EMI 40 A

MAGNETIC INCREMENTAL SOLID SHAFT ENCODER

MAIN FEATURES

Thanks to the magnetic technology, EMI 40 series is suitable for harsh environment applications such as marble and glass working machines, washing systems and generally for industrial automation.

- 3 channel encoder (A / B / Z) up to 2048 ppr
- Power supply up to +28 V DC with several electrical interfaces available
- Cable output, connector available on cable end
- Compact dimensions
- Solid shaft diameter up to 6 mm
- Sturdy construction due to separated chambers design
- Wide operating temperature -25° ... +100°C (-13° ... +212°F)

ORDERING CODE	EMI	40A	1024	Z	5	L	6	X	3	P	R	.XXX

SERIES
magnetic incremental encoder series EMI

MODEL
clamping flange ø 20 mm 40A

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 electrical interface) 5 V DC 5
(with L or PC electrical interface) 8 ... 24 V DC 8/24
5 ... 28 V DC 5/28

ELECTRICAL INTERFACE
push-pull P
line driver L

SHAFT DIAMETER
mm 4
mm 6

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
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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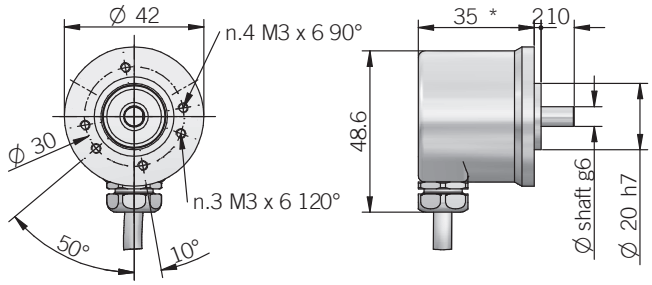
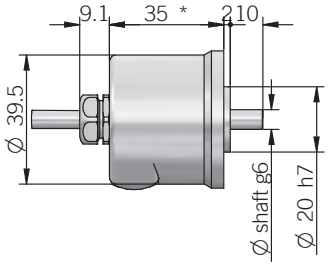
40 A radial cable output



dimensions in mm

40A axial cable output



* IP66 + 7mm

ELECTRICAL SPECIFICATIONS

Resolution	from 2 to 2048 ppr
Power supply	5 = 4,5 ... 5,5 V DC 5/28 = 4,75 ... 29,4 V DC 8/24 = 7,6 ... 25,2 V DC (reverse polarity protection)
Current consumption without load	80 mA max
Max load current	15 mA / channel
Output type*	push-pull / line driver HTL (AEIC-7272) line driver RS-422 (AELT-5000 or equivalent)
Max output frequency	205 kHz
Counting direction	A leads B clockwise (shaft 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

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

MECHANICAL SPECIFICATIONS

Shaft diameter	ø 4 / 6 mm
Enclosure rating	X = IP 64 (IEC 60529) S = IP 66 (IEC 60529)
Max rotation speed	IP 66 - 3000 rpm IP 64 - 6000 rpm
Max shaft load	5 N axial / radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	0,5 x 10^{-6} kgm² (12 x 10^{-6} lbft²)
Starting torque (at +20°C / +68°F)	< 0,02 Nm (2,83 Ozin)
Bearing stage material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	painted aluminum
Bearings	2 ball bearings
Bearing lifetime	10^9 revolutions
Operating temperature	-25° ... +100°C (-13° ... +212°F)
Storage temperature	-25° ... +85°C (-13° ... +185°F)
Weight	150 g (5,29 oz)

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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