

RTD 1 B14 Y 3

Solid shaft $\varnothing 10$ mm with clamping flange

Number of pole pairs 1 (= 2 poles)

Overview

- Robust resolver with solid shaft $\varnothing 10$ mm
- Rotation speed max. 5000 rpm
- Centering alignment $\varnothing 36$ mm, mounting hole circle $\varnothing 48$ mm
- Wide operating temperature range
- High protection IP 67 at the shaft input
- Flange connector radial



Technical data

Technical data - electrical ratings

Number of pole pairs	1 = 2 poles
Input voltage U_i	7 V _{rms}
Input frequency	≤ 10 kHz
Input current I_i max.	≤ 65 mA
Transformation ratio	$0.5 \pm 5\%$
Phase shift	$0^\circ \pm 10^\circ$
Electrical error max.	10 Angular minutes
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 10$ mm solid shaft (clamping flange)

Technical data - mechanical design

Protection DIN EN 60529	IP 65 (IP 67 at shaft input)
Operating speed	≤ 5000 rpm
Starting torque	$\leq 0,025$ Nm (+20 °C)
Admitted shaft load	≤ 40 N axial ≤ 60 N radial
Material	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	$-40 \dots +100$ °C
Resistance	DIN EN 60068-2-6 Vibration 20 g, 60-2000 Hz DIN EN 60068-2-27 Shock 100 g, 11 ms
Weight approx.	310 g
Connection	Connector M23 type 2, 12-pin

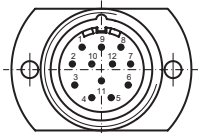
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Terminal assignment

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	—



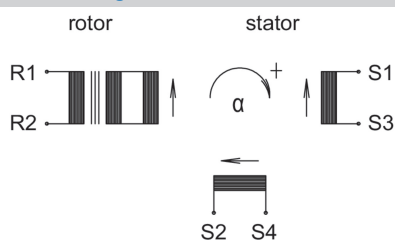
DC resistance

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

Impedances

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

Circuit diagram



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

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

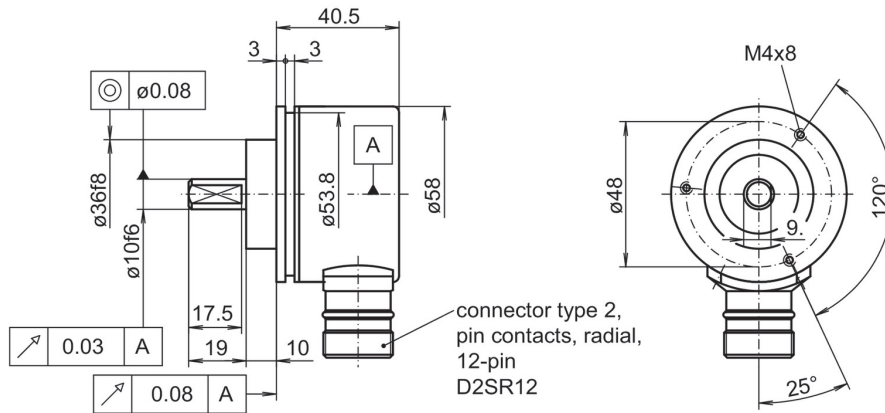
Schematic diagram, diagrammed during direction of rotation against counter-clockwise direction (ccw) when looking at the end of the mounting side.

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Dimensions



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Ordering reference

	RTD 1 B14 Y 3	P1	7	10	0.5	D2SR12	E	10	IP65
Product	RTD 1 B14 Y 3								
Number of pole pairs		P1							
1 = 2-pin									
Input voltage			7						
7 Vrms									
Input frequency				10					
10 kHz									
Transformation ratio					0.5				
0.5									
Connection						D2SR12			
Flange connector type 2, pin contacts, radial, 12-pin									
Operating temperature							E		
-40...+100 °C									
Flange / Solid shaft								10	
Clamping flange / ø10 mm									
Protection									IP65
IP 65									

Accessories

Connectors and cables

11069601	Connector M23 (S2BG12), 2 m cable (RTD)
11069603	Connector M23 (S2BG12), 5 m cable (RTD)
11069605	Connector M23 (S2BG12), 10 m cable (RTD)