

The **XLT0950 Series** is an ultra-compact, long life linear position sensor manufactured to quality standards required for high performance, high cyclic control and measurement systems.

Designed around a Ø9.53mm stainless steel one piece case, the XLT0952 and XLT0955 compact models have separate signal conditioning to offer exceptional temperature performance. This unique arrangement allow both the rod end and body clamp sensor designs to perform at elevated temperatures up to 180°C (356°F).

The XLT0956 and XLT0957 models have the same performance characteristics, but the advantage of integral electronics for ease of installation. These operate at a maximum temperature of 125°C (257°F).

With a measurement range between 10mm to 60mm, the XLT's precision wound inductive coils and innovative electronics produce low thermal drift compared to other similar inductive products.

The internal winding and electronics are fully encapsulated for superior performance under temperature and vibration. They operate from a 5 VDC supply and provide a low noise analogue output of 0.5 - 4.5 VDC.

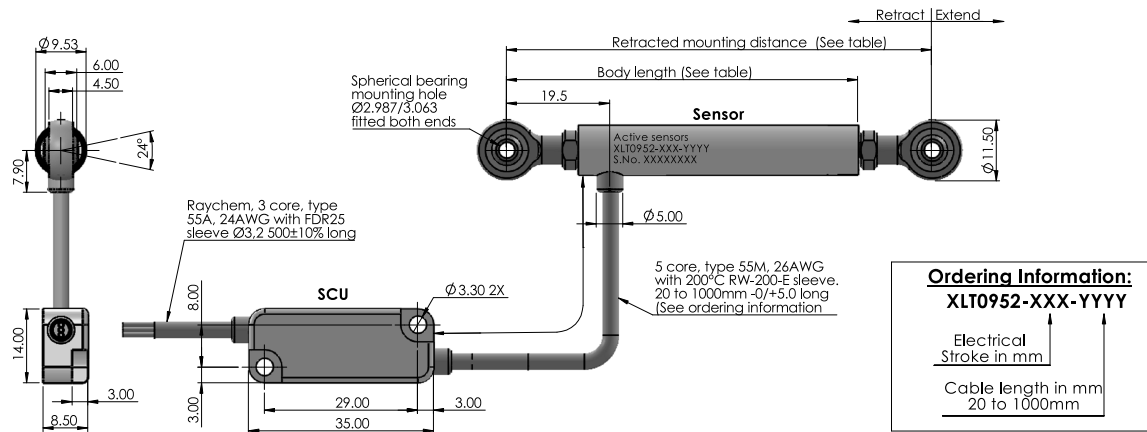
All sensors are designed to be environmentally protected against the ingress of dust and water to IP67.

### Key features and benefits

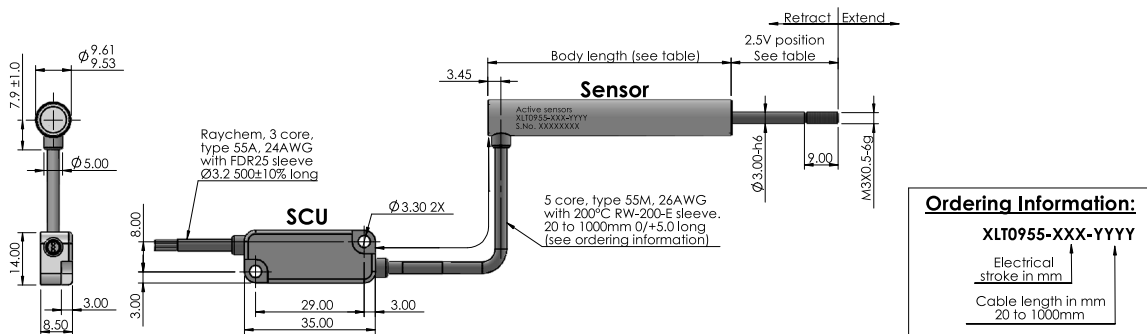
- Measurement range 10mm to 60mm
- Ultra-compact Ø9.53mm stainless steel case with Ø3.0mm shaft
- Maximum operating temperature 180°C (256°F) for the XLT0952 and XLT0955 models
- Superior temperature performance – typically  $<\pm 0.01\%$  FS/°C
- Sealed to IP67
- RW-200-E sleeved type 55 Raychem cable
- Choice of mounting
- Contactless technology
- Integral or separate signal conditioning
- Custom designs available on request.



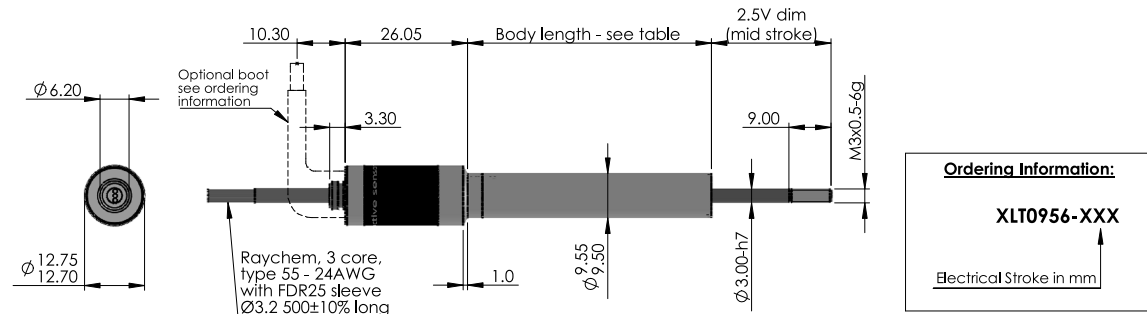
## XLT0952 - Rod end mounting with separate signal conditioning



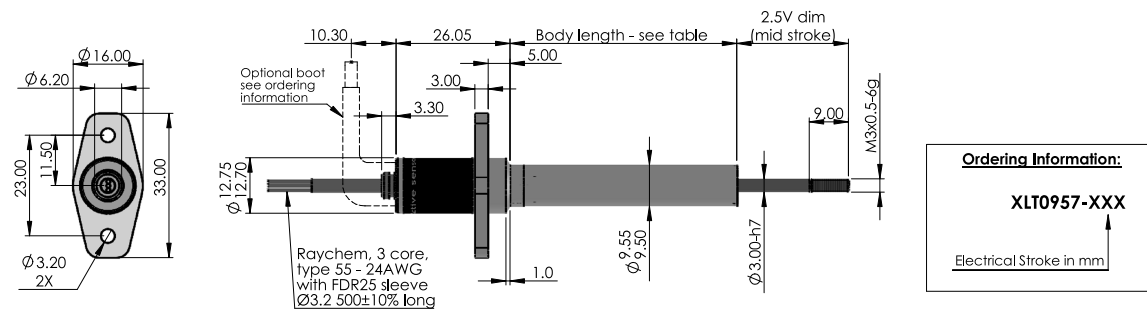
## XLT0955 - Body clamp mounting with separate signal conditioning



## XLT0956 - Body clamp with integral electronics



## XLT0957 - Flange mount with integral electronics



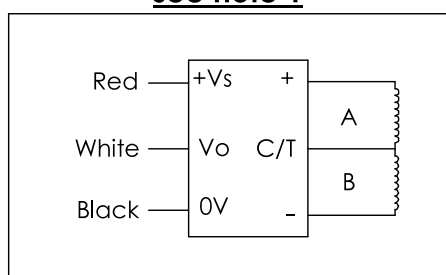
## Electrical and mechanical specification for XLT0950 Series

Measurement range	10	15	20	25	30	40	50	60	mm
Body length XLT0952	66.5	66.5	76.5	76.5	86.5	96.5	101.5	111.5	mm
Retracted mounting XLT0952	83.5	83.5	93.5	93.5	103.5	113.5	118.5	128.5	mm
Body length XLT0955	45.0	45.0	55.0	55.0	65.0	75.0	80.0	90.0	mm
Body length XLT0956	42.0	42.0	52.0	52.0	62.0	72.0	77.0	87.0	mm
Body length XLT0957	42.0	42.0	52.0	52.0	62.0	72.0	77.0	87.0	mm
Non-linearity (Note 2)	$< \pm 0.5$								%FS
Operating temperature XLT0952,0955	Sensor -40 to +180				SCU -40 to +125				°C
Operating temperature XLT0956,0957	Sensor -40 to +125								°C
Thermal drift (Note 3)	$< \pm 0.010$								%FS/°C
Input voltage (+Vs)	$+5.0 \pm 5\%$								VDC
Line regulation (Note 4)	Ratiometric with +Vs								
Supply current	$< 10$								mA
Operating speed	$< 1000$								mm/s
Sealing	IP67								
Output voltage (Vo)	0.5 to 4.5								VDC
Sensitivity ( $\pm 2\%$ ) (Note 2)	400.0	266.7	200.0	160.0	133.3	100.0	80.0	66.7	mV/mm
2.5V dim ( $\pm 1.0$ mm) (Note 5)	20.5	23.0	25.5	28.0	30.5	35.5	40.5	45.0	mm
Frequency response (-3dB) (Nominal)	500								Hz
Output noise ripple	$< 0.1$								%FS pk-pk
Weight XLT0952 (approx)	37.0	38.0	43.0	44.0	48.0	53.0	56.0	61.0	grams
Weight XLT0955 (approx)	22.0	23.0	28.0	29.0	33.0	38.0	41.0	46.0	grams
Weight XLT0956 (approx)	22.0	23.0	28.0	29.0	33.0	38.0	41.0	46.0	grams
Weight XLT0957 (approx)	24.5	25.5	30.5	31.5	35.5	40.5	43.5	48.5	grams
Materials	Case - Stainless steel 410 Shaft - Stainless steel 316 Armature - Nickel iron alloy Seperate SCU - Aluminium alloy								

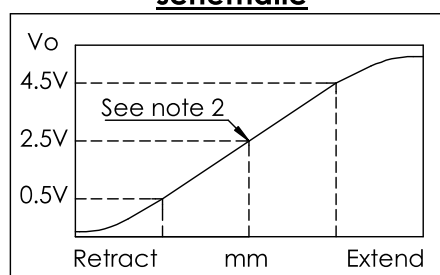
Note:

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  $\pm 0.25mm$ .

### XLT DC electrical connections see note 1



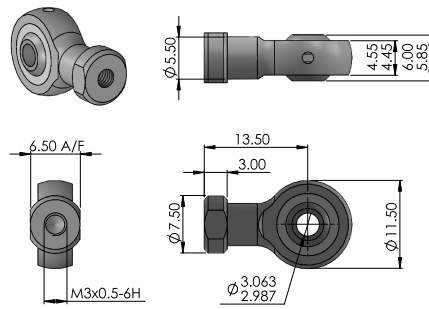
### XLT DC electrical output schematic



## Accessories

### 3mm rod-end

Part No: PT0952-0104-19



**Material:**

Housing - Aluminium Alloy, anodised black

Ball - Steel BS970 230M07, electroless nickel plated

Race - Gr nylon