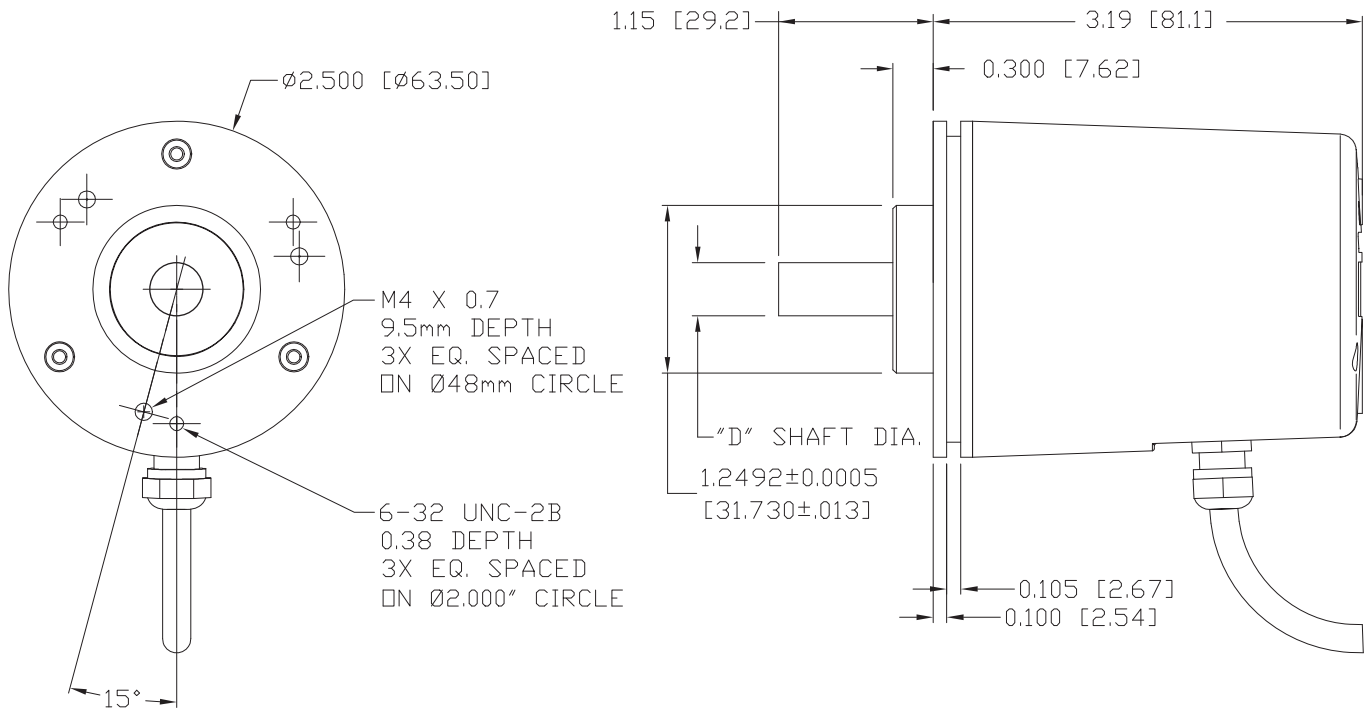


RTX Series Rotary Position Transducer—Installation Guide



Note: All models with a rotational range of 20 turns or fewer use a potentiometer without stops. If rotation continues past the maximum range, a dead zone will be encountered and then the output will begin again. All other units have stops and forced rotation beyond the maximum range may damage the unit.

RTX-P420 4 to 20 mA Current Output

4 to 20 mA Adjustment

The 4 to 20 mA output transducer is a 2-wire, loop powered device. The transducer, power supply, and current monitor must be connected in series as illustrated in Fig. 1. For best noise immunity, use twisted pair shielded cable between each of the electrical components. The shield of the cable should be open at the transducer and grounded at the electrical interface.

The minimum supply voltage is a function of total loop resistance. It may be calculated using the formula: $V = (0.02 \times \text{Load Res.}) + 9 \text{ VDC}$. Supply Voltage may also be determined from the graph in Fig. 2.

To adjust the zero and span, first remove the two Phillips head screws from the potentiometer access holes located on the end of the transducer (see Fig. 3). Visually locate the adjustment screws on each potentiometer. The screws are very small and will require a small blade type screwdriver (.06" (1.5mm) max. blade width x .016" (.4mm) max. blade thickness) for the adjustment. Rotate the shaft of the transducer to the desired zero position (must be within 0% to 30% of range) and adjust the *Zero* potentiometer to give a 4 mA output. Rotate the shaft to the desired maximum position (must be within 80% to 100% of range) and adjust the *Span* potentiometer for the maximum output current of 20 mA. Since the zero and span controls are somewhat interactive, recheck the zero and span settings and adjust as necessary. Insure that a sealing o-ring (see Fig. 3) is on each of the two Phillips head screws. Thread each screw into each potentiometer access hole until the head of the screw bottoms against the raised shoulder. Do **not** tighten the screw against the shoulder.

Output 4 to 20 mA
 Excitation Voltage..... 9 to 35 VDC
 Min. Supply Voltage..... (.02 x Load Res.) + 9 VDC

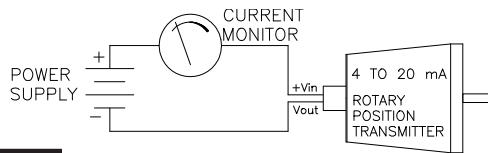
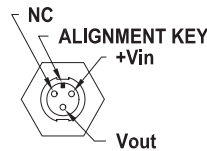


Figure 1

Connector Wiring

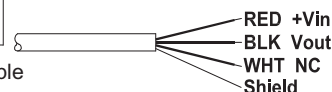
For models with connector option with or without mating connector.

As viewed on transducer and on cable attachment side of mating connector.



NC = No Connection

Electrical Cable Wiring



NC = No Connection

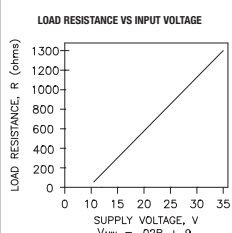


Figure 2

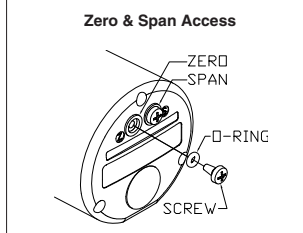


Figure 3

For models with bulkhead fitting and electrical cable option. Also applies to wiring of 10248-xL mating connector with electrical cable.



4175 SW Research Way, Corvallis, Oregon, 97333
 •Tel: (541) 757-3158 •Fax (541) 757-0858