

INCREMENTAL ROTARY ENCODER

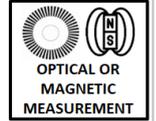
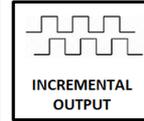
“Optical or Magnetic Measurement, 50 mm Body Diameter, With Shaft”

ARX S 58



GENERAL SPECIFICATIONS

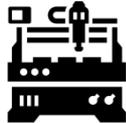
- Incremental measurement with Optical (ARC) or Magnetic (ARS) principle
- Resolution up to 20.000 pulses for Optical (ARC) and 1024 pulses for Magnetic (ARS)
- 58 mm body diameter
- 6 mm, 8 mm, 10 mm, 12 mm or 14 mm shaft options
- Optical (ARC): 6000 RPM, Magnetic (ARS): 3000 RPM operating speed
- 300 KHz response frequency
- High accuracy
- Robust structure, long operating life
- Connection with cable or socket
- IP54 protection class



The ARX S 58 series rotary encoders measure on an optical (ARC) or magnetic (ARS) principle and operate incrementally. The ARC series operating on the optical principle offers a resolution of up to 20.000 pulses per revolution and the ARS 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

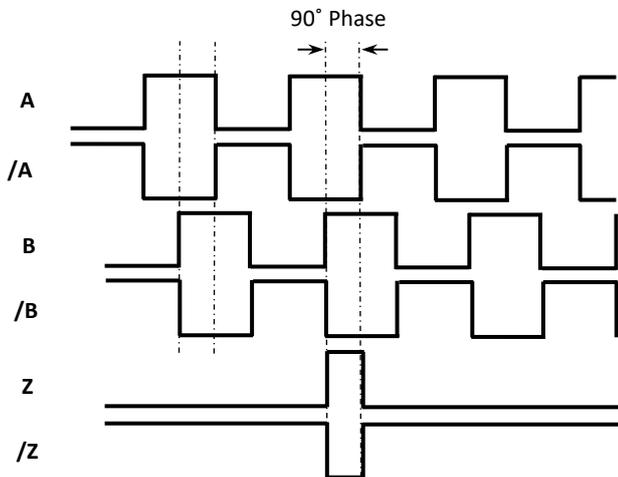


TECHNICAL SPECIFICATIONS

Resolution	ARC: Resolution options up to 20.000 pulses ARS: Resolution options between 1 and 1024 pulses						
Operating Speed	ARC: 6000 RPM, ARS: 3000 RPM max.						
Measuring Type	ARC: Optical, ARS: Magnetic						
Response Frequency	300 KHz						
Current Consumption	50 mA nominal						
Electrical Interface		PP	TTL	HTL	HPL	OCL	OCP
	Supply	10...30 VDC	5 VDC	10...30 VDC	5...30 VDC	The supply signal should not be lower than the output signal	
	Output	10...30 VDC PP	5 VDC TTL	5 VDC TTL	5...30 VDC PP	NPN Open Collector	PNP Open Collector
Output Signals	A, /A, B, /B, Z, /Z						
Output Current	100 mA max. (per channel)						
Electrical Connection	5 or 8x0,14 mm ² shielded cable, M12 / 8 pin connector, M16 / 8 pin connector, M23 / 12 pin connector						
Body Diameter	58 mm						
*Shaft Diameter	6 mm, 8 mm, 10 mm, 12 mm or 14 mm						
Operating Temperature	-25...+85 °C						
Storage Temperature	-40...+100 °C						
IP Protection Class	IP54						
Weight	~200 gr						
Material	Body: Aluminum						
	Shaft: Stainless Steel						

ELECTRICAL CONNECTIONS

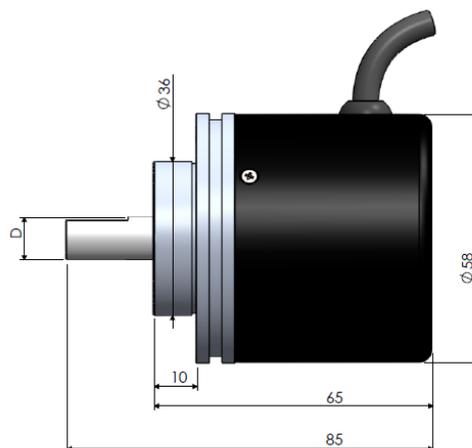
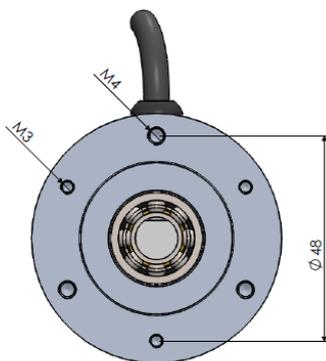
SIGNAL	M12 PANEL TYPE MALE SOCKET (S167) PIN NO	M16 PANEL TYPE MALE SOCKET (S16) PIN NO	M16 CABLE TYPE MALE SOCKET (S21M) PIN NO	M16 CABLE TYPE FEMALE SOCKET (S21F) PIN NO	M23 MALE SOCKET (S23) PIN NO	M23 MALE SOCKET (S25) PIN NO	CABLE COLOR
A	3	1	1	1	5	5	YELLOW
/B	6	2	2	2	1	1	WHITE
+V	2	3	3	3	12-2	12-2	RED
0 V	1	4	4	4	10-11	10-11	BLACK
/A	4	5	5	5	6	6	BLUE
B	5	6	6	6	8	8	GREEN
/Z	8	7	7	7	4	4	GREY
Z	7	8	8	8	3	3	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.

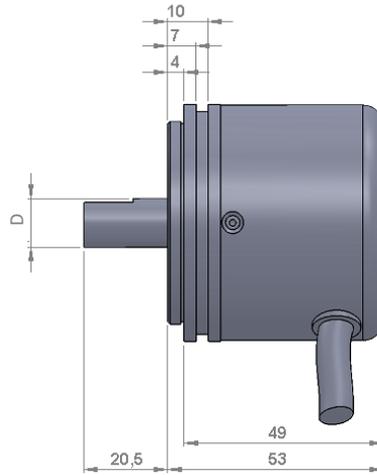
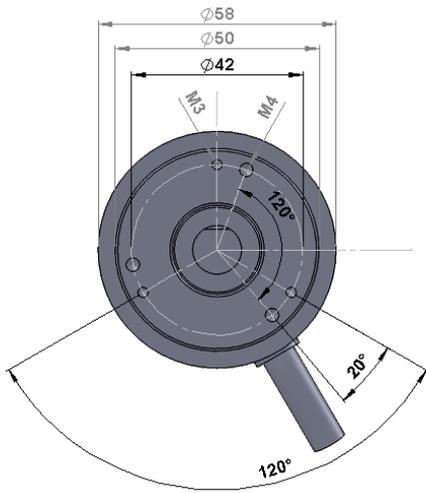
MECHANICAL DIMENSIONS (mm)

Clamping Flange



$\varnothing D$	6	8	10	12	14
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Synchro Flange

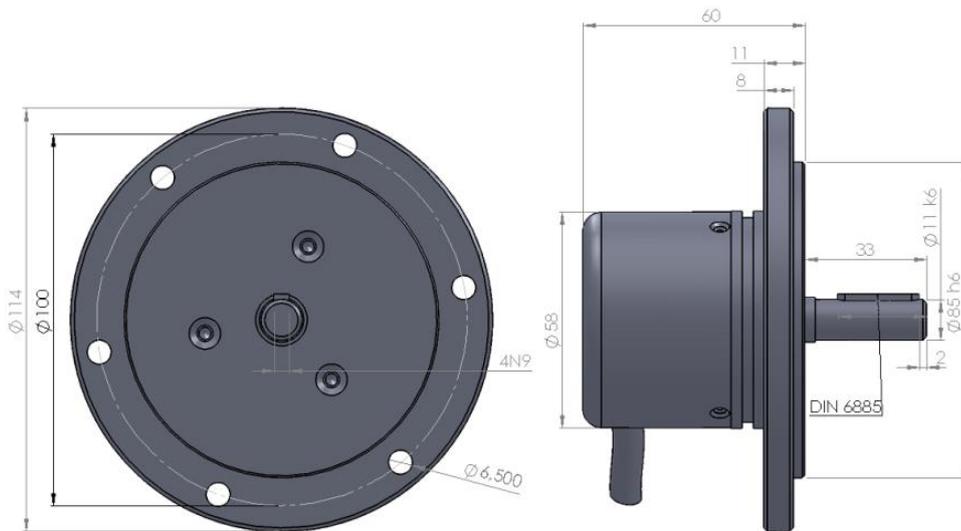


ØD	6	8	10	12	14
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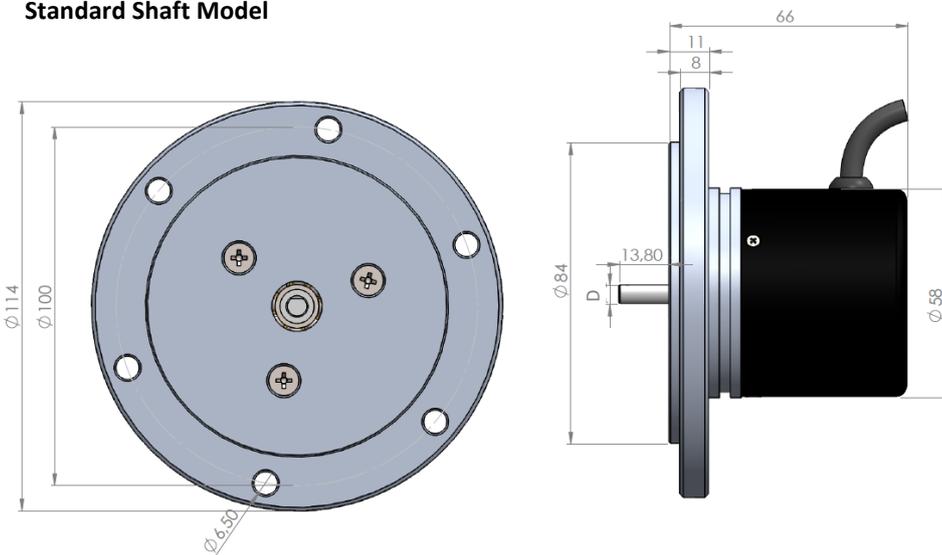
Tacho Flange

Wedge Shaft Model

*In the wedge model, the shaft diameter is produced as only 11 mm.

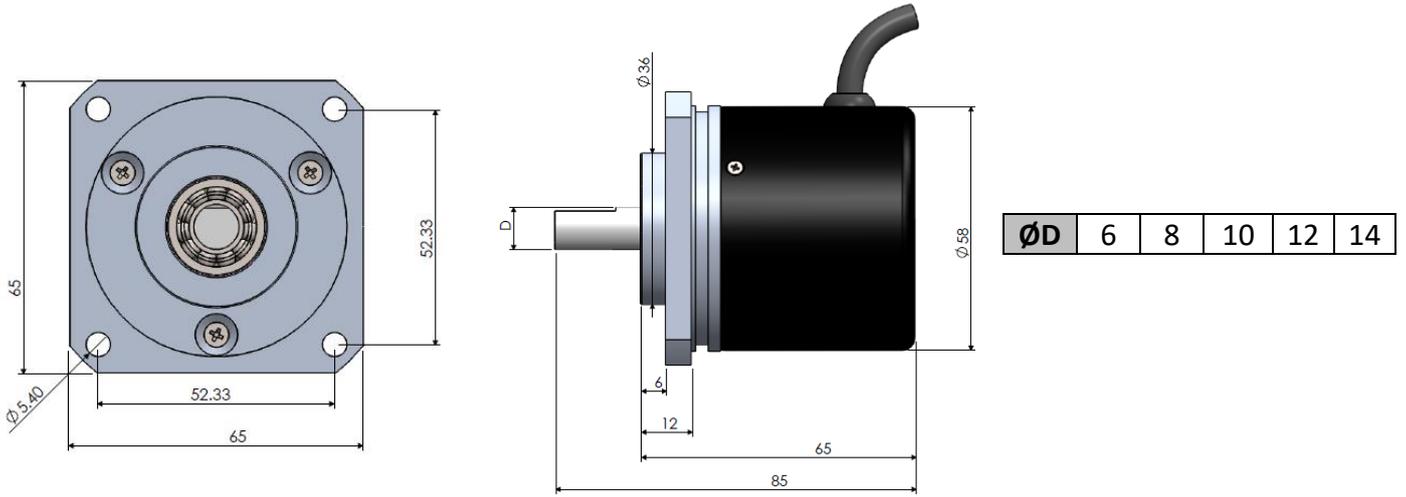


Standard Shaft Model



ØD	6	8	10	12	14
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Square Flange



PRODUCT CODE

Model	Body Diameter	Supply and Output	Electrical Connection ⁽¹⁾	Shaft Diameter
ARC : Optical ARS : Magnetic	58 : 58 mm	PP : 10...30 VDC Supply : 10...30VDC Output TTL : 5 VDC Supply : 5 VDC TTL RS422 Line Driver Out. HTL : 10...30 VDC Supply : 5 VDC TTL RS422 Line Driver Out. HPL : 5...30 VDC Supply : 5...30 VDC Push-Pull Output OCL : NPN Open Collector OCP : PNP Open Collector	3M : 3 m (standard) 5M : 5 m 10M : 10 m S167 : M12/8 pin male socket S16 : M16/8 pin male socket S23* : M23/12 pin male socket S25* : M23/12 pin male socket *See electrical connection	6 : 6 mm 8 : 8 mm 10 : 10 mm 12 : 12 mm 14 : 14 mm 11K4 : 11 mm wedge (only for tachometer flange)

ARX	X	XX	XXXX	XXX	X	XX	XX	XX	X
Shaft Type S : Shaft		Resolution See Resolutions*			Output Signals 2 (A,B) 3 (A,B,Z) 4 (A,/A,B,/B) 6 (A,/A,B,/B,Z,/Z)		Cable or Socket Direction ⁽²⁾ A : From backside Y : From side AS : Backside + spiral		Flange Type ⁽³⁾ C : Clamping S : Synchro T : Tacho K : Square

- Optionally, different cable lengths or socket models can be requested.
When selecting sockets for M23 (S23, S25), attention should be paid to the pin order. For pin order, see the electrical connection table on page 2.
- The M12 (S167) and M16 (S16) connector can be from side or backside, M23 (S23, S25) connector can be only from side.
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 backside
- 6, 8, 10, 12 or 14 mm standard shaft or 11K4 wedge shaft can be selected in model with tachometer flange.
In other flange models, 6, 8, 10, 12 or 14 mm standard shafts can be selected.

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.

Sample Coding:

ARC-S-58-1024-PP-6-10M-A-8-C

Optical, with shaft, 58 mm body diameter, 1024 pulses, Push-Pull, 6 output signals, 10 meters cable from backside, 8 mm shaft, clamping flange

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