

MAIN FEATURES

Thanks to the magnetic technology, the EMI 63 series is suitable for harsh environment applications such as marble and glass working machines, washing systems, metal working machines and all the applications where high temperature resistance is required.

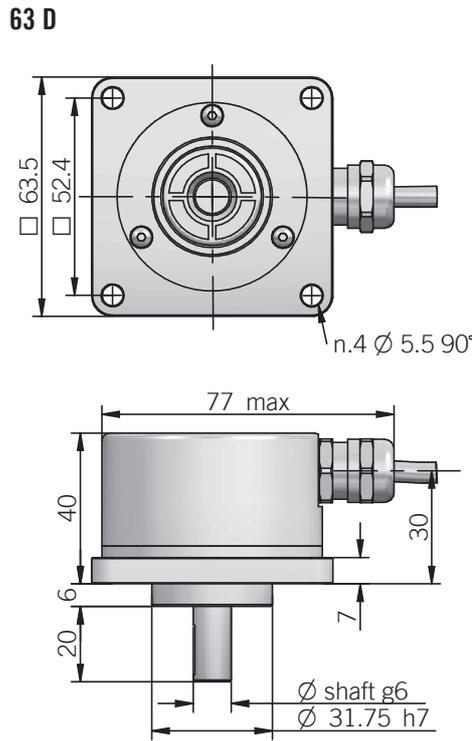
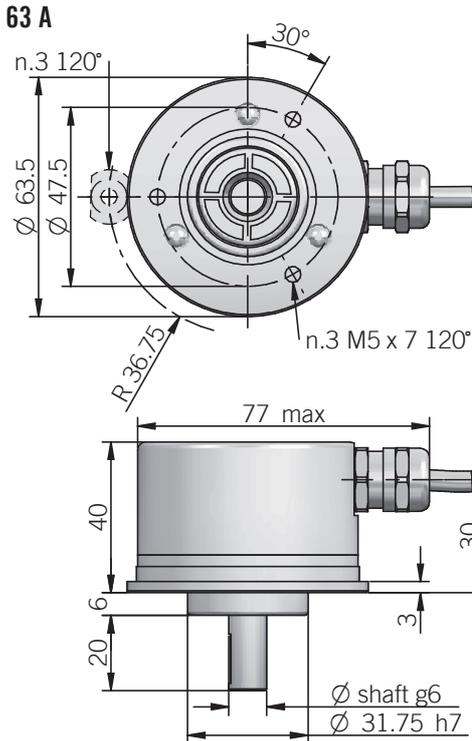
- 3 channel encoder (A / B / Z) up to 2048 ppr
- Power supply up to +28 V DC with several electrical interfaces available
- Up to 300 kHz output frequency
- Cable or M12 connector output, other connector available on cable end
- Solid shaft diameter up to 10 mm
- Mounting by synchronous or centering 2,5" square flange
- Sturdy construction due to separated chambers design
- Wide operating temperature -25° ... +100°C (-13° ... +212°F)



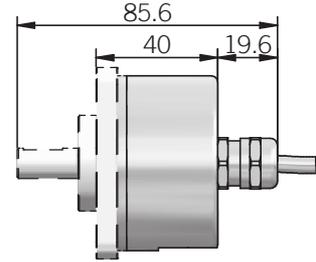
ORDERING CODE

EMI 63A 1024 Z 5 L 10 X 6 P R .XXX

DESCRIPTION	EMI	63A	1024	Z	5	L	10	X	6	P	R	.XXX
SERIES magnetic incremental encoder series EMI												
MODEL synchronous flange ø 31,75 mm centering square flange ø 31,75 mm		63A 63D										
RESOLUTION ppr from 2 to 2048 refer to the available pulses list												
ZERO PULSE without zero pulse with zero pulse												
POWER SUPPLY (with L electrical interface) 5 V DC 5 ... 28 V DC												
ELECTRICAL INTERFACE push-pull line driver power supply 5/28 V - output RS-422												
SHAFT DIAMETER (3/8") mm mm												
ENCLOSURE RATING IP 64 IP 66												
MAX ROTATION SPEED (IP 66) 3000 rpm (IP 64) 6000 rpm												
OUTPUT TYPE cable (standard length 0,5 m) preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after DIRECTION TYPE (eg. PR5) M12 connector female connector included, without female please add 162 as variant code												
DIRECTION TYPE axial radial												
VARIANT custom version												XXX



Dimensions with axial output



fixing clamps not included, please refer to Accessories
dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 2 to 2048 ppr
Power supply¹	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
Power draw without load	800 mW max
Max load current	20 mA / channel
Electrical interface²	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 2015/863/EU directive
UL / CSA	certificate n. E212495

MECHANICAL SPECIFICATIONS

Shaft diameter	∅ 9,52 (3/8") / 10 mm
Enclosure rating	X = IP 64 (IEC 60529) S = IP 66 (IEC 60529)
Max rotation speed	IP 66 - 3000 rpm IP 64 - 6000 rpm
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 kgm ² (12 x 10 ⁻⁶ lbf ²)
Starting torque (at +20°C / +68°F)	< 0,01 Nm (1,42 Ozin) (IP 64) < 0,08 Nm (11,33 Ozin) (IP 66)
Bearing stage material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	EN-AW 2011 aluminum
Bearings	n.2 ball bearings
Bearing lifetime	10 ⁹ revolutions
Operating temperature^{3,4}	-25° ... +100°C (-13° ... +212°F)
Storage temperature⁴	-25° ... +85°C (-13° ... +185°F)
Weight	350 g (12,35 oz)

CONNECTIONS

Function	Cable P	Cable L / RS	5 pin M12 P	8 pin M12 L / RS
+V DC	red	red	2	7
0 V	black	black	4	1
A+	green	green	3	6
A-	/	brown or grey	/	5
B+	yellow	yellow	1	4
B-	/	orange	/	3
Z+	blue	blue	5	2
Z-	/	white	/	8
⊖	shield	shield	housing	housing

¹ as measured at the transducer without cable influences
² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section
³ measured on the transducer flange
⁴ condensation not allowed

RESOLUTIONS

2 - 4 - 8 - 10 - 16 - 20 - 32 - 40 - 64 - 80 - 100 - 125 - 128 - 200 - 250 - 256 - 400 - 500 - 512 - 1024 - 2048

M12 connector (5 pin)
M12 A coded
solder side view FV



M12 connector (8 pin)
M12 A coded
solder side view FV

