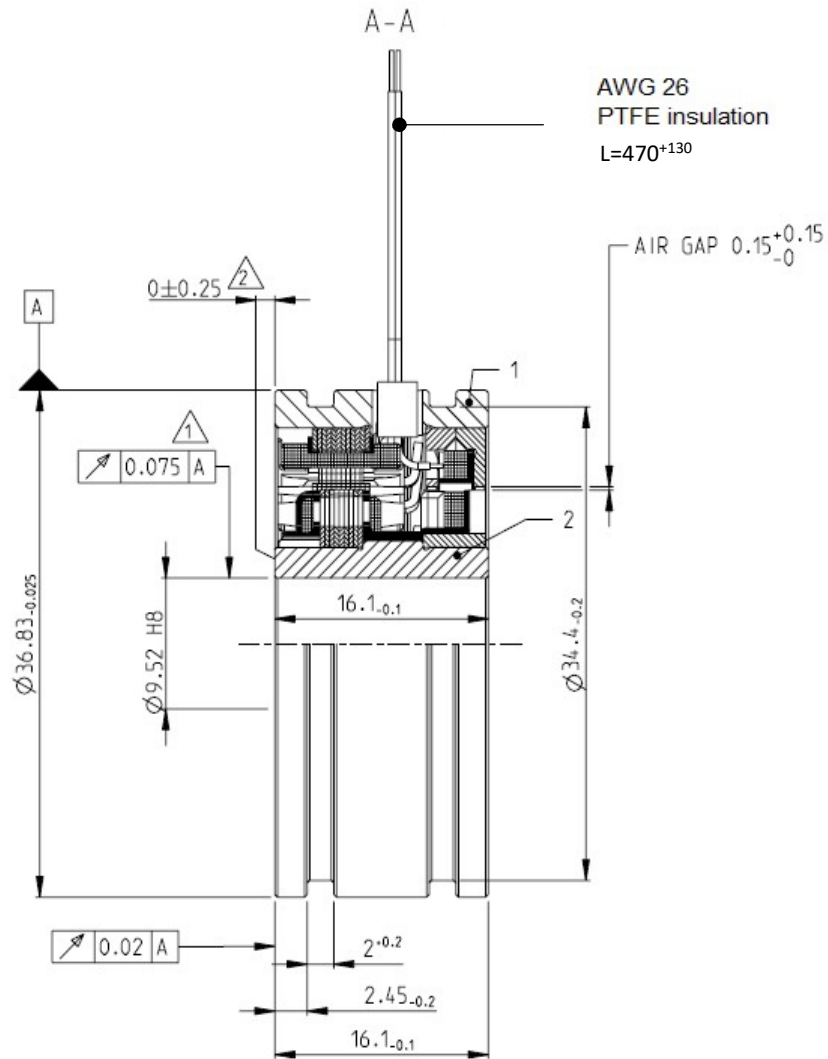




DATA SHEET - HOLLOW SHAFT RESOLVER

| | | | | |
|--|--|--|---|----------|
| Part Number | 1-1414631-0 | | | |
| Description | V23401- S1001-B101 | | | |
| Size | 15 | | | |
| Shaft inner diameter [mm] | 9.52H8 | | | |
| Speed (pair of poles) [p] | 1 | | | |
| Number of poles | 2 | | Customer PN | |
| Application Specification | 114 – 160394 | | | |
| Test protocol | Results saved to manufacturing site archives. Available by request. | | | |
| Input voltage (V_{rms}) [V] | 7.0 | Based on specified Input voltage and Frequency | Input resistance R1–R2 [Ω] | 82 |
| Frequency (typical) [kHz] | 10.0 | | R1–R2 tolerance [%] | ± 10 |
| Input current max [mA] | 40 | | Output resistance S1–S3 or S2–S4 [Ω] | 68 |
| Transformation ratio (r_T) | 0.50 | | S1–S3 or S2–S4 tolerance [%] | ± 10 |
| Transf. ratio tolerance [%] | ± 4 | | | |
| Phase shift (ψ) min [$^\circ$] | -2 | | Z_{RO} [Ω] ($\pm 15\%$) = 133+j154 | |
| Phase shift (ψ) max [$^\circ$] | 8 | | Z_{RS} [Ω] ($\pm 15\%$) = 117+j134 | |
| Angular Error ^[1] max [$^\circ$] | ± 10 (20) | | Z_{SO} [Ω] ($\pm 15\%$) = 121+j189 | |
| Residual voltage max [mV] | 25 | | Z_{SS} [Ω] ($\pm 15\%$) = 205+j341 | |
| ^[1] Angular error spread $\Delta\phi = \phi_{el} - \phi_{mech} \cdot p$ | | Electrical data measured at room temperature (22°C). | | |
| High Voltage test | Voltage: 500V _{AC} (A) | Measured between: | | |
| | 250V _{AC} (B) | A: Winding R1–R2 and housing | | |
| | Time: 1s | Winding S1–S3 and housing Winding S2–S4 and housing | | |
| Isolation test | Voltage: 500V _{DC} (A,B) | B: Windings S1–S3 and S2–S4 | | |
| | Criterion $R_{isol} > 50M\Omega$ | | | |
| "Zero" setting | Electrical "0" is when Coils $V_{S2-S4} = 0$ and V_{S1-S3} are in phase with V_{R1-R2} | | | |
| Transfer function | Looking at transformation part and turning rotor clockwise | | | |
| | $V_{S1-S3} = +r_T \cdot V_{R1-R2} \cdot \cos(p \cdot \alpha)$ | | | |
| | $V_{S2-S4} = +r_T \cdot V_{R1-R2} \cdot \sin(p \cdot \alpha)$ | | | |
| Rotor Inertia | approx. 20g.cm ² | | | |
| Max. Rotational Speed | 20 000 rpm | | | |
| Shock resistance (11ms sine) | 1000 m/s ² | | | |
| Vibration | 200 m/s ² | | | |
| Operating temperature | -55°C...+150°C | | | |
| Permissible radial runout | 0.075 mm | | | |
| Permissible axial offset | ± 0.25 mm | | | |



- △ Total runout when installed
- △ Axial offset