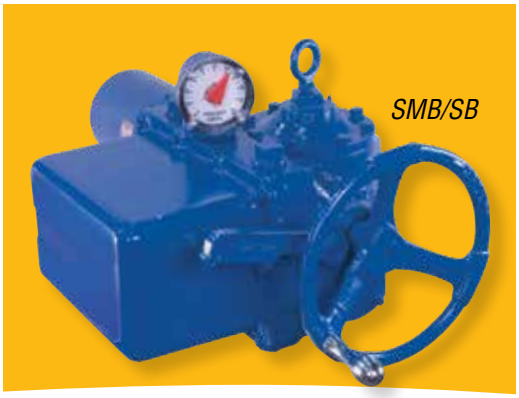
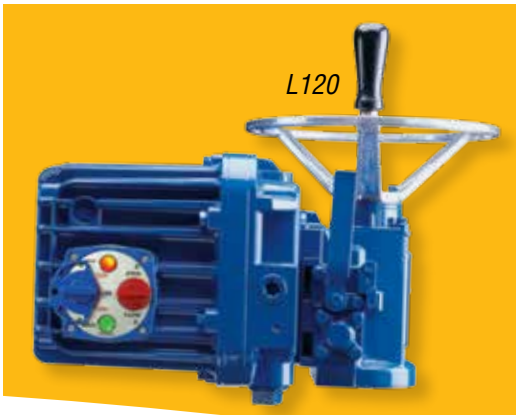
PT20SD
Position Transmitter
Calibration Instructions

For use with SMB, L120 and LY actuators, with or without integral control packages.





Calibration procedure

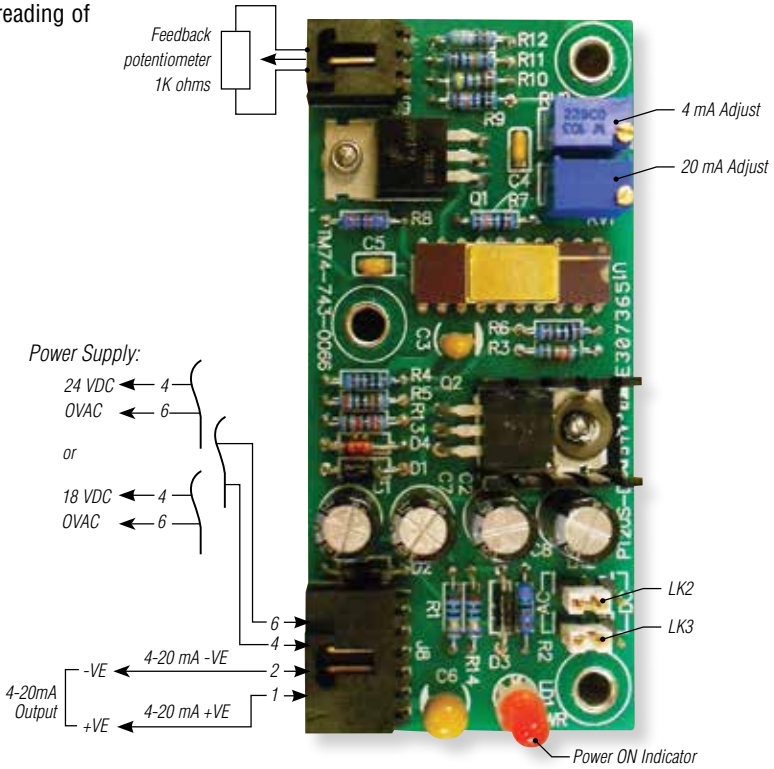
1. Position the actuator to mid-travel (valve at 50% position).
2. Disconnect the potentiometer wiring harness from the PT20SD board and measure the resistance from each end connection to the center connection on the potentiometer.
3. To set the potentiometer to the correct resistance reading, loosen the setscrew that retains the spur gear on the potentiometer shaft and rotate the shaft until a reading of 500 (ohms) is achieved.
4. Tighten the setscrew and reconnect the wiring harness to the PT20SD.
5. Run the actuator fully CLOSED.
6. Calibrate ZERO position by adjusting the zero potentiometer until a 4 mA output signal is read at terminals +VE and -VE.
7. Run the actuator fully OPEN.
8. Calibrate SPAN position by adjusting the span potentiometer until a 20 mA output signal is read at terminals +VE and -VE.
9. Repeat steps 5 to 8 and fine-tune as necessary.

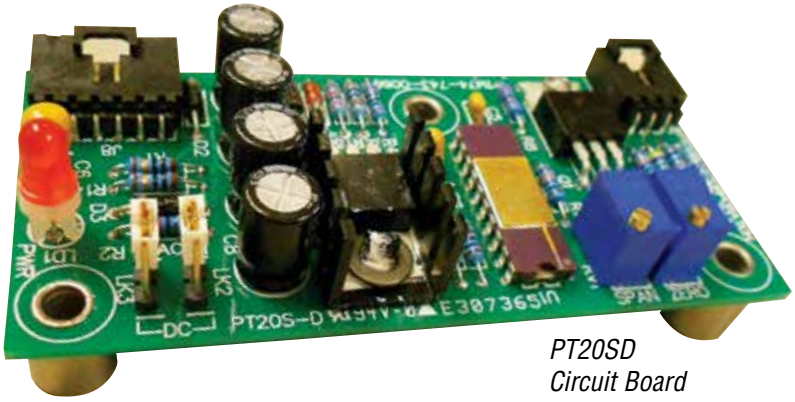
Important notes

1. Analog inputs must not be connected to earth ground on +VE or -VE terminal.
2. For actuators equipped with 18 VAC input, move jumpers LK2 and LK3 to the AC position.

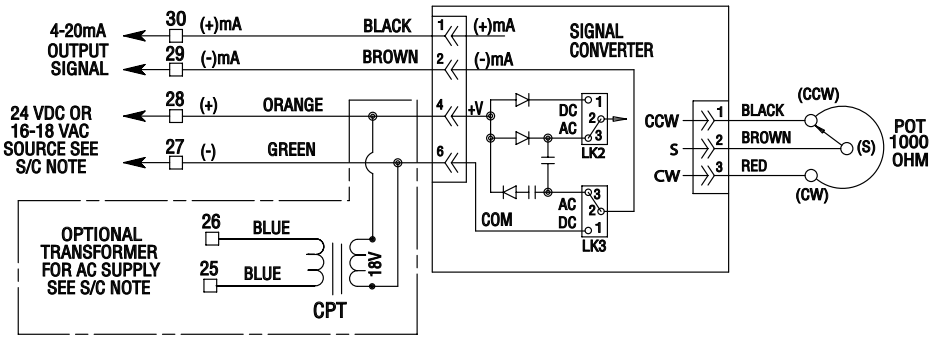
Specifications

- **Output signal:** 4-20 mA
- **Input potentiometer:** 1K (ohms)
- **Temperature rating:** -40 to +85°C
- **Linearity error:** ±1% max.
- **Loop resistance:** 370 (ohms) max.
- **Power:** 18 VAC or 24 VDC ± 10%
  (LK2 and LK3 must be set appropriately.)





PT20SD
Circuit Board



The PT20SD signal converter may be powered by either 24 VDC or 18 VAC. The board is wired to a 1K ohm potentiometer mounted to the position indicator gearing in the actuator. The board circuitry converts the 1K ohm input to a 4-20 mA output for valve position indication.

FCD LMENFL1210-00 (E) 10/13

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