

Series

C50MI • C50MA



- Small size hollow shaft encoder
- Incremental and absolute magnetic sensing
- BiSS-C, SSI, Incremental
- Resolution up to 19 bit (524288 cpr)
- Incremental resolution up to 65536 PPR
- Operating temperature up to +100°C (+212°F)

Applications:

- Motor feedback
- Factory automation



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ENVIRONMENTAL SPECIFICATIONS

Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP65
Operating temperature range:	-25°C +100°C (-13°F +212°F) (-25°C +110°C, -13°F +230°F on request)
Storage temperature range:	-25°C +85°C (-13°F +185°F)

MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Hollow shaft diameter:	∅ 6, 6.35, 8, 9.52, 10 mm
Shaft loading (axial, radial):	20 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque (at 20°C):	≤ 0,25 Ncm (typical)
Bearings life:	10 ⁹ rev. min.
Electrical connections:	cable type M8, 1 m (3.3 ft)
Weight:	~ 100 g (3,5 oz)
Options:	• additional cable

ELECTRICAL SPECIFICATIONS

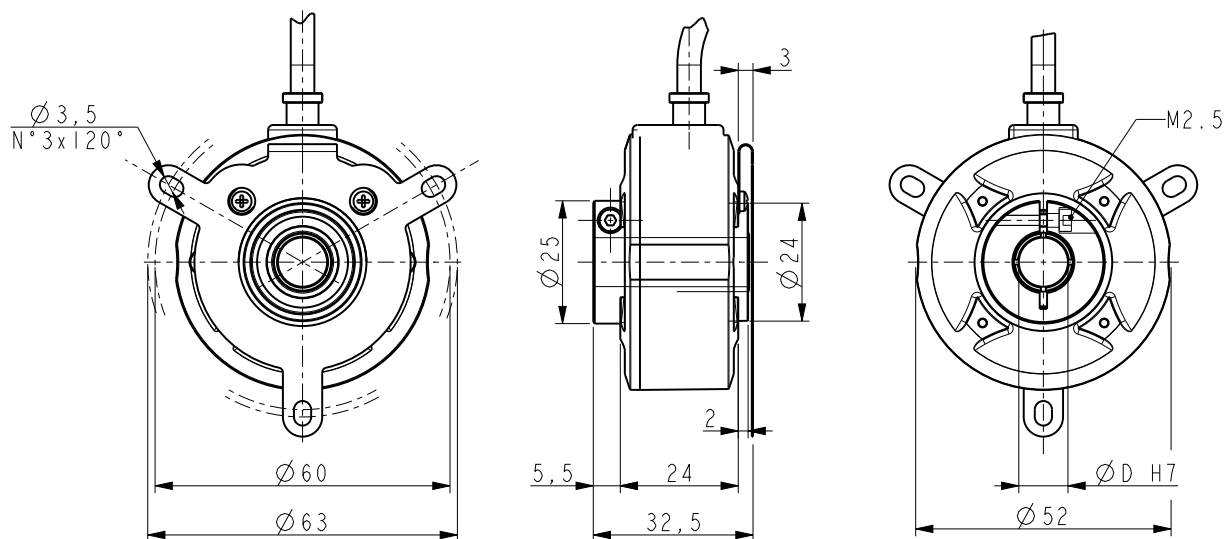
Resolution:	absolute: 19 bit (524288 cpr) max. incremental: 65536 PPR max.
Accuracy:	typ. ±0,05°
Output circuits:	BiSS-C (clock max. 5MHz) SSI (MSB aligned, clock 100 kHz ÷ 2MHz, T _p = 20µs) Line Driver (RS422)
Power supply:	+5Vdc ± 5%
Power consumption:	typ. 105 mA (max. 150 mA)

MATERIALS

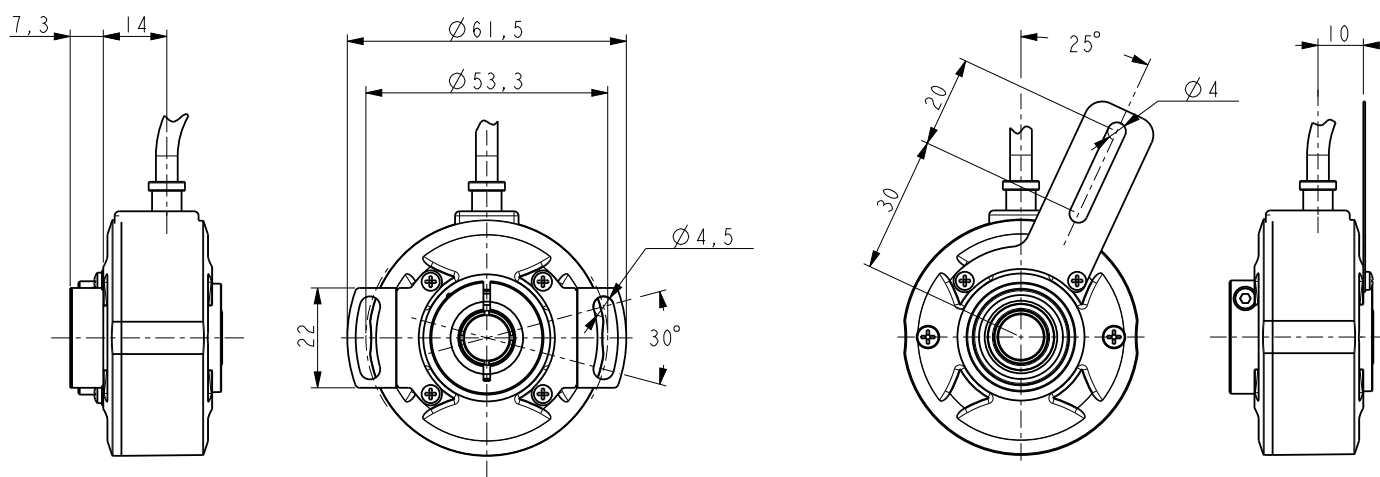
Flange:	zamak 15, UNI EN1774
Housing:	zamak 15, UNI EN1774
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305

ACCESSORIES

KIT C50:	standard fixing plate and screws
KIT MOL2546:	"B" fixing plates and screws
KIT MOL2433:	"D" fixing plate and screws
KIT C50 SCREWS:	50 screws for fixing plate



C50



Version B (2 x MOL2546)

Version D (1 x MOL2433)

Order code - absolute version

C50MA	-	XXX	-	XXX	-	XX	-	X	-	XXX	/SXXX
		Ⓐ		Ⓑ		Ⓒ		Ⓓ		Ⓔ	Ⓕ

Ⓐ INTERFACE SC1 = BiSS-C mode BG1 = SSI Binary	Ⓑ RESOLUTION (ABS) 17 = 17 bit 18 = 18 bit 19 = 19 bit 15M = 15 bit (*) 17M = 17 bit (*) 18M = 18 bit (*) 19M = 19 bit (*)	Ⓒ SHAFT DIAMETER 6 = 6 mm P6 = 6.35 mm - 1/4" 8 = 8 mm P9 = 9.52 mm - 3/8" 10 = 10 mm	Ⓓ FIXING PLATE - = standard fixing plate A = no fixing plate B = Version B fixing plate D = Version D fixing plate	Ⓔ CABLE LENGTH - = cable output 1 m (standard) L2 = cable output 2 m Lx = cable output x m M0,5 = 0,5 m cable + M12 8 pin inline plug M2 = 2 m cable + M12 8 pin inline plug	Ⓕ CUSTOM VERSION
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(*) M = the multiturn counter is 65536 turns (16 bit). Counting is available only with power supply ON.

Order code - incremental version

C50MI	-	XX	-	XXXXX	-	XX	-	X	-	XXX	/SXXX
		Ⓐ		Ⓑ		Ⓒ		Ⓓ		Ⓔ	Ⓕ

Ⓐ OUTPUT CIRCUIT L1 = Line Driver RS422 (+5Vdc ± 5%)	Ⓑ RESOLUTION 1024, 1250, 2048 2500, 4096, 5000 (others on request, see complete list) 1	Ⓒ SHAFT DIAMETER 6 = 6 mm P6 = 6.35 mm - 1/4" 8 = 8 mm P9 = 9.52 mm - 3/8" 10 = 10 mm	Ⓓ FIXING PLATE - = standard fixing plate A = no fixing plate B = Version B fixing plate D = Version D fixing plate	Ⓔ CABLE LENGTH - = cable output 1 m (standard) L2 = cable output 2 m Lx = cable output x m M0,5 = 0,5 m cable + M12 8 pin inline plug M2 = 2 m cable + M12 8 pin inline plug	Ⓕ CUSTOM VERSION
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① List of Resolution (INC) available:

From 1 to 65536 PPR (4 to 262144 edges) any resolution possible.
 Binary resolutions are preferable and have best performance.

Document release	Date	Description
1.0	14.12.2020	First release
1.1	02.02.2021	Materials updating