

# Data Sheet for Linear Sensors

## Inductive Linear Transducer

## Series EVTB



- Robust miniature design with attractive price
- Measuring strokes for  $\pm 1$ ,  $\pm 2.5$  and  $\pm 5$  mm
- In 2 designs as probe or loose core ("L" version)e
- Up to  $\pm 0.1\%$  linearity
- On request increased temperature range up to  $600^\circ\text{C}$

The inductive displacement sensors of the EVTB series are versions with an attractive price level and available with loose core or as probe with spring return.

Electrical Data	EVTB / EVTBL		
	1	2	5
Effective electrical travel	$\pm 1$ (2) mm	$\pm 2,5$ (5) mm	$\pm 5$ (10) mm
Independent linearity (best straight line) 1.)	$\pm 0,5\%$ ( $\pm 0,25\%$ / $\pm 0,1\%$ )		
Sensitivity <b>EVTB</b> (probe IP64)	150 mV/V/mm	375 mV/V/mm	700 mV/V/mm
Sensitivity <b>EVTBL</b> (lose core IP64)	--	375 mV/V/mm	700 mV/V/mm
Theoretical resolution 1.)	Almost infinite		
Backlash (Hysteresis) 1.)	< 0,01 mm		
Supply voltage	nom. 5 V rms, 5 kHz (0,5..7 V rms, 2..10 kHz )		
Output load	100 kOhm		
Temperature coefficient	$\pm 0,01$ % F.S./ $^\circ\text{C}$		

Mechanical and Environment Data	EVTB / EVTBL		
	1	2	5
Mechanical stroke (mm) 1.)	See drawing		
Lifetime (90% effective electrical travel) 2.)	Almost infinite		
Operational force @ RT 1.) 2.) <b>EVTB</b>	0,4 N @13 mm	0,9 N @12 mm	0,9 N @12 mm
Spring rate	1,2N/cm	0,9N/cm	0,8N/cm
Operational temperature	$-20..+125^\circ\text{C}$ (higher temperature range on request)		
Storage temperature	$-20..+125^\circ\text{C}$		
Protection grade (IEC60529)	IP64		
Housing length <b>EVTB</b>	52 mm	61 mm	78 mm
Housing length <b>EVTBL</b>	--	43 mm	56 mm
Mass ca. <b>EVTB</b>	12 gram	25 gram	30 gram
Mass ca. <b>EVTBL</b>	--	17 gram	21 gram
Included in delivery	Probe or nut M3 x 0,5 or loose push rod		
Material housing	Steel nickel plated		
Material push rod	Stainless steel (Mu metal)		
Electrical connection	Round cable 2 m		

1.) According IEC 60393

2.) Determined by climatic conditions according to IEC 68-1, para. 5.3.1 without load collectives

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## Order Code

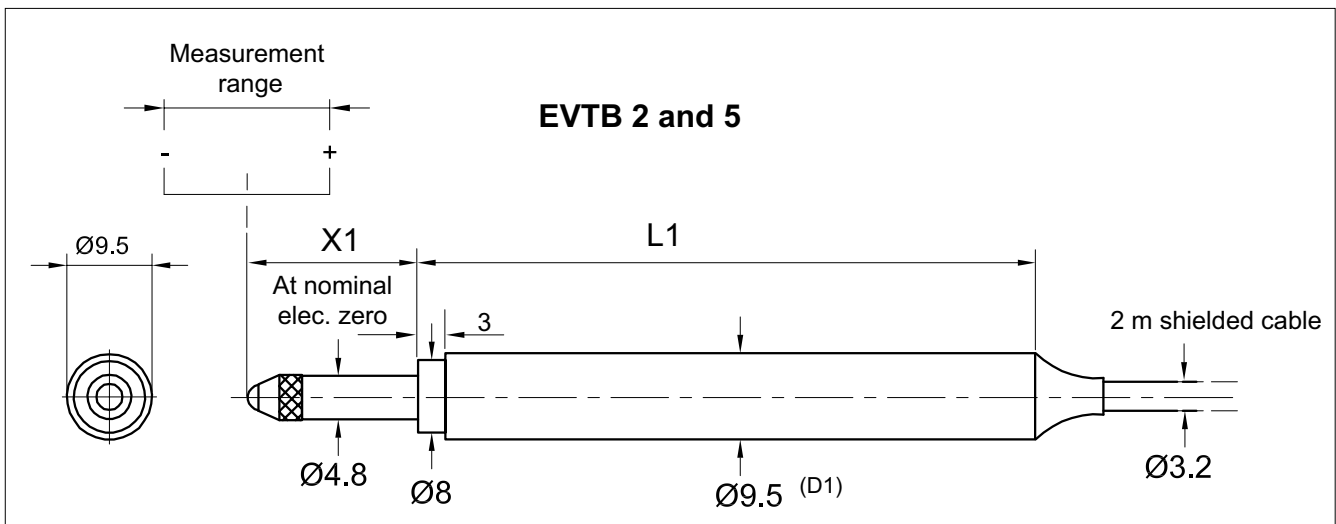
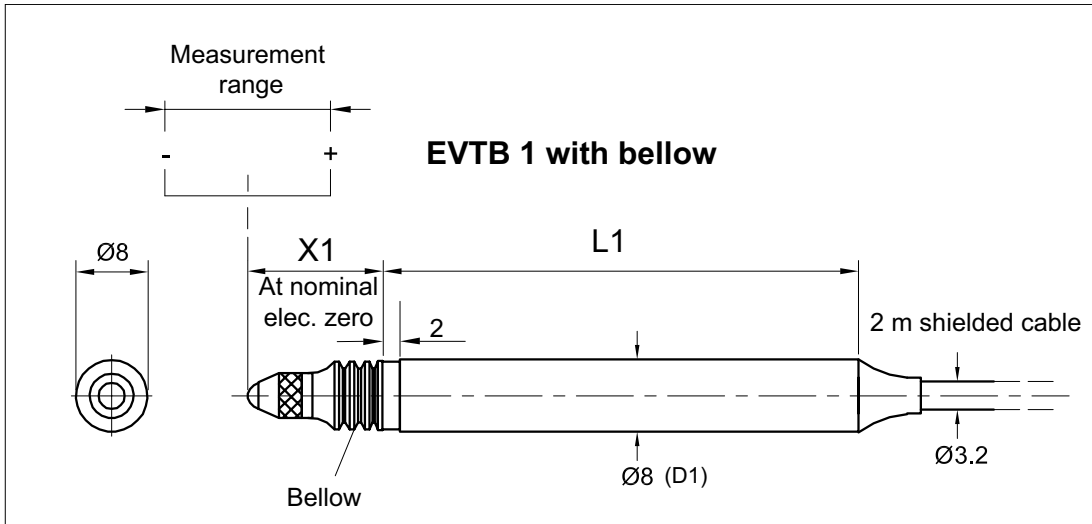
Description	Selection: standard=black/bold, possible options=grey/cursive			
<b>Series:</b> Probe with spring return Loose core	<b>EVTB</b> EVTBL			
<b>Effective electrical travel:</b> ±1 mm (not for EVTBL) ±2,5 mm ±5 mm		<b>1</b> <b>2</b> <b>5</b>		
<b>Independent linearity:</b> Standard ±0,5 % Option ±0,25 Option ±0,1			- L0,25% L0,1%	
<b>Electrical connection:</b> Cable 2 m Option cable length in m (max. 7 m)				- Kxx

### For higher quantities or on-going demand, additional options are available as described below on request

For example:

- EVTB in the probe lengths ±0,25 mm and ±0,5 mm
- Cable assemblies with and without connector, versions with radial cable, cables up to 1000 m
- Extended temperature range up to 350°C for probe versions or up to 600°C for loose core versions
- Special probe, special axis length and much mores

### Drawing



Dimensions	1	2	5
L1 housing length <b>EVTB</b> [mm]	52	61	78
D1 housing <b>EVTB</b> Ø [mm]	8	9,5	9,5
Effective electrical travel middle position [mm]	±1	±2,5	±5
X1 middle position <b>EVTB</b> [mm]	13	12	12
<b>EVTB</b> inward over travel [mm]	1,8	1,3	1,1
<b>EVTB</b> outward over travel [mm]	0,8	1,3	1,4

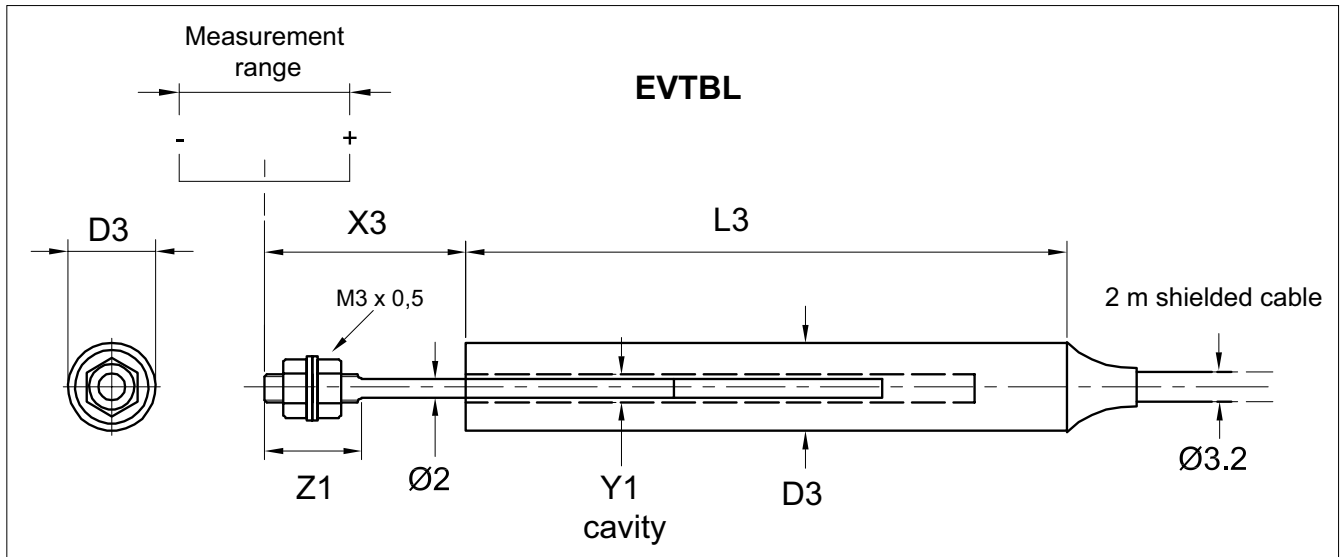
Dimensions in mm

# Data Sheet for Linear Sensors

Inductive Linear Transducer

Series EVTBL

## Drawing



Dimensions	2	5
L3 housing length <b>EVTBL</b> [mm]	43	56
D3 housing <b>EVTBL</b> Ø [mm]	9,5	9,5
Z1 thread <b>EVTBL</b> [mm]	15	18
Y1 cavity Ø <b>EVTBL</b> [mm]	2,9	2,9
<b>EVTBL</b> effective elec. travel middle position [mm]	±2,5	±5
X3 middle position <b>EVTBL</b> [±1 mm]	19	25
<b>EVTBL</b> inward over travel [mm]	1,5	2,0

Dimensions in mm

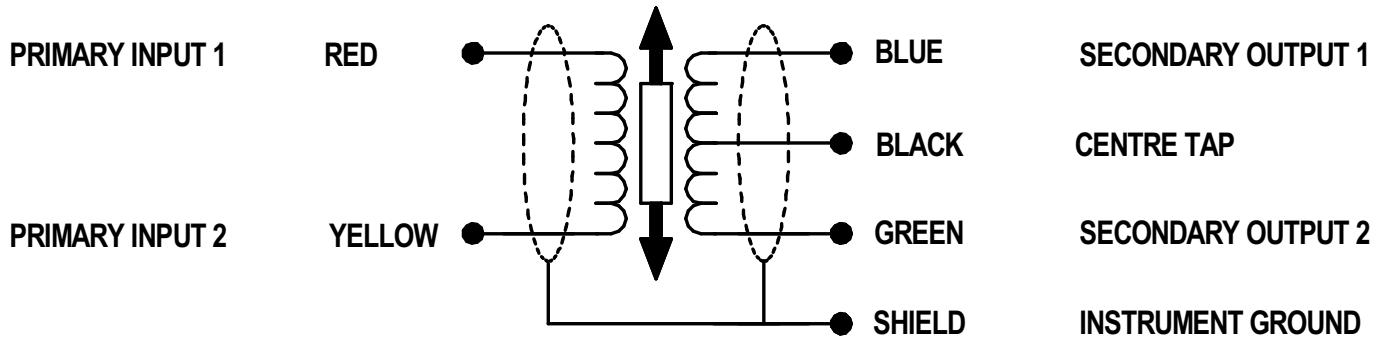
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## Electrical connection

### CONNECTION DETAILS



**NOTE :** If not used the BLACK wire should be insulated from any other wires or connections including the cable shield.