

Suggested Specification for Pratt Positron Series Actuators

Enclosure: The entire actuator shall be watertight according to NEMA-4 Standard. The terminal compartment and limit switch compartment covers will be fastened to the actuator housing with captured stainless steel bolts.

Motor: The motor will stroke in sixty sections, shall be specifically designed for actuator service and be characterized by high starting torque, low stall torque and low inertia. The motor shall be of the induction type, totally enclosed and non-ventilated. The motor shall be capable of operating in any position and shall be properly sealed from the gear case to allow removal of the motor without loss of lubricant.

Limit Switches: Travel limit switches shall be provided to de-energize the motor control circuit when the actuator reaches the limits of travel in the open and closed directions. The limit switch drive shall be a mechanical design and of the stacked counter gear type, easily set with a screwdriver. The standard configuration will be two counter gear rotors with limit switches consisting of two (2) normally closed and (2) normally open contacts per rotor. Limit switches shall have silver contacts and be completely enclosed in their own NEMA-4 case.

Torque Switches: Torque switches shall be provided to de-energize the motor circuit if the valve encounters an obstruction during travel. Each actuator shall have independent open direction and close direction torque switches.

Heater: The actuator shall incorporate a space heater in the limit switch compartment to aid in the prevention of damage to the switches and motor resulting from condensation.

Gearing: All power gearing shall be made of hardened steel or bronze and operate in a grease lubricant. Output drive gearing will be of the worm shaft/gear configuration with the worm gear constructed of bronze.

Electrical Terminal Housing: The electrical terminals are to be housed in a compartment that is isolated from the torque/limit switch compartment. Terminals shall be of the plug and socket design which simultaneously disconnects the motor and control wiring when the terminal compartment cover is removed.

Mechanical Dial Position Indicator: The actuator shall be furnished with a mechanical dial indicator to show continuous valve position.

Handwheel: A handwheel shall be permanently attached to the actuator for manual operation. The handwheel shall not rotate during motor operation and a declutching mechanism shall be provided for manual operation.

POSITRON ELECTRIC ACTUATORS



Open/Close Controls: Actuators shall be furnished with an integral control package which connects to the actuator by means of plug and socket terminals. The control enclosure will be provided in accordance with NEMA-4 standards. Motor controls shall include mechanical reversing contactors. All models shall include Open/Stop/Close control, Local/Off/Remote selector switches and Open/Close lights. (Remote push button stations if required are available by request.)

Modulating Controls: The motor is rated for 60 starts per hour. The control enclosure shall be constructed in accordance with NEMA-4 standards. Motor controls shall include mechanical reversing contactors. All models shall include Open/Stop/Close control, Local/Off/Remote selector switches, Open/Close lights and a positioner board to accept a 4-20mA DC control signal. (4-20MA transmit signal available by request) The 120 volt single phase Positron II and 480 volt 3ph Positron III shall be as manufactured by HENRY PRATT COMPANY.



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