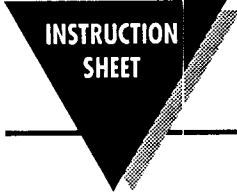


# SV-350/360 Series 2-Way Solenoid Valves



M2188/0695

### Unpacking Instructions

Remove the Packing List and verify that you have received all equipment, including the following (quantities in parentheses):

SV-350/360 Series Solenoid Valve (1)

Operator's Manual (1)

If you have any questions about the shipment, please call the OMEGA Customer Service Department.

When you receive the shipment, inspect the container and equipment for signs of damage. Note any evidence of rough handling in transit. Immediately report any damage to the shipping agent.

**NOTE**

The carrier will not honor damage claims unless all shipping material is saved for inspection. After examining and removing contents, save packing material and carton in the event reshipment is necessary.

### Description

The SV-350 Series 2-way solenoid valves are internally piloted valves with diaphragm and forced lifting which open fully from 0 PSI pressure differential. The valves feature brass or stainless steel body with high flow rates, Viton seal material, and a temperature range from -10 to 130°C (14 to 266°F). The valves are ideal for neutral media such as water, compressed air, and hydraulic oil (viscosity approx.  $2.3 \times 10^{-4}$  ft<sup>2</sup>/sec). Electrical connection is by conduit plug.

### Seal Materials and Fluids Handled

See Table 1.

### Fluid and Ambient Temperature

See Table 1.

Table 1		Seal Materials		
Fluids	Temperatures [°F]	Buna "N" (B)	Ethylene (A) Propylene	Viton (F)
air	Fluid T. Ambient	+14 to +194 +14 to +130	-22 to +266 +14 to +130	+32 to +266 +14 to +130
water	Fluid T. Ambient	+50 to +194 +32 to +130	+50 to +194 +32 to +130	+50 to +194 +32 to +130
neutral gas	Fluid T. Ambient	+14 to +194 +14 to +130	-22 to +266 +14 to +130	+32 to +266 +14 to +130
light oil	Fluid T. Ambient	+50 to +194 +14 to +130	N/A	+50 to +194 +14 to +130
LP-gas	Fluid T. Ambient	+14 to +140 +14 to +130	N/A	+14 to +140 +14 to +130

## Available Models

Part Number	Port Connection (NPT)	C <sub>v</sub>	Range (PSI) <sup>1)</sup>	Orifice Diameter (in)	Body Material	Weight (lbs)
SV-351	1/2	3.3	0-230	7/16	BR	2.2
SV-352	1/2	3.3	0-230	7/16	SS	2.2
SV-353	3/4	5.8	0-230	3/4	BR	3.1
SV-354	3/4	5.8	0-230	3/4	SS	3.1
SV-355	1	11.7	0-230	1	BR	4.0
SV-356	1	11.7	0-230	1	SS	4.0
SV-357	1-1/4	18	0-170	1-1/4	BR	5.9
SV-358	1-1/2	18	0-170	1-1/2	BR	6.8
SV-359	2	44	0-170	2	BR	14.3
SV-360	2-1/2	44	0-170	2-1/2	BR	16.7

<sup>1)</sup> Also suitable for vacuum down to 38 Torr.

## Options

Ordering Suffix	Description
-24VDC	24 Vdc operation
-12VDC	12 Vdc operation
-240VAC	240 Vac operation
-BUNA	Buna-N seal
-EPDM	EPDM seal

## Pressure Range

Maximum inlet pressure: see the label on the valve.

A pressure differential between inlet port and outlet port is not required.

## Installation

Before installing valve make sure that piping etc. is free of foreign matter (metal filings, seal materials, welding scale etc.). Teflon tape is recommended for sealing ports. The arrow on the valve body gives flow direction. Installation as required but preferably with the coil at the top. Installing in this position tends to prevent foreign matter remaining in pilot valve (increased life). A strainer upstream of valve, protects against effects of foreign matter. Do not put any load on coil unit.

Pipework should be supported such that valve body is not under strain. Do not allow a pipe end or sealing material block the pilot bore within the valve outlet. Inlet and outlet of valve must be fullbore and pipework unrestricted.

## Electrical Connection

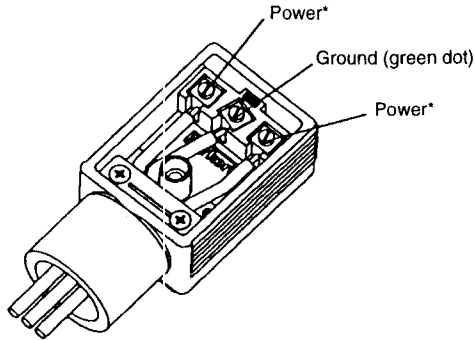
Make sure the supply voltage/frequency corresponds with what is on the valve nameplate. Voltage tolerance is  $\pm 10\%$ . Available Electrical Connections and wiring diagrams are on the reverse side.

## Troubleshooting

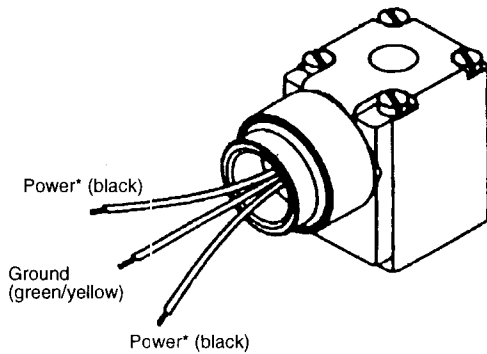
Check port connections, minimum operating pressure differential and supply voltage. Make sure pilot hole in diaphragm is clear and pilot bore in the valve outlet is not obstructed. If the core does not pull in, check for short circuit, coil burn-out or foreign matter impeding core movement. A jammed or missing core causes the coil to overheat in the case of ac supply.

**Wiring Diagram**

**Electrical Connection Type H**



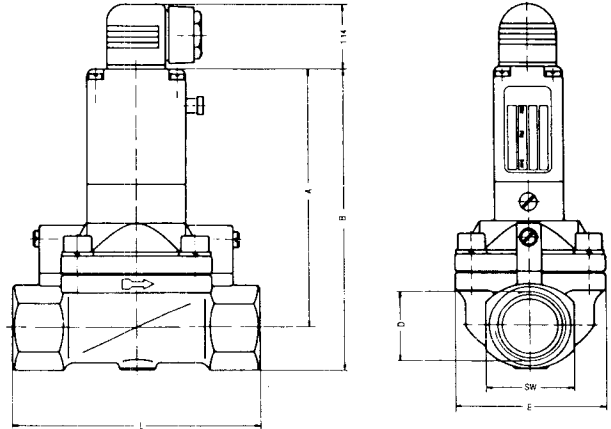
**Electrical Connection Type A**



\* Orientation is not important

**Specifications**

- Mounting Position:** Any (preferably with solenoid system upright)
- Max. Ambient Temp.:** 54°C (130°F)
- Operating Voltage:** 120 Vac Standard
- Voltage Tolerance:** ±10%
- Power Consumption:**
- | Orifice Size   | Inrush | Hold |
|----------------|--------|------|
| 1/2"           | 80 W   | 6 W  |
| 3/4" to 1-1/2" | 100 W  | 9W   |
| 2" to 2-1/2"   | 28W    | 28W  |
- Opening Time (msec):** 100-1000
- Closing Time (msec):** 700-4000 (Switching times are measured using water and are dependent on valve orifice size and fluid pressure and viscosity.)
- Cycling Rate:** Approx. 10-20 cpm
- Duty Cycle:** Continuous (100%)
- Dimensions:** See below



Orifice Dia.	A	B	D (NPT)	F	E	L	SW Width Across Flats
1/2*	4.29	4.84	1/2	0.54	1.57	2.56	1.06
3/4**	4.53	5.16	1/2	0.54	2.36	3.94	1.26
3/4	4.53	5.16	3/4	0.55	2.36	3.94	1.26
1	4.74	5.55	1	0.66	2.76	4.53	1.61
1 1/4	4.80	5.79	1 1/4	0.68	3.35	4.96	1.97
1 1/2	4.96	6.14	1 1/2	0.68	3.35	4.96	2.36
2	5.61	6.99	2	0.69	4.53	6.46	2.76
2 1/2*	5.61	7.28	2 1/2	1.05	4.53	7.09	3.35



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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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