Gear Tooth Rotary Encoder

Overview

High precision rotary encoders are composed of a robust sensor unit and a high precision target wheel. Magnetic contactless gear and position sensing and IP68 rating allow for precise measurements and high durability even in dif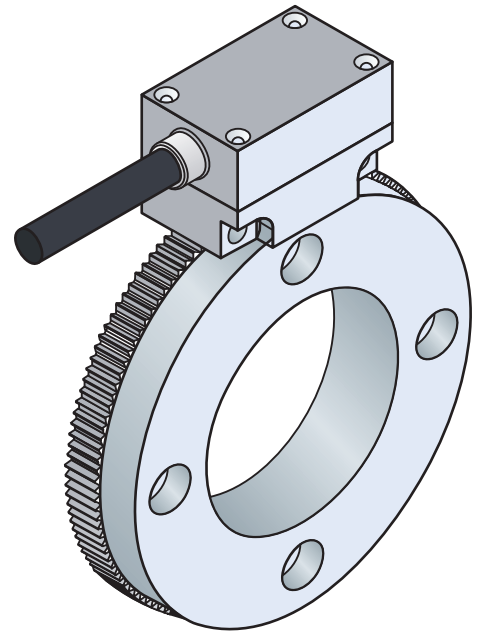ficult environmental conditions. CGNMH Gear Tooth Rotary Encoders are used for position and rotational speed measurement in applications ranging from machine tool engineering, motors and motorized spindles and hybrid drives.
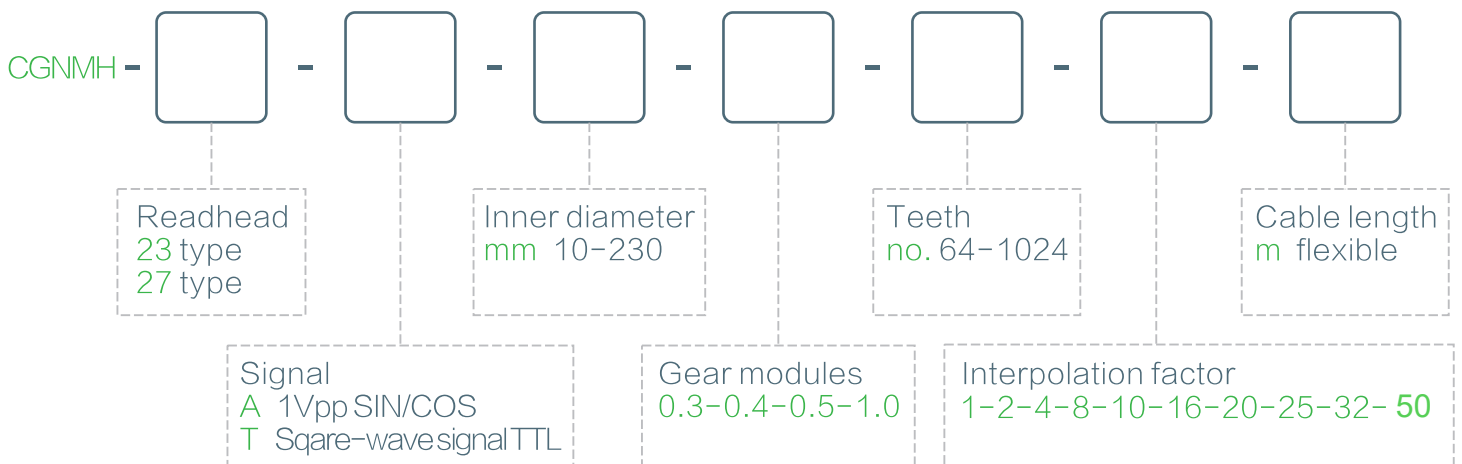
Features

- Wear and tear free, contactless inductive position sensing
- Increased resolution options through interpolation technology
- Signal auto-correction
- Automatic control mode for signal amplitude
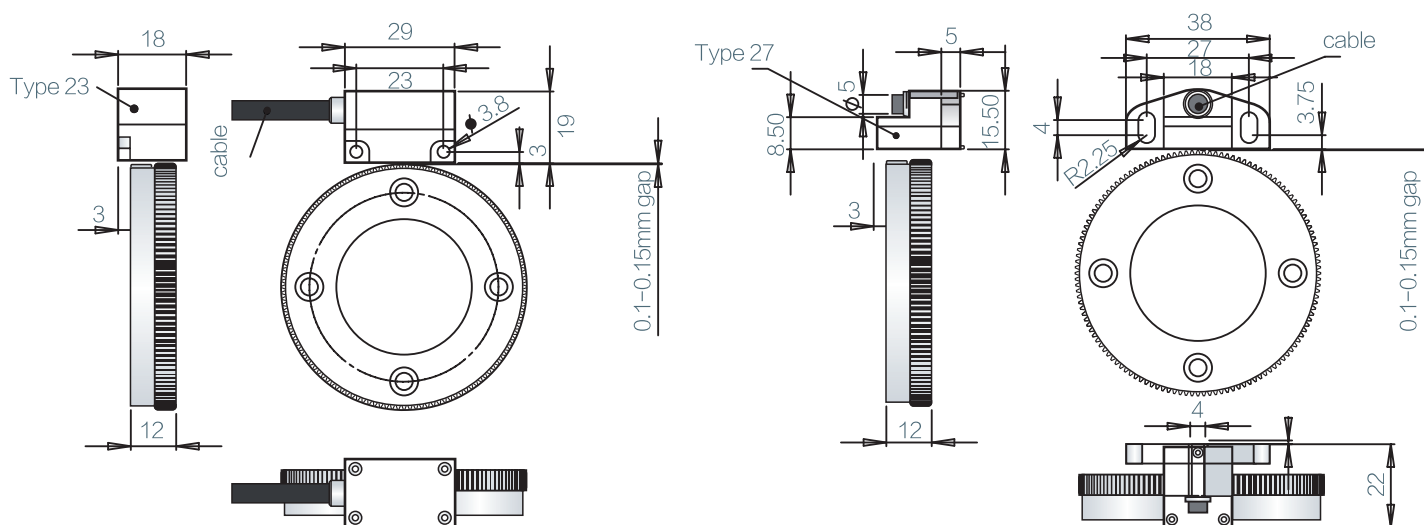- Suited for high-speed electrospindles up to 50.000 rpm

Technical data

Max. rotations/speed	50.000
Operating temperature	−30 ~ +120 °C
Protection class	IP68
Supply Voltage	5V DC
Current consumption	<30 mA
Output signal analog	1 vpp or TTL
Index signal	optional
Max. response frequency	600KHz

Product configuration

CGNMH - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐

Readhead
23 type
27 type

Signal
A 1Vpp SIN/COS
T Sqare-wave signal TTL

Inner diameter
mm 10−230

Gear modules
0.3−0.4−0.5−1.0

Teeth
no. 64−1024

Interpolation factor
1−2−4−8−10−16−20−25−32− 50

Cable length
m flexible

Technical dawings

Connections

Cable color	Red	Black	Brown	Green	White	Gray	Yellow	Orange	Shield
Square wave	5V	0V	A−	A+	B+	B−	Z+	Z−	Case
Sine wave	5V	0V	Sin−	Sin+	Cos+	Cos−	R+	R−	Case

Module versions*

Modules 0.3

Outer Diameter(mm)	Inner Diameter(mm)	Flange(mm)	Mounting Hole(mm)	Teeth
307.8	260	280	4.5	1024
154.2	80	110	4.5	512
77.4	50	70	4.5	256
39	20	30	3.5	128

Modules 0.4

Outer Diameter(mm)	Inner Diameter(mm)	Flange(mm)	Mounting Hole(mm)	Teeth
205.6	180	194.4	4.5	512
154.4	108	120	4.5	384
103.2	82	92	4.5	256
80.8	60	70	3.5	200
52.0	35	43	3.5	128
40.8	20	30	3.5	100

Modules 0.5

Outer Diameter(mm)	Inner Diameter(mm)	Flange(mm)	Mounting Hole(mm)	Teeth
257	230	244	4.5	512
129	95	112	3.5	256
65	50	57	3.5	128
65	40	53	4.2	128

*Inner Diameter, Flange and Mounting Hole can be customized.