



MDI 40 A series

Miniaturized ø 42 mm encoder series for general factory automation applications



Miniaturized Ø42 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 output, connectors available on cable end
- 6 mm solid shaft diameter
- Mounting by clamping flange



web contents



- Application notes
- Photos
- Catalogue / Manuals



code description

	MDI	40A	500	Z	5/30	L	6	X	X	P	R
series	MDI	incremental encoder series MDI									
model	40A	clamping flange ø 20 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									
	RS	power supply 5/30V - output RS-422									
shaft diameter	6	6 mm									
enclosure rating	X	IP54									
	S	IP66									
option	X	to be reported									
output type	P	cable (standard length 0.5 m)*									
direction type	R	radial									

* Longer cable available on demand



technical specifications

Miniatu-
rized Ø42 mm
encoder

	MDI 40
shaft diameter	∅ 6 mm
IP mechanical protection	X = IP 54 (IEC 60529) S = IP 66 (IEC 60529)
max rotation speed	3000 rpm (IP 66) 6000 rpm (IP 54)
max shaft load	5 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	0,1 x 10 ⁻⁶ kgm ²
starting torque (at +20°C / +68°F)	< 0,01 Nm (IP 54) < 0,05 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	100 g (3,52 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

connections

function	Cable output Push pull	Cable output Line driver
+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



Miniaturized Ø42 mm
encoder

resolutions

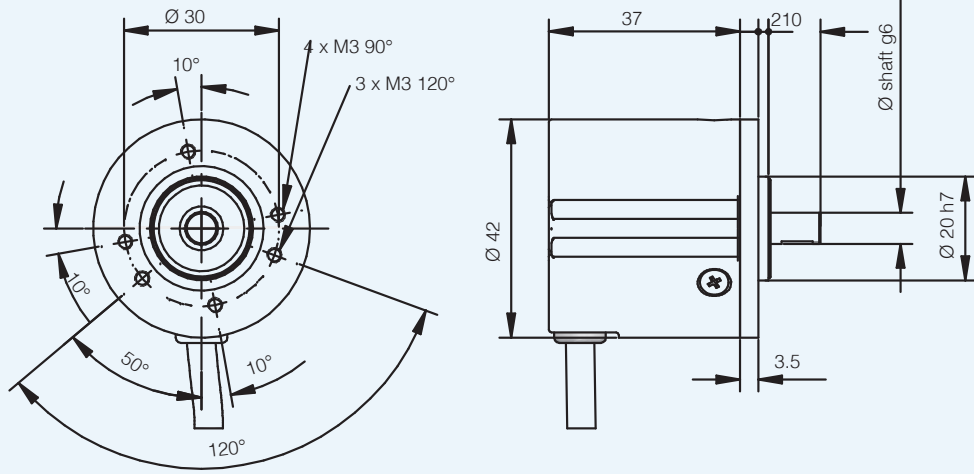
MDI 40 A

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



MDI 40 A IP54



MDI 40 A IP66

