

APPLICATIONS

- Measurement of linear displacements
- Displacement of cylinders
- Presses, injection-moulding machines



DESCRIPTION

LT-range sensors are designed to measure linear displacements from 0-50 mm to 900 mm.

Different measurement ranges are available, with a linearity ranging from 0.1% to 0.05%

- They include a potentiometric plastic track.
- Separate linearity up to 0.05%
- Infinite resolution.
- Repeatability : 0,01 mm.
- Displacement speed up to 5 m/s (optional : 10 m/s).
- Lifespan > 100x10⁶ operations.

TECHNICAL FEATURES

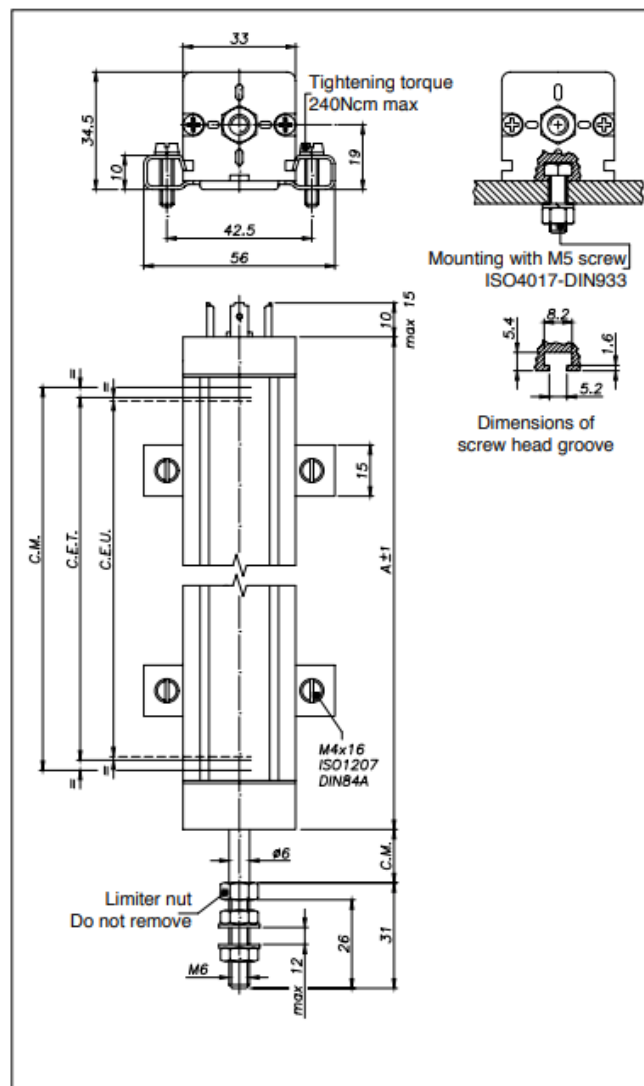
Useful electrical stroke (C.E.U.)	50/75/100/130/150/175/200/225/275/300/ 350/375/400/450/500/600/650/750/900
Independent linearity (within C.E.U.)	± 0,05%
Resolution	Infinte
Repeatability	0,01 mm
Electrical connections	LTM 4pole connector DIN43650 LTH 3-pole connector LTB 5-pole connector DIN43322 1 meter LTF 3-pole shielded cable
Displacement speed	standard ≤ 10 m/s
Protective level	IP60 (IP65 on request)
Life	> 25x10 ⁶ m strokes or > 100x10 ⁶ maneuvers, which ever is less (within C.E.U.)
Displacement force	3,5N (typical) IP60 version 15N (typical) IP65 version
Vibrations	5...2000Hz, Amax =0,75 mm amax. = 20 g
Shock	50 g, 11ms.
Acceleration	200 m/s ² max (20g)
Tolerance on resistance	± 20%
Recommended cursor current	< 0,1 µA
Maximum cursor current	10mA
Maximum application voltage	60V
Electrical isolation	>100MΩ à 500V=, 1bar, 2s
Dielectric strength	< 100µA à 500V~, 50Hz, 2s, 1bar
Dissipation at 40°C (0W to 120°C)	3W
Thermal coefficient of resistance	-200...+ 200 ppm/°C typical
Actual Temperature Coefficient of the output voltage	≤ 5 ppm/°C typical
Working temperature	-30...+100°C
Storage temperature	-50...+120°C
Material for transducer case	Anodised Aluminuim Nylon 66 G
Material for pull shaft	Stainless steel AISI 303
Mounting	Brackets with adjustable distance between centers or with M5 screw ISO4017-DIN933

Important: all the data reported in the catalogue linearity, lifetime, temperature coefficient are valid for a sensor utilization as a ratiometric device with a max current across the cursor $I_c \leq 0.1$ mA

ELECTRICAL MECHANICAL DATA

MODEL		50	75	100	130	150	175	200	225	275	300	350	375	400	450	500	600	650	750	900	
Useful electric stroke (C.E.U.) +3/-0	mm	50	75	100	130	150	175	200	225	275	300	350	375	400	450	500	600	650	750	900	
Theoretical electrical stroke (C.E.T.) ±1	mm	C.E.U. +3						C.E.U. +4					355	380	406	457	508	609	660	762	714
Resistance (C.E.T.)	kΩ	5						5					5	5	5	5	5	5	5	10	10
Mechanical stroke (C.M.)	mm	C.E.U. +9						C.E.U. +10					361	386	412	463	518	619	670	772	924
Case length (A)	mm	C.E.U. +63						C.E.U. +64					415	440	466	517	572	673	725	826	978

MECHANICAL DIMENSIONS



OPTIONS

STANDARD	Code
LT mounting kit, 2 brackets, screws	PKIT009
ON REQUEST	Code
LTM 4-pole 90° radial female connector DIN43650 IP65 PG9 clamp for ø6-ø8mm cable	CON006
LTH 3-pole axial female connector IP40 clamp for ø4-ø6mm cable	CON002
LTB 5-pole axial female connector DIN43322 IP40 clamp for ø4-ø6mm cable	CON011
LTB 5-pole axial female connector DIN43322IP65 PG7 clamp for ø4-ø6mm cable	CON012
LTB 5-pole 90° radial female connector DIN43322 IP40 clamp for ø4-ø6mm cable	CON013
Ball connection joint	PKIT015

SPHEREL Systèmes reserves the right to make any kind of design or functional modification at any moment without prior notice.