



## DATA SHEET - HOLLOW SHAFT RESOLVER

<b>PN</b>	3-1393048-1			
<b>Description:</b>	V23401	H9019-B901		
<b>Size</b>	21			
<b>Shaft inner diameter [mm]</b>	16 H7			
<b>Speed - pair of poles - [pp]</b>	1			
<b>Application Spec</b>				
<b>Test protocol</b>	100% EOL testing, stored. Available up on request			
<b>Electrical parameters (at 22°C):</b>				
Input voltage nom. [V <sub>rms</sub> ]	7	Based on nominal Input voltage and Frequency	DC resistance R1R2 [Ω]	21
Frequency nom. [kHz]	7		R1R2 tolerance [±Ω]	2,1
Input current max [mA]	40		DC resistance S1S3 or S2S4 [Ω]	22
Transformation ratio rT [±]	0,45		S1S3 or S2S4 tolerance [±Ω]	2,2
Transf. ratio tolerance [%]	5			
Phase shift min [°]	-9			
Phase shift max [°]	1			
Angular Error [±]	10			
Residual voltage max [mV]	25			
<b>Connect. Wire Length [mm]</b>	470, AWG 26 Teflon Isolated			
<b>High Voltage test</b>	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	
<b>Isolation test</b>	Voltage: 500	$V_{DC} \pm 5\%$ (A, B)	B: Windings S1-S3 and S2-S4	
	Criterion:	$R_{isol.} > 50M\ \Omega$		
<b>"Zero" setting:</b>	Ele. "0" is when Winding Us2-s4 = 0 and Us1-s3 are in phase with Ur1-r2			
<b>Transformation function</b>	Function applies to the clockwise rotation of the rotor when looking at the (grooveless) transformer component from the top			
	$U_{S1-S3} = +rT * U_{R1-R2} * \cos(pp * \varphi)$			
	$U_{S2-S4} = +rT * U_{R1-R2} * \sin(pp * \varphi)$			
<b>Rotor Inertia</b>	approx. $20\ g/cm^2$			
<b>Max. Rotational Speed</b>	20.000 rpm			
<b>Shock resistance (11ms sine)</b>	1.000 m/s <sup>2</sup>			
<b>Vibration (0 ... 2 kHz)</b>	200 m/s <sup>2</sup>			
<b>Operating temp.</b>	-55°C...+150°C			



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