

**139 L****REC**

precision linear transducer

– conductive plastic

The 139 L is a robust industrial linear motion transducer with a side actuation, ideally suited for applications with very long travels.

- MEASUREMENT RANGE 25 mm to 3000 mm
- LONG LIFE
- HIGH ACCURACY $\pm 1\%$ down to $\pm 0,025\%$
- EXCELLENT REPEATABILITY
- ESSENTIALLY INFINITE RESOLUTION
- SIMPLE MOUNTING
- ACTUATION TOLERANT TO SOME MISALIGNMENT
- REDUCED BULK

**ELECTRICAL SPECIFICATIONS**

Theoretical electrical travel (TET = E)	from 25 mm to 3000 mm in increments of 25 mm on request up to 6000 mm
Independent linearity (over TET)	$\leq \pm 1\%$ - $\leq \pm 0,1\%$ on request $\leq \pm 0,05\%$ for $E \geq 100$ mm $\leq \pm 0,025\%$ for $E \geq 200$ mm
Actual electrical travel (AET)	AET = E + 1,5 mm min.
Ohmic value (R_T)	400 Ω /cm to 2 k Ω /cm
Resistance tolerance at 20°C	$\pm 20\%$
Repeatability	$\leq 0,01\%$
Maximum power rating	0,04 W/cm at 70°C 0 W at 125°C
Wiper current	recommended : a few μ A 1 mA max. continuous
Load resistance	minimum $10^3 \times R_T$
Insulation resistance	$\geq 1000 M\Omega$ 500 VDC
Dielectric strength	≥ 1000 V RMS 50 Hz

MECHANICAL SPECIFICATIONS

Mechanical travel (MT)	MT = E + 7 mm min.
Housing	anodized aluminium
Operating force	2,5 N typical
Coupling	self alignment
Termination	hydraulic type connector DIN 43650
Wiper	precious metal multifinger
Sealed to	IP53
Mounting	movable brackets

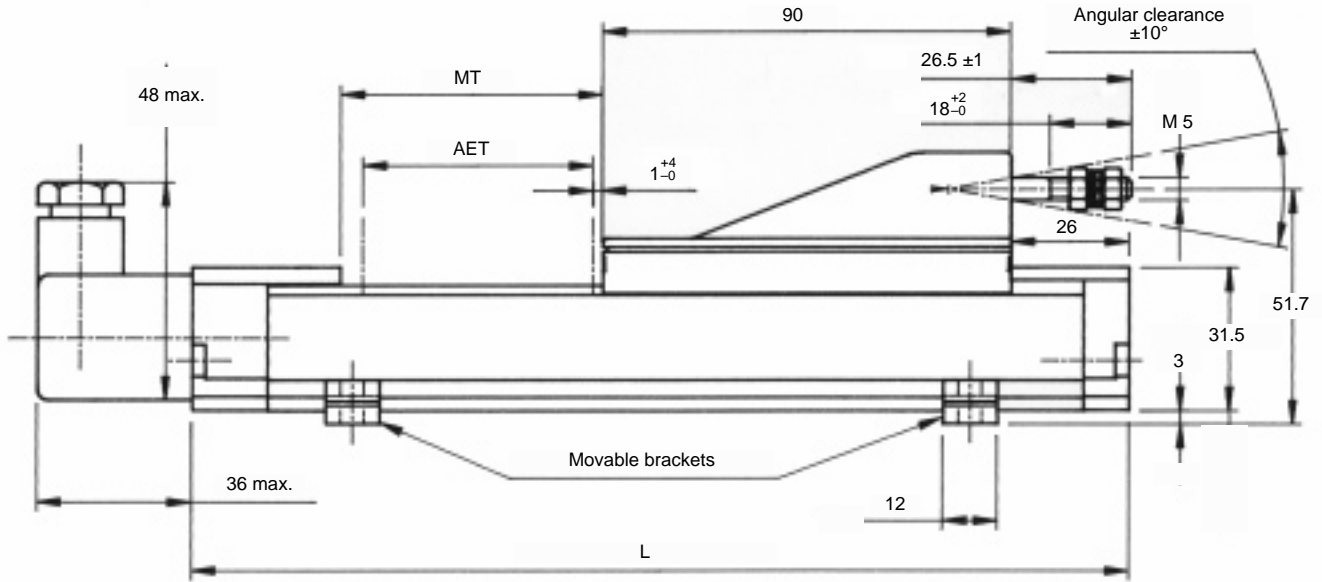
PERFORMANCES

Operating life	100 millions cycles typical
Temperature range	-55°C +125°C
Sine vibration on 3 axes	1,5 mm peak to peak or 15 g - 10 Hz - 2000 Hz
Mechanical shocks on 3 axes	50 g - 11 ms - half sine
Speed (m/s)	10 max.

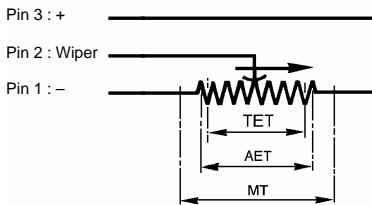
ORDERING PROCEDURE

SERIES	MODEL	NUMBER OF TRACKS	THEORETICAL ELECTRICAL TRAVEL	LINEARITY	OHMIC VALUE	MODIFICATIONS
REC	139	L L = 1	43 Times 25 mm	D A : $\pm 1\%$ D : $\pm 0,1\%$ E : $\pm 0,05\%$ F : $\pm 0,025\%$	103 First 2 digits are significant numbers 3rd digit indicates number of zeros	W... Special feature code number

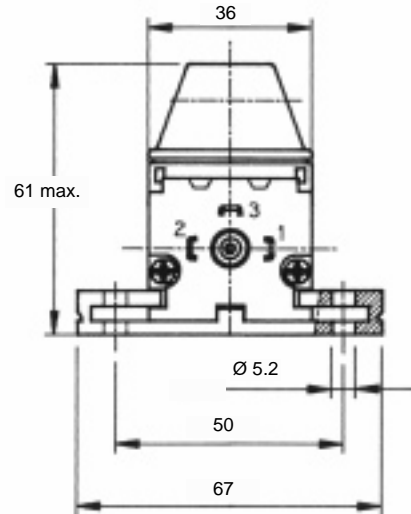
139 L



ELECTRICAL CONNECTIONS



TET = Theoretical electrical travel
 AET = Actual electrical travel
 MT = Mechanical travel



General tolerance ± 1 mm
 Dimensions in mm

Table 1

SIZE	AET	MT	L
L1A L20	E +1,5 min.	E + 7 min.	E +158 max.
L 21A L40	E +1,5 min.	E +11 min.	E +163 max.
L41A L120	E + 1,5 min.	E +15 min.	E +169 max.



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