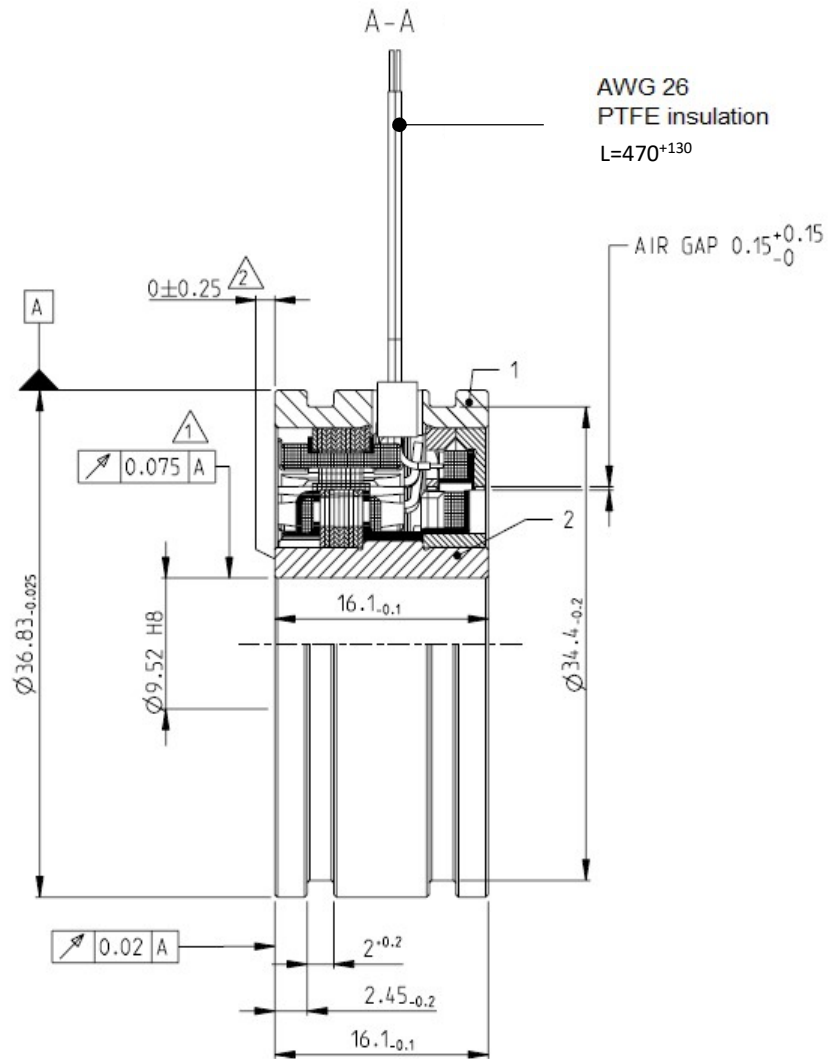




DATA SHEET - HOLLOW SHAFT RESOLVER

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