

4-20 mA ANALOG OUTPUT OPTION

Model 7000 / 7000XL / 8000XL

Introduction

The 4-20 mA Analog Output Option is used to provide an analog output that is proportional to the weight on the scale platform. Because of the inherent noise immunity present in a current loop, an isolated 4-20mA analog output is ideal for use in noisy environments. The 4-20mA analog output option can be used to send weight data to a process indicator, a simple on/off controller or to a programmable logic controller. An example of Active and Passive circuits is shown, see Fig. 2 & 3.

Setup

To setup the 4-20 mA Analog Output Option, Follow standard calibration procedure. This procedure is found in the instruction manual. The 4-20mA option is automatically calibrated for an output range of 4mA to 20mA, (i.e. 4mA equals zero weight and 20mA equals the scale's capacity). Once the basic scale has been connected and calibrated, attach the output cable from the appropriate controller or indicator to the 4-20mA option board. The white lead is connected to the + input of TB2 and the black lead is connected to the – input of TB2.

Active (default) or Passive mode, if your application requires a self powered (Active mode) analog output, place jumpers on pins 3,4 (ACT) on JU1 and JU2. For loop power (Passive mode) applications, place jumpers on pins 1,2 (PAS) on JU1 and JU2. See Fig 1 for jumper locations.

Calibrate your process indicator or controller according to the manufacturer's instructions. The option will output 4mA when the scale reads "zero" and 20mA when the scale reads full capacity. **NOTE:** If the scale is in a fault condition, the 4-20mA output levels are 3.5mA for gross underload or underload, and 24mA for gross overload or overload. Output impedance range is zero to 600 ohms.

Operation

8000XL battery life will be reduced by 50% when the 4-20mA option is set to the active mode. To increase battery life back to normal, set option output for passive mode.

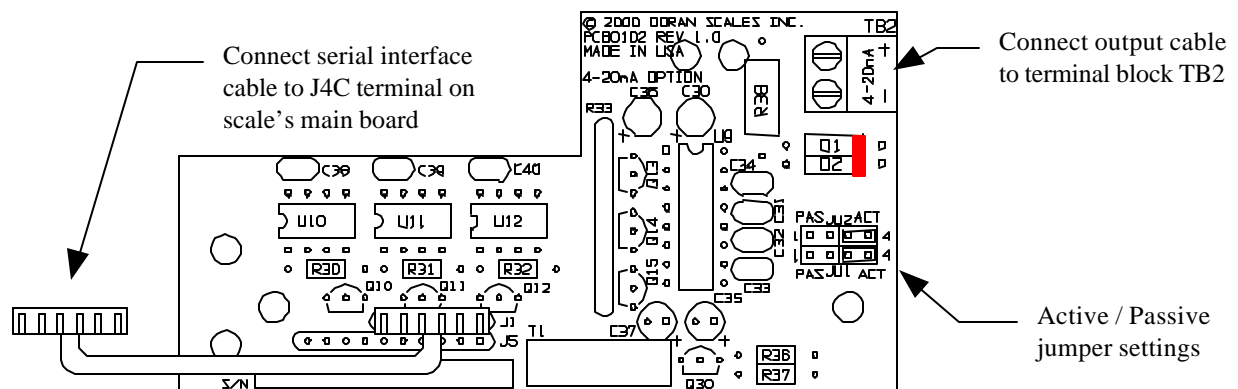


Fig. 1: 4-20mA analog option board

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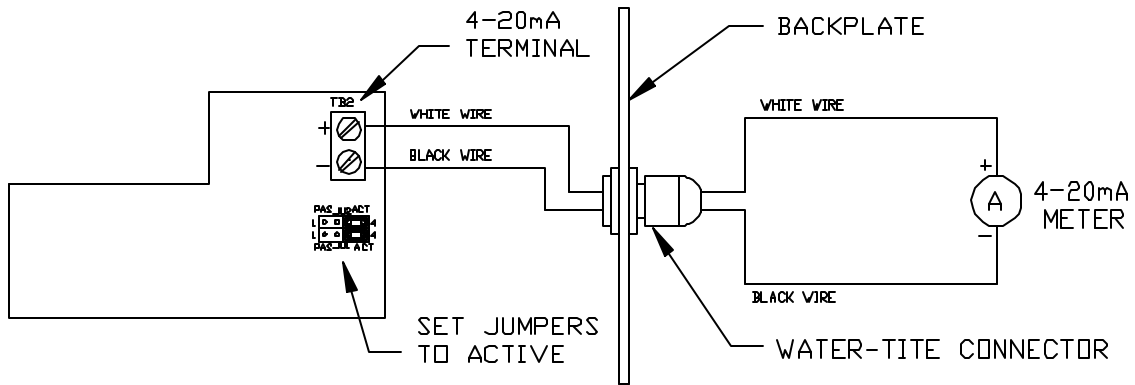


Fig. 2: Active 4-20mA analog circuit

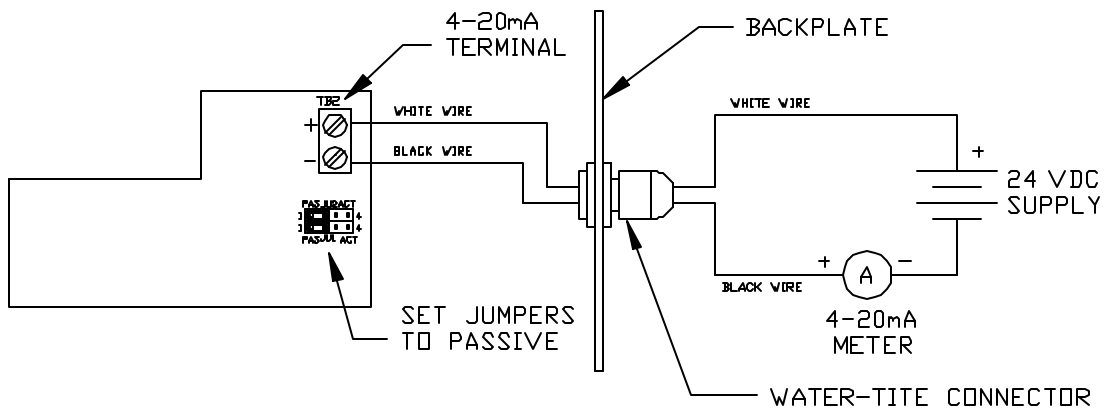


Fig. 3: Passive 4-20mA analog circuit