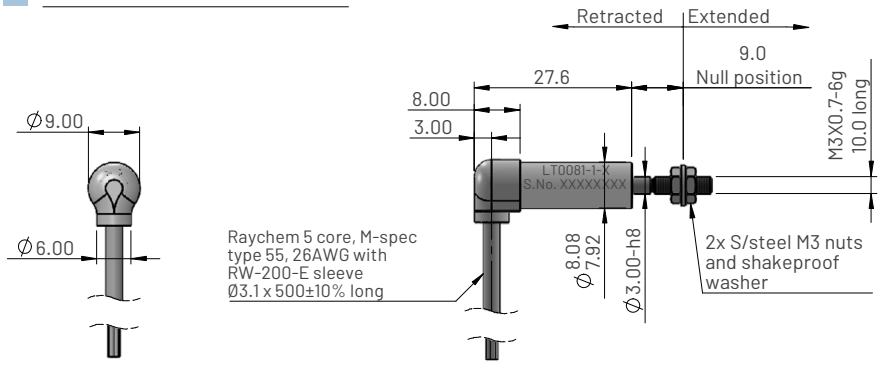
LT0801 Series - LVDT position sensor (1mm to 4mm measurement range)

Ø8mm Ultra-slim, ultra-compact. Clamp mounting.

Dimensions for LT0801-1-X



Ordering code

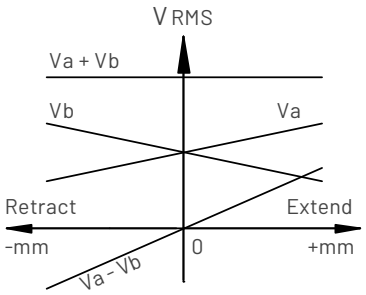
LT0801-1-X

Measurement range in mm

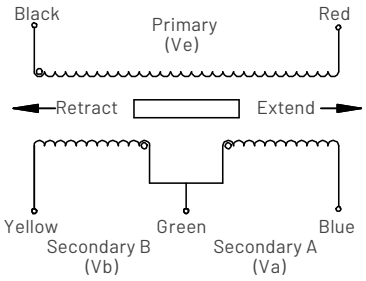
Electrical and mechanical specification

Parameters	Values			Units	Tol	Notes
Measurement range (MR)	1	2	4	mm		
Electrical stroke	±0.5	±1.0	±2.0	mm		
Mechanical stroke	±3.0			mm	Max	
Body length	27.6			mm	±0.5	
Null position	9.0			mm	±1.0	
Input voltage (Ve)	3.0			Vrms	±5%	1
Input frequency	10000			Hz	±5%	
Non-linearity	<±0.5			% FS		3, 6
Ratiometric sensitivity	0.103			R/mm	±3%	2, 3
Va and Vb voltage range	1.55 - 1.72	1.47 - 1.80	1.30 - 1.97	Vrms	Nom	4, 5
(Va + Vb)/Ve Summation ratio	1.09			Vrms/Ve	±20%	
Thermal drift	<±0.010			%FS/°C		6, 7
Input impedence	>120			Ohms		
Insulation resistance	>100			Mohms		8
Operating temperature range	-55 to +180			°C		
IP rating	IP67					
Weight (excluding cable)	12			grams	Nom	
Materials	Housing - Stainless steel 416, Shaft - Stainless steel 316					

LVDT AC Output schematic



Electrical connections



Notes

1. Sine waveform. THD <3%.
2. Ratiometric measurement mode (R) is defined as (Va-Vb)/(Va+Vb).
3. Non-linearity error and ratiometric sensitivity is calculated by least squares best fit method.
4. Va and Vb are ratiometric with Ve.
5. Blue (Va) increases and Yellow (Vb) decreases as shaft extends (as shown in Output schematic).
6. FS is defined as ratiometric sensitivity x measurement range (MR).
7. Average thermal drift over operating temperature range.
8. Between prim and sec coils and all coils to case at 500Vdc.

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