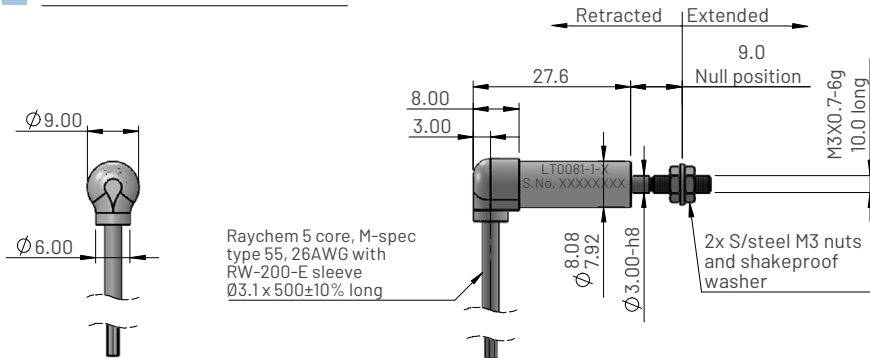


# LT0801 Series - LVDT position sensor (1mm to 4mm measurement range)

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

## Dimensions for LT0801-1-X



## Ordering code

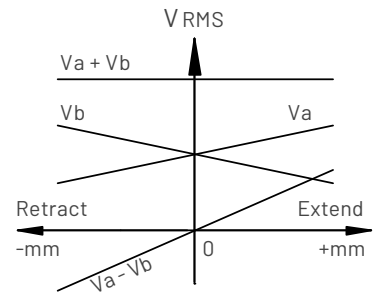
LT0801-1-X

Measurement range in mm

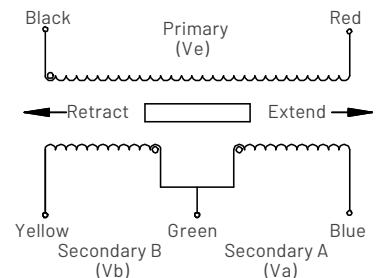
## Electrical and mechanical specification

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 impedance	>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



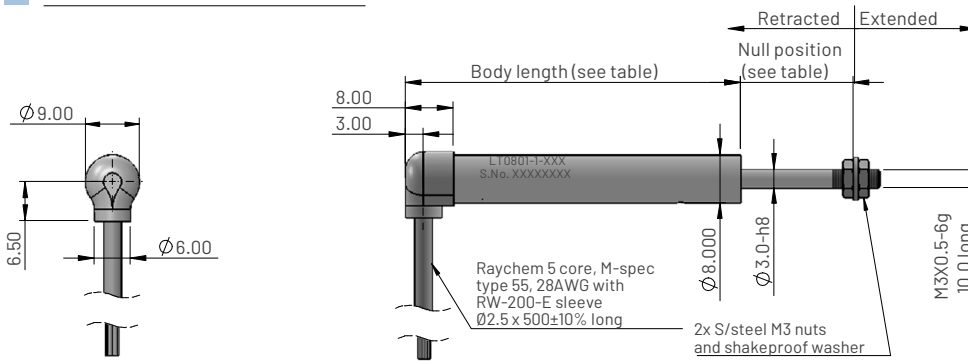
## Notes

1. Sine waveform. THD <3%.
2. Ratiometric measurement mode (R) is defined as  $(V_a - V_b)/(V_a + V_b)$ .
3. Non-linearity error and ratiometric sensitivity is calculated by least squares best fit method.
4.  $V_a$  and  $V_b$  are ratiometric with  $V_e$ .
5. Blue ( $V_a$ ) increases and Yellow ( $V_b$ ) 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.

# LT0801 Series - LVDT position sensor (10mm to 40mm measurement range)

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

## Dimensions for LT0801-1-XX



## Ordering code

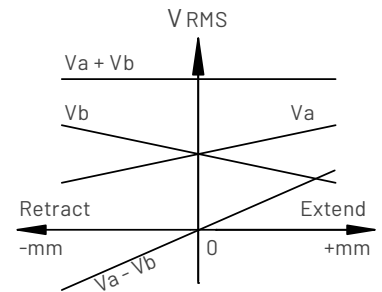
LT0801-1-XX

Measurement range in mm

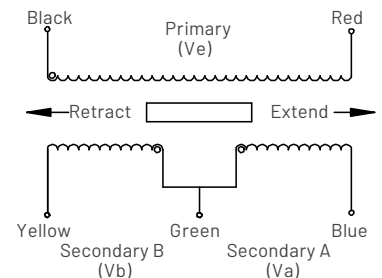
## Electrical and mechanical specification

Parameters	Values				Units	Tol	Notes
Measurement range (MR)	10	20	25	40	mm		
Electrical stroke	±5.0	±10.0	±12.5	±20.0	mm		
Mechanical stroke	±6.0	±11.0	±13.5	±21.0	mm	Max	
Body length	37.7	51.0	55.9	69.5	mm	±0.5	
Null position	11.0	16.0	19.0	26.0	mm	±1.0	
Input voltage (Ve)	3.0				Vrms	±5%	1
Input frequency	2500				Hz	±5%	
Non-linearity	<±0.5				% FS		3, 6
Ratiometric sensitivity	0.0571	0.0530	0.0324	0.0201	R/mm	±3%	2, 3
Va and Vb voltage range	0.562 - 1.010	0.394 - 1.283	0.679 - 1.604	0.658 - 1.544	Vrms	Nom	4, 5
(Va + Vb)/Ve Summation ratio	0.524	0.559	0.761	0.734	Vrms/Ve	±20%	
Thermal drift	<±0.010				%FS/°C		6, 7
Input impedance	>150				Ohms		
Insulation resistance	>100				Mohms		8
Operating temperature range	-55 to +135				°C		
IP rating	IP67						
Weight (excluding cable)	28	36	40	48	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  $(V_a - V_b)/(V_a + V_b)$ .
3. Non-linearity error and ratiometric sensitivity is calculated by least squares best fit method.
4.  $V_a$  and  $V_b$  are ratiometric with  $V_e$ .
5. Blue ( $V_a$ ) increases and Yellow ( $V_b$ ) 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.