



MDI 58 B / C series

Standard Ø 58 mm encoder series for industrial applications with high mechanical resistance requirements



Standard Ø 58 mm
encoder

features

- 3 channel encoder (A / B / Z) up to 2500 ppr
- Power supply up to +30 VDC with several electronic outputs available
- Up to 220 kHz output frequency
- Cable or connector output
- Solid shaft diameter up to 10 mm
- Mounting by synchronous, clamping flange



web contents

- Application notes
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code description

	MDI	58B	1000	Z	5/30	P	6	X	X	P	R
series	MDI	incremental encoder series MDI									
model	58B	synchronous flange Ø 50 mm									
	58C	clamping flange Ø 36 mm									
resolution	D	ppr 100 ... 2500 mm									
zero pulse	S	without zero pulse									
	Z	with zero pulse									
power supply	5/30	5...30 Vdc									
electronic interference	P	push-pull									
	L	line driver									
shaft diameter	6	mod. B - mm 6									
	10	mod. C - mm 10									
enclosure rating	X	IP54									
	S	IP66									
option	X	to be reported									
output type	P	cable (standard length 1.5 m)*									
	M	MIL connector									
	M12	M12 connector									
direction type	A	axial									
	R	radial									

* Longer cable available on demand



technical specification

MDI 58 B/C	
shaft diameter	Ø 6 mod.B Ø 10 mm mod.C
IP mechanical protection	X = IP 54 (IEC 60529) S = IP 66 (IEC 60529)
max rotation speed	6000 rpm (IP54) 3000 rpm / 70° C - 2000 rpm / 85° C (IP66)
max shaft load	10 N axial with Ø6 mm shaft 20 N radial with Ø6 mm shaft 200 N axial / radial
shock resistance	50 G, 11 ms (IEC 60068-2-27)
vibration resistance	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
moment of inertia	1,5 x 10 ⁻⁶ kgm ²
starting torque (at +20°C / +68°F)	< 0,02 Nm (IP 54) < 0,06 Nm (IP 66)
body material	EN-AW 2011 aluminum
shaft material	1.4305 / AISI 303 stainless steel
housing material	PA66 glass fiber reinforced
bearings	2 ball bearings
bearings life	10 ⁹ revolutions
operating temperature	-25° ... +85°C (-13° ... +185°F)
storage temperature	-25° ... +70°C (-13° ... +158°F)
weight	350 g (12,35 oz)
resolution	from 100 to 2500 ppr
power supply	5/30 = 4,5 ... 30 V DC (reverse polarity protection)
No-Load supply current	800 mW
max load current	20 mA / channel
output type*	push-pull / line driver
max output frequency	220 kHz
counting direction	A leads B clockwise (shaft view)
EMC	IEC 61000-6-2 IEC 61000-6-4

* output levels according to power supply

resolutions

MDI 58 B/C
100* - 120 - 128 - 150 - 200 - 240 - 250 - 256 - 300 - 360* - 400* - 480 - 500* - 512* - 600* - 625 - 720* - 750 - 800 - 900 - 1000* - 1024* - 1200 - 1250 - 1440 - 1500 - 1600 - 1800 - 2000* - 2048* - 2500*

* preferred resolutions

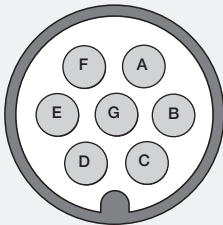


Standard Ø 58 mm
encoder

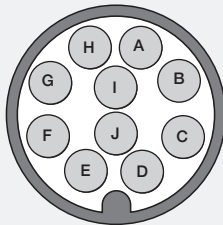
connections

function	Cable output Push pull	Cable output Line driver	7 pin M output Push pull	7 pin M output Line Driver no Zero	10 pin M output Line Driver with Zero	5 pin M12 output Push pull	8 pin M12 output Line Driver
+V DC	red	red	F	D	D - E	2	7
0 V	black	black	A	F	F	4	1
Ch. A	green	green	C	A	A	3	6
Ch. A-	/	brown	/	C	G	/	5
Ch. B	yellow	yellow	E	B	B	1	4
Ch. B-	/	orange	/	E	H	/	3
Ch. Z	blue	blue	D	/	C	5	2
Ch. Z-	/	white	/	/	I	/	8
⏏	shield	shield	G	G	J	housing	housing

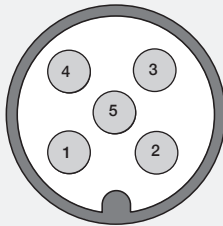
M connector (7 pin)
Amphenol MS3102-E-16-S
solder side view FV



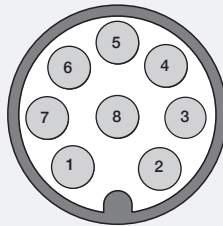
M connector (10 pin)
Amphenol MS3102-E-18-1
solder side view FV



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



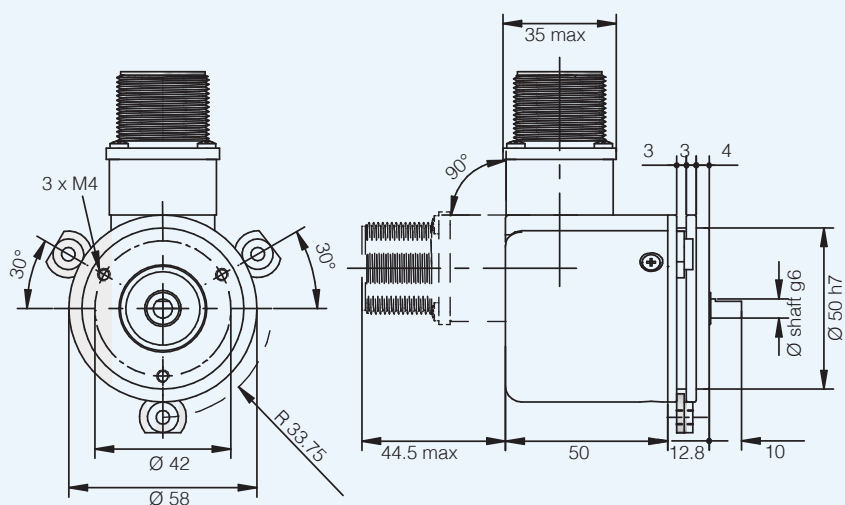
M connector (8 pin)
M12 A coded
solder side view FV



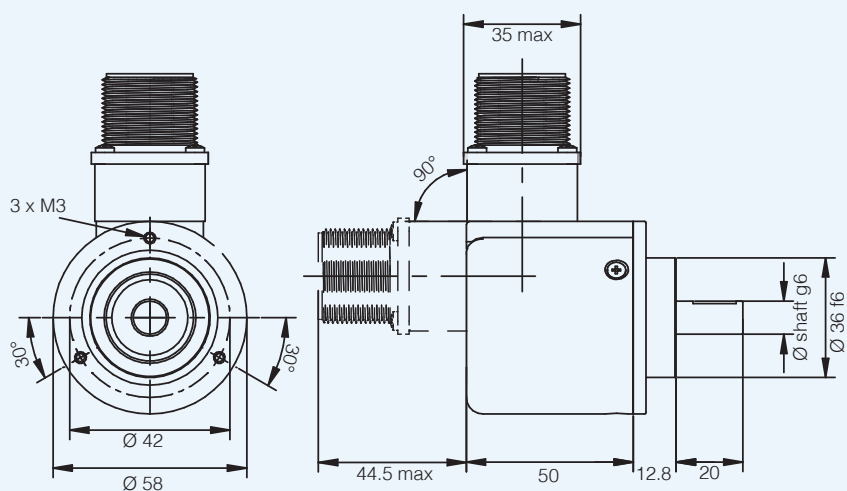


dimensions (mm)

MDI 58 B



MDI 58 C



dimensions (mm)

set n.3 fixing clamps for model 58 B

