



GENERAL SPECIFICATIONS

- Absolute measurement by magnetic principle
- 50 mm body diameter
- 6 mm, 8 mm or 10 mm shaft options
- 12 bit angular resolution
- 3000 RPM operating speed
- SSI interface
- High sensitivity
- IP54 protection class

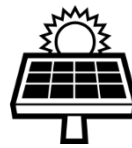
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ARS S 50 series rotary encoders measure by magnetic principle and work absolutely. They have SSI interface. They offer high sensitivity due their high 12 bit resolution at 4096 different positions for 360°. Optionally, different shaft types, cable length or socket model can be requested.

APPLICATION FIELDS

- 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



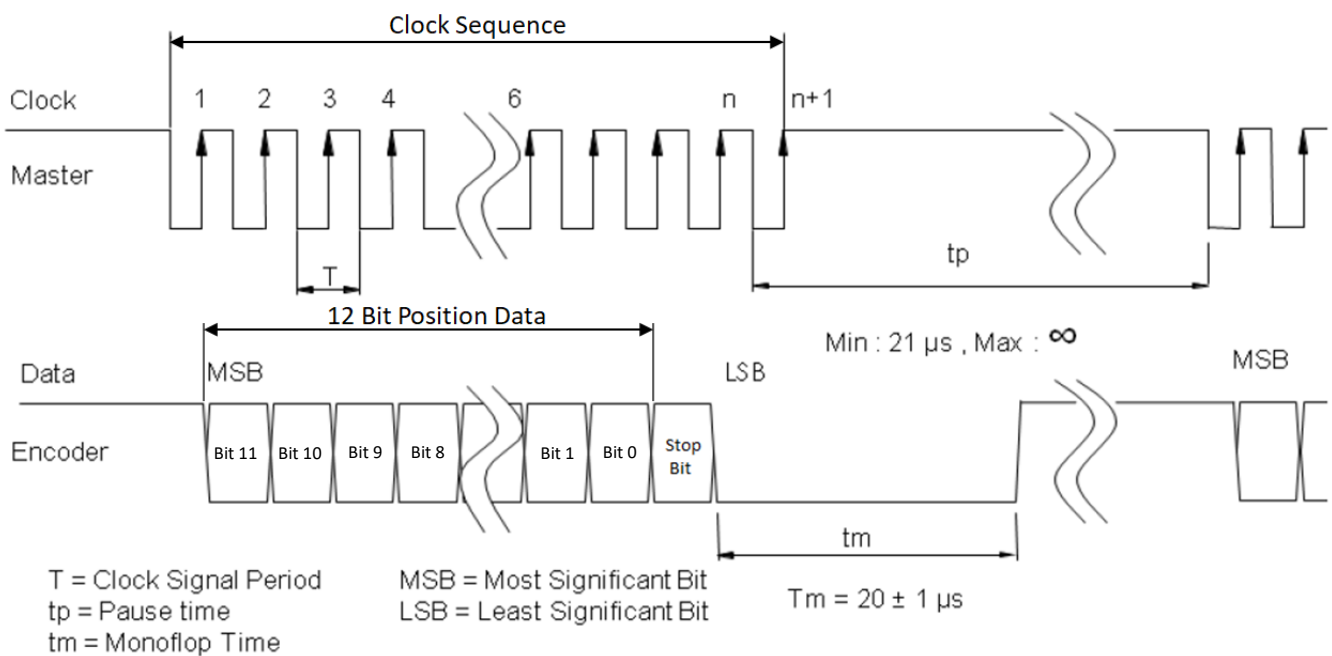
TECHNICAL SPECIFICATIONS

Measuring Range	0° ... 360°	Overvoltage Protection	26 V
Max. Operating Speed	3000 RPM	No-load current consumption	<60mA (24V DC)
Measuring Type	Magnetic	Initializing time	<250 ms (after power on)
Output Signal (protocol)	SSI 13 bit (12 bit data + 1 stop bit)	Ohmic load at outputs	120 ohm
Encoding	Gray	Physical interface	RS-422
Data update rate	500 Hz (2 ms)	Max clock rate	2 MHz
Frame Format	MSB First - [12 Bit Position] + [1 Stop Bit] - LSB	Monoflop time (tm)	20 μs
Max. Cable Length	13m @2 MHz, 44m @1 MHz, 85m @600 kHz, 300m @200 kHz, 750m @80 kHz It is recommended to use twisted pair cables which comply with the RS422 Standard.	Operating Temperature	-40...+85 °C
Resolution	12 bit	Storage Temperature	-40...+85 °C
Accuracy	≤ ± %0.25	IP Protection Class	IP54
Supply Voltage	5 - 24 VDC	Weight	~180 gr
		Material	Body: Aluminum Shaft: Stainless Steel

ELECTRICAL CONNECTION

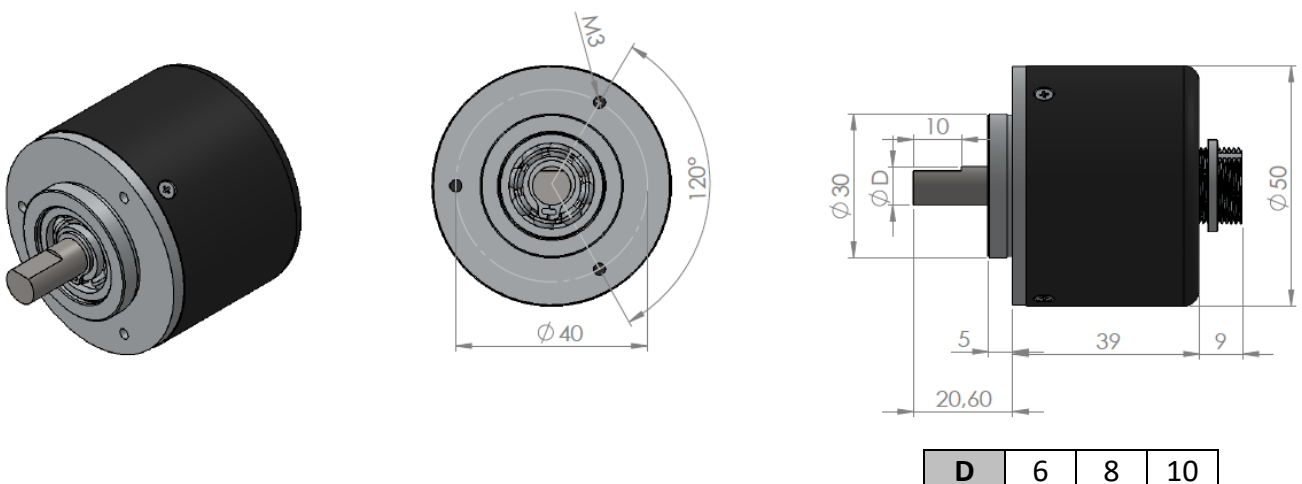
SIGNAL	CABLE COLOR	M16-8 PIN MALE CONNECTOR PIN NO	M16-8 PIN FEMALE CONNECTOR PIN NO
+V	Red	1	1
GND	Black	2	2
Data +	Yellow	3	3
Data -	Green	4	4
Clock +	White	5	5
Clock -	Brown	6	6

SSI TIMING DIAGRAM

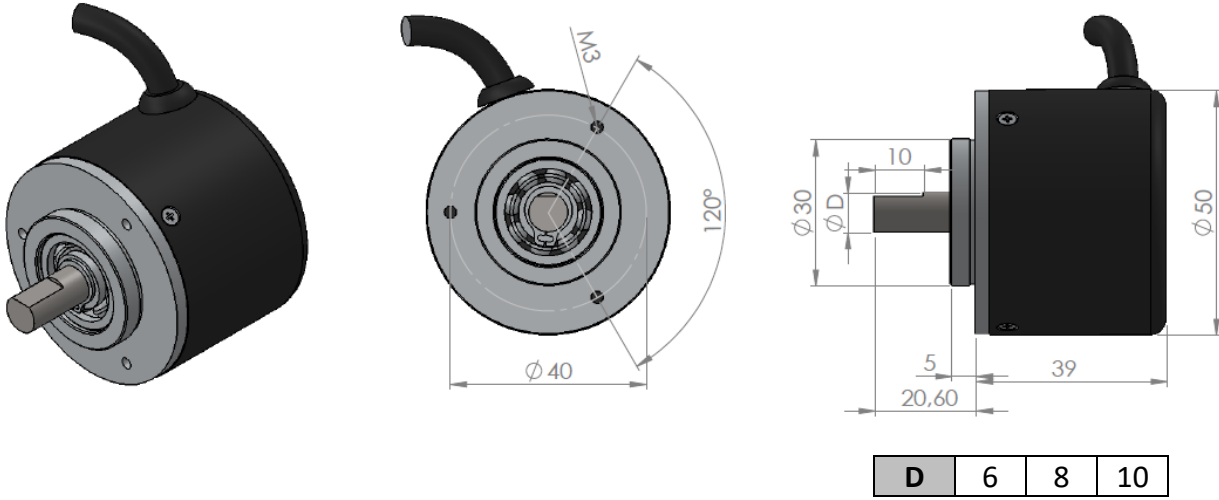


MECHANICAL DIMENSIONS (mm)

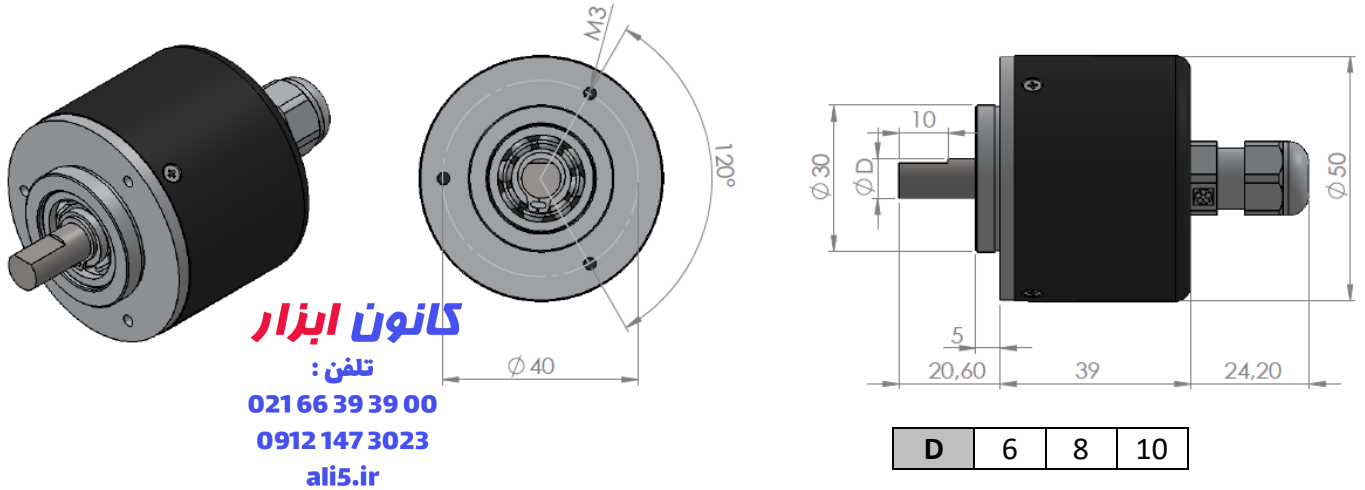
Clamping Flange, M16 Connector



Clamping Flange, Cable from side



Clamping Flange, Cable from backside



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PRODUCT CODE

Model ARS	Body Diameter 050 : 50 mm	Output Signal SSI : SSI Output	Electrical Connection ⁽¹⁾ 3M : 3 m 5M : 5 m 10M : 10 m S117M : M16/8 pin male conn.	Shaft Diameter 6 : 6 mm 8 : 8 mm 10 : 10 mm					
ARS	X	XXX	XXXX	XXX	X	XX	XX	XX	X
Shaft Type S : Shafted	Resolution 0012 : 12 Bit	Encoding G : Gray	Cable Direction ⁽²⁾ A : From backside Y : From side AS : From backside + spiral	Flange Type C : Clamping					

(1) The cable length can be selected to desired length, provided that minimum 1.5 meters. The M16 connector can only be backside. Optionally, different connector 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.

Optional Products
K6C2 10M S21(F) Pur Flex cable 3x2x0.34mm ² + M16/8 pin female connector (extension cable with connector)

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