

MAIN FEATURES

The EML 38 is a magnetic rotary encoder with blind hollow shaft. Its sturdiness, compact size and easy mounting system make the EML 38 suitable for heavy duty applications such as marble and glass working machinery, marine and industrial applications.

- Analogue linear voltage or current output
- IP 67 protection class
- Wide temperature range (-25 ... 100 °C)



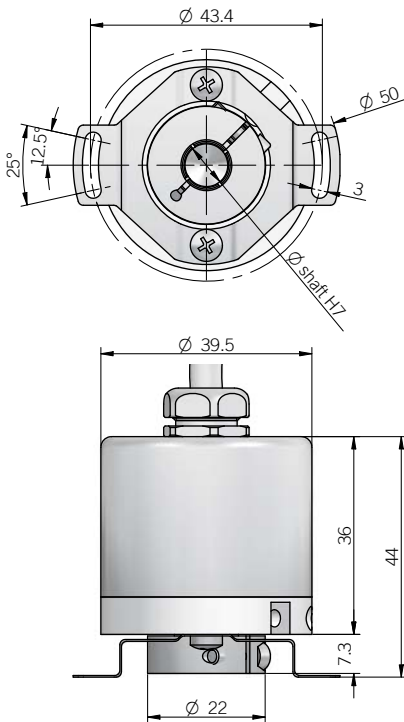
ORDERING CODE

EML 38 F 360 X 5 V 05 X 6 X 6 PA . XXX	
SERIES singleturn absolute magnetic linear encoder EML	VARIANT XXX custom version
SIZE overall dimension 39.5 mm 38	OUTPUT TYPE PA axial cable output with cable gland (standard length 0.5 m) PR radial cable output with cable gland (standard length 0.5 m)
TYPE front spring F flange with hollow for anti-rotation pin G	MAX ROTATION SPEED 6 6000 rpm
ACTIVE ANGLE degrees 360 degrees 270 degrees 180 degrees 90	ENCLOSURE RATING X IP 54 (standard) S IP 67 cover side / IP 64 shaft side (optional)
OPTION unused option X	BORE DIAMETER 6 6 mm 8 8 mm 9 9.52 mm (3/8") 10 10 mm
POWER SUPPLY 5 V DC 5 12 ... 28 V DC 12/28	OPTION X unused option
ELECTRONIC INTERFACE analogue linear voltage output V analogue linear current output I	OUTPUT RANGE 05 0 ... 5 V 010 0 ... 10 V (only with 12/28 power supply) 020 0 ... 20 mA (only with 12/28 power supply) 420 4 ... 20 mA (only with 12/28 power supply)

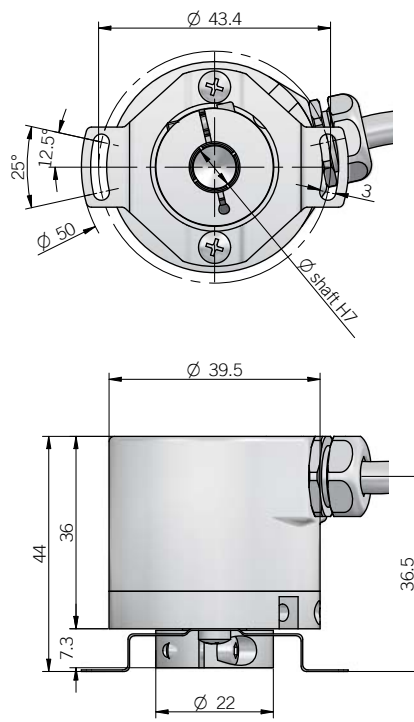
MAGNETIC SINGLETURN ABSOLUTE ENCODERS

EML 38

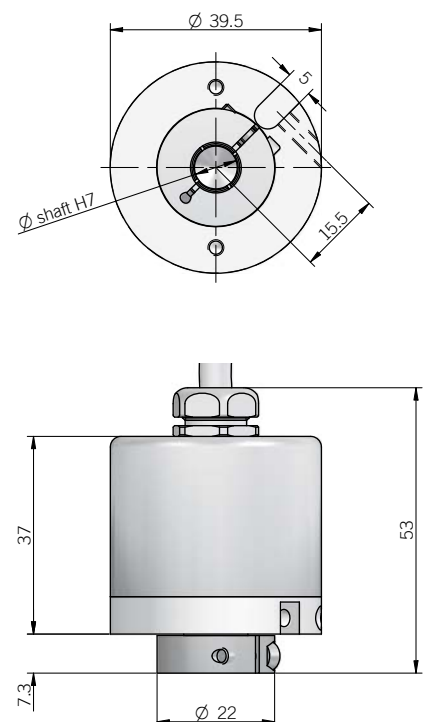
EML 38 F
axial output



EML 38 F
radial output



EML 38 G



Electrical specifications

Resolution	8 bits per revolution
Active angle	90 ... 360 mechanical degrees
Power supply	5 V DC \pm 5% 12 ... 28 V DC \pm 5% reverse polarity protection
Current consumption without load	40 mA max
Signal pattern	increasing with counterclockwise rotation (shaft view)
Error signal	active on low state (sensor fault)
Electronic interface	analogue linear voltage output (0 ... 5 V / 0 ... 10 V) analogue linear current output (0 ... 20 mA / 4 ... 20 mA)
Load	$R_{min} = 1 \text{ k}\Omega$ (voltage output) $R_{max} = (V_{dd} - 3) / 0.02$ (current output)
Linearity error	< 1%
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-3

Mechanical specifications

Bore diameter	6 / 8 / 9.52 / 10 mm
Enclosure rating	IP 54 (standard) IP 67 cover side / IP 64 shaft side (optional) (IEC 60529)
Max rotation speed	6000 rpm
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10÷2000 Hz (IEC 60068-2-6)
Body material	aluminum UNI 9002/5
Shaft material	stainless steel UNI X10CrNiS1809
Housing material	aluminum UNI 9002/5
Bearings	2 ball bearings
Bearing lifetime	10 ⁹ revolutions
Operating temperature	-25 ... 100 °C
Storage temperature	-30 ... 105 °C
Weight	250 g

INSTALLATION

Electrical connections

Function	Wire colour (voltage output)	Wire colour (current output)
+V DC	red	red
0 V	black	black
error	blue	blue
V _{out}	green	
I _{out}		green
I _{in}		yellow
earth	shield	shield

Signal pattern

