Linear potentiometer

VLP1500 Series Current Output

The **VLP1522** current output series is a general purpose, 2-wire linear potentiometer designed with a single conductive track, which provides a 4 to 20mA output signal.

Constructed from a robust Ø15.0mm aluminium case, they are assembled with a Ø6.0mm stainless steel shaft to provide a strong, robust sensor with exceptional repeatability and linearity.

Available in measurement ranges between 25mm to 350mm (1” to 14”), this sensor is supplied with aluminium rod ends, which are fitted with steel balls for self-alignment, during operation.

Specified for industrial motion control and measurement systems, they operate from an unregulated 12 to 40VDC supply. They are rated to a maximum temperature of 105°C (221°F) and are environmentally protected against the ingress of dust and water to IP66.

For total system integrity, these sensors are fitted with fire and chemical resistant 2 core 22AWG signal cabling, which is available in a choice of different cable lengths up to 9m.

Key features and benefits

- 2 wire, 4 to 20mA output
- Measurement ranges 25 mm up to 350mm (1” to 14”)
- Low noise output signal
- Superior non-linearity <± 0.50 %FS
- Robust Ø15.0mm aluminium case with Ø6.0mm stainless steel shaft
- Fitted with Ø5.0mm rod ends
- Maximum operating temperature 105°C (221°F)
- Sealed to IP66
- 2 core 22AWG MIL-C-24640 DEF-STD 61-12 cabling
- Custom designs available on request

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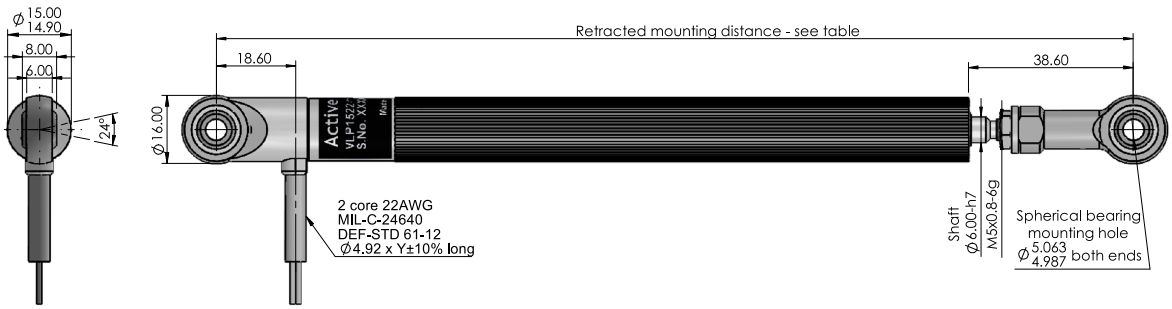
VLP1522 – Rod end mounting



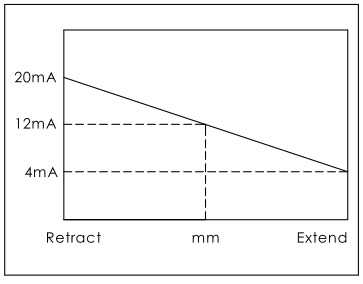
Ordering information: **VLP1522-11-XXX-Y-RA1**

- Measurement range (mm)
- Output signal A1 - 4-20mA
- Output increasing R = retracted
- Cable length 0 to 9 0 - 0.5m, 1 - 1m,....9 - 9m

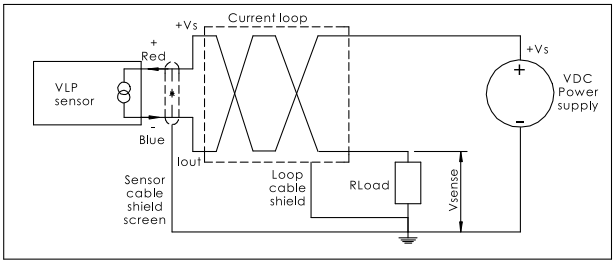
Specification																
Mechanical specification																
Mechanical range	25	50	75	100	125	150	175	200	225	250	275	300	325	350	mm
Retracted Mounting Distance (Dim A)	165	190	215	240	265	290	315	340	365	390	415	440	465	490	mm
Sensor weight (excluding cable)	86	96	106	116	126	136	146	156	166	176	186	196	206	216	grams
Materials	Case - Anodised aluminium alloy 6063-T5, Shaft - Stainless Steel 303,														
Performance specification															
Non-linearity (see note 2)	<±0.5														%FS
Resolution	Infinite														
Thermal drift	±0.01 TBD														%FS/°C
Electrical specification															
Input voltage (+Vs)	12 to 40														VDC
Line regulation (see note 6)	<0.002														%FS/V
Reverse polarity (max) (+Vs)	-60														VDC
Output current (Iout) (see graph)	2 wire 4-20														mA
Sensitivity <±2% (see note 2)	0.640	0.320	0.213	0.160	0.128	0.107	0.091	0.080	0.071	0.064	0.058	0.053	0.049	0.046	mA/mm
Loop resistance (max) (see note 7)	(+Vs-8V)/0.02A														ohms
Output noise and ripple	<0.05														%FS RMS
Electrical connections	2 core x 22AWG (screened) Zerohal jacket														
Cable length (max) (see note 8)	0.5 to 9.0														m
Environmental specification															
Operation temperature	-30 to +105														°C
Shaft velocity	<1000														mm/sec
Environmental	IP66														

Notes:
1. Incorrect wiring may cause internal damage.
2. Non-linearity error and sensitivity is calculated from least squares best fit method
3. Average thermal drift over operating temperature range
4. Nominal bandwidth (-3dB) with a 1st order (-20dB/decade) roll-off.
5. Within 20 seconds of power on condition and over 30 minutes period. (Whilst delta temperature sensor <2°C.)
6. When +Vs = +12VDC to +30VDC.
7. Includes all wiring resistance and RLoad resistance.
8. Includes all wiring between sensor and RLoad.
9. General dimension tolerance is ±0.25mm

VLP mA output schematic



Electrical connections - (see note 1)



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