

LVDT Oscillator Demodulator G123-817

Description

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.

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.

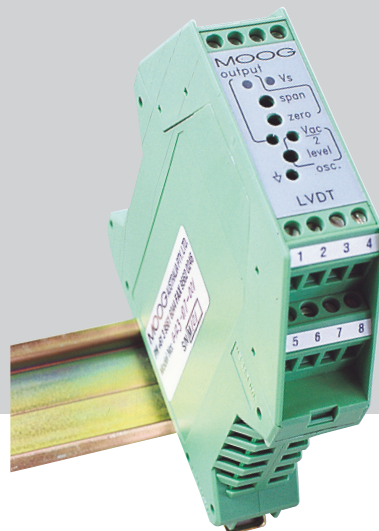
Two output signals are available. They are 0 to $\pm 10V$ and 4-20mA. The front panel has a dual colour LED to indicate the level and polarity of the $\pm 10V$ signal.

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.

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

Features

- 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



Specifications

Outputs: 0 to $\pm 10V$, 1 kOhm min load, terminal 3
4-20mA, 500 Ohm max load, terminal 7
100 PPM/dB excitation rejection
500 PPM non-linearity
4mV RMS ripple @ 3 kHz
300Hz bandwidth

Oscillator: 1 to 8.0V RMS
1 to 10kHz
50mA RMS
-50dB THD
200 PPM/°C frequency TC

Maximum allowable secondary voltage: Terminals 9 and 12
0.9 x osc. voltage or 8.0V RMS

Front panel indicators: Output positive = red
negative = green
Vs, internal supply = green

Front panel test points: Output $\pm 10V$
Oscillator, half level
Signal 0V

Front panel trim pots: Output span
Output zero
Oscillator level

Internal trim pot: Secondary demodulator phase adjust R6

Internal switches: Oscillator frequency select S1-1 to -4
Phase lead select S2-1 to -6
Phase lag select S2-7 and -8

Supply: Terminal 1
24V DC nominal, 22 to 28V
60mA @ 24V, no load
160mA @ 22V, 50mA oscillator load

Recommended supply protection: M205, 250mA T (slow blow) fuse compliant with IEC 127-2 sheet 3

Mounting: DIN rail
IP 20

Temperature: 0 to +40°C

Dimensions: 100W x 108H x 22.5D

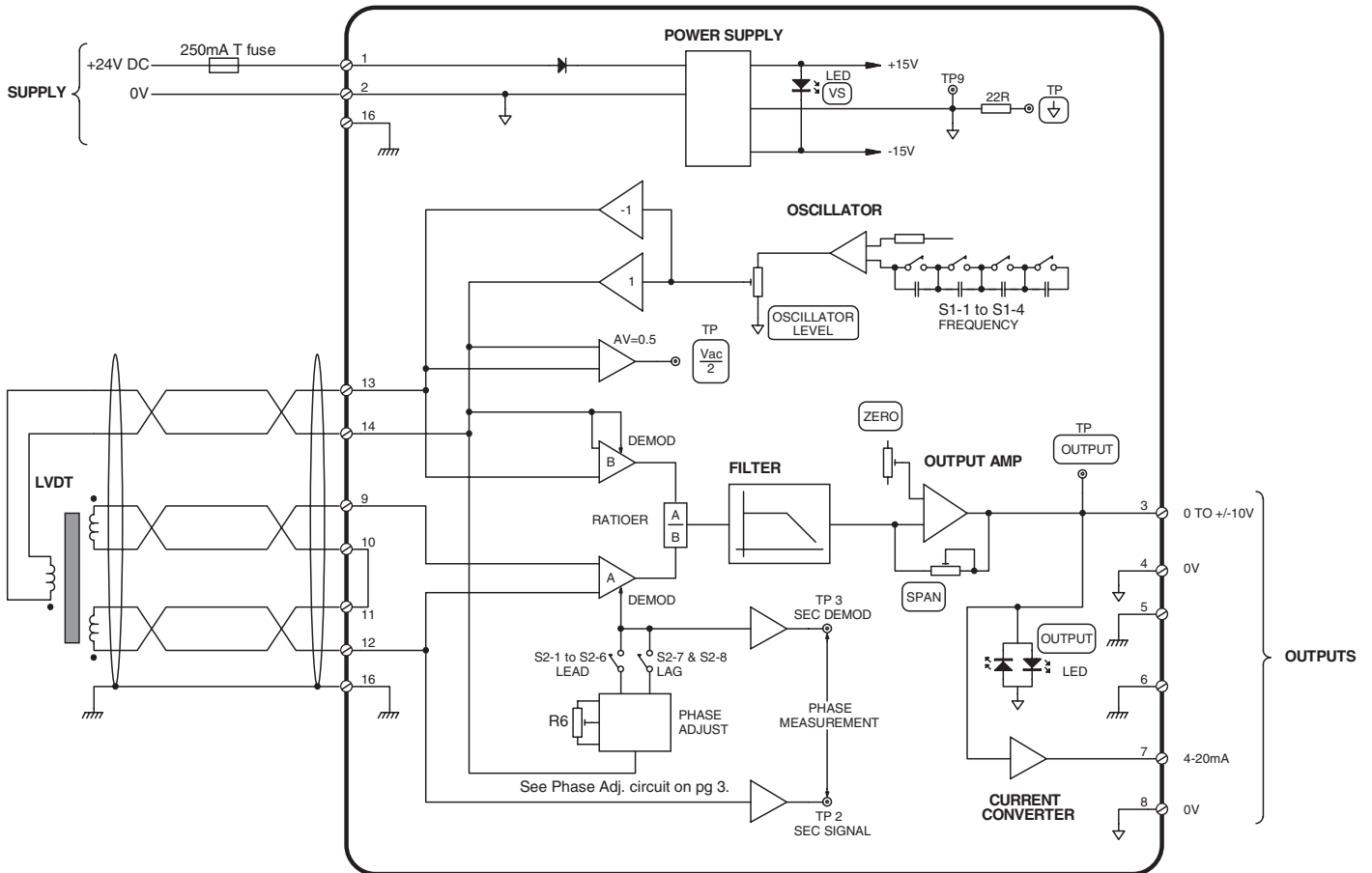
Weight: 127g

CE mark: EN50081.1 emission
EN61000-6-2 immunity

C tick: AS4251.1 emission

Full scale sensitivity: Min: 0.15 V/V
Max: 0.9 V/V

Operating Details



Ordering Information

LVDT Oscillator Demodulator G123-817-006

Special configurations can be provided.

Consult your Moog sales office to discuss details.



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