Active sensors

Proud to be part of *the* team

DC/DC LVDT sensors

XLT1320 compact long life range

- Measurement range: 25mm (1”) to 200mm (8”)
- Robust 12.7mm Ø housing/4.0mm Ø shaft
- Choice of mounting
- Contactless technology
- Integral or separate signal conditioning
- Superior temperature performance

The XLT1321 and XLT1325 is a compact, long life, high temperature linear position sensor with integral electronics. It is housed in a slim 12.70mm Ø stainless steel body and has fully encapsulated, sealed internal electronics and electrical connections. The sensor is manufactured to quality standards required for high performance, high cyclic control and measurement systems. With a measurement range from 25mm to 200mm, the sensor operates from 6 to 30Vdc unregulated supply with a low noise analogue output of 0.5V to 4.5Vdc. The XLT’s precision wound inductive coils enable an improved temperature performance (low thermal drift, typically <±0.005%FS/°C), compared to other similar inductive products. Also available in the XLT1328 sensor which is designed for high temperature applications and has separate signal conditioning.

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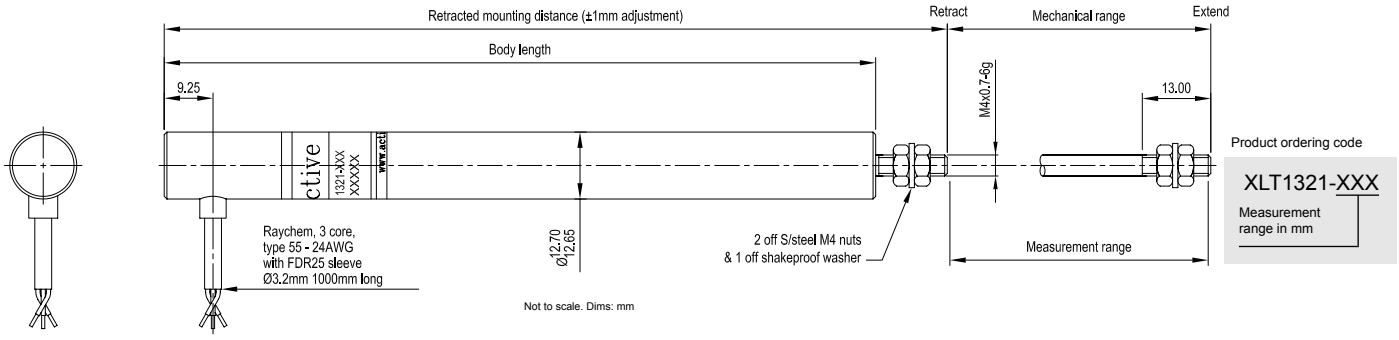
Model dimensions and mounting

XLT1321 - body clamp mount

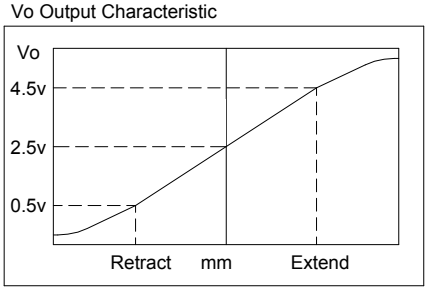


Electrical & mechanical information for XLT1321 range

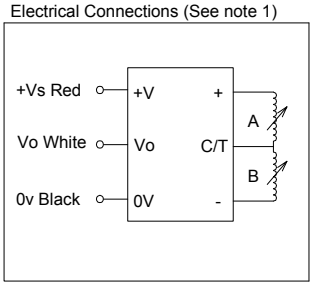
Measurement range	25	50	75	100	150	200	mm
Retracted mounting distance	124	149	174	199	249	299	mm
Body length	110	135	160	185	235	285	mm
Input voltage (+Vs)	+6 to +30						Volts DC
Supply current	<10						mA dc
Output voltage (Vo)	0.50 to 4.50						Volts DC
Non-linearity	<±0.30						%
Thermal drift	<±0.01%						FS/°C
Output load	>150						ohms
Output noise and ripple	0.1%						FS (pk-pk)
Frequency response (-3dB)	250 (Nom)						Hz
Mechanical range	Measurement range +1						mm
Shaft velocity	<1000						mm/sec
Operating temp. range	-40° to +125°						°C
Sealing	IP66						
Shaft operating force	<100 (typical)						grams
Weight (approx.)	71	83	105	108	141	166	grams
Material	Case - Stainless Steel 410 Shaft - Stainless Steel 303						

Note 1: Incorrect wiring may cause internal damage to the sensor.

Vo Output Characteristic



Electrical Connections (See note 1)



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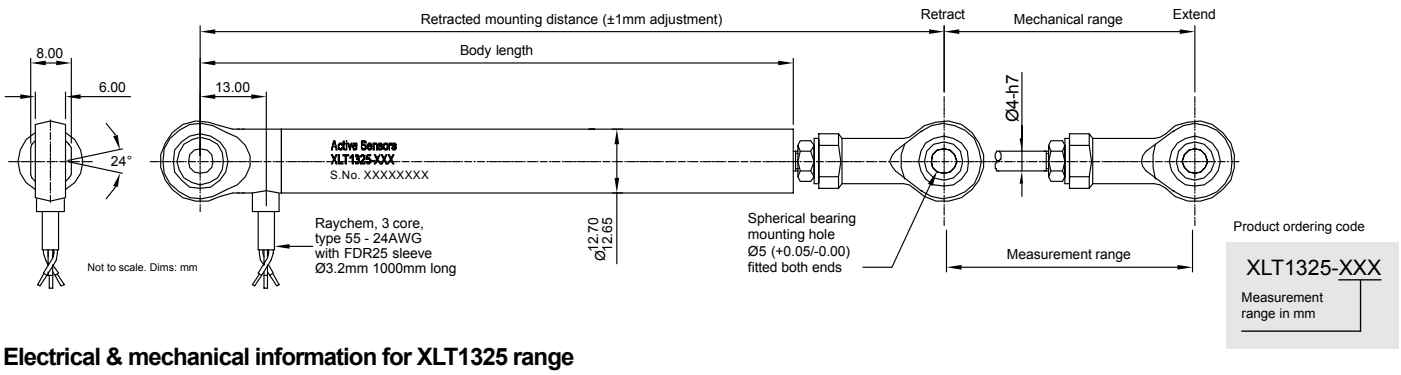
XLT1325 - rod end mount

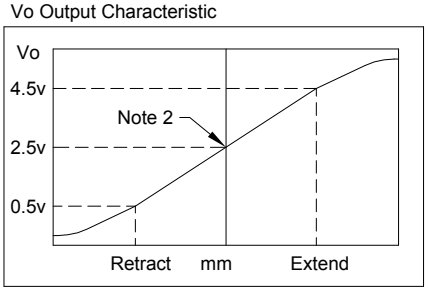


Electrical & mechanical information for XLT1325 range

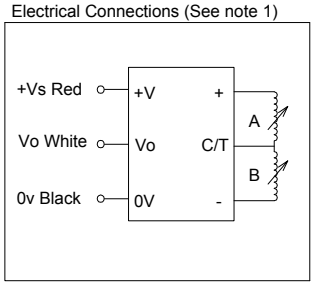
Measurement range	25	50	75	100	150	200	mm
Retracted mounting distance	173	198	223	248	298	348	mm
Body length	143	168	193	218	268	318	mm
Input voltage (+Vs)	+6 to +30						Volts DC
Line regulation (ΔVo)	<0.025%FS (+Vs = +6 to +30Vdc)						
Supply current	<10						mA dc
Output voltage (Vo)	0.50 to 4.50						Volts DC
Sensitivity (Note 3) ±1%	160	80	53.3	40	26.7	20	mV/mm
Non-linearity (Note 3)	<±0.30						%
Thermal drift	<±0.010%						FS/°C
Output load	>150						ohms
Output noise and ripple	0.05%						FS (pk-pk)
Frequency response (-3dB)	500 (Nom)						Hz
Mechanical range	Measurement range +1						mm
Shaft velocity	<1000						mm/sec
Operating temp. range	-40° to +125°						°C
Sealing	IP66						
Shaft operating force	<100 (typical)						grams
Material	Case - Stainless Steel 410 Shaft - Stainless Steel 303						

Note 1: Incorrect wiring may cause internal damage to the sensor.
Note 2: Sensor calibrated to 2.5v±0.01v at Retracted mounted distance + (Measurement range/2)
Note 3: Non-linearity error and sensitivity is calculated from least squares best fit method.

Vo Output Characteristic



Electrical Connections (See note 1)



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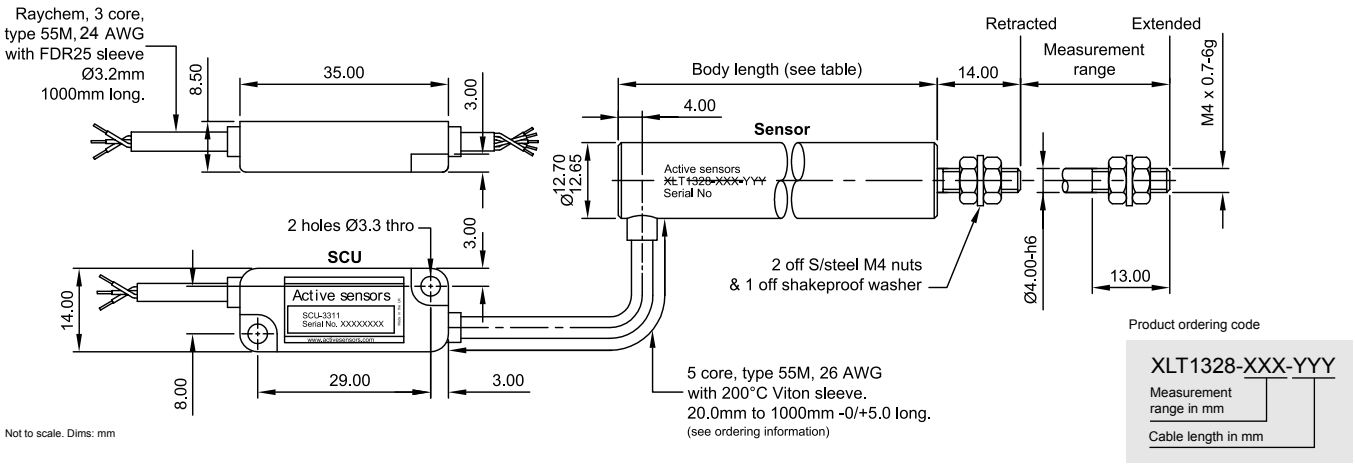
XLT1328 - high temperature model (separate signal conditioning)

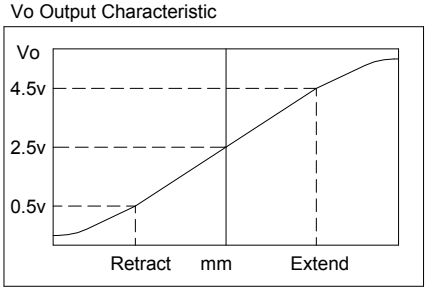


Electrical & mechanical information for XLT1328 range

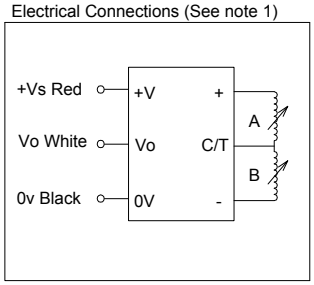
Measurement range	25	50	75	100	150	200	mm
Body length	80.0	105.0	130.0	155.0	205.0	255.0	mm
Input voltage (+Vs)	5 ±5%						Volts DC
Supply current	<10						mA dc
Output voltage (Vo) (Note 2)	0.50 to 4.50						Volts DC
Non-linearity	<±0.50						%
Thermal drift	<±0.010%						FS/°C
Output load	>150						ohms
Output noise and ripple	0.1%						FS (pk-pk)
Frequency response (-3dB)	500 (Nom)						Hz
Operating temp. range	Sensor - -40° to +180°			SCU - -40° to +125°			°C
Sealing	IP66						
Material	Sensor - Stainless Steel 410			SCU - Aluminium			

Note 1: Incorrect wiring may cause internal damage to the sensor.
Note 2: Output (Vo) ratiometric with input (+Vs)

Vo Output Characteristic



Electrical Connections (See note 1)



Other XLT DC/DC LVDT sensors available

XLT0950

- Measurement range: 10mm to 60mm
- Slim 9.54mm Ø housing/3.0mm Ø shaft
- Choice of mounting
- Integral or separate signal conditioning

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