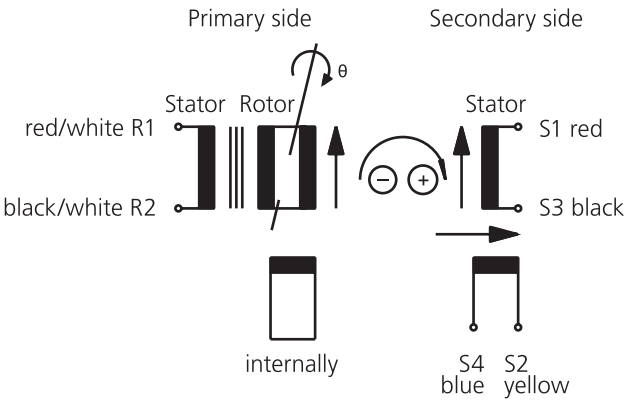
RESOLVER

RE 165

FACTS

- Hollow shaft Ø: max. 100 mm
- Outer Ø: 165 mm
- Length: 35 mm



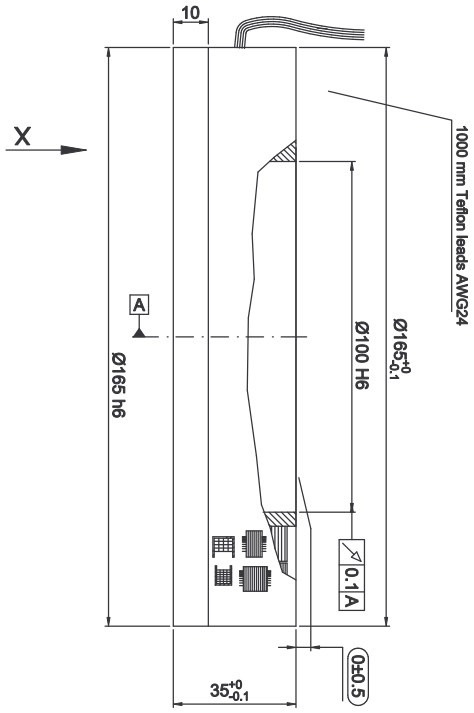
Input: E(R1-R2) = E · sin(cos)

Output: E(S1-S3) = TR · E(R1-R2) · cos θ

E(S2-S4) = TR · E(R1-R2) · sin θ

TR = Transformation ratio

Positive counting direction: Rotor cw as viewed (X→)



RESOLVER

RE 165

SELECTION GUIDE FOR ELECTRONICAL DATA

Primary side	R1 - R2	R1 - R2
Pole Pairs	1	1
Transformation ratio	0.5 ± 10%	0.5 ± 10%
Input voltage	5 V	5 V
Input current	23 mA	17 mA
Input frequency	5 kHz	10 kHz
Phase shift	8° ± 3°	-10° ± 3°
Null voltage	max. 30 mV	max. 30 mV
Impedance		
Zro	191 Ω + j · 109 Ω	228 Ω + j · 180 Ω
Zrs	183 Ω + j · 107 Ω	220 Ω + j · 182 Ω
Zso	724 Ω + j · 1383 Ω	1149 Ω + j · 2494 Ω
Zss	687 Ω + j · 1346 Ω	1079 Ω + j · 2482 Ω
D.C. resistance		
Rotor	138 Ω ± 10% at 20 °C	138 Ω ± 10% at 20 °C
Stator	200 Ω ± 10% at 20 °C	200 Ω ± 10% at 20 °C
Accuracy	± 4'	± 4'
Operating temperature	-55 °C ... +155 °C (-67 °F ... +311 °F)	-55 °C ... -155 °C (-67 °F ... +311 °F)
Max. permissible speed	5.000 min^{-1}	5.000 min^{-1}
Weight rotor/stator	1000 g / 1500 g	1000 g / 1500 g
Hi-pot housing/winding	min. 500 V_{AC}	min. 500 V_{AC}
Hi-pot winding/winding	min. 250 V_{AC}	min. 250 V_{AC}
Rotor/Stator	Completely impregnated	Completely impregnated

Leads pairwise twisted and shielded:

red/white - black/white
red - black
blue - yellow

shield over twisted pairs
not connected to housing
shrinking tube over shield end

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