

Digital Transmitter (Spectrum) 4-20 mA Installation Instructions

1. The Spectrum 4-20 mA transmitter is preset at the factory. There is an arrow indicator above the top cam to show the direction of the current output. The 4 mA output is located at 12 o'clock. The 20 mA output is located at 3 o'clock, 90 degrees clockwise from the 4 mA position. Note: The transmitter can only operate between the 12 and 3 o'clock positions with minimal overtravel in each direction. (See Figure 1)
2. Determine the direction of the transmitter shaft rotation in relation to the opening or closing of the valve. Position the circuit board action reversal switch (see figure 2) to match the desired direction of rotation.

Case 1: If the output is required to increase from 4 mA to 20 mA for clockwise rotation of the actuator, position the reversal switch tab so it sits closest to terminals on PCB (terminals may be substituted with wire leads per customer specification).

Case 2: If the output is required to increase from 4 mA to 20 mA for counter-clockwise rotation of the actuator, position the reversal switch tab so it sits furthest from terminals on PCB (terminals may be substituted with wire leads per customer specification).

3. Connect a 12-32 VDC power supply source and multimeter to terminal points 1 & 2. The multimeter must be connected in series with the power supply (refer to unit wiring diagram for the standard setup procedure.).
4. Adjust the 4mA and 20mA outputs to the desired ends of travel of the valve. The 4 mA output is adjusted with the #1 potentiometer (zero adjustment) as shown in Figure 1. The 20mA output is adjusted with the #2 potentiometer (span adjustment), also shown in Figure 1.

Note: The span adjustment allows in both extreme cases of 4 mA and 20 mA;

Clockwise: 47 degrees min.
 99 degrees max.

Counter-clockwise: 47 degrees min.
 94 degrees max.

5. The span and zero adjustment must be calibrated repeatedly until the required 4-20mA output is established for each end of travel of the valve.

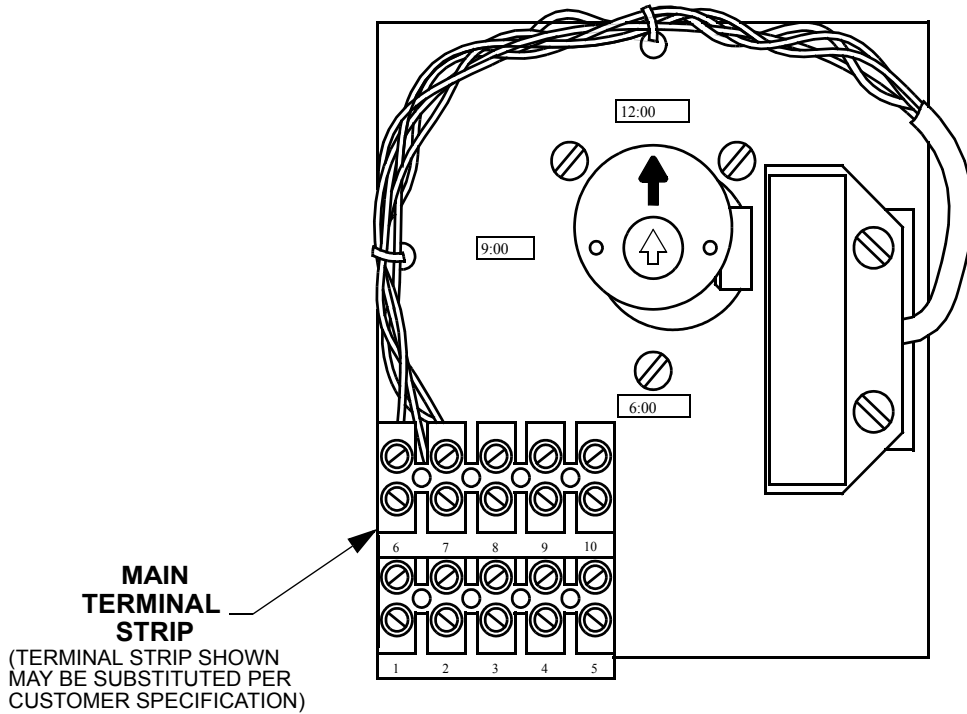


Figure 1

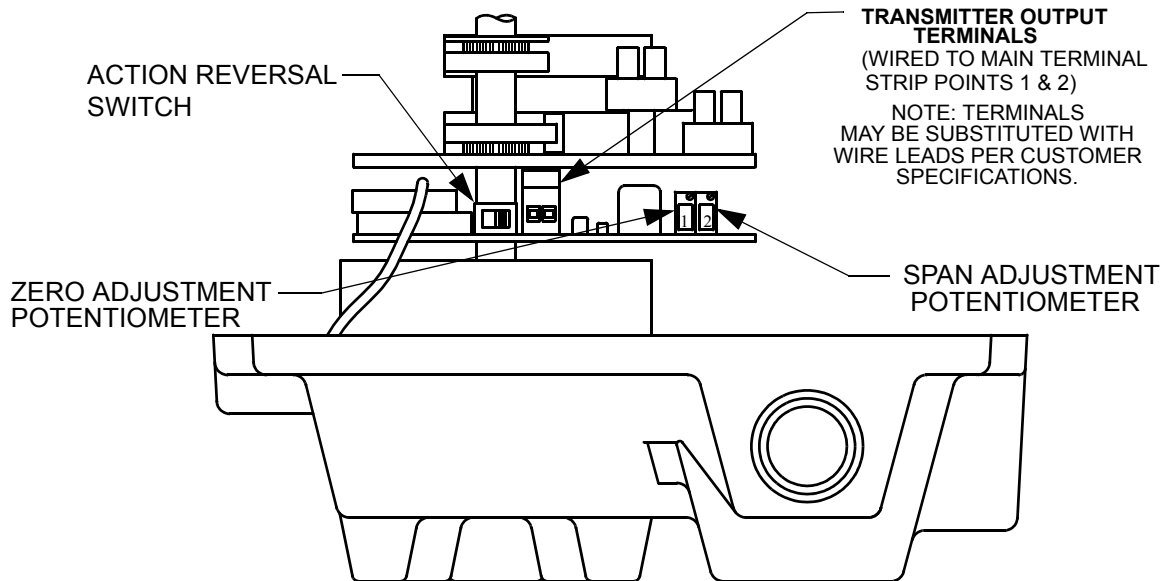


Figure 2