

# 3-WAY SOLENOID ACTUATOR

## Model S-390-T-3W

The BERMAD S-390T-3W is a compact 3-way normally open or normally closed solenoid actuator, specially designed for reliable long-life service in irrigation systems controlled by continuous current controllers. The S-390T-3W solenoid actuator is applicable directly to the Trio valve cover or to a Trio base that can connect to variety of 3-way control circuits. It is compliant with all continuous current output irrigation controllers on the market and excels in its low power demand and low sensitivity to dirt and voltage variations.



### Features & Benefits

- Advanced Construction Materials, Unique Plastic Casing
  - Proven pressure, voltage and weather resistance
  - Highly durable in corrosive environments
  - High mechanical strength
  - Protection Class: IP68 – max 3m depth, 7 days submersion
- Superb Internal Design and Finish
  - Reliable operation under dirt loaded water
  - Low sensitivity to voltage variations
- Low Power Consumption
  - Low coil heating and sediment damage
  - Saves wires and infrastructures costs
  - Suites all Continuous Current Controllers on the market
- Angled Plastic Base with Installation Bracket
  - High flow capacity quickens valve response
  - 3 position TRIO manual override (Open, Auto and Close)
  - Simple installation to valve or manifold
- Simple Installation, Operation and Maintenance
- Reliable and Durable Product that Bears the Stamp of BERMAD Quality

### Typical Applications

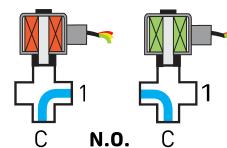
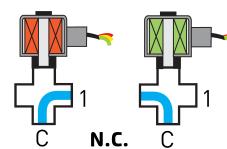
- Solenoid controlled on/off valves
- Solenoid controlled pressure and flow control valves
- Multiple valve systems
- Systems distanced from control center

### Operation:

**3-way, normally open (for normally closed valve):** When de-energized, port 3 (command pressure) connects with port 2 (control chamber) while port 1 (vent) is sealed. Energizing the solenoid vents control chamber via port 1, sealing port 3 (command).

**3-way, normally closed (for normally open valve):** When de-energized, port 3 (vent) connects with port 2 (control chamber) while port 1 (command pressure) is blocked. Energizing the solenoid pressurizes control chamber via port 1, sealing port 3 (vent).

All images in this catalog are for illustration only



## Technical Data

### Specifications:

**Pressure Rating:** 0-150 bar

**Leads:** 2 leads x 0.000496 Inch<sup>2</sup> x 31.5 Inch

**Actuator Orifice Diameter:** 0.06 Inch

**Base Flow Factor:** Cv = 0.09 GPM @1 psi ΔP

**Length (L):** 1.6 Inch

**Height (H):** 3.6 Inch

**Width (W):** 1.6 Inch

### Materials:

**Actuator Casing:** Nylon

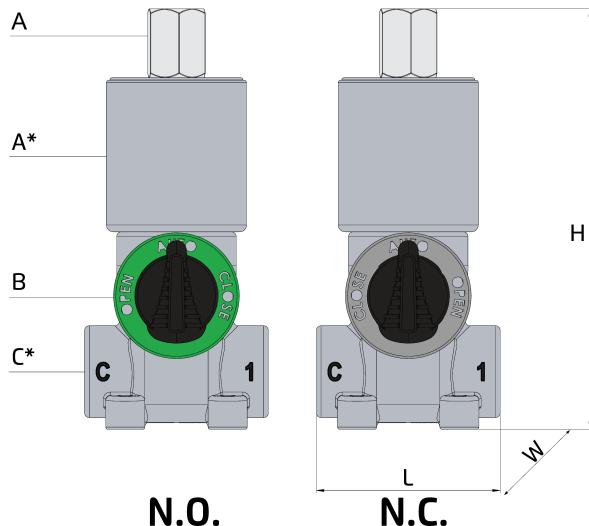
**Seals:** NBR

**Wetted Parts:** Stainless steel and polyamide

**Base:** Nylon

## Electrical Data

Actuator Type	Cable Color	Power (Watt)	Current (Amp)		Coil Resistance ohm@68°F
			Inrush	Hold	
S-390-T-3W-24VAC-R	Red/Red	2.3	0.40	0.18	75
S-390-T-3W-24VAC-R	Red/Red	2.3	0.40	0.18	75
S-390-T-3W-24VAC-D	Red/Orange	2.2	0.13	0.13	53.5
S-390-T-3W-24VAC-D	Orange/Blue	4.0	0.2	0.2	42
S-390-T-3W-24 V DC	Black/Black	4.2	0.17	0.17	135
S-390-T-3W-24VAC-D	Red/Orange	2.2	0.13	0.13	-
S-390-T-3W-12 V DC	Black/Black	4.0	0.33	0.33	36
S-390-T-3W-12 V DC	Black/Black	4.0	0.33	0.33	36



Port	Size	Connections
A	1/8" NPT	Actuator Port-Pressure (N.O.); Vent (N.C.)
1	1/4" NPT	Vent (N.O.); Pressure (N.C.)
C	1/4" NPT	Valve Control Chamber

Part	Description
A*	Actuator Port-Pressure (N.O.); Vent (N.C.)
B	Vent (N.O.); Pressure (N.C.)
C*	Valve Control Chamber