# 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 ±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.

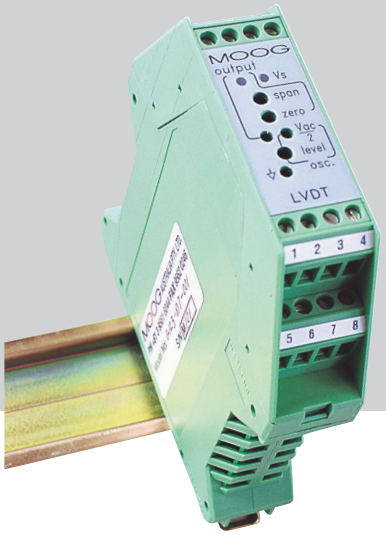
Two output signals are available. They are 0 to ±10V and 4-20mA. The front panel has a dual colour LED to indicate the level and polarity of the ±10V signal.

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

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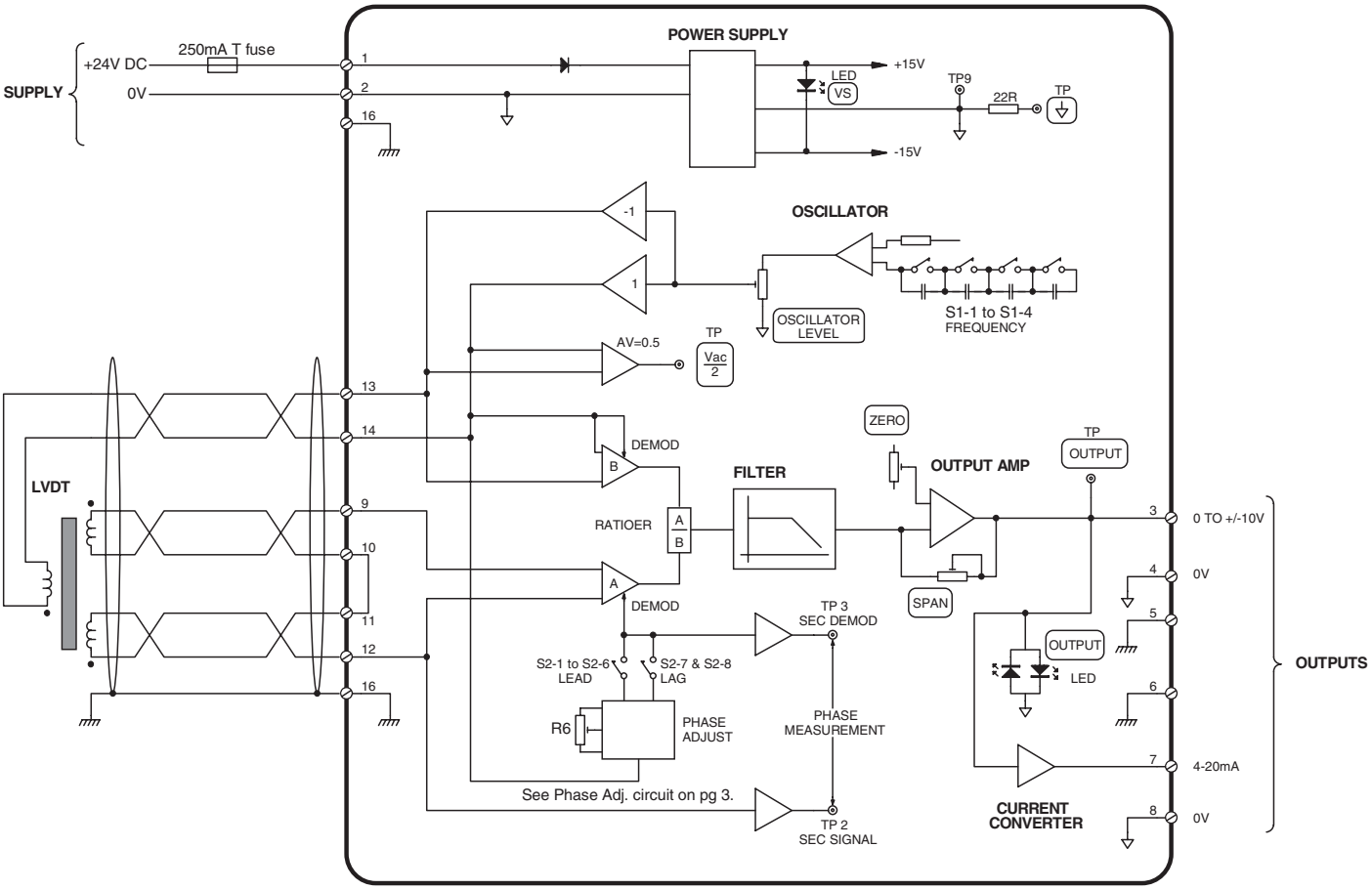
|---|---|
| **Outputs:** | 0 to ±10V, 1 kOhm min load, terminal 3<br>4-20mA, 500 Ohm max load, terminal 7<br>100 PPM/dB excitation rejection<br>500PPM non-linearity<br>4mV RMS ripple @ 3 kHz<br>300Hz bandwidth |
| **Oscillator:** | 1 to 8.0V RMS<br>1 to 10kHz<br>50mA RMS<br>–50dB THD<br>200 PPM/°C frequency TC |
| **Maximum allowable secondary voltage:** | Terminals 9 and 12<br>0.9 x osc. voltage or 8.0V RMS |
| **Front panel indicators:** | Output positive = red<br>negative = green<br>Vs, internal supply = green |
| **Front panel test points:** | Output ±10V<br>Oscillator, half level<br>Signal 0V |
| **Front panel trimpots:** | Output span<br>Output zero<br>Oscillator level |
| **Internal trimpot:** | Secondary demodulator phase adjust R6 |
| **Internal switches:** | Oscillator frequency select S1-1 to -4<br>Phase lead select S2-1 to -6<br>Phase lag select S2-7 and -8 |
| **Supply:** | Terminal 1<br>24V DC nominal, 22 to 28V<br>60mA @ 24V, no load<br>160mA @ 22V, 50mA oscillator load |
| **Recommended supply protection:** | M205, 250mA T (slow blow) fuse compliant with IEC 127-2 sheet 3 |
| **Mounting:** | DIN rail<br>IP 20 |
| **Temperature:** | 0 to +40°C |
| **Dimensions:** | 100W x 108H x 22.5D |
| **Weight:** | 127g |
| **CE mark:** | EN50081.1 emission<br>EN61000-6-2 immunity |
| **C tick:** | AS4251.1 emission |
| **Full scale sensitivity:** | Min: 0.15 V/V<br>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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