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**APL-4 Series
LIMIT SWITCH
Installation & Operation Manual
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Description

Triac APL-4 limit switch enclosures provide local and remote position indication for automated valves. They generally feature a Hi-Viz indicator with “red=closed” and “green=open” for intuitive local position determination. The APL-4 is available with a number of limit switch options for remote indication in a variety of electrical applications. They may also be used as a junction box for direct installation of solenoid valves.



Installation

APL-4 may be installed with a variety of mounting hardware. For best results, specify the NAMUR shaft option and NAMUR mounting hardware (when possible). These options allow direct coupling to actuators without couplings, reducing deadband.

Simply bolt bracket to actuator and APL-4 to bracket, leaving bolts finger tight. For NAMUR applications, the APL-4 shaft features an integral alignment pin. This pin must engage the tapped hole in your actuator shaft. For non-NAMUR applications, make sure to properly install a coupler between APL-4 and actuator. Once the APL-4 is installed with fasteners loosely tightened, stroke your actuator two or three times to align the bracket. Then tighten all fasteners.

Special Hazardous Location Instructions

APL-4 series enclosures are designed to explosion proof EEx d IIB t6 and IP67 (NEMA 4, 4X) specifications. Check with national and local electrical regulations to ensure enclosure rating meets application requirements. See nameplate information to verify hazardous location suitability.

Adjusting Hi-Viz Indicator

Hi-Viz indicators are easily adjusted to match the dome's clear windows to the rotor's red and green quadrants. Simply loosen the four screws to adjust the indicator. Make sure dome window line up with rotor quadrants. Finally, tighten the screws to insure a good seal.



Adjusting Limit Switches

APL-4 enclosures feature quick-set cams which are used to trip the limit switches. These cams are easily adjusted. Remove cover and set aside. Rotate actuator/valve to full clockwise (CW) position.

Adjust cam(s) associated with CW as follows:

1. Push or pull cam against spring to disengage it from splines.
2. Rotate cam CW breaking contact with switch (or moving magnet away from switch).
3. Continue rotating cam CW just until switch trips.
4. Release cam and reengage it with splines.

Rotate actuator/valve to full counter-clockwise (CCW) position. Adjust cam(s) associated with CCW as described above except rotate cam(s) CCW.

Note: factory setting is top switch = CW (closed), second switch = CCW (open), third switch = CW, and fourth switch = CCW.

Wiring Instructions

APL-4 enclosures feature prewired switches. All user connections are made at a numbered terminal strip. A wiring diagram is located inside the cover and indicated which terminal numbers correspond to switch contacts: normally open, normally closed common, etc. Simply follow the wiring diagram and electric code to connect switches to your system.

Solenoids may also be wired through the APL-4 enclosure. At least two auxiliary terminals are included as an option. A ground screw is also included. Simply wire the solenoid to auxiliary terminals, and then connect power leads to the opposite terminal side. Be sure to properly ground the solenoid at provided ground terminal.

APL-4 series enclosures include two 3/4" conduit entries. Be sure to follow the National Electric Code regulations for rigid conduit, flexible conduit or cable systems as applicable.

