

The **XLT1321** and **XLT1325** models are a compact, long life linear position sensor with integral electronics. These sensors are manufactured to quality standards required for high performance, high cyclic control and measurement systems.

Designed with a Ø12.70mm stainless steel case, the internal winding and electronics are fully encapsulated for superior performance under temperature and vibration. They operate from a 6 – 30 VDC unregulated supply, with a low noise analogue output of 0.5 - 4.5 VDC.

The **XLT1328** model operates from a single input option of 5 VDC and has similar performance characteristics, but with separate signal conditioning, the sensor can operate at high temperature applications up to 180°C.

With a wide measurement range of 25mm to 200mm, the XLT's precision wound inductive coils and innovative electronics produce low thermal drift compared to other similar inductive products.

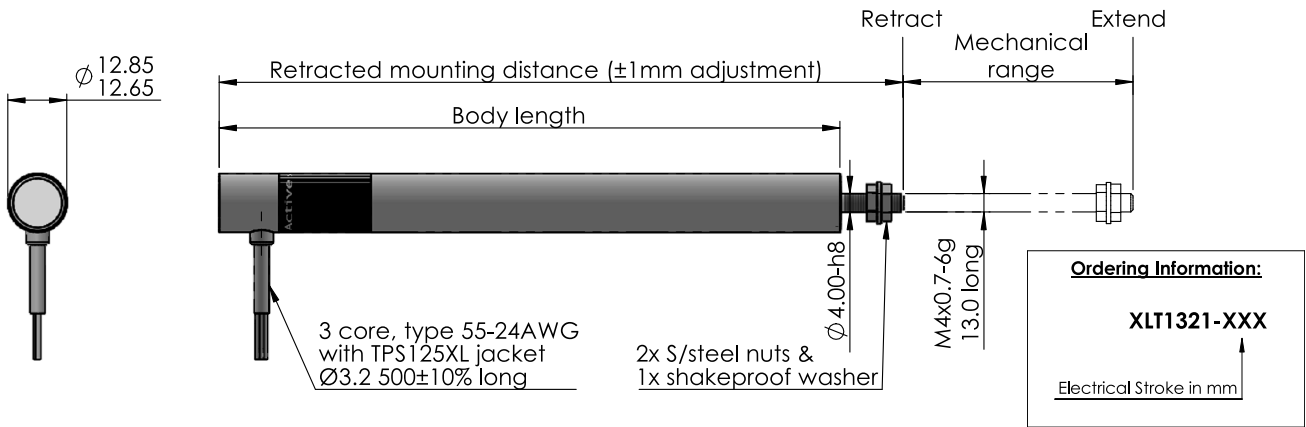
All sensors are designed to be environmentally protected against the ingress of dust and water to IP67.

### Key features and benefits

- Measurement range 25mm to 200mm (1" and 8")
- Compact Ø12.70mm stainless steel case with Ø4.0mm shaft
- Maximum operating temperature 180°C (356°F) for the XLT1328 model
- Superior temperature performance – typically  $\leq \pm 0.01\%$  FS/°C
- Sealed to IP67
- RW-200-E sleeved type 55 Raychem cable
- Choice of mounting
- Contactless technology
- Integral or separate signal conditioning
- Custom designs available on request.



## XLT1321 - Body clamp mounting

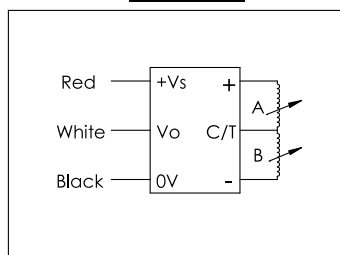


Electrical and mechanical information							
Measurement range	25	50	75	100	150	200	mm
Retracted mounting distance	124.0	149.0	174.0	199.0	249.0	299.0	mm
2.5V dim ( $\pm 1.0$ mm) (Note 2)	136.5	174.0	211.5	249.0	324.0	399.0	mm
Body length	110.0	135.0	160.0	185.0	235.0	285.0	mm
Input voltage (+Vs)	+6 to 30						VDC
Supply current	<10						mA
Reverse polarity (Vs max)	-30						VDC
Line regulation ( $\Delta V_o$ )	<0.025 (+Vs = +6 to 30VDC)						%FS
Output voltage (Vo)	0.5 to 4.5						VDC
Sensitivity ( $\pm 2\%$ ) (Note 3)	160.0	80.0	53.3	40.0	26.7	20.0	mV/mm
Non-linearity (Note 3)	< $\pm 0.5$						%FS
Output noise and ripple	<0.05						%FS pk-pk
Frequency response (-3dB)	500 (Nom)						Hz
Operating temperature	-40 to +125						$^{\circ}$ C
Thermal drift (Note 4)	< $\pm 0.010$						%FS/ $^{\circ}$ C
Shaft velocity	<1000						mm/s
Shaft operating force	<100 (typical)						grams
Sealing	IP67						
Weight (approx)	71	86	101	116	146	185	grams
Material	Case - Stainless steel 410 Shaft - Stainless steel 316 Armature - Nickel iron alloy						

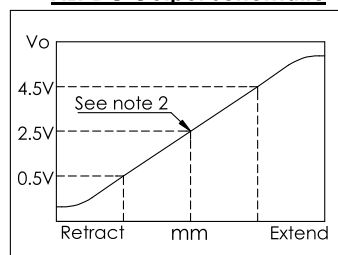
**Note:**

1. Incorrect wiring will cause internal damage to the sensor.
2. Sensor calibrated to 2.5V $\pm$ 20mV at retracted mounting distance + (measurement range/2)
3. Non-linearity error and sensitivity is calculated from least squares best fit method
4. Average thermal drift over operating temperature range
5. General dimension tolerance is  $\pm 0.25$ mm

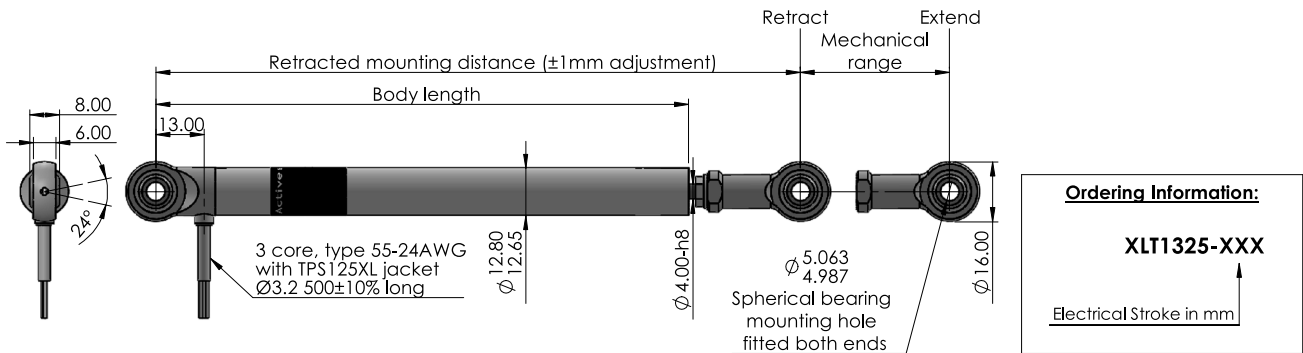
**Electrical connections**  
See note 1



**XLT DC Output schematic**



## XLT1325 - Rod end mounting

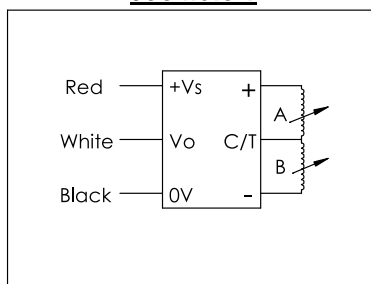


Electrical & mechanical information							
Measurement range	25	50	75	100	150	200	mm
Retracted mounting distance	173.0	198.0	223.0	248.0	298.0	348.0	mm
2.5V dim ( $\pm 1.0$ mm) (Note 2)	185.5	223.0	260.5	298.0	373.0	448.0	mm
Body length	143.0	168.0	193.0	218.0	268.0	318.0	mm
Input voltage (+Vs)	+6 to 30						VDC
Supply current	<10						mA
Reverse polarity (Vs max)	-30						
Line regulation ( $\Delta V_o$ )	<0.025% (+Vs = +6 to 30VDC)						FS
Output voltage (Vo)	0.5 to 4.5						VDC
Sensitivity ( $\pm 2\%$ ) (Note 3)	160.0	80.0	53.3	40.0	26.7	20.0	mV/mm
Non-linearity (Note 3)	< $\pm 0.5$						%FS
Output noise and ripple	<0.05						%FS pk-pk
Frequency response (-3dB) (Nominal)	500						Hz
Operating temperature	-40 to +125						$^{\circ}$ C
Thermal drift (Note 4)	< $\pm 0.010$						%FS/ $^{\circ}$ C
Shaft velocity	<1000						mm/s
Shaft operating force	<100 (typical)						grams
Sealing	IP67						
Weight (approx)	97	109	121	133	157	181	grams
Material	Case - Stainless steel 410 Shaft - Stainless steel 316 Armature - Nickel iron alloy						

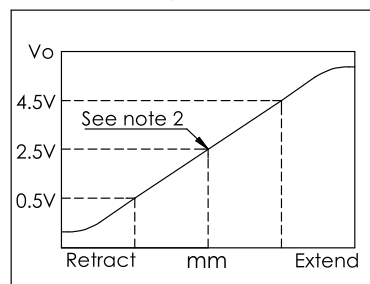
Note:

1. Incorrect wiring will cause internal damage to the sensor.
2. Sensor calibrated to  $2.5V \pm 20mV$  at retracted mounting distance + (measurement range/2)
3. Non-linearity error and sensitivity is calculated from least squares best fit method
4. Average thermal drift over operating temperature range
5. General dimension tolerance is  $\pm 0.25mm$

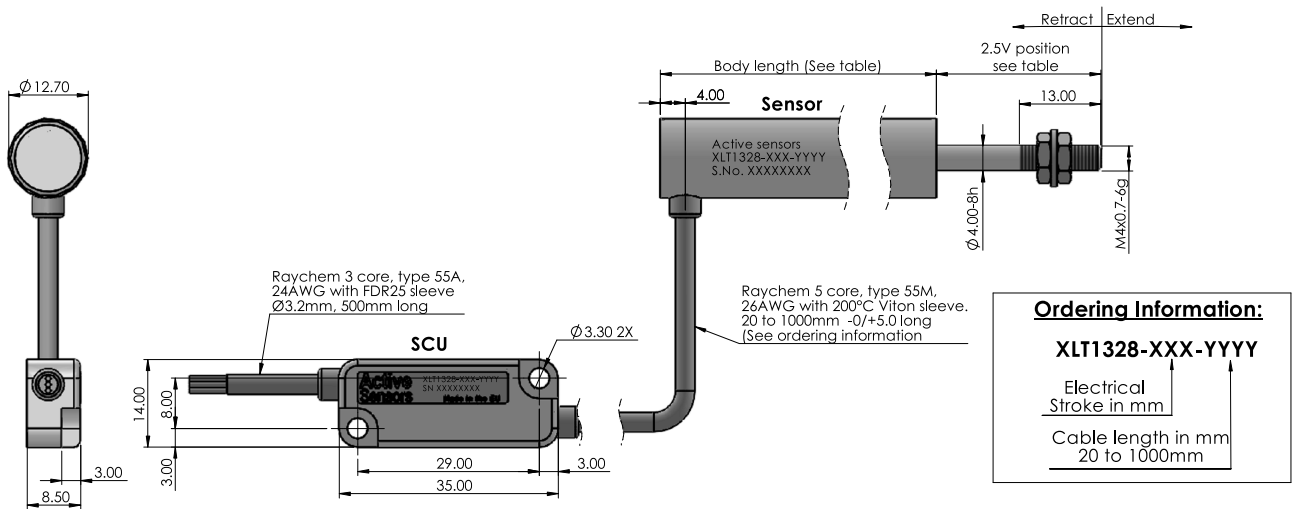
### Electrical connections See note 1



### XLT DC Output schematic



## XLT1328 - High temperature model with separate signal conditioning

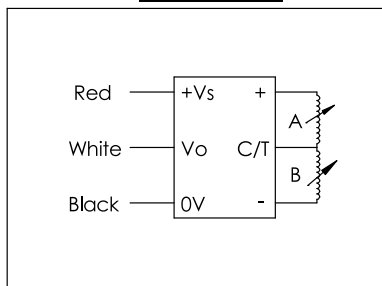


Electrical and mechanical information							
Measurement range	25	50	75	100	150	200	mm
Body length	80.0	105.0	130.0	155.0	205.0	255.0	mm
2.5V dim ( $\pm 1.0$ mm) (Note 5)	26.5	39.0	51.5	64.0	89.0	114.0	mm
Input voltage (+Vs)	+5.0 $\pm 5\%$						VDC
Supply current	<10						mA
Line regulation (Note 4)	Ratiometric with Vs						
Output voltage (Vo)	0.5 to 4.5						VDC
Sensitivity ( $\pm 2\%$ ) (Note 2)	160.0	80.0	53.3	40.0	26.7	20.0	mV/mm
Non-linearity (Note 2)	< $\pm 0.5$						%FS
Output noise and ripple	<0.05						%FS pk-pk
Frequency response (-3dB) (Nominal)	500						Hz
Operating temperature	Sensor -40 to 180			SCU -40 to 125			$^{\circ}$ C
Thermal drift (Note 3)	< $\pm 0.010$						%FS/ $^{\circ}$ C
Operating speed	<1000						mm/s
Sealing	IP67						
Weight (approx)	90.0	105.0	125.0	140.0	160.0	186.0	grams
Materials	Case - Stainless steel 410 Armature - Nickel iron alloy Shaft - Stainless steel 316 SCU - Aluminium alloy body, stainless steel cover 316						

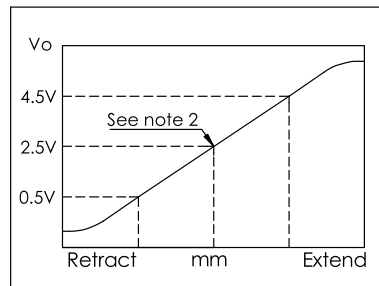
**Note:**

1. Incorrect wiring will cause internal damage to the sensor.
2. Sensor calibrated to 2.5V  $\pm 20$ mV at retracted mounting distance + (measurement range/2)
3. Non-linearity error and sensitivity is calculated from least squares best fit method
4. Average thermal drift over operating temperature range
5. General dimension tolerance is  $\pm 0.25$ mm

### Electrical connections See note 1



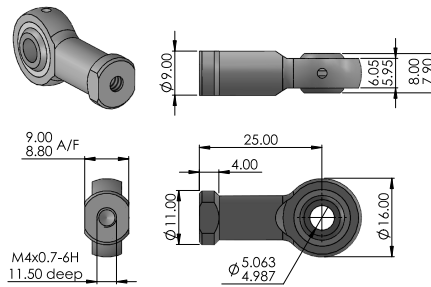
### XLT DC Output schematic



## Accessories

### 5mm rod-end

Part No: PT1322-0104-19



#### Material:

Housing - Aluminium Alloy, anodised black  
Ball - Steel BS970 230M07, electroless nickel plated  
Race - Gr nylon