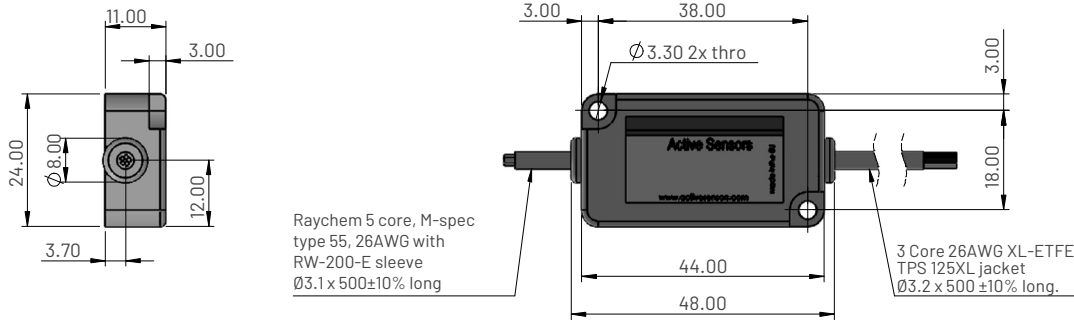


# SCU31X1 XV Series - LVDT Signal Conditioning Unit (SCU)

Compact housing. Analogue voltage output.

## Dimensions



## Ordering information

SCU31X1-XV

### Output

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

Please advise the LVDT specification for pairing with the SCU

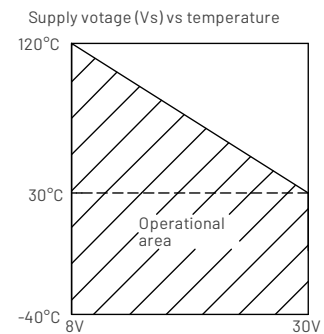
## Electrical and mechanical specification

Parameters	SCU3111 Values	SCU3121 Values	Units
Supply voltage (+Vs)	5±10%	8 to 30 (see graph)	VDC
Line regulation	Ratiometric with supply	<0.10	%FS
Supply current	<60		mA
Reverse polarity protection	None	-24	VDC
Over voltage protection	None	Up to 50	VDC
Input voltage rise time	0.25 minimum		V/ms
Update time (nominal)	600		Hz
Output voltage (Vout)	10-90% Vs	0 - 4.096	VDC
Output resolution	0.031	0.024	% LVDT MR
SCU non-linearity (Note 2)	<0.20		%FS
Output ripple	10		mV
Output load	>2		Kohms
LVDT excitation voltage	3		VRMS
LVDT excitation frequency	5		KHz
Temperature coefficient (Vout)	<50		ppm/°C
Operating temperature	-40 to +125	See de-rating graph	°C
Environmental	IP68 and IP69K		
Weight (approx.)	20		grams
Materials	Case - Anodised aluminium. Cover - Stainless steel 304		
SCU error conditions (Iout)			
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



## Notes

1. Incorrect wiring may cause internal damage.
2. Non-linearity is calculated from least squares best fit method.
3. LVDT wire colours listed match Active Sensors standard LVDTs.
4. When ordering SCU please state which LVDT the SCU will be paired with.
5. General dimension tolerance is ±0.25.

## Typical output voltage

