DATA SHEET - HOLLOW SHAFT RESOLVER

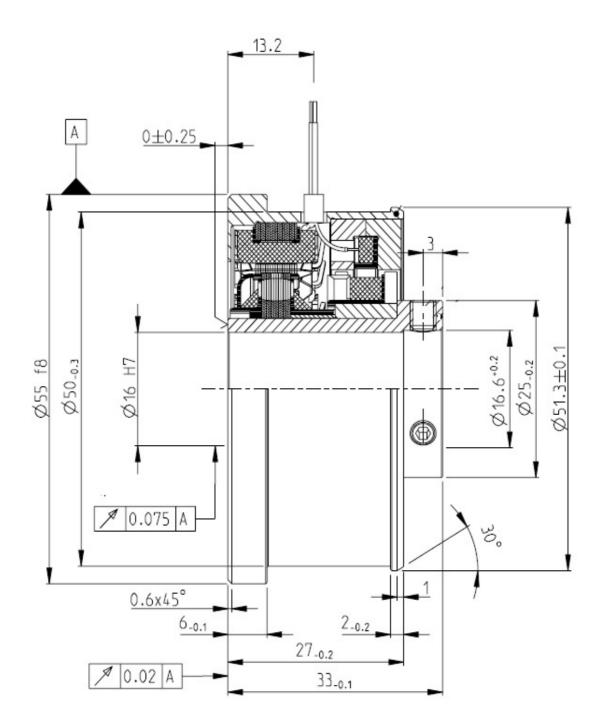| PN	3-1393048-1		
Description:	V23401	H9019-B901	
Size	21		
Shaft	B9		
Speed - pair of poles - [pp]	1		
Application Spec			
Test protocol	100% EOL testing, stored. Available up on request		
Electrical parameters (at 22°C):			
Input voltage nom. [Vrms]	7.0	DC resistance R1R2 [Ω]	21
Frequency nom. [kHz]	7.0	R1R2 tolerance [±%]	10
Input current max [mA]	40	DC resistance S1S3 or S2S4 [Ω]	22
Transformation ratio rT [±]	0.45	S1S3 or S2S4 tolerance [±%]	10
Transf. ratio tolerance [%]	5	Based on nominal Input voltage and Frequency	
Phase shift min [º]	-9		
Phase shift max [º]	1		
Angular Error max [']	20		
Residual voltage max [mV]	25		
Connect. Wire Lenght [mm]	470, 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 componment from the top	
	$U_{S1-S3} = + \mathrm{rT} * U_{R1-R2} * \cos(pp * \varphi)$	
	$U_{S2-S4} = + \mathrm{rT} * U_{R1-R2} * sin(pp * \varphi)$	
Rotor Inertia	approx. 20 g/cm^2	
Max. Rotational Speed	20.000 rpm	
Shock resistance (11ms sine)	1000 m/s2	
Vibration (0 … 2 kHz)	200 m/s2	
Operating temp.	-55°C…+150°C	

13.2

0±0.25

A

3

Ø55 f8

Ø50 -0.3

Ø16 H7

Ø16.6 +0.2

Ø25 -0.2

Ø51.3±0.1

30°

| ∕ | 0.075 | A |

| ∕ | 0.02 | A |

0.6x45°

6 -0.1

27 -0.2

33 -0.1

2 -0.2

1

DATE	REV.	DWN	APP	LTR
2015-06-25	B	P. Lerchenfeld	D. Ondrej	1