

Eco-Line Fixed Setpoint Controller

Introduction

This product is a result of a customer request in a hydraulic valve controller application. The requirement was a for a digital PLC output (0-24 VDC) to be able to control an analogue setpoint value (4-20 mA).

Our plan was to use the Eco-Line Signal Converter hardware and then modify the firmware to give the output minimum set by the Zero trimpot (20 turn) and the output maximum set by the Span trimpot (20 turn) and the analogue input used as a digital input.

Operation is as follows:

1. Input > 13 VDC the output will be the maximum setpoint (set using the Span trimpot).
2. Input < 11 VDC the output will be the minimum setpoint (set using the Zero trimpot).

Typically, the maximum setpoint can be 20 mA and the minimum setpoint can be 4 mA.

Both setpoints are adjustable from 0 to 22 mA.

The unit requires a 24 VDC (±5%) auxiliary supply.

Optional features are:

1. Ramping up and down which is DIP switch selectable (approx) 10 mS, 100 mS, 1 sec, 10 sec. [SW1-2 & SW1-3].
2. Setpoint trimpot locking using DIP switch. [SW1-1]
3. Output operation inversion (>13 V output=min setpoint, <11 V output=max setpoint). [SW1-6]
4. Capturing of the switching point using DIP switch. [SW1-7 & SW1-8]
5. Switching hysteresis selection 1 %, 5 %, 10 %, 25% using DIP switch. [SW1-4 & SW1-5]
6. SW2 can be used for different input types and ranges (similar to standard Eco-Line).
7. SW3 can be used for different output types and ranges (similar to standard Eco-Line).

