



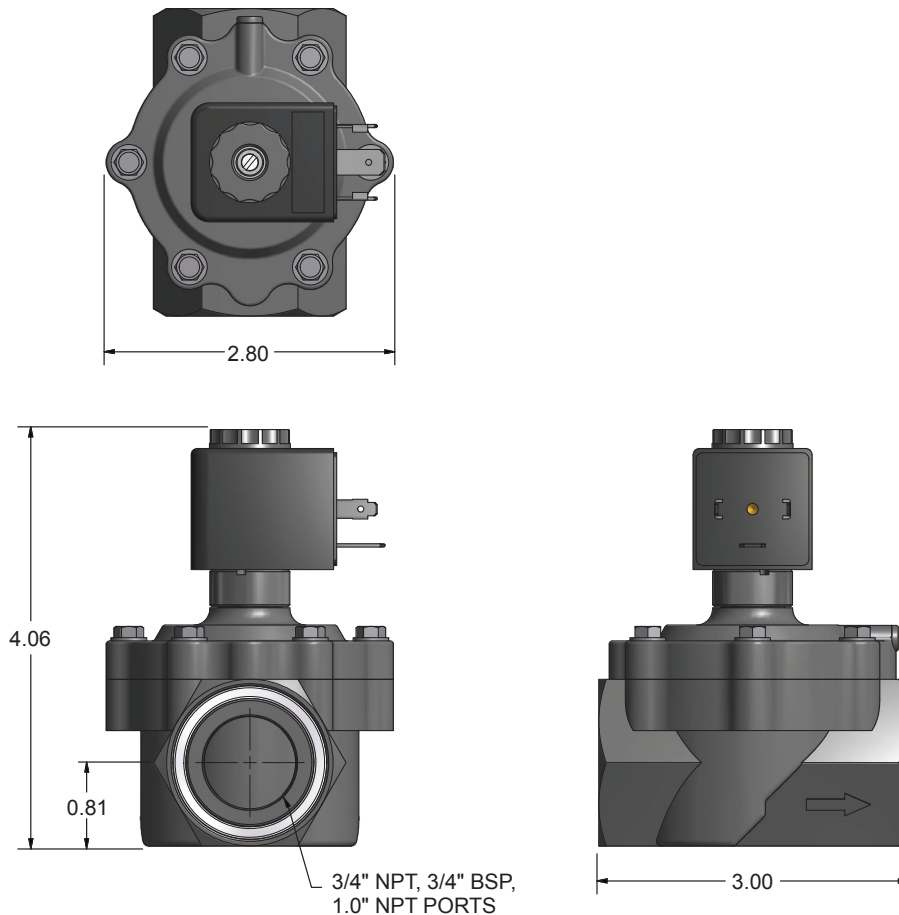
Series 3685

Anti-Water Hammer 2-Way
2-Position Solenoid Valve

The Spartan Scientific Series 3685 2-way, 2-position solenoid diaphragm valve offers the highest flow for the smallest overall size in its class. The valve is designed from the ground up using modern design technologies and materials. Featuring a full flow 1.0" (25 mm) orifice, the 3685 is available in either normally open or normally closed configurations. The nylon body is media compatible, light in weight, and by use of external metal port rings, is virtually indestructible. The normally open version of the valve features an optional turn lock manual override and has no external by-pass tube which eliminates leak points and size. The body is available in 3/4" and 1.0" NPT or BSP. The low wattage solenoid features a DIN 43650 Form A electrical interface and is nylon encapsulated. FKM, EPDM and Buna are standard elastomers and the operators are made of stainless steel / brass or stainless steel / brass with copper shading rings for AC versions. Typical applications include control of inert gasses, water and compatible fluids.

Dimensional Data

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED



Technical Data

Function:	2-way, 2-position NC and NO internal pilot solenoid operated
Port Size:	3/4" NPT, 3/4" BSP and 1.0" NPT
Pressure Range:	10 PSI (min) to 120 PSI
Orifice Sizes (Cv):	1.125" (14)
Manual Override:	N.O. versions, Turn-Lock
Temp. Range:	(Fluid Temp max. +60°C) Ambient -10°C to +50°C
Media:	Air, Water, Light Oil, Noble Gases (Contact factory for additional media compatibilities)
Mounting:	On pipe
Response Time:	80 to 120 ms

Electrical Data

Materials:	Composites: Noryl, Zytel, Ultem 2100 (optional) Armature Assembly: Brass, 300 and 400 Stainless Steel Seats and Seals: NBR, EPDM, FKM Springs: 300 Stainless Steel Fasteners: 300 Series Stainless Steel
Coil Data:	Encapsulation: Glass Filled Nylon (Class F, Insulation Rating) Windings: Insulated copper (Class H) Voltages: 6, 12, 24 VDC; 24, 120, 220, 240 VAC 50/60 Hz Voltage Tolerance: +/- 10% nominal
Connections:	DIN Spades: According to DIN 43650 Form "A"/ISO 4400, EN175301-803:2000 Flying Lead Wires: PVC 18 Gauge, Multi-Strand Copper Wire, 300V, 18" Length

SPARTAN SCIENTIFIC
www.spartanscientific.com

P.O. Box 9792, Boardman, Ohio 44513
(330) 758-8446 Fax: (330) 758-3314



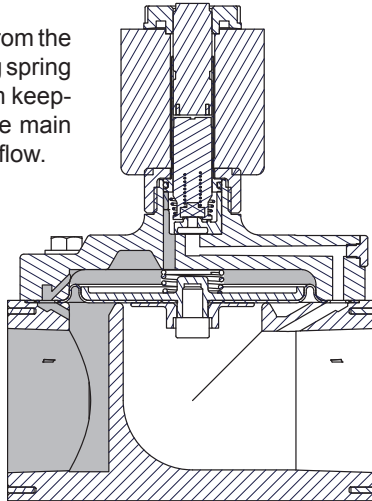
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Principle of Operation

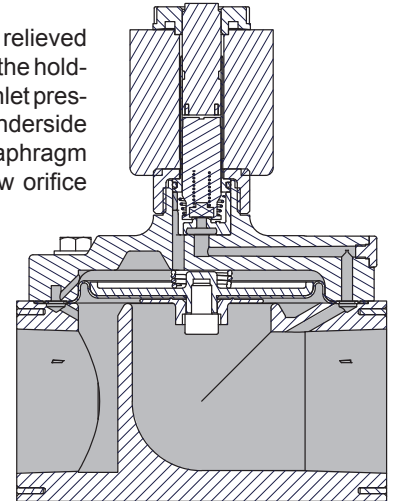
Closed Position

Pilot de-energized, pressure from the inlet combined with the biasing spring applies force to the diaphragm keeping it closed tightly against the main flow orifice preventing media flow.



Open Position

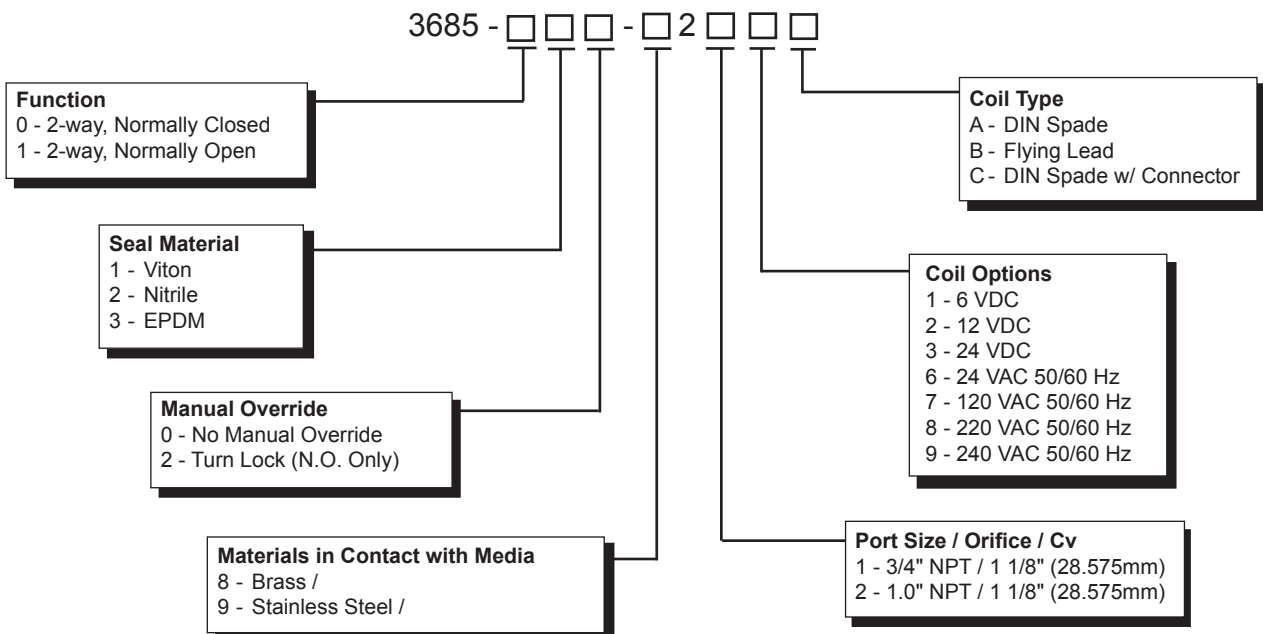
Pilot energized, pressure is relieved from pilot bonnet eliminating the holding force on the diaphragm. Inlet pressure forces acting on the underside of the diaphragm flex the diaphragm and lift it off of the main flow orifice allowing media flow.



Note: Normally Closed Version Shown



How To Order



Order Example: 3685-010-8211A
2-way, normally closed, Viton,
Brass, 3/4" NPT, 6 VDC, DIN Spade