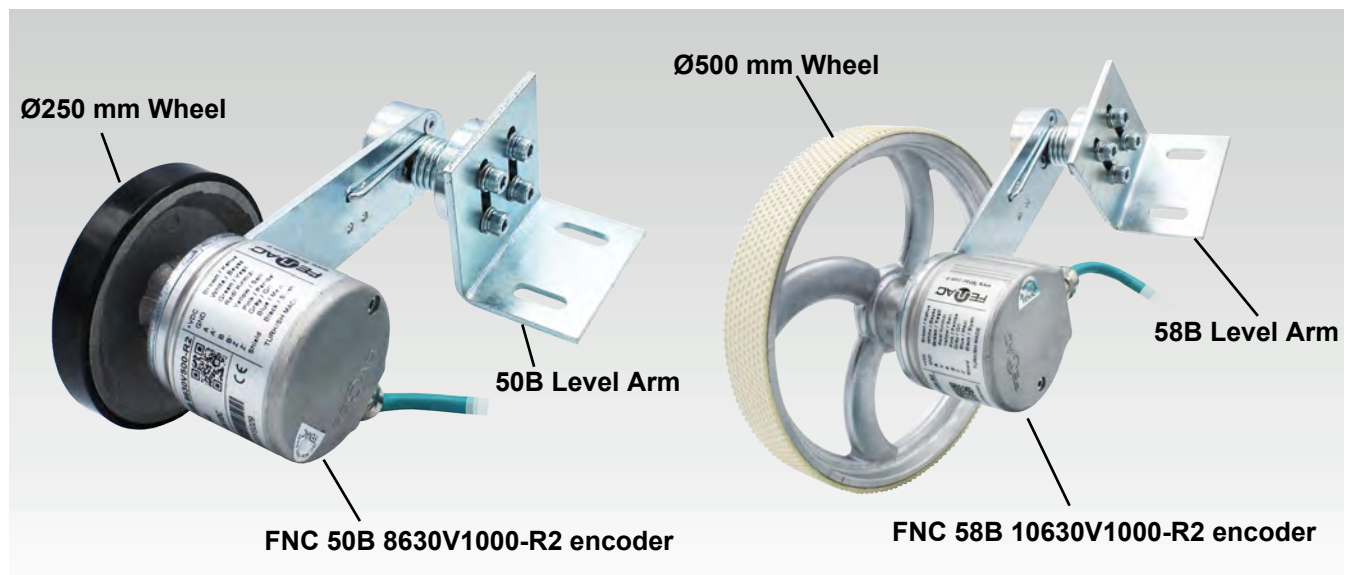


Wheel Measuring System

Textile, steel etc. length measurement



FNC WMS Measuring System



Features

- Wheel + spring arm + encoder linear measurement system
- Robust mechanical and electrical construction
- Protection up to IP67

Encoder technical data-electrical ratings

Voltage supply	4.75VDC to 30VDC 4.75VDC to 5.5VDC
Protection	Output short circuit protection. Reverse polarity protection (except 5V version)
Consumption w/o load	≤60 mA (24 VDC)
Resolution (steps/turn)	up to 65.536 ppr
Reference signal	Zero pulse, width 90° 180°, 360° optional
Optoelectronic life time	100.000 (min)
Output frequency	<300 kHz
Output signals	90° shifted A and B, Z+ inverted
Output circuit	Linedriver / RS422 Push-pull short-circuit proof NPN Open Collector
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	CE

Encoder technical data-mechanical ratings

Dimensions (flange)	Ø50 or Ø58 mm
Shaft loading	≤120 N axial ≤160 N radial
Protection DIN EN 60529	IP54, IP65
Operating speed	≤10.000 rpm
Starting torque	≤0.025 Nm (IP67)
Materials	Housing: aluminum Flange: aluminum Shaft: stainless steel
Shaft diameter	6, 8, 10, 12, 14, 15 mm (other diameters on request)
Bearings lifetime	2x10 ⁹ rev. at 100% of full rated shaft load (minimum)
Operating temperature	-20...+85°C
Storage temperature	-30°C up to +90°C
Weight approx.	350 g

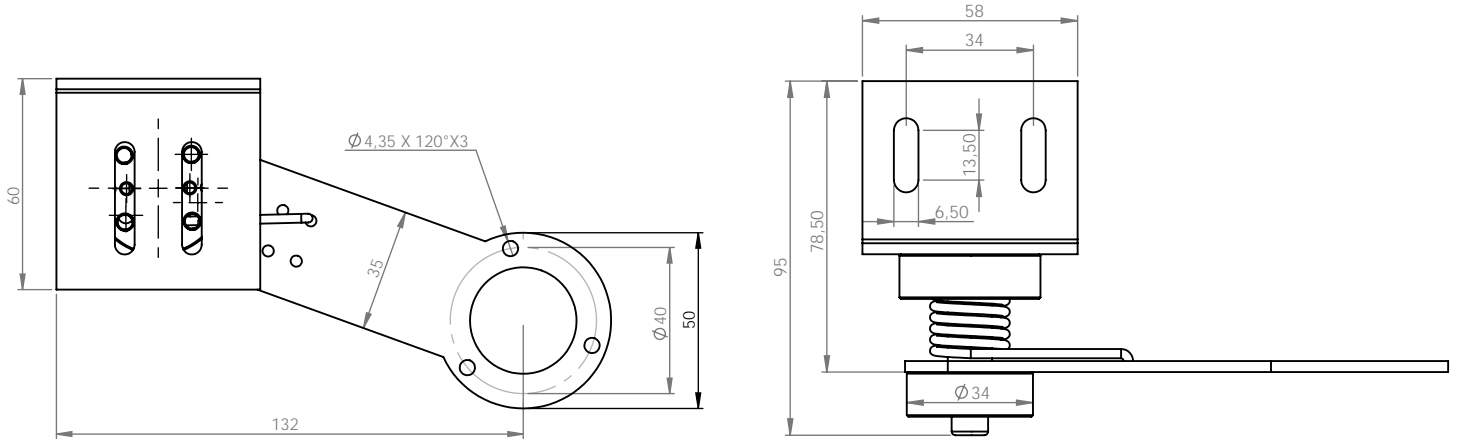
Incremental encoders

Cable / Connector Wiring, Part Number

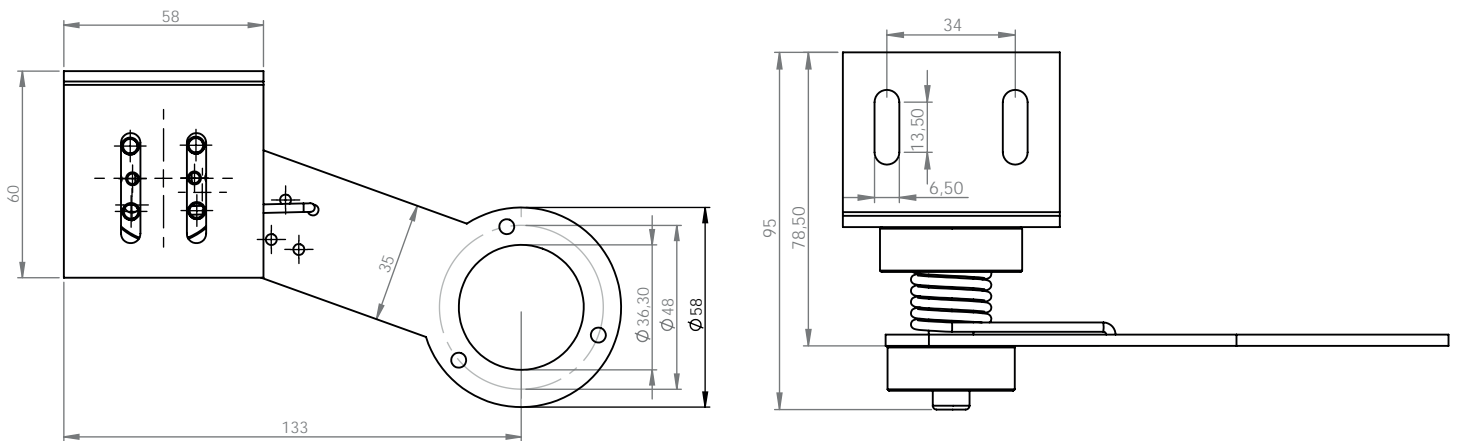
FNC WMS Measuring System

Mechanical Dimensions

Level arm for 50B encoder



Level arm for 58B encoder



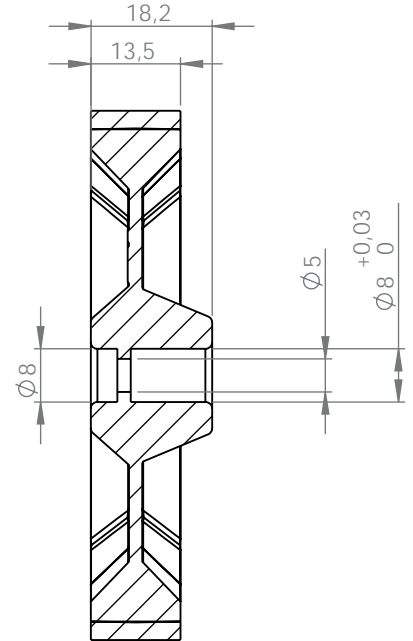
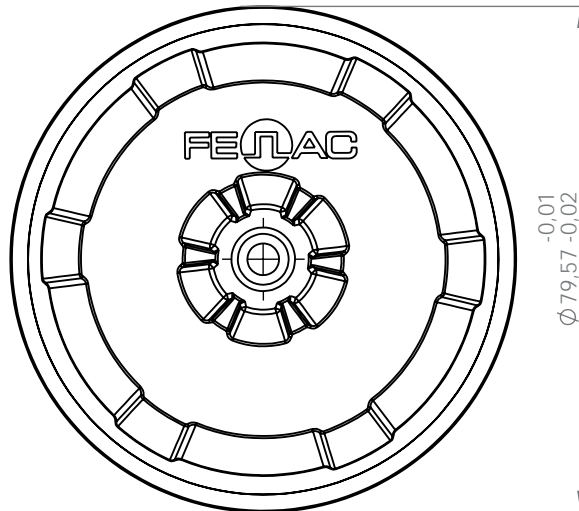
Incremental encoders

Cable Wiring, Pulse Diagram,
Part Number

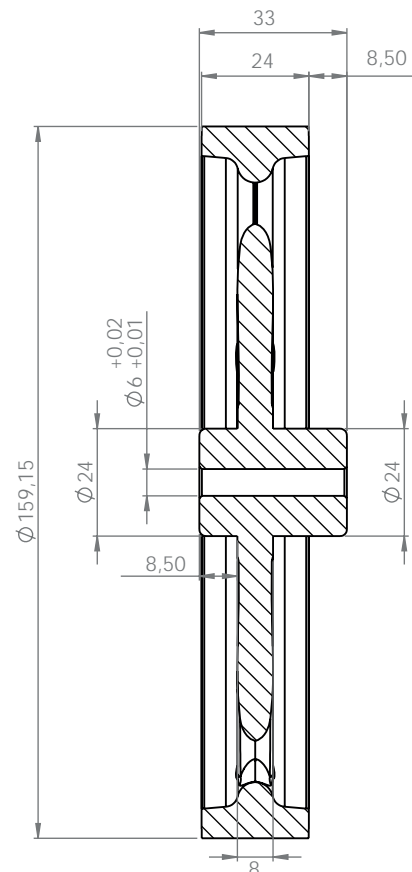
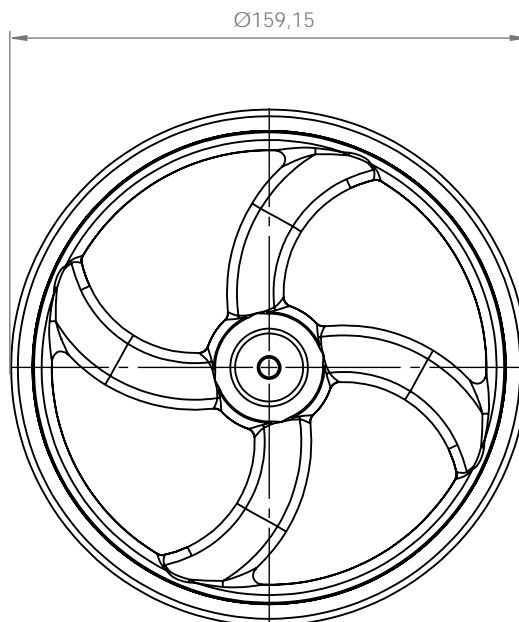
FNC WMS Measuring System

Mechanical Dimensions

250 mm circumference wheel



500 mm circumference wheel



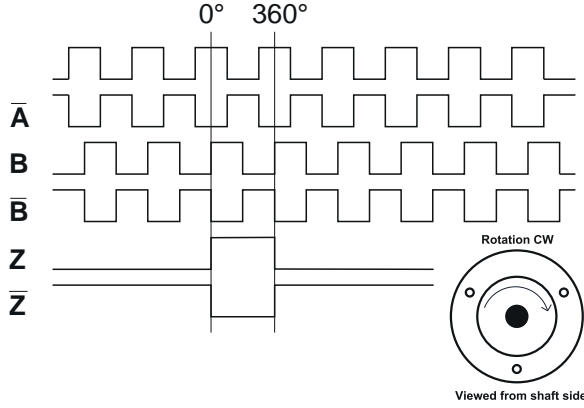
Incremental encoders

Cable Wiring, Pulse Diagram
Part Number



FNC WMS Measuring System

Pulse Diagram



Cable Connection

Function	Color	Renk
+VB		Brown Kahve
GND		White Beyaz
A		Green Yeşil
A'		Red Kırmızı
B		Yellow Sarı
B'		Pink Pembe
Z		Gray Gri
Z'		Blue Mavi
Shield		Black Siyah

Wheel Part Number

FC 500 M T K 08

Wheel Circumference

200 : 200 mm
250 : 250 mm
300 : 300 mm
500 : 500 mm

Body Type

M : Metal Body
P : Plastic Body

Surface Type

D : Flat Surface
T : Serrated Surface

Surface Material

K : Rubber Surface
M : Metal Surface

Shaft Diameter

06 : 6 mm
08 : 8 mm
10 : 10 mm

Level Arm Part Number

50B Series Encoder Level Arm **FNC SA100 50B**

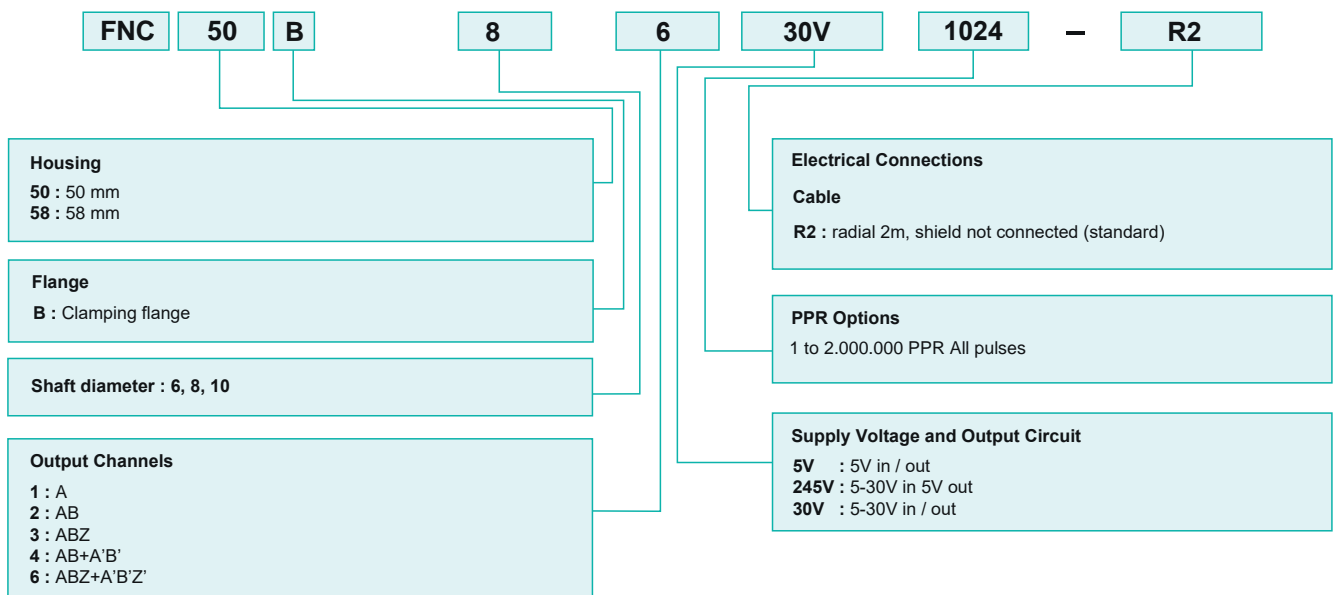
58B Series Encoder Level Arm **FNC SA100 58B**

Incremental encoders

Cable Wiring, Pulse Diagram, Part Number

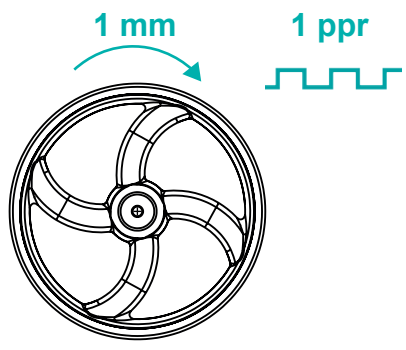
FNC WMS Measuring System

Encoder Part Number



How to select the right encoder?

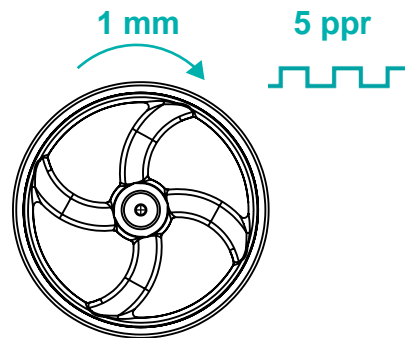
Measuring 1 pulse in 1 mm.



(Wheel Circumference) x (Desired Pulse in 1 mm) = Encoder Pulse

Wheel Circumference	Desired Pulse in 1 mm	Encoder Pulse
200 mm	1 ppr	200 ppr
250 mm	1 ppr	250 ppr
300 mm	1 ppr	300 ppr
500 mm	1 ppr	500 ppr

Measuring 5 pulse in 1 mm.



(Wheel Circumference) x (Desired Pulse in 1 mm) = Encoder Pulse

Wheel Circumference	Desired Pulse in 1 mm	Encoder Pulse
200 mm	5 ppr	1000 ppr
250 mm	5 ppr	1250 ppr
300 mm	5 ppr	1500 ppr
500 mm	5 ppr	2500 ppr