SCU3101 XV Series LVDT Signal Conditioning Unit (SCU)
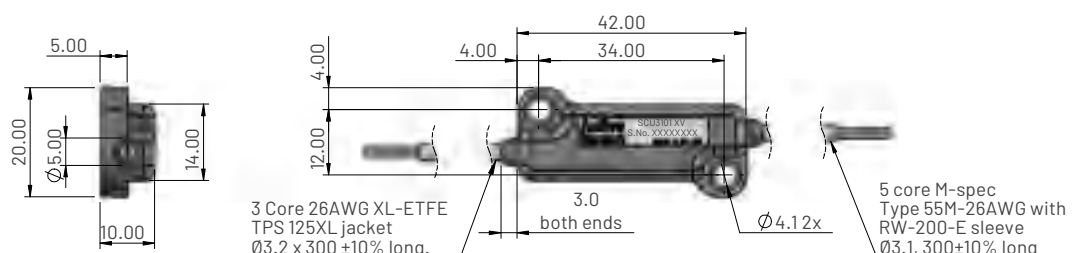## Ultra-compact housing. Analogue voltage output.

Active sensors

Dimensions

5.00
20.00
Ø5.00
14.00
10.00

42.00
34.00
4.00
4.00
12.00

3 Core 26AWG XL-ETFE
TPS 125XL jacket
Ø3.2 x 300 ±10% long.

3.0
both ends

Ø 4.1 2x

5 core M-spec
Type 55M-26AWG with
RW-200-E sleeve
Ø3.1, 300±10% long

Ordering information

SCU3101-XV

Output
R = Output retracting
E = Output extending
(See output graph)

Please advise the LVDT specification
for pairing with the SCU

## Electrical and mechanical specification

Parameters	Values		Units
Supply voltage (+Vs)	5.0±5% regulated	8 to 30 unregulated	Vdc
Line regulation	Ratiometric with supply	<0.01% FS/V	% FS
Supply current	<60		mA
Output (Vout)	10 - 90 % Vs	0.5 - 4.5	Vdc
SCU non-linearity (Note 3)	<0.20		% FS
Output ripple	<10		mV
Output load	>2		K Ohms
LVDT excitation voltage	3		Vrms
LVDT excitation frequency	5		KHz
Temperature coefficient	<50	<110	ppm/°C
Operating temperature	-40 to +125	See de-rating graph	°C
Environmental	IP67		
Weight (approx.)	12		grams
SCU error conditions (Vout)			
LVDT disconnected	0.25		Vdc
LVDT sum voltage error	0.25		Vdc
SCU initialisation failure	0		Vdc

Electrical connections (see note 1)

Wire Colour	LVDT Connection
Red	Primary +
Black	Primary -
Green	Secondary centre
Blue	Secondary A
Yellow	Secondary B
Wire Colour	System Connection
Red	Supply (+Vs)
White	Analogue signal (Vout)
Black	Supply (0V)

Operational temperature

Supply voltage (Vs) vs temperature

125°C
65°C
-40°C
4.5V 5.25V   8V 10V   30V
See note 2
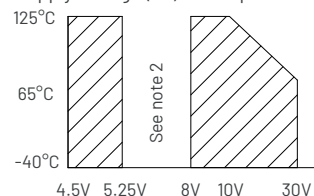
Notes

1. Incorrect wiring may cause internal damage.
2. Do not operate between 5.25V and 8V.
3. Non-linearity is calculated from least squares best fit method. SCU non-linearity is in addition to LVDT non-linearity.
4. LVDT wire colours listed match Active Sensors standard LVDTs.
5. When ordering SCU please state which LVDT the SCU will be paired with.
6. General dimension tolerance is ±0.1.

Typical output graph

Vmax
Vmid
Vmin
RV   EV
Retracted   Extended
Sensor travel