



1411006-1
Rev. C
26 April 2017

DATA SHEET - HOLLOW SHAFT RESOLVER

PN	1411006-1			
Description:	V23401		D1001-C801	
Size	15			
Shaft inner diameter [mm]	10 H7			
Speed - pair of poles - [pp]	1			
Application Spec				
Test protocol	100% EOL testing, stored. Available up on request			
Electrical parameters (at 22°C):				
Input voltage nom. [V _{rms}]	7	possible 2V...10V	DC resistance R1R2 [Ω]	48
Frequency nom. [kHz]	10	pos, 4kHz...20kHz	R1R2 tolerance [±Ω]	4,8
Input current max [mA]	40	Based on nominal Input voltage and Frequency	DC resistance S1S3 or S2S4 [Ω]	68
Transformation ratio rT [±]	0,5		S1S3 or S2S4 tolerance [±Ω]	6,8
Transf. ratio tolerance [%]	5			
Phase shift min [°]	-5			
Phase shift max [°]	5			
Angular Error [±']	10			
Residual voltage max [mV]	25			
Connect. Wire Lenght [mm]	300, AWG 26 Teflon Isolated			
High Voltage test	Voltage: 500 $V_{AC} \pm 3\%$ (A)		Measured between:	
	250 $V_{AC} \pm 3\%$ (B)		A: Winding R1-R2 and housing	
	Time: 1s		Winding S1-S3 and housing	
			Winding S2-S4 and housing	
Isolation test	Voltage: 500 $V_{DC} \pm 5\%$ (A, B)		B: Windings S1-S3 and S2-S4	
	Criterium:	$R_{isol.} > 50M\ Ohm$		
"Zero" setting:	Ele. "0" is when Winding Us2-s4 = 0 and Us1-s3 are in phase with Ur1-r2			
Transformation function	Function applies to the clockwise rotation of the rotor when looking at the (grooveless) transformer component from the top			
	$U_{S1-S3} = + rT * U_{R1-R2} * \cos(pp * \varphi)$			
	$U_{S2-S4} = + rT * U_{R1-R2} * \sin(pp * \varphi)$			
Rotor Inertia	approx. $20\ g/cm^2$			
Max. Rotational Speed	20.000 rpm			
Shock resistance (11ms sine)	1.000 m/s2			
Vibration (0 ... 2 kHz)	200 m/s2			
Operating temp.	-55°C...+150°C			

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