



FRAMELESS RESOLVER

RE15

FACTS

- Hollow shaft Ø: max. 12 mm
- Outer Ø: 36 mm
- Length: 16 mm

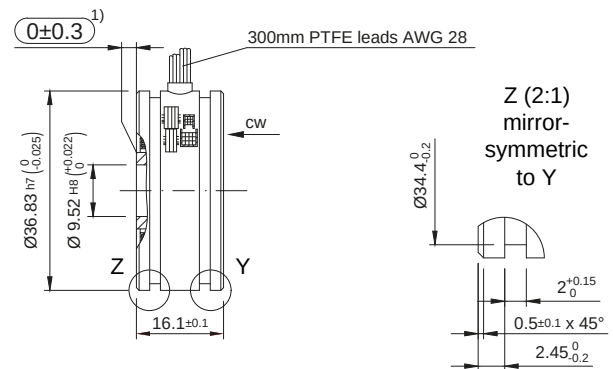
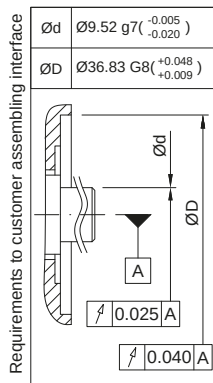
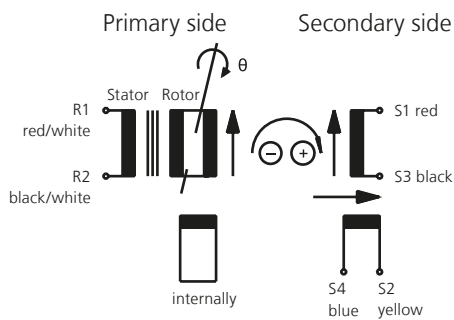


OPERATING PRINCIPLE

Inner diam. stator = 22.820 min.
Outer diam. rotor = 22.350 max.

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

1) axial offset
operational tolerance



Input: $E(R1-R2) = E \cdot \sin(\omega \cdot t)$

Output: $E(S1-S3) = TR \cdot E(R1-R2) \cdot \cos \theta$

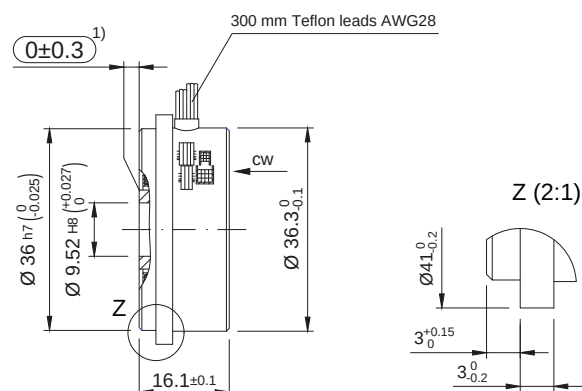
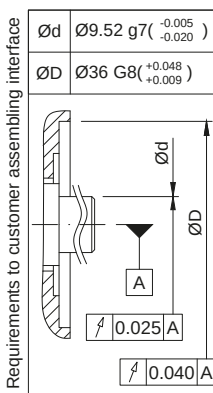
$E(S2-S4) = TR \cdot E(R1-R2) \cdot \sin \theta$

TR = Transformation ratio

Inner diam. stator = 22.820 min.
Outer diam. rotor = 22.350 max.

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

1) axial offset
operational tolerance



ELECTRICAL DATA

Type	RE-15-1-XXX	RE-15-3-XXX	RE-15-4-XXX
Pole Pairs	1	3	4
Transformation Ratio	0,5 ±10%	0,5 ±10%	0,5 ±10%
Input Voltage	7 V	7 V	7 V
Input Current	65 mA 7 V & 5 kHz	50 mA 7 V & 4 kHz ± 10%	53 mA 7 V & 5 kHz
Phase Shift	13° ±3° 7 V & 5 kHz	15° ±3° 7 V & 4 kHz	18° ±3° 7 V & 5 kHz
Acuracy	± 10'/20' spread ± 4/6' on request	± 5'/9' spread	± 6'/12' spread
Null Voltage	≤ 30 mV	≤ 30 mV	≤ 30 mV
Operating Temperature	-55 °C ... +155 °C	-55 °C ... +155 °C	-55 °C ... +155 °C
R1-R2 DC Resistance at room temperature	37 Ohm ± 10%	34 Ohm ± 10%	25 Ohm ± 10%
S1-S3/S2-S4 DC Resistance at room temperature	102 Ohm ± 10%	380 Ohm ± 10%	231 Ohm ± 10%
Max. Permissible Speed	≤ 20.000 rpm	≤ 20.000 rpm	≤ 20.000 rpm
Shock	≤ 1.000 m/s2 (11 ms)	≤ 1.000 m/s2 (11 ms)	≤ 1.000 m/s2 (11 ms)
Vibration	≤ 500 m/s2 10...500 Hz	≤ 500 m/s2 10...500 Hz	≤ 500 m/s2 10...500 Hz
High Pot Test Voltage Housing/Winding	≤ 500 VAc 50 Hz & 3 s	≤ 500 VAc 50 Hz & 3 s	≤ 500 VAc 50 Hz & 3 s
High Pot Test Voltage Winding/Winding	≤ 250 VAC 50 Hz & 3 s	≤ 250 VAC 50 Hz & 3 s	≤ 250 VAC 50 Hz & 3 s
Rotor / Stator	completely impregnated	completely impregnated	completely impregnated
Lead Length	AWG 28 min. 300 mm	AWG 28 min. 300 mm	AWG 28 min. 300 mm