

Resolvers

End shaft $\varnothing 10$ to $\varnothing 16$ mm

Number of pole pairs 1 (= 2 poles)

RTD 4 A 4 Y 2



RTD 4 A 4 Y 2 with end shaft

Features

- Robust resolver with end shaft $\varnothing 10$ -16 mm
- Rotation speed max. 8000 rpm
- Very high resistance to shock and vibrations
- Wide operating temperature range

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)	$\varnothing 80$ mm
Shaft	$\varnothing 10 \dots 16$ mm end shaft
Protection DIN EN 60529	IP 65
Operating speed	≤ 8000 rpm
Starting torque	≤ 0.015 Nm
Materials	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	-40...+100 °C
Resistance	DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 11 ms
Weight approx.	670 g
Connection	Connector M23 type 2, 12-pin
Motor shaft tolerance	0.25 mm axial 0.1 mm radial
Mounting kit variant	050

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Part number

RTD 4 A 4 Y 2	P1	7	10	0.5	D2SR12		IP65	050
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Mounting kit
050Mounting accessory kit 050

	<u>Protection</u>
IP65	IP 65

	<u>End shaft</u>
10	End shaft $\varnothing 10$ mm
11	End shaft $\varnothing 11$ mm
...	...
16	End shaft $\varnothing 16$ mm

	Connection
D2SR12	Flange socket type 2, pin contacts, radial, 12-pin

Transformation ratio

0.5

	<u>Input frequency</u>
10	10 kHz

	Input voltage
7	7 Vrms

	<u>Number of pole pairs</u>
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

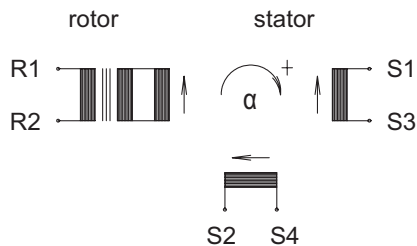
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Circuit diagram



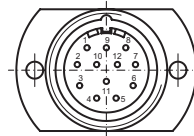
$$U_{S1-S3} = TR \cdot U_{R1-R2} \cdot \cos \alpha$$

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

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	shield/housing
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 (transformer)	Approx. 36 Ω
R_S (stator winding)	Approx. 62 Ω
Max. zero voltage	50 mV

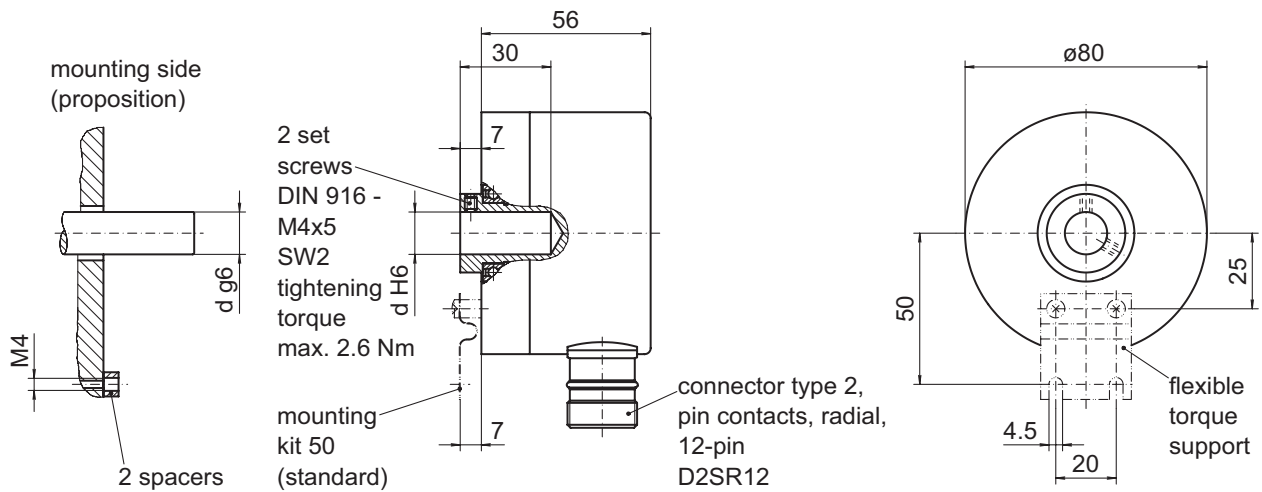
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Dimensions



026-34 Y 2