

SOLENOID PILOT VALVES

Solenoid pilot valves are customarily used to operate pneumatic/hydraulic actuators, acting upon electrical signals to admit and exhaust supply pressure to the actuator. Four-way pilot valves are generally used with double-acting actuators, while three-way pilot valves are used on spring-return and spring-diaphragm models.

Metso maintains a complete stock of solenoid pilot valves for its line of pneumatic/hydraulic actuators and can recommend solenoid valves for special services on an application basis.

When pilot valves are ordered with actuators, they are assembled and tested before shipment from the factory. Solenoid pilot valves are normally mounted on double-acting actuators to provide for valve closure when de-energized. If reverse operation is required, the pilot valve will be mounted on the actuator with the supply connections reversed.

Most solenoid pilot valves are supplied from stock with standard enclosures for 115-volt 60-Hz AC service with a Class F coil. Pilot valves for other services, such as 230 VAC, 480 VAC, or direct current, as well as valves with other coils, such as high temperature, are available on application. Enclosure ratings are given in the tables on page 2 of this Bulletin.

The tables on page 2 list the recommended solenoid pilot valves for each JAMESBURY® actuator. Please note that the solenoid pilot valves shown are sized to provide the typical operating speeds cited in our individual catalog bulletins. These generally range from 1 second on the smaller actuators, up to 15 seconds on the larger ones. Other solenoid pilot valves, along with a variety of accessories such as quick exhaust valves and speed controls, are available when different speeds are required. Manual operators are also available for most models. Please consult the factory for further information on these options.



VPVL with Solenoid

Specific actuator information can be found in the following Bulletins:

Series B Piston Actuators	6B20
QUADRA-POWR® X Spring-Diaphragm Actuators	A110-4
VALV-POWR® VPVL Mod C	A111-3
VALV-POWR Stainless Steel	A111-4

HOW TO ORDER

To order a solenoid valve, simply choose the appropriate model from the tables on page 2 and specify the required voltage as shown in the example below:

EXAMPLE: A standard solenoid valve with a NEMA 4 enclosure for a QPX2 QUADRA-POWR X actuator would be specified as follows:

8320G182 (115V 60 Hz AC)

STANDARD SOLENOID PILOT VALVES

ACTUATOR	TYPE	STANDARD ENCLOSED DESIGN NEMA 1, 2, 3, 3S, 4, 4X, 115V, 60 Hz AC	WATERTIGHT/HAZARDOUS LOCATION DESIGN NEMA 3, 3S, 4, 4X, 6, 6P, 7, 9, 115V, 60 Hz AC	C _v	NPT
QPX1, QPX2	Spring-Diaphragm	8320G182	EF8320G182	0.09	1/4
QPX3, QPX4		8317G35	EF8317G35	0.20/0.73	1/4
QPX5		8316G54	EF8316G54	3.0	3/8
B1C6, B1C9, B1C12, B1C16	Double-Acting Piston	8342C1*	EF8342C1**	0.70	1/4
B1C20, B1C25			EF8342C3**	0.70	3/8
B1C32, B1C40, B1C50		—	EF8344G72 EF8342C20** Numatics 335XP4460***	1.4/2.2 0.70 3.0	3/8 3/8 3/8
B1J8, B1J10, B1J12, B1J16, B1J20	Spring-Return	—	EF8321G2	0.8/1.2	3/8
B1J25, B1J32	Piston	—	EF8316G54	3.0	3/8

* Meets NEMA 1 specifications

† Pneumatic use only

** Meets NEMA 3, 7, and 9 specifications

*** Meets NEMA 4, 7, and 9 specifications

DIRECT-MOUNTED SOLENOID PILOT VALVES

Direct-mounted solenoid valves for Series VPVL actuators are available in both 3-way and 4-way configurations. These solenoids mount directly to the actuator in accordance with NAMUR and VDI/VDE 3845 standards.

ACTUATOR	TYPE	STANDARD ENCLOSED DESIGN NEMA 4 115V 60 Hz AC	WATERTIGHT/HAZARDOUS LOCATION DESIGN NEMA 4 & 7 115V 60 Hz AC	C _v	NPT
VPVL*	Double-Acting Spring-Return	031-0576-01	031-0580-01	0.7	1/4 Inlet 1/4 Exhaust

*Except VPVL011, 650, 700, 800. These use a mounting linkage. Note, there is no solenoid available for the VPVL011 actuator.

STANDARD SOLENOID PILOT VALVES

ACTUATOR	TYPE	STANDARD ENCLOSED DESIGN NEMA 1, 2, 3, 3S, 4, 4X 115V 60 Hz AC	WATERTIGHT/HAZARDOUS LOCATION DESIGN NEMA 3, 3S, 4, 4X, 6, 6P, 7, 9 115V 60 Hz AC	C _v	NPT
VPVL650	Double-Acting	8344G72	EF8344G72	1.4	3/8
	Spring-Return	8316G54	EF8316G54	3.0	3/8
VPVL700	Double-Acting	8344G74	EF8344G74	3.0	1/2
	Spring-Return	8316G64	EF8316G64	4.0	1/2

Subject to change without prior notice.

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