Honeywell

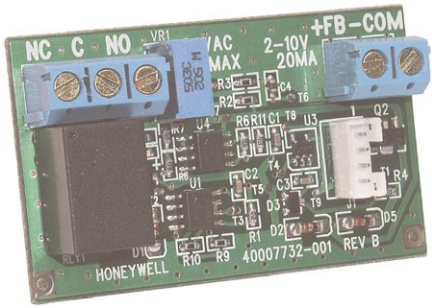
272630D
Position Feedback and Auxiliary Switch Accessory

For ML6984 and ML7984

INSTALLATION INSTRUCTIONS

APPLICATION

The 272630D auxiliary board is an optional circuit board that is used in conjunction with Series 4000 ML6984 and ML7984 globe valve actuators. This auxiliary board combines the function of an adjustable low voltage SPDT auxiliary switch with a 2-10 Vdc or 4-20 mA position feedback signal. It has a 4-pin keyed connector for communications from the mother circuit board.



SPECIFICATIONS

Feedback: 2-10 Vdc (10-2 V reverse acting) into minimum impedance 500 Ω. Maximum output current is 20 mA dc.

Auxiliary Switch: SPDT, 24 V, 50/60Hz, 1 A inductive. Fixed differential (3% of stroke), adjustable operating point from 0 to 100% of stroke.

INSTALLATION

When installing this product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check ratings given in instructions and on the product to ensure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation in complete, check out product operation as provided in these instructions.

⚠ CAUTION:

1. Disconnect power supply before beginning installation to prevent electric shock and equipment damage.
2. All wiring must comply with applicable local electrical codes, ordinances and regulations.
3. DO NOT electrically operate the ML6-7984 actuator before assembly to the valve because damage not apparent to the installer may occur. Mount the actuator to the valve before connecting to power.

Assembly

1. Remove plastic cover from the ML6-7984 by loosening the two screws located on the top. (Note: These screws are captive. Rotate three complete revolutions to remove cover).
2. Slide the auxiliary board into the two slots at the bottom of the bridge. Push back and snap the board into the fingers. (See Fig. 1)
3. Connect one end of the 4-pin connector to the main board and the other end to the auxiliary board if it is not already connected. The connectors are keyed and only install one way.
4. Mount the actuator onto the valve body and connect wiring.
5. Reinstall cover after operational check.

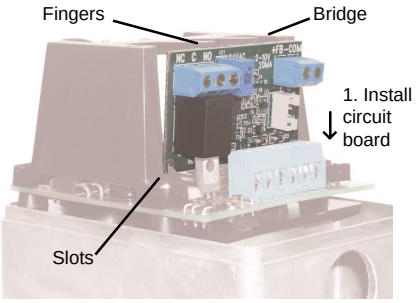


Fig. 1 - Installation of auxiliary board

OPERATION

The first time the valve is powered, the microprocessor will automatically cycle the valve through a full stoke to calibrate its position. Any stroke between 1/2" (13 mm) and 1" (25 mm) will be divided into 30 equal steps. Run time will be proportional to stroke length. (For example: nominal timing for 3/4" stroke is 63 seconds. For 1/2" stroke this would be 42 seconds). The LED lights up when terminals T5-T6 are powered, and flash when the actuator is in motion.

NOTE: 272630D requires that the actuator be continuously powered, so ML6984 must be wired in "5-wire" configuration.

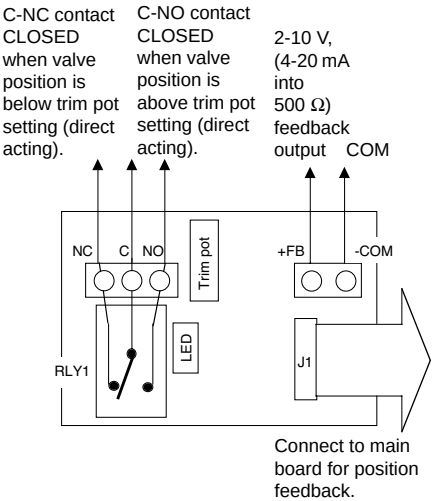


Fig. 2 - Wiring and operation of auxiliary board 272630D

The 272630D provides:

1. A 2-10 Vdc voltage proportional to the valve stem position. This output is capable of sourcing up to 20 mA dc drive current.
2. An isolated "Form C" relay contact closure that energizes when the valve is open more than the setting of the trimmer potentiometer ("trim pot").

Position feedback voltage mirrors the control signal. For ML6984 and direct acting ML7984 operation, see Fig. 3. For reverse acting ML7984, see Fig. 4.

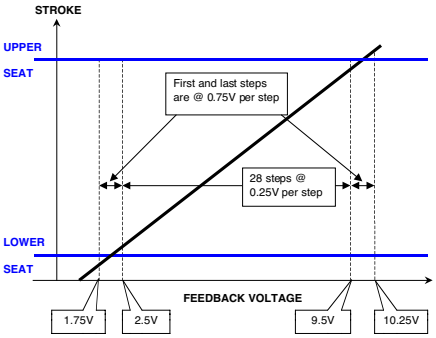


Fig. 3 - Feedback voltage reponse for ML6984 and direct acting ML7984

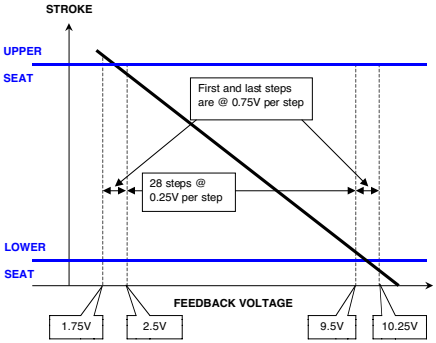


Fig. 4 - Feedback voltage response for reverse acting ML7984

Auxiliary Switch Setup

1. Drive actuator to desired position.
2. Adjust trimmer potentiometer ("trim pot") until relay is energized. (On-board LED will light).

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