

**MAIN FEATURES**

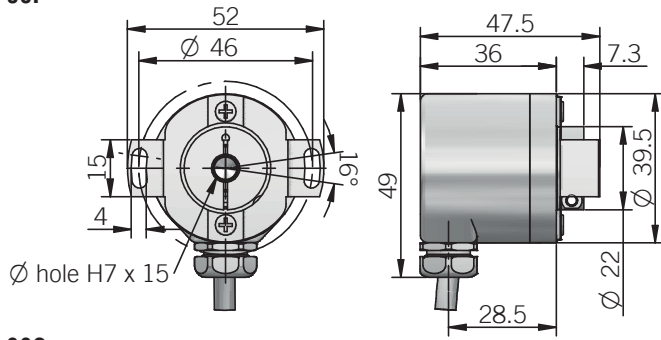
Thanks to the magnetic technology, the EMI 38 series is suitable for harsh environment applications such as marble and glass working machines, washing systems and generally for industrial automation.

- Innovative proprietary magnetic Asic
- 3 channel encoder (A / B / Z) with resolution up to 10000 ppr
- Power supply up to +30 V DC with several electrical interfaces available
- Cable output, connectors available on cable end
- Compact dimensions
- Blind hollow shaft diameter up to 10 mm with shaft fixing by collar clamping
- Wide operating temperature -25° ... +100°C (-13° ... +212°F)

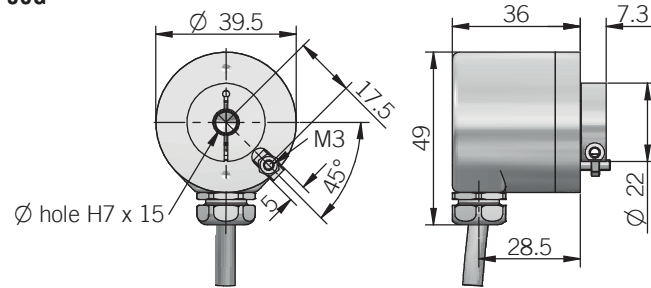


ORDERING CODE	EMI	38F	500	S	5/30	P	10	X	X	PR	.XXX
<b>SERIES</b> magnetic incremental encoder series <b>EMI</b>											
<b>MODEL</b> blind hollow shaft with stator coupling <b>38F</b> blind hollow shaft with torque pin <b>38G</b>											
<b>RESOLUTION</b> ppr from <b>1</b> to <b>10000</b> please refer to the preferred resolutions list											
<b>ZERO PULSE</b> without zero pulse <b>S</b> with zero pulse <b>Z</b>											
<b>POWER SUPPLY</b> (with L electrical interface) 5 V DC <b>5</b> 5 ... 30 V DC <b>5/30</b>											
<b>ELECTRICAL INTERFACE</b> NPN open-collector <b>C</b> push-pull <b>P</b> line driver <b>L</b> power supply 5/30 V DC - output RS-422 <b>RS</b>											
<b>SHAFT DIAMETER</b> mm <b>4</b> mm <b>5</b> mm <b>6</b> (1/4") mm <b>6,35</b> mm <b>8</b> mm <b>10</b>											
<b>ENCLOSURE RATING</b> IP 66 shaft side / IP67 cover side <b>X</b>											
<b>OPTION</b> to be reported <b>X</b>											
<b>OUTPUT TYPE</b> radial cable (standard length 0,5 m) <b>PR</b> preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)											
<b>VARIANT</b> custom version <b>XXX</b>											

38F



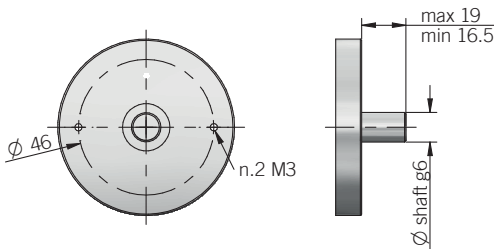
38G



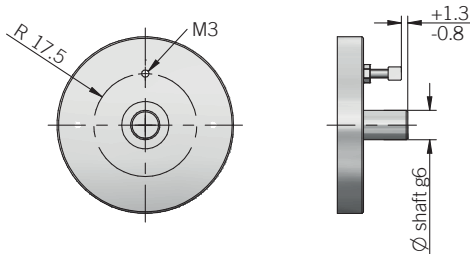
torque pin is included

RECOMMENDED INTERFACE FLANGE DESIGN

38F



38G



dimensions in mm

ELECTRICAL SPECIFICATIONS

<b>Resolution</b>	from 1 to 10000 ppr
<b>Power supply</b> <sup>1</sup>	5 = 4,5 ... 5,5 V DC 5/30 = 4,5 ... 30 V DC (reverse polarity protection)
<b>Power draw without load</b> typical	0,4 W
<b>Max load current</b>	C / P = 50 mA / channel L / RS = 20 mA / channel
<b>Electrical interface</b> <sup>2</sup>	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272 or similar) line driver RS-422 (AELT-5000 or similar)
<b>Max output frequency</b>	800 kHz
<b>Counting direction</b>	A leads B clockwise (shaft view)
<b>Index signal</b>	180°e (gated A)
<b>Startup time</b> typical	10 ms
<b>Accuracy</b>	< 0,3° at +20°C (+68°F) ± 0,5° in the operating temperature range
<b>Hysteresis</b>	0,70° up to 256 ppr 0,35° from 257 ppr to 10000 ppr
<b>Mean time to dangerous failure (MTTF)<sub>d</sub></b> <sup>3</sup> according to EN ISO 13849-1	275 years
<b>Mission time (T<sub>m</sub>)</b> <sup>3</sup>	20 years
<b>Diagnostic coverage (DC)</b> <sup>3</sup>	0%
<b>Cable type</b>	shielded - fixed installation conductors section 0,22 mm <sup>2</sup> / AWG 24 bending radius min 60 mm
<b>Electromagnetic compatibility</b>	according to 2014/30/EU directive
<b>RoHs</b>	according to 2011/65/EU directive
<b>UL / CSA</b>	file n. E212495

MECHANICAL SPECIFICATIONS

<b>Shaft diameter</b>	Ø 4* / 5* / 6* / 6,35 (1/4") / 8* / 10 mm * with supplied shaft adapter
<b>Enclosure rating</b> IEC 60529	IP 66 shaft side / IP 67 cover side
<b>Max rotation speed</b>	6000 rpm
<b>Max shaft load</b> <sup>4</sup>	5 N (1,12 lbs) axial / 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>Moment of inertia</b>	0,8 x 10 <sup>-6</sup> kgm <sup>2</sup> (19 x 10 <sup>-6</sup> lbf <sup>2</sup> )
<b>Starting torque</b> (at +20°C / +68°F)	< 0,01 Nm (1,42 Ozin)
<b>Bearing stage material</b>	aluminum
<b>Shaft material</b>	stainless steel
<b>Shaft adapter material</b>	bronze
<b>Housing material</b>	painted aluminum
<b>Bearings</b>	n.2 ball bearings
<b>Bearing lifetime</b>	10 <sup>9</sup> revolutions
<b>Operating temperature</b> <sup>5,6</sup>	-25° ... +100°C (-13° ... +212°F)
<b>Storage temperature</b> <sup>6</sup>	-25° ... +85°C (-13° ... +185°F)
<b>Weight</b>	150 g (5,29 oz)

<sup>1</sup> as measured at the transducer without cable influences

<sup>2</sup> for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

<sup>3</sup> this product is not a safety component, for further details refer to TECHNICAL BASICS section

<sup>4</sup> maximum load for static usage

<sup>5</sup> measured on the transducer flange

<sup>6</sup> condensation not allowed

PREFERRED RESOLUTIONS

2 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 20 - 30 - 40 - 50 - 60 - 80 - 90 - 100 - 125 - 128 - 200 - 250 - 256 - 360 - 400 - 500 - 512 - 720 - 1000 - 1024 - 1440 - 2000 - 2048 - 3600 - 4096 - 5000 - 7200 - 10000

please directly contact our offices for other pulses