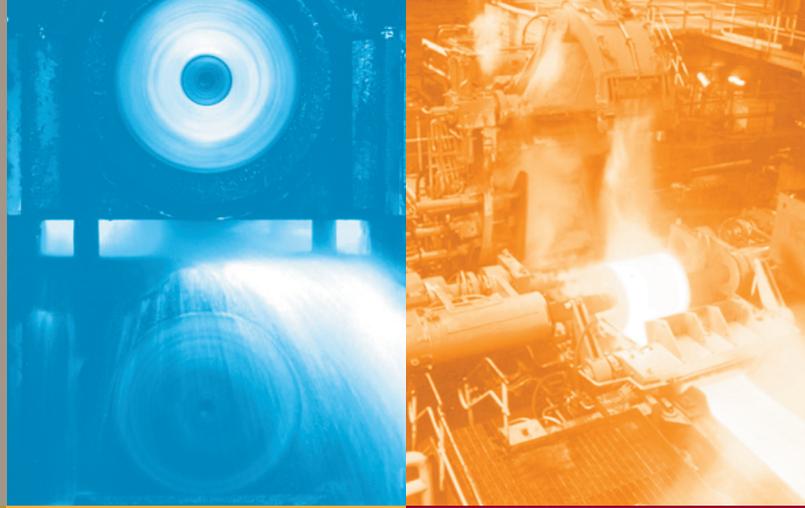


# G123-817-006

## LVDT OSCILLATOR DEMOMULATOR



The G123-817 LVDT Oscillator Demodulator is a complete Linear Variable Differential Transformer (LVDT) signal conditioning module. It is used in conjunction with an LVDT to convert transducer mechanical position to a DC voltage of  $\pm 10V$  and a DC current of 4-20mA. The outputs have high accuracy and repeatability with very low noise and ripple. Due to a unique ratiometric circuit structure, temperature stability and power supply immunity are vastly improved over older style circuits.

### Oscillator:

The module has an oscillator for driving the LVDT primary. Its level is set by a front panel trimpot. Selector switches inside the module set its frequency. A front panel test point enables the level and frequency to be measured.

### Outputs:

Two output signals are available. They are 0 to  $\pm 10V$  and 4-20mA. The front panel has a dual colour LED to indicate the level and polarity of the  $\pm 10V$  signal.

### Set up:

Inside the module adjustable lag and lead circuits can be switch selected to compensate for LVDT secondary phase changes. Two special monitoring circuits are provided to monitor the phase. This ensures quick and reliable set up when phase adjustments are found to be necessary.

### Housing:

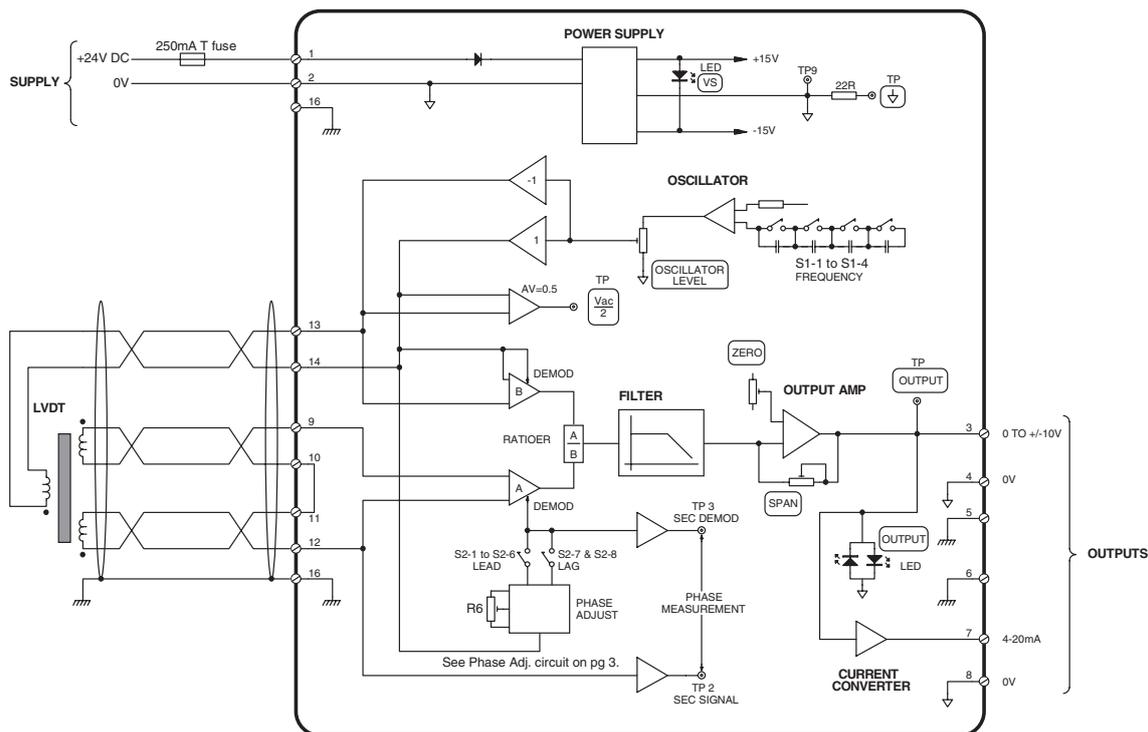
The Oscillator Demodulator is housed in a compact DIN rail mounting enclosure and requires a +24V DC power supply.

### ADVANTAGES

- Improved accuracy, repeatability, noise and ripple
- Output voltage and current
- High supply immunity and temperature stability
- Oscillator level and frequency adjust
- Output span and zero adjust
- Switch selectable secondary phase adjust
- Convenient front panel controls and indicators
- Compact DIN rail housing
- CE marked



## BLOCK WIRING DIAGRAM



## SPECIFICATIONS

<b>Outputs</b>	0 to $\pm 10V$ , 1 kOhm min load, terminal 3 4-20mA, 500 Ohm max load, terminal 7 100 PPM/dB excitation rejection 500PPM non-linearity 4mV RMS ripple @ 3 kHz 300Hz bandwidth
<b>Oscillator</b>	1 to 8.0V RMS 1 to 10kHz 50mA RMS -50dB THD 200 PPM/ $^{\circ}C$ frequency TC
<b>Full scale sensitivity</b>	Min: 0.15 V/V Max: 0.9 V/V
<b>Maximum allowable secondary voltage</b>	Terminals 9 and 12 0.9 x osc. voltage or 8.0V RMS
<b>Front panel indicators</b>	Output positive = red negative = green Vs, internal supply = green
<b>Front panel test points</b>	Output $\pm 10V$ Oscillator, half level Signal 0V

<b>Front panel trimpots</b>	Output span Output zero Oscillator level
<b>Internal trimpot</b>	Secondary demodulator phase adjust R6
<b>Internal switches</b>	Oscillator frequency select S1-1 to -4 Phase lead select S2-1 to -6 Phase lag select S2-7 and -8
<b>Supply</b>	Terminal 1 24V DC nominal, 22 to 28V 60mA @ 24V, no load 160mA @ 22V, 50mA oscillator load
<b>Recommended supply protection</b>	M205, 250mA T (slow blow) fuse compliant with IEC 127-2 sheet 3
<b>Mounting</b>	DIN rail IP 20
<b>Temperature</b>	0 to $+40^{\circ}C$
<b>Dimensions</b>	100W x 108H x 22.5D
<b>Weight</b>	127g
<b>CE mark</b>	EU 2011/65/EU RoHS EU 2014/30/EU EMC EN61000-6-4 : 2007 emission EN61000-6-2 : 2005 immunity
<b>RCM</b>	EN61000-6-4 : 2007 emission

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DIN LVDT Osc/Demod  
Moog Aust/PDF/0418

## ORDERING INFORMATION

LVDT Oscillator Demodulator G123-817-006  
Delivery includes LVDT Osc/Demod, DIN fuse holder,  
2 x M205 250 mA T fuses and a 4 page application note.

This technical data is based on current available information and is subject to change at any time by Moog. Specifications for specific systems or applications may vary.

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