



SCU3100 range

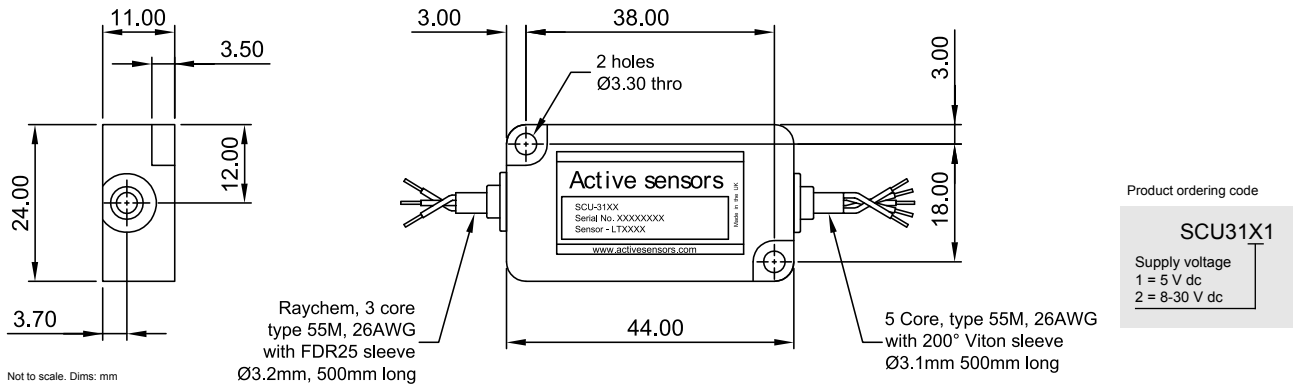


For applications that prohibit installing sensors with integral electronics, which are usually a high temperature environment or mounting space restrictions, we offer the compact SCU3100 signal-conditioning unit that is designed to operate remotely from the LVDT or RVDT sensor. The SCU operates from 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.

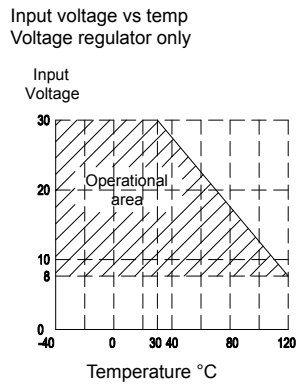
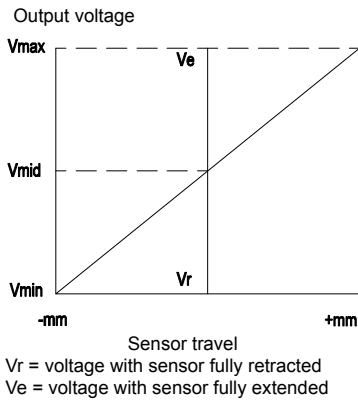
Model dimensions and mounting

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

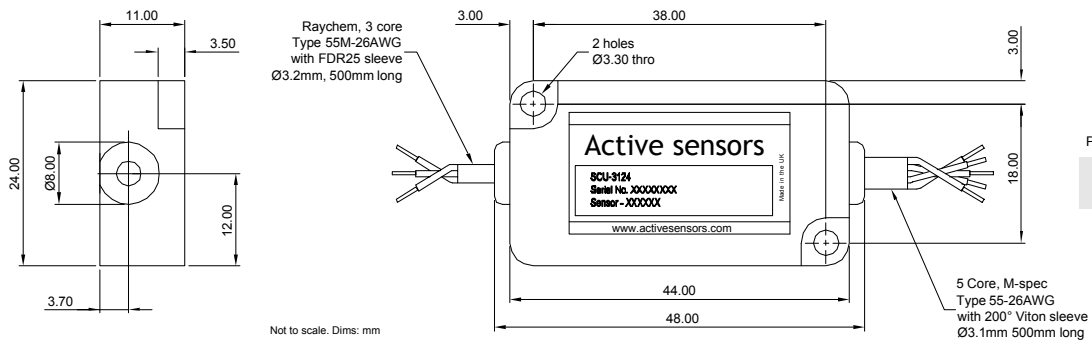


Electrical connections

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)

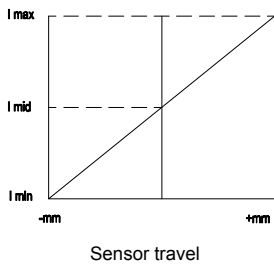


Product ordering code
SCU3124

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

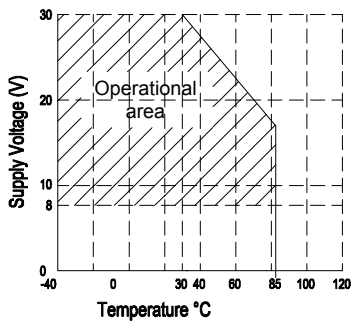


Electrical connections

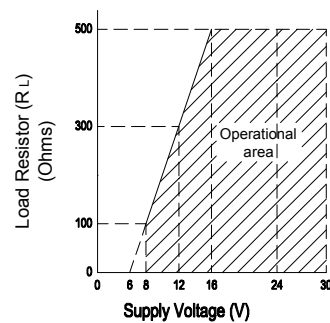
Wire colour*	LVDT connection
Red	Primary +
Black	Primary -
Green	Secondary Centre
Blue	Secondary A
Yellow	Secondary B
Wire colour	System connection
Red	Supply +Vs
Black	Supply 0V
White	Signal Iout

*Active Sensors LVDTs

(1) Input voltage vs temp
Voltage regulator only



(2) Supply voltage vs load
Resistor (RL)



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Additional product information

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