

MAIN FEATURES

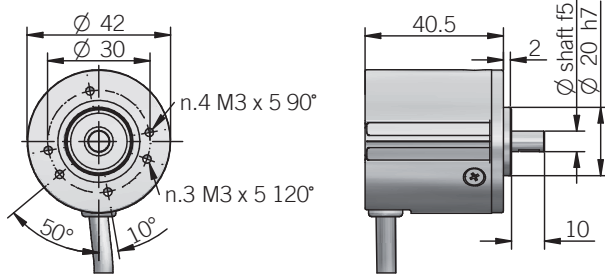
Miniaturized \varnothing 42 mm encoder series for general factory automation applications.

- Innovative proprietary magnetic Asic
- 3 channel encoder (A / B / Z) up to 10000 ppr
- Power supply up to +30 V DC with several electrical interfaces available
- Cable output, connectors available on cable end
- Solid shaft diameter 6 mm
- Mounting by clamping, square, threaded or synchronous flange

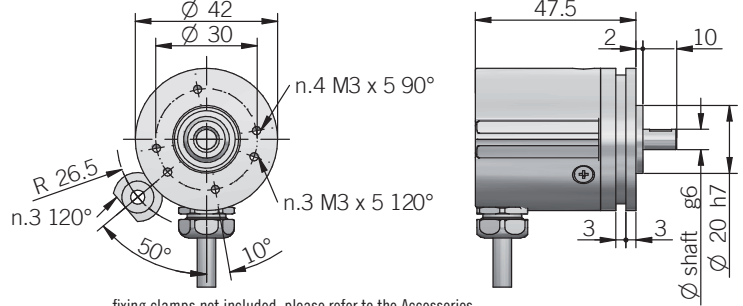


ORDERING CODE	EMI	40A	100	S	5/30	P	6	X	X	P	R	.XXX
SERIES magnetic incremental encoder series EMI												
MODEL clamping flange \varnothing 20 mm 40A square flange \square 36,5 mm 40B clamping flange \varnothing 17,46 mm 40C M18 threaded flange 40H M20 threaded flange 40I synchronous flange \varnothing 21 mm 40N												
RESOLUTION ppr from 1 to 10000 please refer to the preferred resolutions list												
ZERO PULSE without zero pulse S with zero pulse Z												
POWER SUPPLY (with L electrical interface) 5 V DC 5 5 ... 30 V DC 5/30												
ELECTRICAL INTERFACE NPN open collector C push-pull P line driver L power supply 5/30 V DC - output RS-422 RS												
SHAFT DIAMETER mm 6												
ENCLOSURE RATING IP 54 X (mod. A / B) IP 66 S												
OPTION to be reported X												
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 (mod. A / B / C / H / I / N) axial A radial R												
VARIANT custom version XXX												

40 A (X ENCLOSURE RATING)

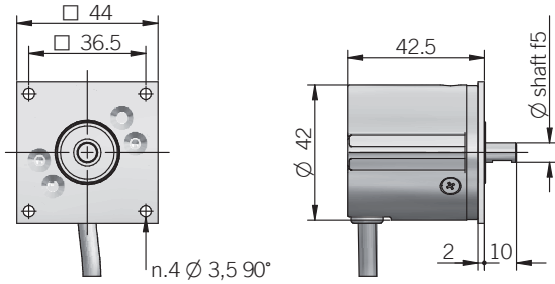


40 A (S ENCLOSURE RATING)

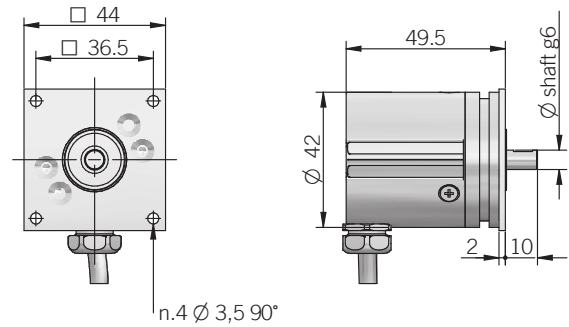


fixing clamps not included, please refer to the Accessories

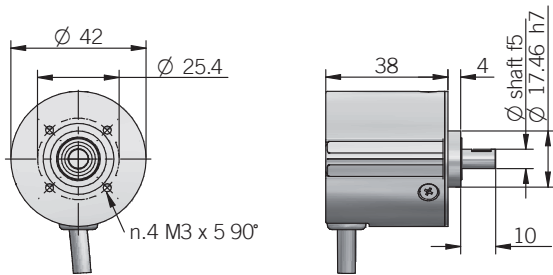
40 B (X ENCLOSURE RATING)



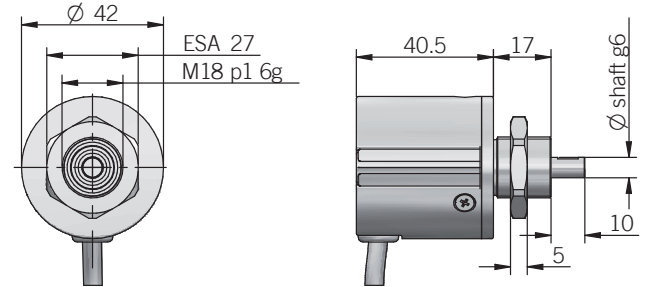
40 B (S ENCLOSURE RATING)



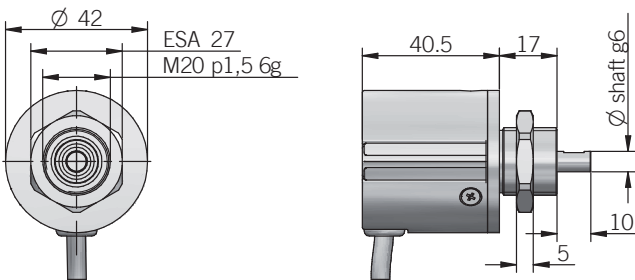
40 C



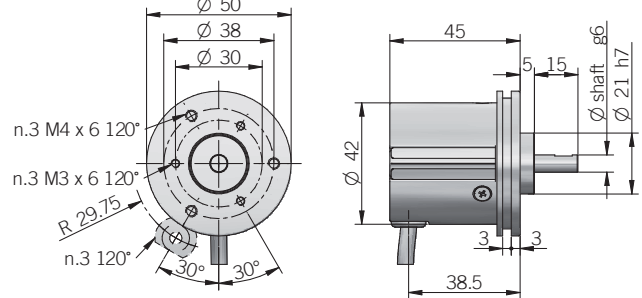
40 H



40 I



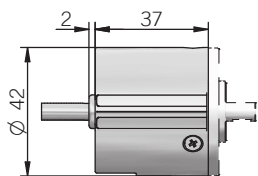
40 N



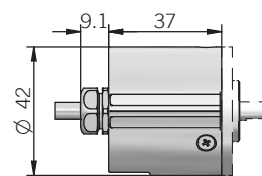
fixing clamps not included, please refer to the Accessories

recommended mating shaft tolerance H7

DIMENSIONS WITH AXIAL OUTPUT WITH X ENCLOSURE RATING



DIMENSIONS WITH AXIAL OUTPUT WITH S ENCLOSURE RATING



dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 1 to 10000 ppr
Power supply¹	5 = 4,5 ... 5,5 V DC 5/30 = 4,5 ... 30 V DC (reverse polarity protection)
Power draw without load^{typical}	0,4 W
Max load current	C / P = 50 mA / channel L / RS = 20 mA / channel
Electrical interface²	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)
Max output frequency	800 kHz
Counting direction	A leads B clockwise (shaft view)
Index signal	180°e (Z&A)
Startup time^{typical}	10 ms
Accuracy	< 0,3° at +20°C (+68°F) ± 0,5° in the operating temperature range
Hysteresis	0,70° up to 256 ppr 0,35° from 257 ppr to 10000 ppr
Electromagnetic compatibility	according to 2014/30/EU directive
RoHs	according to 2011/65/EU directive
UL / CSA	file n. E212495

CONNECTIONS

Function	Cable C / P	Cable L / RS
+V DC	red	red
0 V	black	black
A+	green	green
A-	/	brown or grey
B+	yellow	yellow
B-	/	orange
Z+	blue	blue
Z-	/	white
≡	shield	shield

MECHANICAL SPECIFICATIONS

Shaft diameter	∅ 6 mm
Enclosure rating IEC 60529	X = IP 54 S = IP 66
Max rotation speed	6000 rpm with X enclosure rating 4000 rpm with S enclosure rating
Max shaft load³	30 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	0,1 x 10 ⁻⁶ kgm ² (2,4 x 10 ⁻⁶ lbfm ²)
Starting torque (at +20°C / +68°F)	< 0,01 Nm (1,42 Ozin) with X enclosure rating < 0,05 Nm (7,10 Ozin) with S enclosure rating
Bearing stage material	EN-AW 2011 or 2033 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	PA66 glass fiber reinforced
Bearings	n.2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature^{4,5}	-25° ... +100°C (-13° ... +212°F)
Storage temperature⁵	-25° ... +70°C (-13° ... +158°F)
Weight	100 g (3,52 oz)

¹ as measured at the transducer without cable influences

² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

³ maximum load for static usage

⁴ measured on the transducer flange

⁵ 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