



Thursday, June 25, 2020

## DATA SHEET - HOLLOW SHAFT RESOLVER

<b>PN</b>	2358691-1			
<b>Description:</b>	V23401-	T1071-B101		
<b>Size</b>	21			
<b>Shaft inner diameter [mm]</b>	12.7			
<b>Speed (pair of poles) [p]</b>	1			
<b>Number of poles</b>	2			
<b>Application Specification</b>				
<b>Test protocol</b>	Results saved to manufacturing site archives. Available by request			
<b>Electrical parameters (22°C)</b>				
Input voltage [V]	7	Based on specified Input voltage and Frequency	Input resistance R1R2 [Ω]	80
Frequency Typical [kHz]	10		R1R2 tolerance [%]	± 10
Input current max [mA]	50		Output resistance S1S3 or S2S4 [Ω]	80
Transformation ratio (rT)	0.5		S1S3 or S2S4 tolerance [%]	± 10
Transf. ratio tolerance [%]	± 10			
Phase shift min [°]	-15			
Phase shift max [°]	5			
Electrical Angular Error max [°]	± 10			
Residual voltage max [mV]	25			
<b>High Voltage test</b>	Voltage: 500V <sub>AC</sub> (A)		Measured between: A: Winding R1-R2 and housing Winding S1-S3 and housing Winding S2-S4 and housing	
	250V <sub>AC</sub> (B)			
	Time: 1s			
<b>Isolation test</b>	Voltage: 500V <sub>DC</sub> (A, B)		B: Windings S1-S3 and S2-S4	
	Criterion:	R <sub>isol.</sub> > 50MΩ		
<b>"Zero" setting:</b>	Electrical "0" is when Coils V <sub>S2-S4</sub> = 0 and V <sub>S1-S3</sub> are in phase with V <sub>R1-R2</sub>			
<b>Transfer function</b>	Looking at Transformation part and turning Rotor clockwise			
	$V_{S1-S3} = +rT * V_{R1-R2} * \cos(p*\alpha)$			
	$V_{S2-S4} = +rT * V_{R1-R2} * \sin(p*\alpha)$			
<b>Rotor Inertia</b>	approx. 20g.cm <sup>2</sup>			
<b>Max. Rotational Speed</b>	20,000 rpm			
<b>Shock resistance (11ms sine)</b>	1000 m/s <sup>2</sup>			
<b>Vibration</b>	200 m/s <sup>2</sup>			
<b>Operating temp.</b>	-55°C...+150°C			

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