



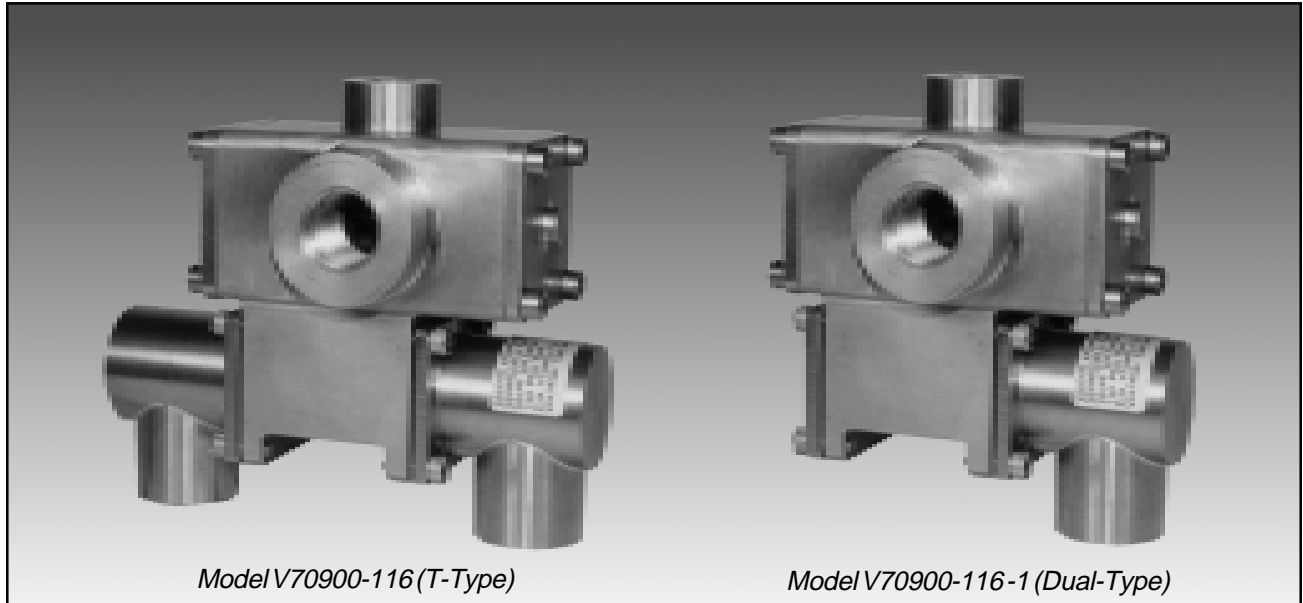
Valcor Nuclear

Scram Solenoid Pilot Valve SSPV

3-Way, Pilot Operated, Solenoid

Model: V70900-116 (T-Type)

Model: V70900-116-1 (Dual-Type)



Model V70900-116 (T-Type)

Model V70900-116-1 (Dual-Type)

DESCRIPTION

Valcor Nuclear, a division of Valcor Engineering Corporation, has created this compact size and low weight 3-way, pilot operated, nuclear grade solenoid valve, to be used as a Scram Solenoid Pilot Valve (SSPV) in Boiling Water Reactor (BWR) nuclear power plants. It has been designed specifically to prevent the chronic operational problem associated with conventional solenoid operated valves currently installed on many plants world-wide and as addressed in USNRC information notice 96-07. These valves have many other applications as well.

Valcor model V70900-116 can be used in a T-type configuration (1-valve/2-coil installation). Two solenoids - a push and a pull type are used in this model. A slight variation of this model V70900-116-1 is

used in dual-type configuration (2-valve/1-coil installation). In this version, only the pull solenoid is used. However, the basic valve design remains the same in both models. The coils used are AC powered, which is required to meet the critical scram response time specified. A minimum 35 psig operating pressure is required, however, the valve can operate safely in excess of 200 psig applied at the pressure port.

DESIGN FEATURES

Models V70900-116 and -116-1 incorporate these outstanding features:

- Compact size, low weight and rugged construction; porting arrangement suitable to replace existing valves

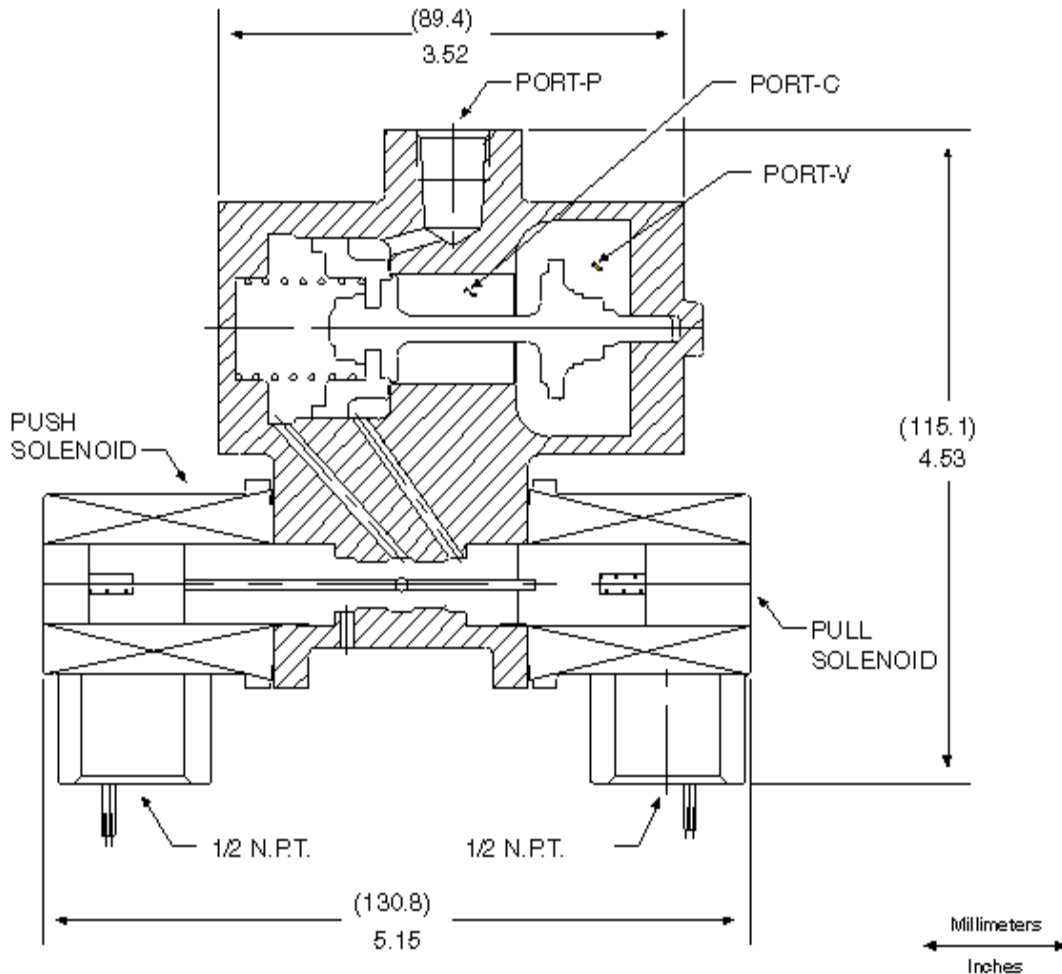
- Available in ½" NPT line size
- Brass body
- Remote pilot operated
- No diaphragms (which can stick to brass valve seats and cause slow response time)
- All stainless steel, welded construction, solenoid enclosure for Nema 4, 7 compliance (water tight and explosion proof)
- Less than 10 watts power requirement, with a cool-running/potted coil design
- Design for continuous duty up to 120°F (50°C) ambient
- Maintenance-free. Replacement O-ring kits and other spare parts available for field replacement
- 40 year qualified life for coil and metallics; 10 years for O-rings
- To be qualified to IEEE standard 382-1985

SPECIFICATIONS

Fluid Air
 Connections 1/2" NPT - Electrical
 1/2" NPT - Process
 Operating Pressure (static) 0-150 psig (10.3 bar)
 Operating Pressure (differential)
 35-150 psig (2.4-10.3 bar)
 Electrical 90 VAC to 125 VAC
 56.5 to 63.5 HZ
 Power Consumption 10 Watts/coil max

Normal Scram Response Time .. 70 m-sec for venting
 45 cu. in. volume from
 75 psig (5.17 bar) to
 40 psig (2.75 bar)
 Time to reach 8 psig (0.55 bar) ... Not to exceed 100 m-sec
 Coil Rating Better than Class H
 220°C (428°F)
 Weight < 7lb (3.1 kg) T-type
 < 6lb (2.7 kg) dual type
 Dimensional Envelope 5.15" L x 4.53" H x 2.75" W
 (120.8 mm x 115.1 x 69.85)

OUTLINE DIMENSIONS MODEL V70900-116



Valcor Nuclear

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