

# SCM100 dc/dc LVDT DRIVER

The LVDT Signal Conditioning Module SCM100 has been specifically designed to operate with the AF111 and AF145 range of LVDT's, and to make using an LVDT as simple as using a linear potentiometer. This module incorporates a high performance circuit which drives the LVDT in a ratiometric configuration, thereby maximising system accuracy by eliminating effects caused by temperature and supply current variations.

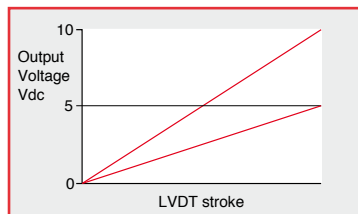
## PERFORMANCE

Supply voltage	Vdc	18 - 30 (regulated) or $\pm 15$ (regulated)
Supply current	mA	100 maximum
LVDT excitation voltage	Vrms	3 (nominal)
LVDT excitation frequency	Hz	2.5k (nominal)
Output voltage* (SCM100/V)		See output options on page 9 for full details
Output current (SCM100/I)		See output options on page 9 for full details
Output ripple	mVrms	<5
Output load	$\Omega$	1k minimum (resistive) - voltage and current output
Frequency response	Hz	300 (-3dB)
Non-linearity		$\pm 0.05\%$ max (over 1% to 99% of stroke when used with AF111 or AF145 LVDT's)
Line regulation		<0.01% output span/Volt
Load regulation		<0.05% output span (minimum to maximum load)
Output adjustment range		
-null adjustment		$\pm 25\%$
-gain adjustment		$\pm 10\%$
Operational temperature	$^{\circ}\text{C}$	0 to +70
Storage temperature	$^{\circ}\text{C}$	-20 to +85
Temp. coefficient of output		<0.01% of span volts/ $^{\circ}\text{C}$
Transducer types		5 wire ratiometric LVDT only
Mechanical housing		Entrelec 11000 series (to suit DIN EN50022/EN50035 rails)
Weight maximum	g	100

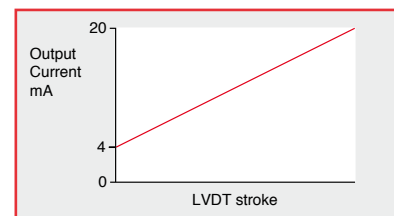
\* When powered with a single rail supply, the output may not quite reach 0 Vdc. For this reason, linearity is specified for 1% to 99% of LVDT stroke.

## OUTPUT CHARACTERISTICS

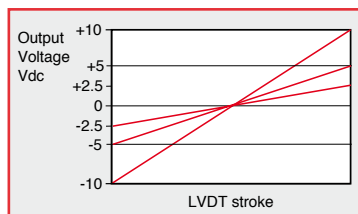
18 - 30Vdc supply



18 - 30Vdc or  $\pm 15$ Vdc supply



$\pm 15$ Vdc supply

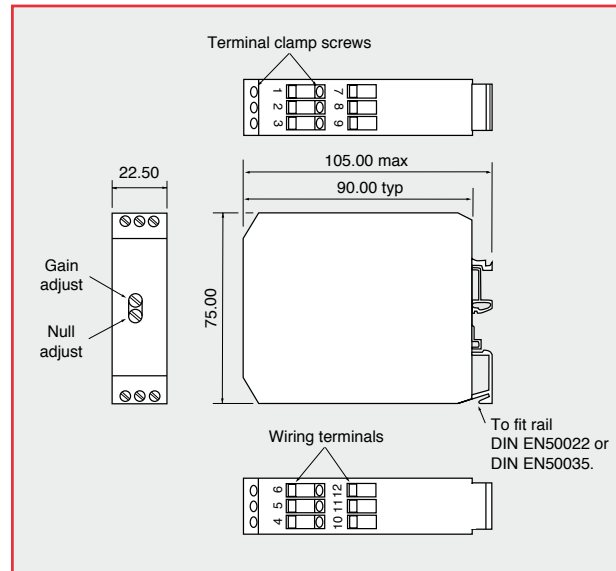


**Note:** This module is user configurable for input and output options. See set-up guide supplied with module for full instructions.

## OUTPUT OPTIONS

Output option	Power supply option	
	18 - 30Vdc	±15Vdc
±2.5Vdc	N/A	✓
±5Vdc	N/A	✓
±10Vdc	N/A	✓
0 - 5Vdc	✓	✓
0 - 10Vdc	✓	✓
4 - 20mA (SCM100/I only)	✓	✓
Slope reversal	✓	✓

## DIMENSIONS

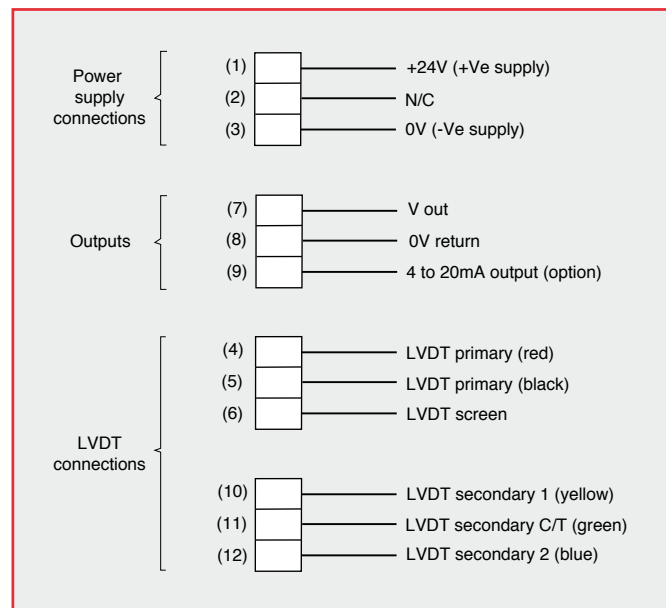


## ELECTRICAL CONNECTIONS

Screw terminals

Note:  
Refer to the SCM100 set-up guide for details on how to connect to a ±15Vdc (split rail) power supply.

**Misconnection of the supply may cause permanent damage.**



## AVAILABILITY

Normally available from stock

## ORDERING CODES

SCM100/.....  
 V = Voltage output  
 I = Current output