

Resolvers

Shaft $\varnothing 6$ mm with synchro flange

Number of pole pairs 1 (= 2 poles)

RTD 1 B14 Y 1



RTD 1 B14 Y 1 with synchro flange

Features

- Robust resolver with shaft $\varnothing 6$ mm
- Rotation speed max. 10000 rpm
- Centering alignment $\varnothing 50$ mm
- Mounting hole circle $\varnothing 68$ mm
- Wide operating temperature range
- Flange socket radial

Technical data - electrical ratings

Primary element	Rotor
Number of pole pairs	1 = 2 poles
Input voltage	7 Vrms
Input frequency	10 kHz
Input current max.	65 mA
Input effective power max.	250 mW
Transformation ratio	0.5 $\pm$ 5 %
Phase shift	0° $\pm$ 10°
Electr. errors max.	$\pm$ 10 Angular minutes

Technical data - mechanical design

Dimensions (flange)	$\varnothing 58$ mm
Shaft	$\varnothing 6$ mm
Protection DIN EN 60529	IP 65
Operating speed	≤ 10000 rpm
Starting torque	≤ 0.01 Nm
Shaft loading	≤ 20 N axial ≤ 40 N radial
Materials	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	-20...+100 °C
Resistance	DIN EN 60068-2-6 Vibration 20 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 11 ms
Weight approx.	450 g
Connection	Connector M23 type 2, 12-pin

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Part number

RTD 1 B14 Y 1	P1	7	10	0.5	D2SR12	6	IP65
							Protection
							IP65 IP 65
							Flange / Shaft
						6	Synchro flange / ø6 mm
							Connection
					D2SR12		Flange socket type 2, pin contacts, radial, 12-pin
							Transformation ratio
				0.5			
							Input frequency
			10				10 kHz
							Input voltage
		7					7 Vrms
							Number of pole pairs
P1							1 = 2-pin

Accessories

Connectors and cables

11069601	Connector S2BG12 with cable (RTD) L = 2 m
11069603	Connector S2BG12 with cable (RTD) L = 5 m
11069605	Connector S2BG12 with cable (RTD) L = 10 m

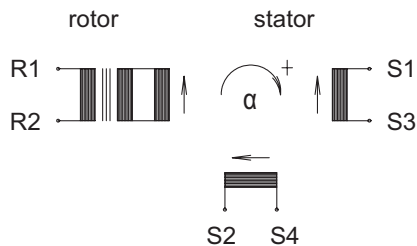
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Circuit diagram



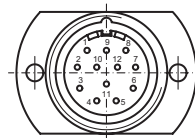
$$U_{S1-S3} = TR \cdot U_{R1-R2} \cdot \cos \alpha$$

$$U_{S2-S4} = TR \cdot U_{R1-R2} \cdot \sin \alpha$$

Schematic diagram, diagrammed during direction of rotation against counter-clockwise direction (ccw) when looking at the end of the mounting side.

Terminal assignment

Connector	Assignment
Pin 1	R1
Pin 2	R2
Pin 3	S2
Pin 4	S4
Pin 5	S1
Pin 6	S3
Pin 7	–
Pin 8	–
Pin 9	–
Pin 10	–
Pin 11	–
Pin 12	–



Impedances

Z_{RO}	$[70+j100] \Omega$
Z_{SO}	$[180+j300] \Omega$
Z_{SS}	$[175+j275] \Omega$

DC resistance

R_R (rotor)	Approx. 36 Ω
R_S (stator winding)	Approx. 60 Ω
Max. zero voltage	20 mV

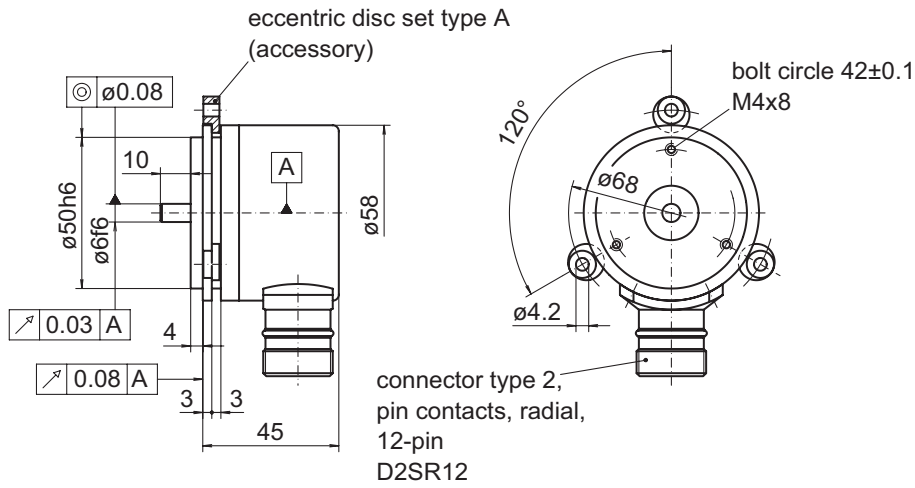
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Dimensions



026-41 Y 1