

## Precision Linear Transducers, Conductive Plastic, up to 300 mm



The 50 L is a compact, accurate and adaptable motion transducer for both industrial and military markets.

### QUICK REFERENCE DATA

传感器类型	直线位移, 导电塑料技术
信号输出	导线 Wires
应用市场	Professional 专业级, 工业和军工
尺寸	L x $\phi$ 12.7 mm (长度 L = TET + 41 mm)

### 特性 FEATURES

- 测量范围: 25 mm ~ 300 mm
- 高线性精度:  $\pm 1\%$  ~  $\pm 0.025\%$
- 理论上无限分辨率
- 长使用寿命
- 可要求防护密封等级 Sealed on request
- 材料分类认证: 认证规格定义和体系, 产品标签说明 (compliance) 详见 [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



### 电气参数 ELECTRICAL SPECIFICATIONS

测量电气行程 (TET = E)	25 mm ~ 300 mm 每 25mm 递增
独立线性精度 (在 TET 范围内) 可客户定制 on request	$\leq \pm 1\%$ - $\leq \pm 0.1\%$ $\leq \pm 0.05\%$ 对于 $E \geq 100$ mm $\leq \pm 0.025\%$ 对于 $E \geq 200$ mm
实际电气行程 (AET)	$AET = E + 1 \text{ mm} \pm 0.5 \text{ mm}$
电阻阻值 Ohmic values ( $R_T$ )	400 $\Omega$ /cm ~ 2 k $\Omega$ /cm
R阻值误差 (在 20 °C 环境下)	$\pm 20\%$
重复精度 Repeatability	$\leq 0.01\%$
最大额定功率 Maximum power rating	0.05 W/cm at 70 °C, 0 W at 125 °C
电刷电流 Wiper current	推荐: $\mu\text{A}$ - 1 mA 最大. (持续电流) A: 安倍
负载电阻 Load resistance	Minimum 最小 $10^3 \times R_T$
电阻轨迹数 Number of tracks	1 个轨迹; 可定制 2 个轨迹 on request 2
绝缘电阻 Insulation resistance	$\geq 1000 \text{ M}\Omega$ , 500 V <sub>DC</sub>
介质强度 Dielectric strength	$\geq 500 \text{ V}_{\text{RMS}}$ , 50 Hz

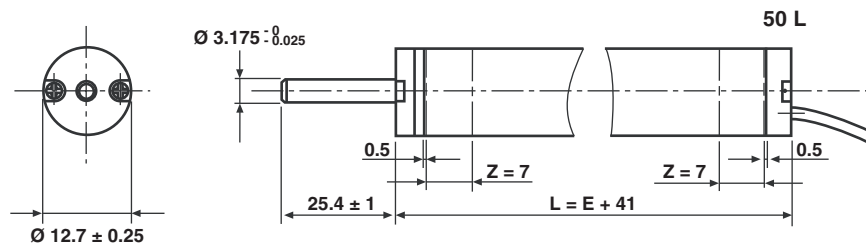
### 机械参数 MECHANICAL SPECIFICATIONS

机械行程 Mechanical travel	TET + 2 mm min.
外壳材料 Housing	氧化铝 Anodized aluminum
移动工作力 Operating force 可客户定制 on request	0.35 N typical, 通常 0.35 牛顿 (标准型 standard model) 2.50 N typical 通常 2.5 牛顿 (密封要求的 sealed model)
移动拉杆 Shaft (360° 自由旋转)	不锈钢 Stainless steel
信号输出方式 Termination 可客户定制 on request	3 线 PTFE 导线, 线标号 AWG-30, 线长度 L = 300 mm 线缆和电气插头 cable or connector
电刷 Wiper	精密金属多触头 Precious metal multifinger
防护等级 Sealing	IP65 可根据客户要求定制 on request

### 环境参数 PERFORMANCE

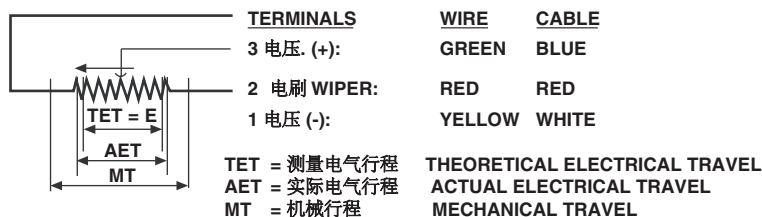
使用寿命 Operating life	25 百万次往复周期 cycles typical / 在 1 Hz/T° = 20 °C $\pm$ 5 °C/80 % TET
温度范围 Temperature range	- 55 °C ~ + 125 °C
三维正弦振动 Sine vibration on 3 axes	1.5 mm 峰值~峰值 (peak to peak) 或 15 g - 10 Hz - 2000 Hz
三维机械震动 shocks on 3 axes	50 g - 11 ms - half sine 半正弦

## 标准型 尺寸 公制 mm± 1 mm STANDARD MODEL DIMENSIONS in millimeters, general tolerance ± 1 mm



Z = TIGHTENING ZONE  
安装区域

## 电气接头连接 ELECTRICAL CONNECTIONS

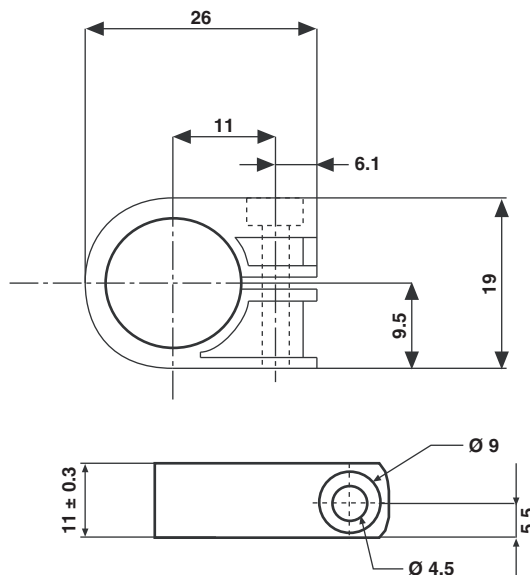


## 安装附件 ACCESSORIES ON REQUEST - DIMENSIONS in millimeters, general tolerance ± 3 mm

Clamp for 50L

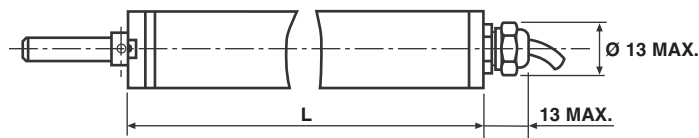
Vishay Reference: CQ00050

Vishay订购参考号: CQ00050



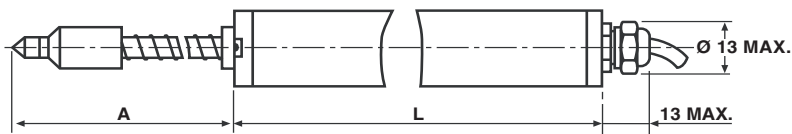
## 可选项 OPTIONS - DIMENSIONS in millimeters

### OPTION 1: SEALED (防护等级 IP65): 后缀代码 W03242



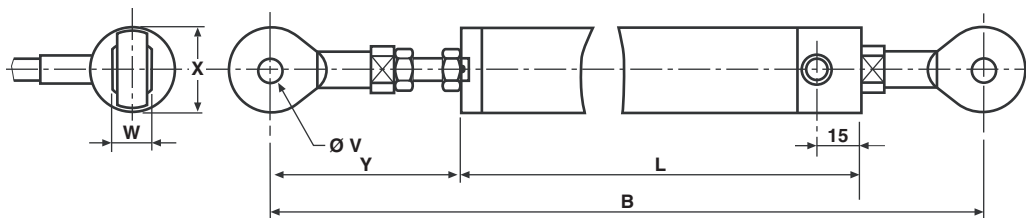
MODEL	CODE	L
50 L ...	W03242	TET + 70.5

### OPTION 2: 弹簧自复位; 屏蔽线缆信号输出 BY SHIELDED CABLE: 后缀代码 W01743



MODEL	CODE	A	L
50 L1	W01743	70	TET + 97.8
50 L2	W01743	116	
50 L3	W01743	162	
50 L4	W01743	208	

### OPTION 3: DOUBLE BALL JOINT 双向万节连结: 后缀代码 W01565



MODEL CODE	B	L	Ø V	W	X	Y	TET
50 L W01565 L1 to L3	TET + 108.5	TET + 57.5	3	6	12	30 ± 2	25 to 75
L4 to L6	TET + 133.5	TET + 82.5	3	6	12	30 ± 2	100 to 150

## 订购型号说明 ORDERING INFORMATION/DESCRIPTION

REC	50	L	3	D	103	W...	e1
SERIES 系列	MODEL	电阻轨迹数 TRACKS Number	测量电气行程 (TET)	线性精度 LINEARITY	电阻阻值 OHMIC VALUE	后缀代码 MODIFICATIONS	LEAD FINISH
		L = 1 track LL = 2 tracks	25mm倍数, 比如: 3 x 25 = 75mm	A: ± 1 % D: ± 0.1 % E: ± 0.05 % F: ± 0.025 %	前二位有效数, 第三位是添加"0"的个数。比如: 103 = 10 000 Ω	Special feature code number 特别特性代码	Sn Ag Cu

## SAP 订购型号 (系列不同, 其余同上) SAP PART NUMBERING GUIDELINES

RE	50 L	3	D	103	W....
SERIES 系列	MODEL	TET	LINEARITY	OHMIC VALUE	SPECIAL FEATURES



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