



LT0600 micro-slim range

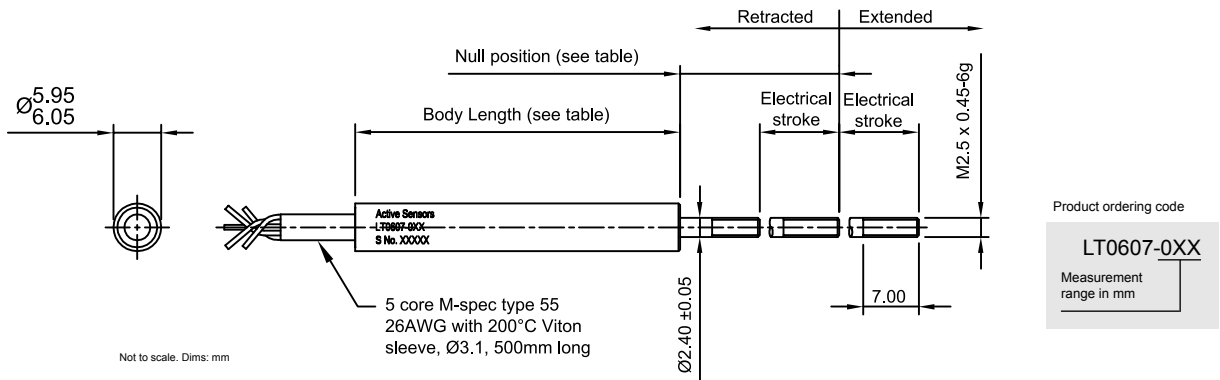


- Measurement range: up to 20mm
- Mirco-slim 6.0mm body Ø
- 180°C (360°F) operating temperature
- Ultra compact
- Sealed as standard
- Raychem cabling

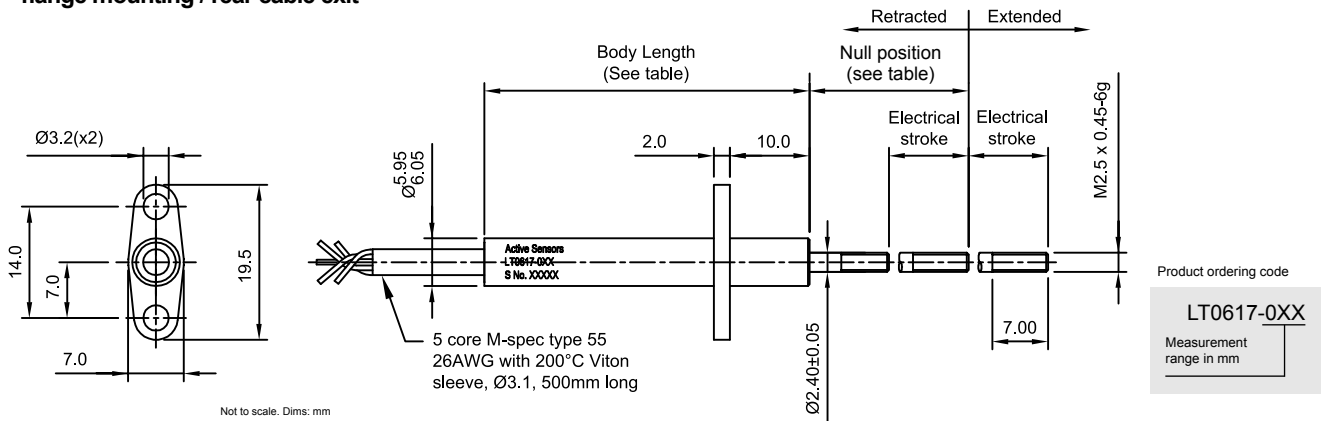
The LT0600 sensors contains design features which make it suitable for applications where high temperature, severe vibration, high cycling and fluid contamination are important considerations. The sensor is used in installations when size, performance and reliability are part of the design criteria and are used extensively in motorsport control systems for throttle and clutch actuation. Other applications include flight control and measurement systems. The sensor housing is manufactured from stainless steel and is environmentally sealed and fitted with Raychem fire & chemical resistant, high temperature Viton-type 55-26 signal cabling for total system reliability. The LVDT sensor is designed to convert the linear movement of a separate non-contacting core or shaft into a proportional voltage output.

Model dimensions and mounting

LT0607 - body clamp mounting / rear cable exit



LT0617 - flange mounting / rear cable exit



Electrical & mechanical information for LT0600 range

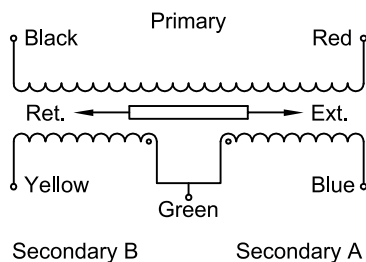
Input conditions (V _{in})	3.0V RMS ±5% @ 5.0 KHz ±5%		
Electrical stroke	15 (±7.50)	20 (±10.00)	mm
Mechanical stroke (min.)	±8.50	±11.00	mm
Body length	36.0	42.0	mm
Null position	20.0		mm
Summed output voltage (±5%)	0.465	0.500	V/V _{in}
Ratiometric sensitivity $\frac{V_a - V_b}{V_a + V_b}$	0.053	0.048	/mm
Output voltage range (nominal)	0.4202 - 0.9748	0.3900 - 1.1100	V rms
Non-linearity (note 1, 3)	<±0.5		% FS
Thermal drift (note 2)	<±0.01		%FS/°C
Input impedance	>150		Ohms
Operating temperature	-55° to +180°		°C
Environmental conditions	IP66		
Weight	15 (approx.)		grams
Materials	Housing - 400 Series stainless steel Armature - nickel iron alloy		

Note 1: Non-linearity error and sensitivity is calculated from least squares best fit method.

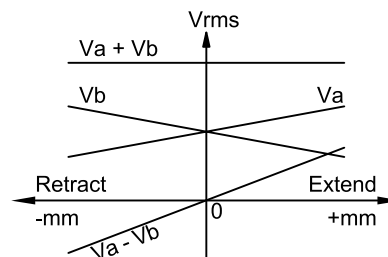
Note 2: Maximum error from reading at ambient (+20°C) to reading at +180°C.

Note 3: FS is total ratiometric output range.

Electrical Connections



LVDT AC Output Schematic



Other LVDT position sensor models available

LT0800

- Range up to 40mm
- Ultra-slim 8.0mm body Ø
- 200°C operating temperature
- Ultra-compact design



LT0950

- Range up to 50mm (2")
- Slim 9.54mm body Ø
- 200°C operating temperature
- Sealed as standard



LT1300

- Range: 25mm (1") to 200mm (8")
- Robust and slim 12.7mm body Ø
- 200°C operating temperature
- Sealed as standard



Please see separate datasheet for electronic signal conditioning for LVDT sensors.

Contact details

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Additional product information

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SCU3100 range

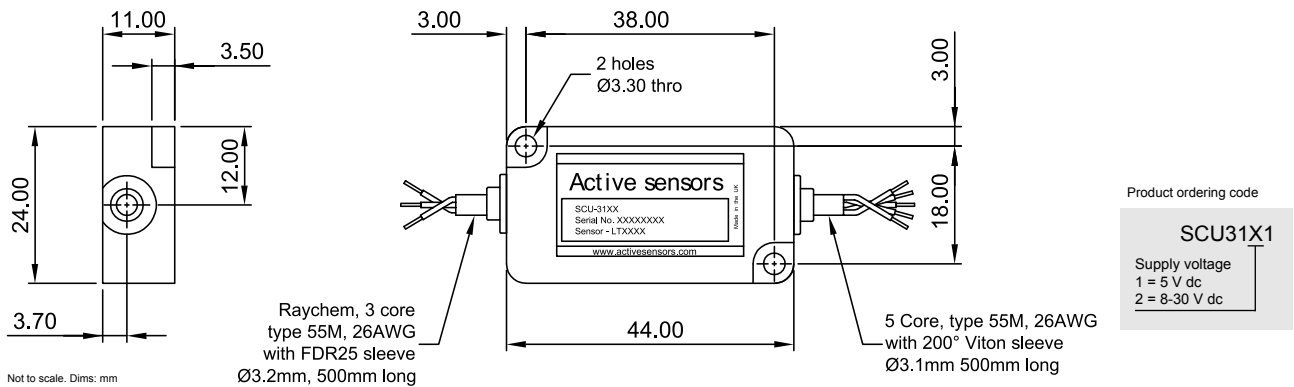


For applications that prohibit installing sensors with integral electronics, which are usually a high temperature environment or mounting space restrictions, we offer the compact SCU3100 signal-conditioning unit that is designed to operate remotely from the LVDT or RVDT sensor. The SCU operates from either a 5Vdc regulated or 8V to 30Vdc unregulated supply and the output options are 0.5V to 4.5V and 4-20mA.

The unit is used extensively in motor sport data acquisition and control systems as the operating circuit for inductive position sensors. The SCU is housed in a machined aluminium ultra-compact casing and is fitted with fire & chemical resistant DR25/type 55 cabling. It has fully encapsulated electronics for maximum reliability when mounted close to the hostile environment and the unit is sealed to IP66 as standard. For ease of installation the SCU3100 output configuration is factory programmed at the time of ordering. This SCU is also available with dual or quad outputs in a compact housing for system integration.

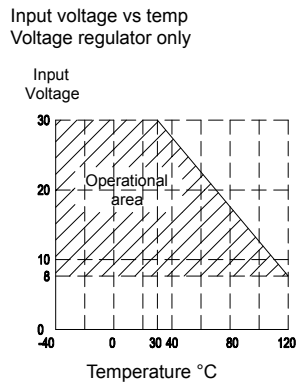
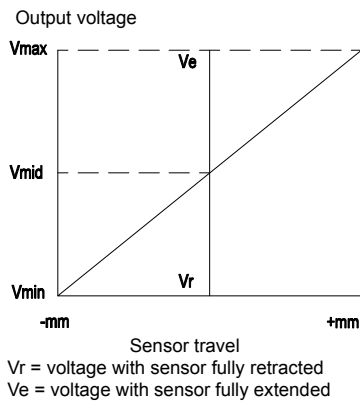
Model dimensions and mounting

SCU31X1 - signal conditioning unit (analogue)



Electrical & mechanical information for SCU31X1

	SCU3111	SCU3121	
Supply voltage +Vs	5 ±10%	8-30 (see graph)	V dc
Line regulation	Ratiometric with supply		<0.1 %
Supply current	<60	<60	mA
Output Vout	0.5 - 4.5	0 - 4.096	V dc
Linearity	<0.05	<0.05	%
Output ripple	10	10	mV
Output load		>2	K Ohm
LVDT excitation voltage		3	V rms
LVDT excitation frequency		5	KHz
Temperature performance	<50	<50	ppm/°C
Operating temperature		-40 - +125	°C
Environmental		IP66	
Weight (without wire)		20 (±5)	grams

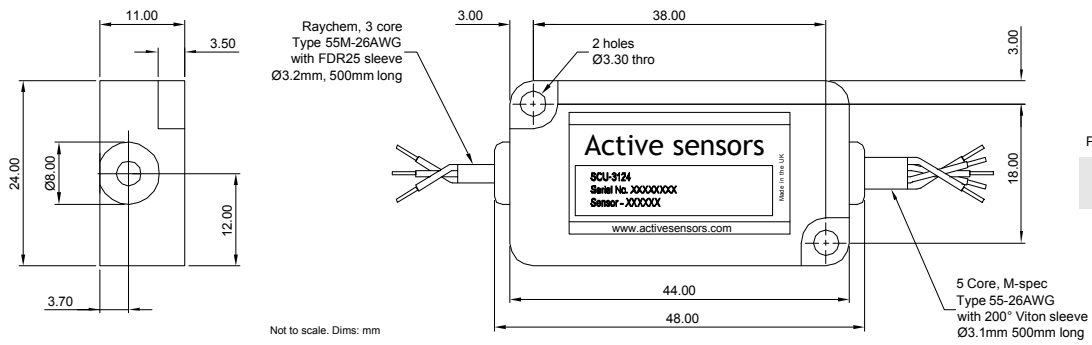


Electrical connections

Wire colour*	LVDT connection
Red	Primary +
Black	Primary -
Green	Secondary Centre
Blue	Secondary A
Yellow	Secondary B
Wire colour	System connection
Red	Supply +Vs
Black	Supply 0V
White	Analogue signal Vout

*Active Sensors LVDTs

SCU3124 - signal conditioning unit (4-20mA)

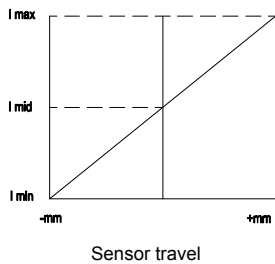


Product ordering code
SCU3124

Electrical & mechanical information for SCU3124

Supply voltage +Vs	8-30 Derate @ 0.2V/°C from 20°C. See graph (1)	V dc
Line regulation	<0.1	%
Supply current	<60	mA
Output type	Current	
Output noise	<±0.05	%FS
Output I out (typical)	4-20 (3 wire)	mA
Update rate	>500	Hz
Linearity	<±0.05	%
Output load (Rc)	100ohms@8V increasing by 50ohms/V to a max of 500ohms. See graph (2)	
LVDT excitation voltage (typical)	3	V rms
LVDT excitation frequency (typical)	5	KHz
Temperature performance	<±400	ppm/°C FS
Operating temperature	-40 - +85	°C
Environmental	IP66	
Weight (without wire)	20 (±5)	grams

Output current

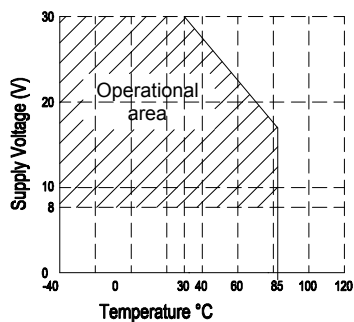


Electrical connections

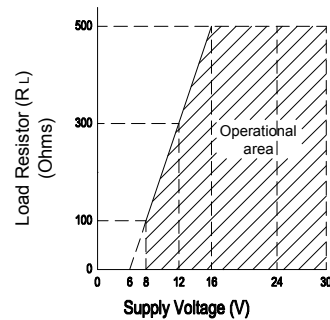
Wire colour*	LVDT connection
Red	Primary +
Black	Primary -
Green	Secondary Centre
Blue	Secondary A
Yellow	Secondary B
Wire colour	System connection
Red	Supply +Vs
Black	Supply 0V
White	Signal Iout

*Active Sensors LVDTs

(1) Input voltage vs temp
Voltage regulator only



(2) Supply voltage vs load
Resistor (RL)



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