



# MDI 38 F / G series

Miniaturized ø 38 encoder series for general factory automation applications, small AC motors and gearmotors.



Miniaturized Ø 38 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
- Metal cover for high IP mechanical protection
- Blind hollow shaft diameter up to 10 mm
- Mounting by stator coupling or anti-rotation pin



## web contents



- Application notes
- Photos
- Catalogue / Manuals



## code description

	MDI	38F	1024	Z	5/30	P	6	X	X	PR
series	MDI	incremental encoder series MDI								
model	38F	blind hollow shaft with stator coupling								
	38G	blind hollow shaft with anti-rotation pin								
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								
bore diameter	6	6 mm								
	8	8 mm								
	10	10 mm								
enclosure rating	X	IP64								
	S	IP65								
option	X	to be reported								
	PR	radial cable (standard length 0.5 m)*								

\* Longer cable available on demand



## technical specification

MDI 38 F / G	
bore diameter	ø 6* / 8* / 10 mm
IP mechanical protection	IP 64 (IEC 60529) IP 65 (IEC 60529)
max rotation speed	3000 rpm
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	0,8 x 10 <sup>-6</sup> kgm <sup>2</sup>
starting torque (at +20°C / +68°F)	< 0,01 Nm (IP 64) < 0,06 Nm (IP 65)
body material	EN-AW 2011 aluminum
shaft material	1.4305 / AISI 303 stainless steel
housing material	painted aluminum
bearings	2 ball bearings
bearings life	10 <sup>9</sup> revolutions
operating temperature	-20° ... +70°C
storage temperature	-25° ... +70°C
weight	150 g
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

\* with supplied adapter shaft

\*\* output levels according to power supply



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

## resolutions

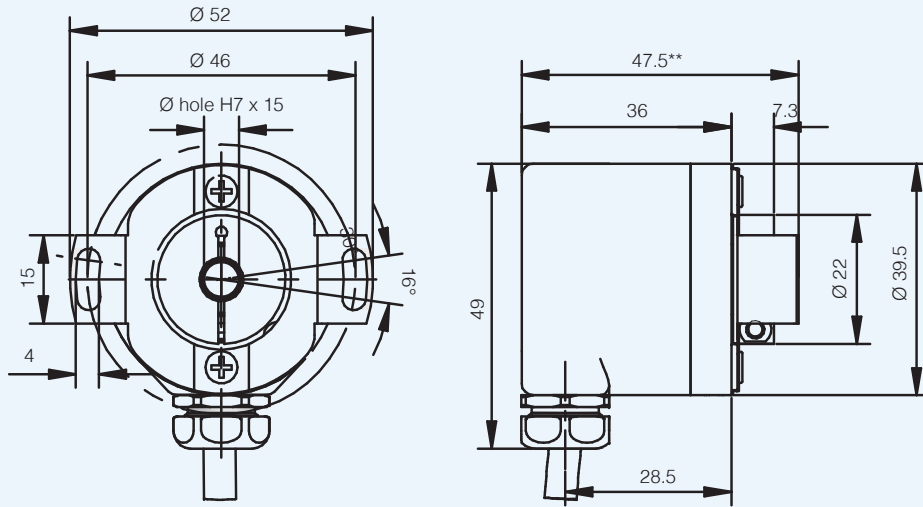
### MDI 38 F / G

100\* - 120 - 128 - 200 - 240 - 256 - 360\* - 400 - 480 - 500\* - 512\* - 625 - 720 -  
750 - 900 - 1000\* - 1024\* - 1250 - 1440 - 1500 - 1800 - 2000\* - 2048\* - 2500\*

\* preferred resolutions

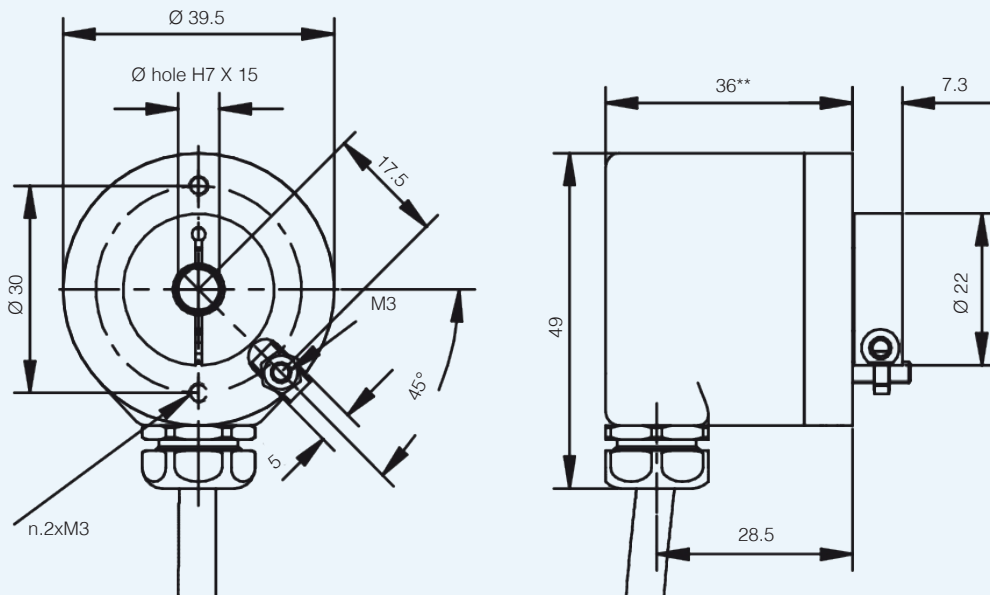


MDI 38 F



\*\* IP65 + 5.2

MDI 38 G



\*\* IP65 + 5.2

\*anti-rotation pin is included in model G, for mounting instruction please refer to product installation notes