



### XLT0950 compact long life range

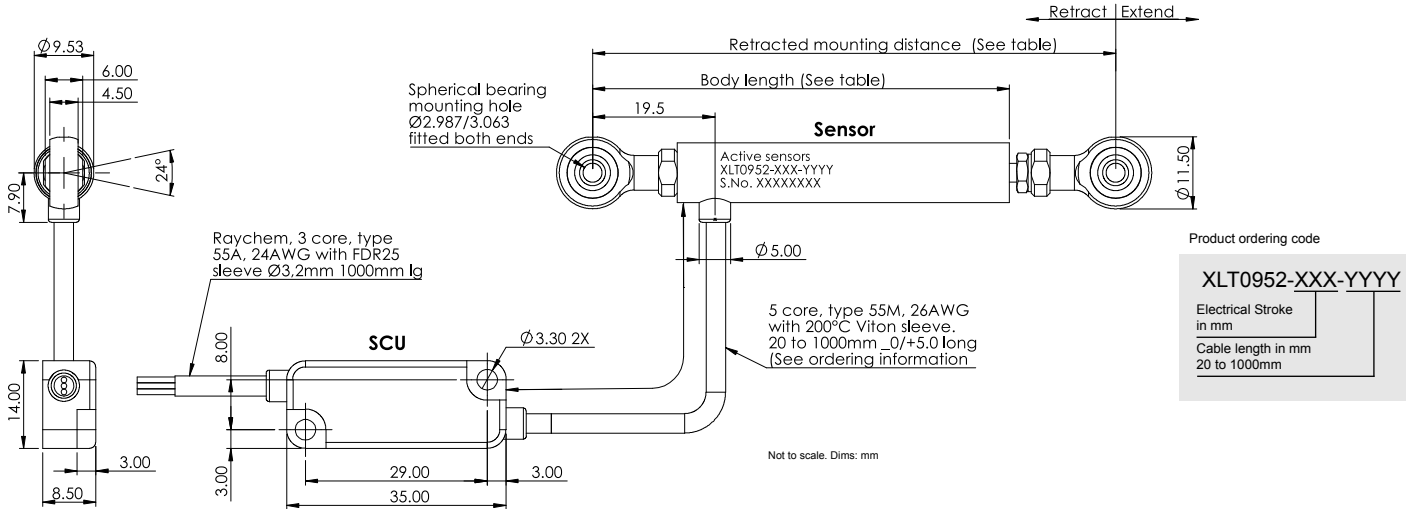


- Measurement range: 10mm to 60mm
- Slim 9.54mm Ø housing/3.0mm Ø shaft
- Choice of mounting
- Contactless technology
- Integral or separate signal conditioning
- Superior temperature performance
- Duplex model

The XLT0950 series is a compact, long life, high temperature linear position sensor available with either integral or separate electronics. Housed in a slim 9.54mm Ø stainless steel body, they have fully encapsulated, sealed internal electronics and electrical connections. The sensors are manufactured to quality standards required for high performance, high cyclic control and measurement systems. With a measurement range from 10mm to 60mm, the sensor operates from a 5Vdc regulated 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  $<\pm 0.005\%FS/^{\circ}C$ ), compared to other similar inductive products. They are available with a choice of mounting options and a dual output model.

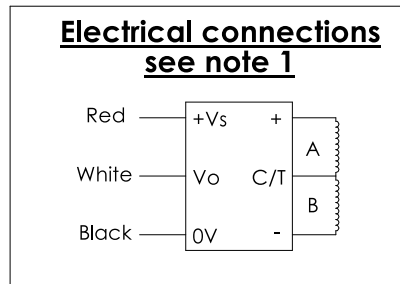
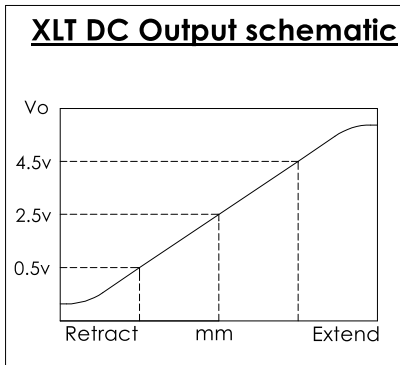
# Model dimensions and mounting

## XLT0952 - rod end mounting



## Electrical & mechanical information for XLT0952 range

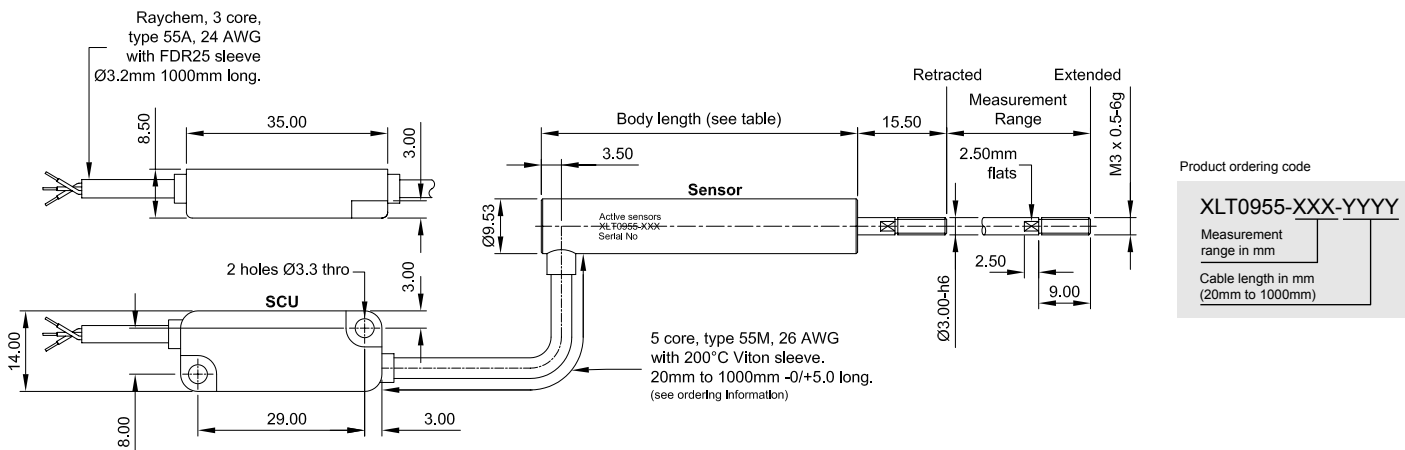
Measurement range	10	15	20	25	30	40	50	60	Units
Body length	66.5	66.5	76.5	76.5	86.5	96.5	101.5	111.5	mm
Retracted position	83.5	83.5	93.5	93.5	103.5	113.5	118.5	128.5	mm
Non-linearity (Note 2)	<math>\pm 0.5\%</math>								FS
Operating temperature	Sensor -40° to 150°				SCU -40° to 125°				°C
Thermal drift (Note 3)	<math>\pm 0.010\%</math>								FS/°C
Input voltage (+Vs)	+5.0 ± 5%								Vdc
Line regulation (Note 4)	Ratiometric with +Vs								
Supply current	<math>< 10</math>								mA
Operating speed	<math>< 10</math>								m/s
Sealing	IP67								
Weight (approx)	37.0	38.0	43.0	44.0	48.0	53.0	56.0	61.0	grams
<b>Analogue output</b>									
Output voltage (Vo)	0.5 to 4.5								Vdc
Sensitivity (±2%) (Note 2)	400	266.7	200	160	133.3	100	80	66.7	mV/mm
Frequency response (-3dB)	500 (Nom)								Hz
Output noise ripple	<math>< 0.1\%</math>								FS pk-pk



Note:

1. Incorrect wiring will cause internal damage to the sensor.
2. Non-linearity error and sensitivity is calculated from least squares best fit method.
3. Average thermal drift over operating temperature range.
4. When +Vs = +4.75 to 5.25 Vdc.

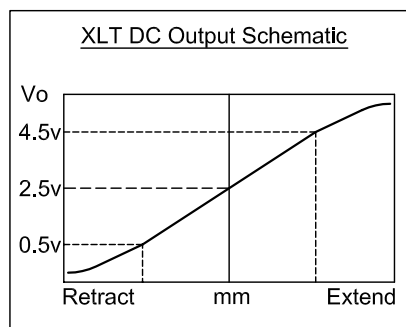
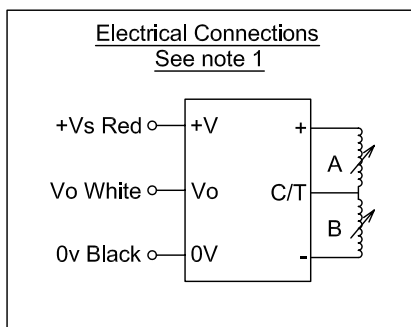
# XLT0955 - high temperature model (separate signal conditioning)



## Electrical & mechanical information for XLT0955 range

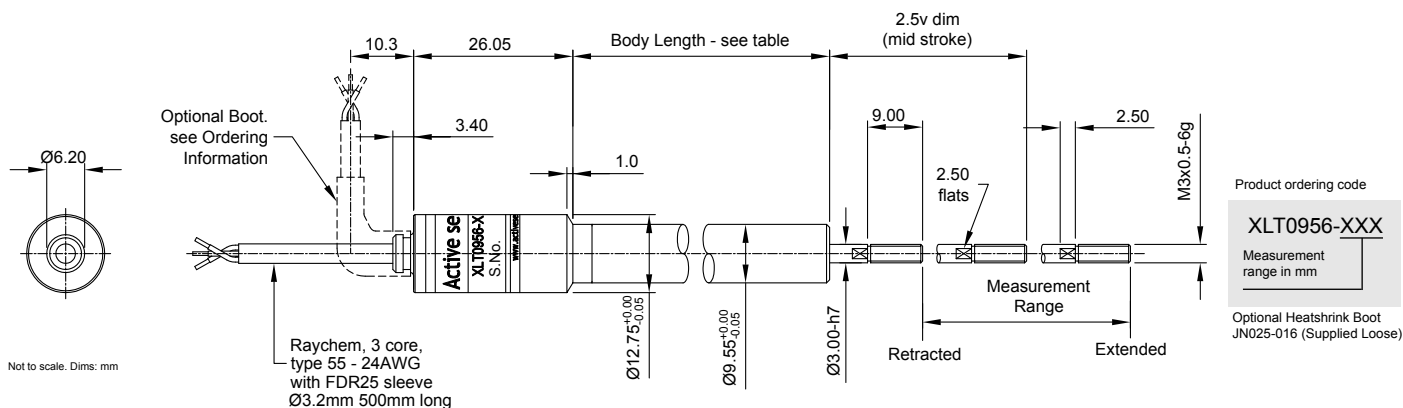
Measurement Range	10	15	20	25	30	40	50	60	mm	
Body length	45	45	55	55	65	75	80	90	mm	
Non-linearity (Note 2)	<±0.5%								FS	
Operating temperature	Sensor -40° to +180°				SCU -40° to +125°					°C
Thermal Drift (Note 3)	< ±0.010%								FS/°C	
Input voltage (+Vs)	+5.0 ±5%								Vdc	
Line Regulation (Note 4)	Ratio-metric with +Vs									
Supply current	<10								mA	
Operating speed	<10								m/S	
Sealing	IP67									
Weight	22.0	23.0	28.0	29.0	33.0	38.0	41.0	46	Grams	

Analogue output									
Output voltage (Vo)	0.5 to 4.5								Vdc
Sensitivity (±2%) (Note 2)	400	266.7	200	160	133.3	100	80	66.7	mV/mm
2.5V dim (±1.0mm) (Note 5)	20.5	23	25.5	28	30.5	35.5	40.5	45.0	mm
Frequency response (-3dB)	500 (Nom)								Hz
Output noise and ripple	<0.1%								FS pk-pk

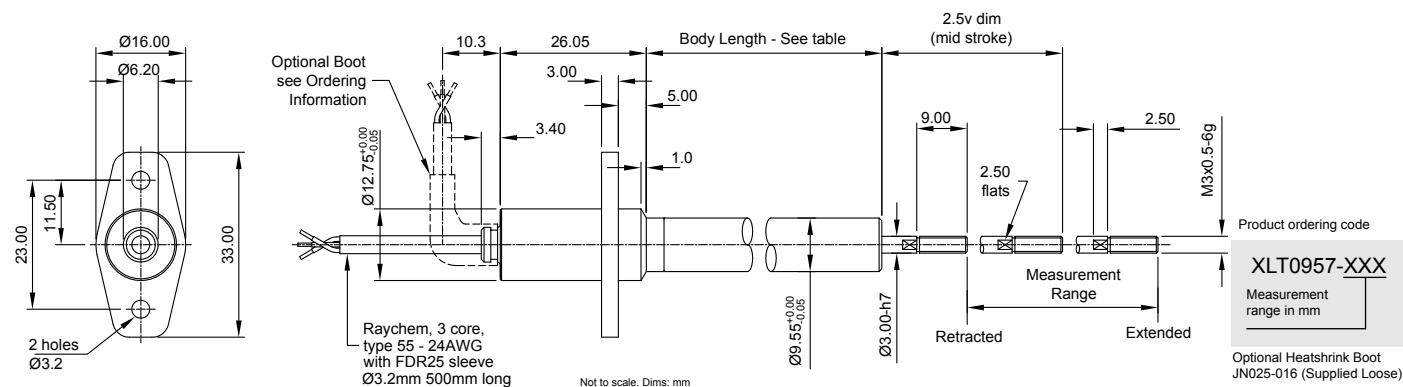


- Note:
1. Incorrect wiring will cause internal damage to the sensor.
  2. Non-linearity error and sensitivity is calculated from least squares best fit method.
  3. Average thermal drift over operating temperature range.
  4. When +Vs = +4.75 to 5.25 Vdc.
  5. Tested when +Vs is set at 5V ±1mV.

## XLT0956 - body clamp mount



## XLT0957 - flange mount



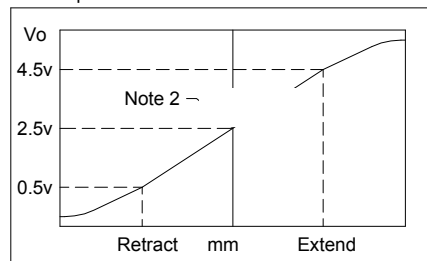
## Electrical & mechanical information for XLT0956 and XLT0957 range

Measurement range	10	15	20	25	30	40	50	60	mm	
Body length	42	42	52	52	62	72	77	87	mm	
Non-linearity (note 2)	<±0.5%								FS	
Operating temperature	-40 to +125								°C	
Thermal drift (note 3)	<±0.010%								FS/°C	
Input voltage (+Vs)	+5.0 ±5%								Vdc	
Line regulation (note 4)	Ratio-metric with +Vs									
Supply current	<10								mA	
Operating speed	<10								m/S	
Sealing	IP67									
Weight	XLT0950	22.0	23.0	28.0	29.0	33.0	38.0	41.0	46.0	Grams
	XLT0957	24.5	25.5	30.5	31.5	35.5	40.5	43.5	48.5	Grams
Material	Case - Stainless Steel 416 Shaft - Stainless Steel 316 Core - Nickel iron alloy									

## Analogue output

Output voltage (Vo)	0.5 to 4.5								Vdc
Sensitivity (±2%) (note 2)	400	266.7	200	160	133.3	100	80	66.7	mV/mm
2.5V dim (±1.0mm) (note 5)	20.5	23	25.5	28	30.5	35.5	40.5	45.0	mm
Frequency response (-3db)	500 (Nom)								Hz
Output noise and ripple	<0.1%								FS pk-pk

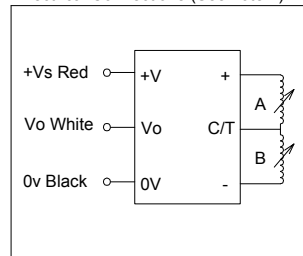
Vo Output Characteristic



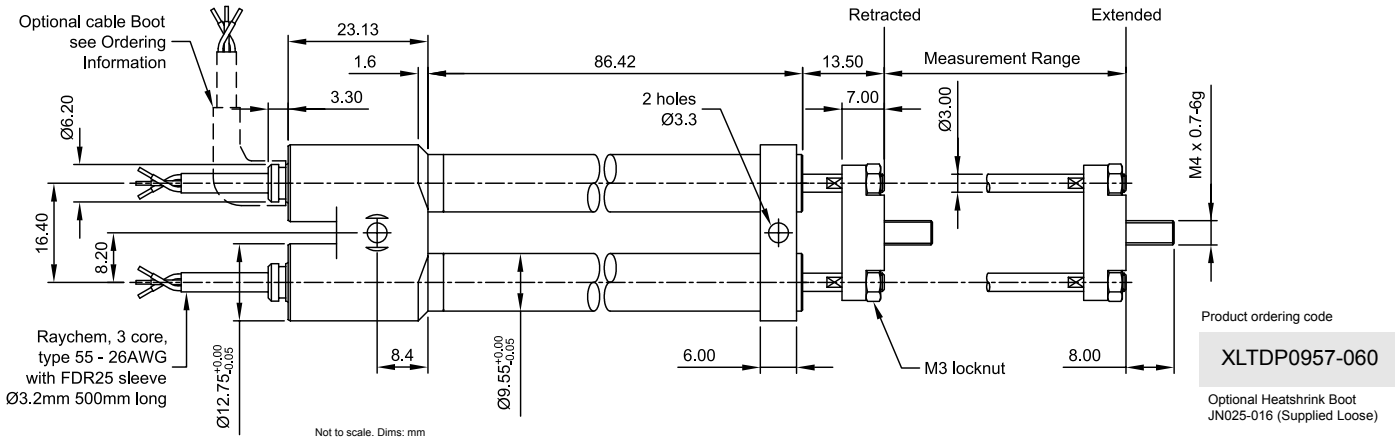
Note:

1. Incorrect wiring will cause internal damage to the sensor.
2. Non-linearity error and sensitivity is calculated from least squares best fit method.
3. Average thermal drift over operating temperature range.
4. When +Vs = +4.75 to 5.25 Vdc.
5. Tested when +Vs is set at 5V ±1mV.

Electrical Connections (See note 1)

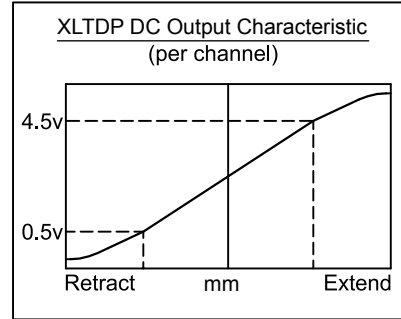
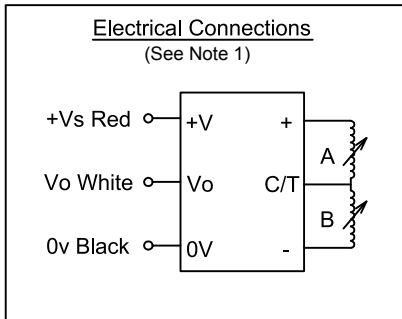


## XLTDP0957 - duplex model



## Electrical & mechanical information for XLTDP0957 range

Measurement range	60	mm
Input voltage (+Vs)	5 ±5%	Volts DC
Supply current	<10	mA dc
Output voltage (Vo)	0.5 to 4.5	Volts DC
Non-linearity	<±0.5	%
Phasing (channel to channel)	<1.0	%
Thermal drift	<±0.01%	FS/°C
Output load	>150	ohms
Output noise and ripple	0.1%	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 416 Shaft - Stainless Steel 316	



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

## Other XLT DC/DC LVDT sensors available

**XLT1300**

- Measurement range: 25mm to 200mm
- Robust 12.7mm Ø housing/4.0mm Ø shaft
- Choice of mounting
- Integral or separate signal conditioning

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