	ø 6 / 8 / 9,52 / 10 mm
<b>Enclosure rating</b>	IP 64 (IEC 60529) IP 66 (IEC 60529)
<b>Max rotation speed</b>	6000 rpm 3000 rpm with IP66
<b>Max shaft load</b>	5 N (0.5 kgf) axial 5 N (0.5 kgf) radial
<b>Shock</b>	50 G, 11 ms (IEC 60068-2-27)
<b>Vibration</b>	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
<b>Body material</b>	EN-AW 2011 aluminum
<b>Shaft material</b>	1.4305 / AISI 303 stainless steel
<b>Housing material</b>	painted aluminum
<b>Bearings</b>	2 ball bearings
<b>Bearing lifetime</b>	10 <sup>9</sup> revolutions
<b>Operating temperature</b>	-25° ... +100°C
<b>Storage temperature</b>	-25° ... +85°C
<b>Weight</b>	100 g

### Electrical specifications

<b>Resolution</b>	up to 2048 ppr
<b>Power supply</b>	5 V DC ± 10% 5 ... 28 V DC ± 5% 8 ... 24 V DC ± 5% (reverse polarity protection)
<b>Current consumption without load</b>	80 mA max
<b>Max load current</b>	15 mA for channel
<b>Electronic interface</b>	push-pull line driver HTL / RS422
<b>Max output frequency</b>	205 kHz
<b>Counting direction</b>	A leads B clockwise (shaft view)
<b>Accuracy</b>	± 0.35° max
<b>Electromagnetic compatibility</b>	IEC 61000-6-2 IEC 61000-6-4

### Connections and standard colours

Function	Push pull	Line driver
+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