

# ASCO™ Series 148 & 149 Motorized Valve for Fuel Oil

**SERIES  
148 & 149**

On/Off | General Purpose & Watertight | 3-Way and 2-Way Normally Closed | 1/2" to 3/4"

- ASCO series 148 valve & ASCO series 149 Motorized Actuator are exclusively designed to be used together
- This motorized valve is designed to be used as a Safety Shut-Off Valve for fuel oil burners applications
- On site adjustable 3/4" or 1/2" NPT/Rp connection, and 3/2 or 2/2 function. Adjustable by optional adapters and plugs.
- High flow and high pressure design
- Benefits of motorized technologies with a reliable fail safe in closed position within less than 1 second
- Broad ambient temperature range and optional watertight construction for outdoor applications
- Electrical options like optional Proof-Of-Closure switch and Auxiliary settable position switches available
- Suitable for fuel oil recirculation as well as for simple safety shutoff applications



## Fluid

No. 2 Fuel Oil at 60 SSU    No. 5 Fuel Oil at 5000 SSU  
No. 4 Fuel Oil at 300 SSU    No. 6 Fuel Oil at 5000 SSU (Heated)

## ASCO 148 Valve Specifications

**MOPD:** 300 psi (20.68 bar)

**Max Fluid Temperature:** 300°F (+149°C)

**Body/Trim:** Brass

**Seal Material:** PTFE

Material in contact with Fluid: Brass, Zinc plated Steel, Stainless Steel, PTFE, Viton (FKM)

**Pipe Size:** 3/4" by default, can be reduce to 1/2" on-site by installing pipe reducers *(supplied if requested by customer in product codification)*

**Function:** 3-Ways by default, can be changed to 2-Ways by installing a plug on port 3 *(supplied if requested by customer in product codification)*

**Valve Supply:** 1x Plug 3/4" for 2-way option

- 1x 3-Ways valve with threaded 3/4" ports

- 3x Optional threaded pipe reducers 3/4" to 1/2"

## ASCO 149 Actuator Specifications

**Power Requirement:** 240 VA max.

**Closing Time:** 1 second max.

**Opening Time:**

Typical time approximately 9 seconds max.

At temperatures below -30C, actuator may take as long as 30 seconds

**Standard voltages:** 120V/60Hz, 110V/50Hz, 240V/60Hz, 230V/50Hz

**Proof of Closure Switch (POC): (optional)**

A factory set, non-field adjustable SPDT switch. 120 or 240VAC  
Maximum Connected Load: 7A Resistive, 3A Inductive

## Auxiliary Switch: (optional)

One integral SPDT switch; field adjustable to actuate at any position of stroke. 120 or 240VAC Maximum Connected Load: 7A Resistive, 3A Inductive

*Note: The combined load on the optional proof of closure and auxiliary switches cannot exceed 1800 VA. Electrical options 4 and 5 are only available with an On/Off construction.*

Operating Voltage/Frequency	Current (Amps)		
	Inrush	Opening	Holding
120/60	11	1.7	0.06
110/50	11.5	2.1	0.065
240/60	5	0.7	0.03
230/50	5.5	1	0.035

## Enclosure

**Standard:** General Purpose Type 1 & IP 10

**Optional:** Watertight Type 4 & IP65

## Installation

The combination of series 148 & 149 mounted together can be mounted in any position including head down.



## Ambient Temperature

-40°F to +150°F (-40°C to +66°C)

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## Approvals

### 148 valve with 149 actuator

- UL listed to standard 429 "Electrically Operated Valves", Guide YIOZ, File MP932 Safety Shutoff Valves
- CSA Certified to CSA C22.2 No. 139 "Electrically Operated Valves", Class 3221-01, 3221-81, File 109157 Safety Shutoff Valves
- FM Approved to Class 7400 "liquid and gas safety shutoff valves"
- Complies with RoHS directives

## Ordering Information:

Order by Catalog Number. Online configurator is available for this product on the ASCO Series 148/149 page on Emerson.com

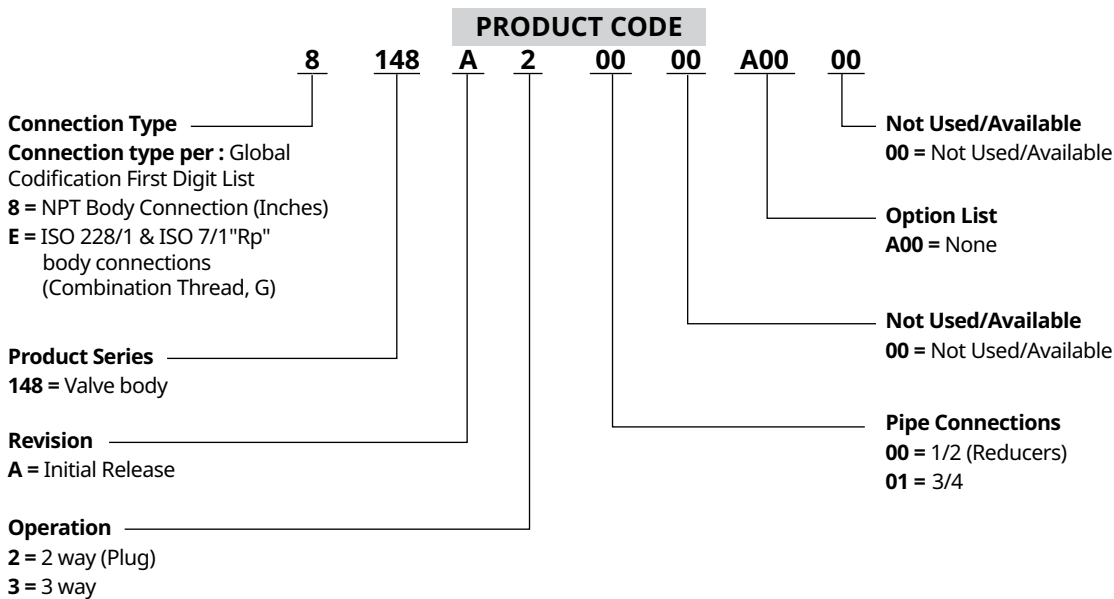
## ASCO 148 Valve Specifications Imperial (Metric)

Pipe size in (mm)	Orifice size in (mm)	"Flow factor CV (Kv = m³/h)"	Maximum Operating Pressure Diferential psi (bar)	Maximum Fluid Temperature °F (°C)
1/2" (15)	3/4" (19)	5.16 (4.46)	300 (20.68)	300 (149)
3/4" (20)	3/4" (19)	5.47 (4.73)	300 (20.68)	300 (149)

## Spare Part Kit

Description	Pipe Reducers 3/4" -> 1/2"		Pipe Plug 3/4" (NPT, ISO)	
	NPT	ISO	NPT	ISO
Quantities	1	1	1	1
Kit Number	M200868	M200869	M200870	M200871

## ASCO 148 Valve Codification



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148 & 149**

## ASCO 149 Actuator Codification

**PRODUCT CODE**  
P149 A1 11 X1 X01 F0

**Product Series**

P149A1 = 149 series motorized actuator

**Enclosure**

11 = Watertight, IP65 and Type 4

21 = General Purpose, IP20 and Type 1

**Electrical Connection Type**

X1 = 1/2" orifice for use with 1/2" fittings

X2 = M20 orifice for use with M20 type fittings

**Voltage**

F0 = 120/60, 110/50

CU = 240/60, 230/50

**Mechanical options**

X01 = None

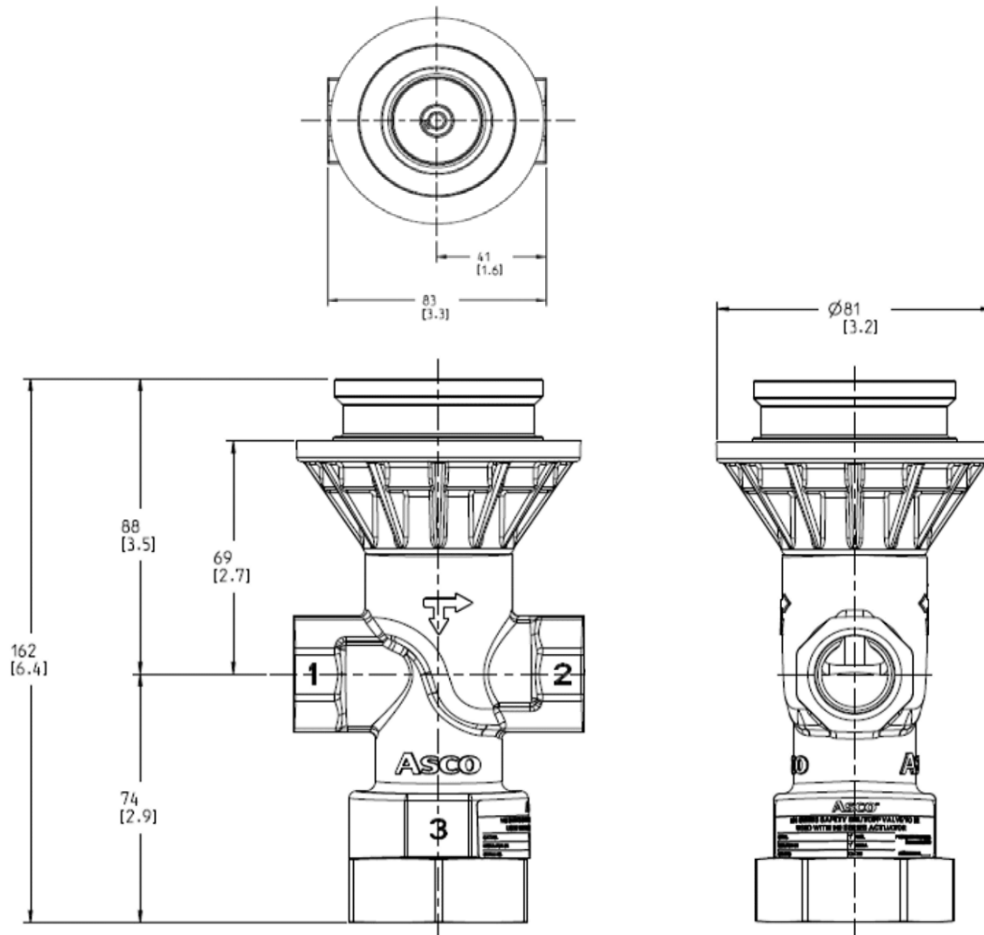
X02 = Auxiliary Switch

X03 = Proof-of-closure Switch

X04 = Auxiliary Switch & Proof-of-closure Switch

X05 = Two Auxiliary Switches

## Valves Dimensions mm (inches)

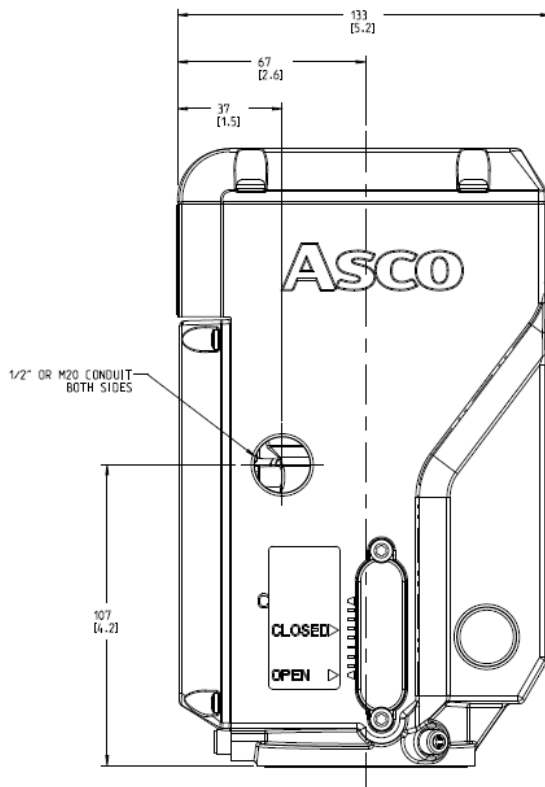
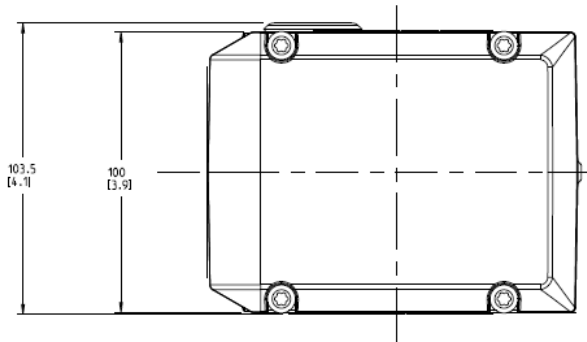


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## Actuators Dimensions mm (inches)



(1) Reference Note(s)

Availability, design and specifications are subject to change without notice.  
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