

# INCREMENTAL ROTARY ENCODER

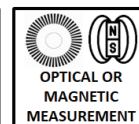
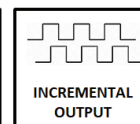
“Optical or Magnetic Measurement, 50 mm Body Diameter, Semi Hollow Shaft”

## RRC B 50



### GENERAL SPECIFICATIONS

- Incremental measurement with Optical (RRC) or Magnetic (RRS) principle
- Resolution up to 20.000 pulses for Optical (RRC) and 1024 pulses for Magnetic (RRS)
- 50 mm body diameter
- 6 mm, 8 mm, 10 mm or 12 mm hollow shaft options
- Optical (RRC): 6000 RPM, Magnetic (RRS): 3000 RPM operating speed
- 300 KHz response frequency
- High accuracy
- Robust structure, long operating life
- Connection with cable or socket
- IP54 protection class



The RRCB 50 series rotary encoders measure on an optical (RRC) or magnetic (RRS) principle and operate incrementally. The RRC series operating on the optical principle offers a resolution of up to 20.000 pulses per revolution and the RRS series operating on the magnetic principle up to 1024 pulses.

### APPLICATIONS

- Wind Applications / Power Plants
- Marine or Utility Vehicle Applications
- Press or Wood and Stone Processing Machinery
- Construction Machinery
- Cranes
- Offshore Applications
- Commercial Solar Plants
- Filling Plants
- Food & Beverage Applications
- Oil & Gas - Pipe Handling and Cranes

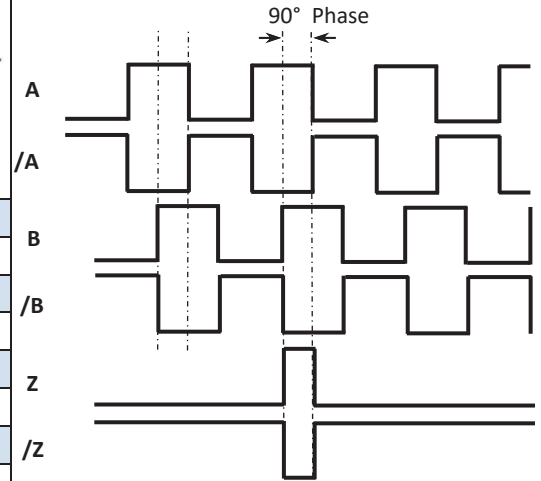


### TECHNICAL SPECIFICATIONS

<b>Resolution</b>	RRC: Resolution options up to 20.000 pulses RRS: Resolution options between 1 and 1024 pulses						
<b>Operating Speed</b>	RRC: 6000 RPM, ARS: 3000 RPM max.						
<b>Measuring Type</b>	RRC: Optical, ARS: Magnetic						
<b>Response Frequency</b>	300 KHz						
<b>Current Consumption</b>	50 mA nominal						
<b>Electrical Interface</b>		<b>PP</b>	<b>TTL</b>	<b>HTL</b>	<b>HPL</b>	<b>OCL</b>	<b>OCP</b>
	<b>Supply</b>	10...30 VDC	5 VDC	10...30 VDC	5...30 VDC	The supply signal should not be lower than the output signal	
	<b>Output</b>	10...30 VDC PP	5 VDC TTL	5 VDC TTL	5...30 VDC PP	NPN Open Collector	PNP Open Collector
<b>Output Signals</b>	A, /A, B, /B, Z, /Z						
<b>Output Current</b>	100 mA max. (per channel)						
<b>Electrical Connection</b>	5 or 8x0,14 mm <sup>2</sup> shielded cable, M16 / 8 pin male connector						
<b>Body Diameter</b>	50 mm						
<b>Hollow Shaft Diameter</b>	6 mm, 8 mm, 10 mm or 12 mm						
<b>Operating Temperature</b>	-25...+85 °C						
<b>Storage Temperature</b>	-40...+100 °C						
<b>IP Protection Class</b>	IP54						
<b>Weight</b>	~180 gr						
<b>Material</b>	Body: Aluminum						
	Shaft: Stainless Steel						

## ELECTRICAL CONNECTIONS

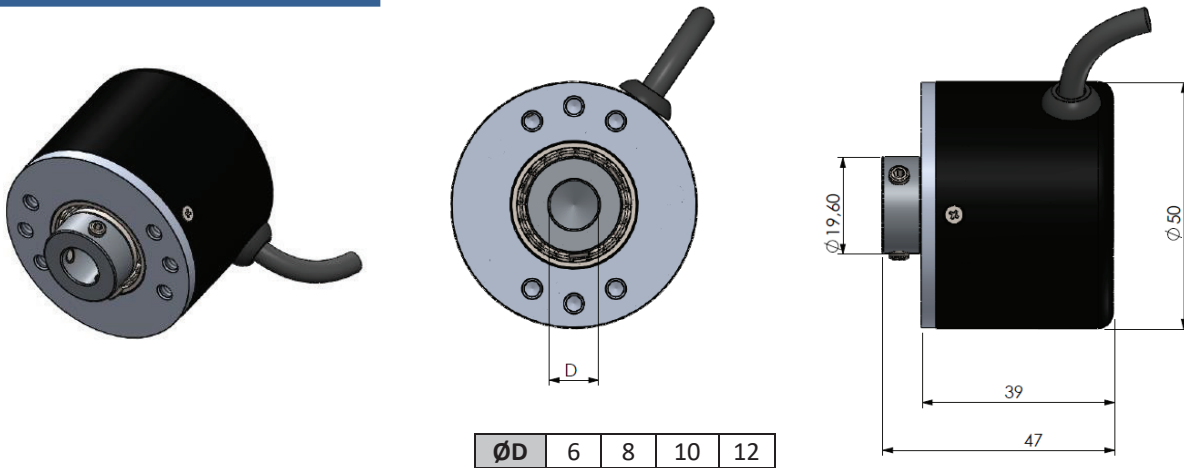
SIGNAL	M16 MALE SOCKET (S16) PIN NO	M16 CABLE TYPE MALE SOCKET (S21M) PIN NO	M16 CABLE TYPE FEMALE SOCKET (S21F) PIN NO	CABLE COLOR
A	1	1	1	YELLOW
/B	2	2	2	WHITE
+V	3	3	3	RED
0 V	4	4	4	BLACK
/A	5	5	5	BLUE
B	6	6	6	GREEN
/Z	7	7	7	GREY
Z	8	8	8	PINK



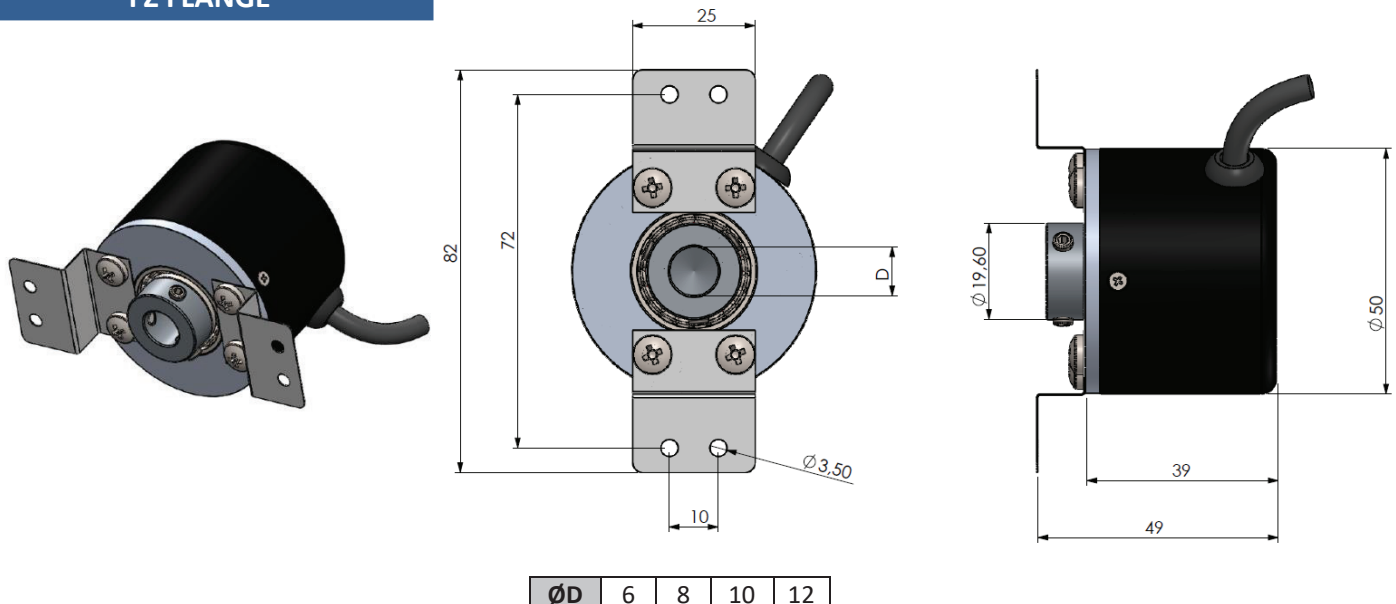
The table above shows the cable colors of the sensor output signals. If the control circuit is suitable in the Line Driver sensors of the not output signals (/A, /B, /Z) have to be added to the system. If it is not suitable /A, /B, /Z signal cables must be fixed as insulated separately. Don't forget that these edges have electricity too.

## MECHANICAL DIMENSIONS (mm)

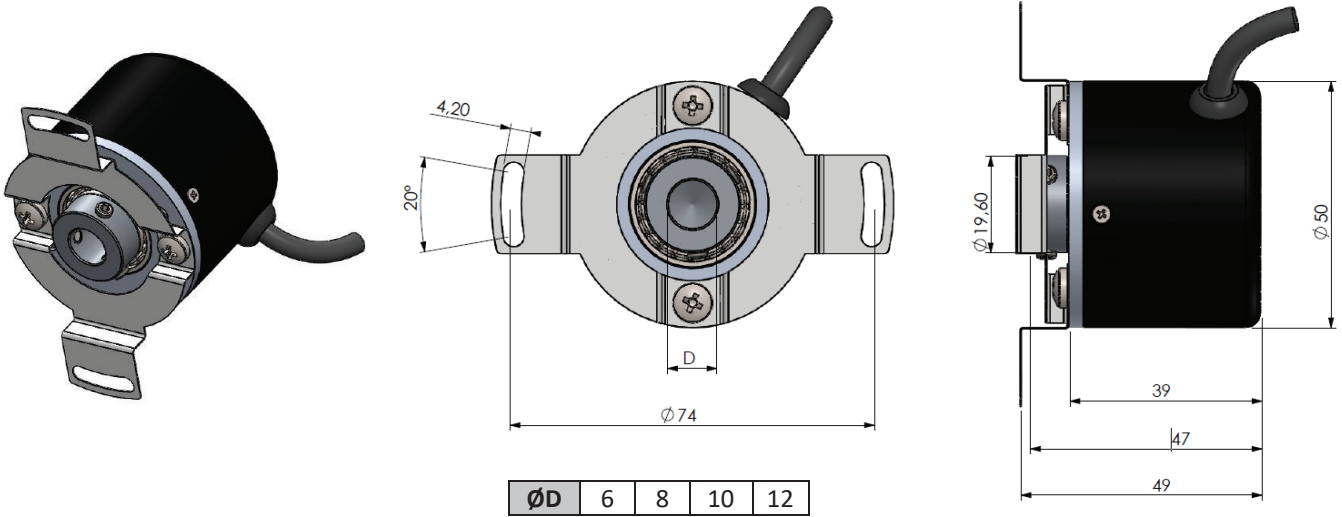
### Encoder Dimensions



### FZ FLANGE



## FC FLANGE



## PRODUCT CODE

<b>Model</b> <b>RRC</b> : Optical <b>RRS</b> : Magnetic	<b>Body Diameter</b> <b>50</b> : 50 mm	<b>Supply and Output</b> <b>PP</b> : 10...30 VDC Supply : 10...30VDC Output <b>TTL</b> : 5 VDC Supply : 5 VDC TTL RS422 Line Driver Out. <b>HTL</b> : 10...30 VDC Supply : 5 VDC TTL RS422 Line Driver Out. <b>HPL</b> : 5...30 VDC Supply : 5...30 VDC Push-Pull Output <b>OCL</b> : NPN Open Collector <b>OCP</b> : PNP Open Collector	<b>Electrical Connection <sup>(1)</sup></b> <b>3M</b> : 3 m cable (standard) <b>5M</b> : 5 m cable <b>10M</b> : 10 m cable <b>S16</b> : M16 Socket *Ask for other options	<b>Hole Diameter</b> <b>6</b> : 6 mm <b>8</b> : 8 mm <b>10</b> : 10 mm <b>12</b> : 12 mm	
<b>RRC</b> - <b>X</b> - <b>XX</b> - <b>XXXX</b> - <b>XXX</b> - <b>X</b> - <b>XX</b> - <b>XX</b> - <b>XX</b> - <b>XX</b>					
	<b>Shaft Type</b> <b>B</b> : Semi Hollow Shaft	<b>Resolution</b> See Resolutions*	<b>Output Signals</b> <b>2</b> (A,B) <b>3</b> (A,B,Z) <b>4</b> (A,/A,B,/B) <b>6</b> (A,/A,B,/B,Z,/Z)	<b>Cable Direction <sup>(2)</sup></b> <b>A</b> : From backside <b>Y</b> : From side <b>AS</b> : From backside + spiral	<b>Flange Type</b> <b>FZ</b> : Z type <b>FC</b> : Circular

- (1) The M16 (S16) socket can only be from the backside. Optionally, different cable lengths or socket models can be requested.  
 (2) Cable direction can be selected from backside or side  
 PG7 gland is used when the cable direction is from the rear, PG7 gland is not used when the cable direction is from the back.

**\*Resolutions:**

**Optical:** 60 - 100 - 360 - 500 - 1024 - 2000 - 2048 - 2500 - 3600 - 4096 - 5000 - 8192 - 10000 - 16384 - 20000 pulse

**Magnetic:** All resolution options from 1 to 1024 pulses.

**Örnek Kodlama:**

**RRC-B-50-1024-PP-6-10M-A-8-FC**

Optical, semi hollow shaft, 50 mm body diameter, 1024 pulses, Push-Pull, 6 output signals, 10 meters cable from backside, 8 mm shaft, Z type flange