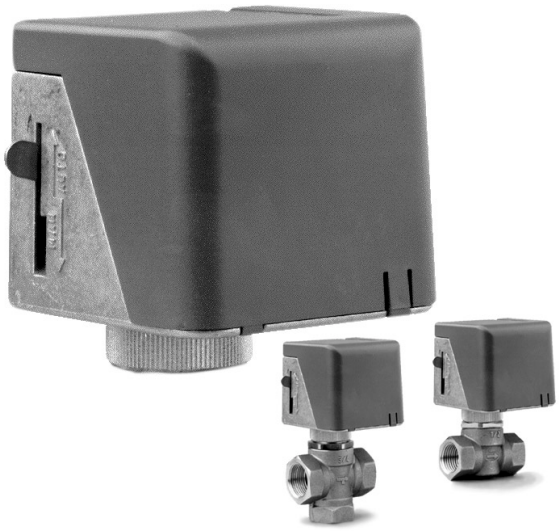
# VA-7010
# Electric On/Off Actuator

## Introduction

*The VA-7010 electric on/off actuator provides a two-position (open-closed) control and can easily be mounted with a threaded coupling onto VG5000 forged brass valves (see pertinent bulletin).*

*A lever at the side of the actuator housing can be used to manually open a 2Way PDTO valve, on the normally closed port of a 3-way valve.*



**VA-7010 Actuator with VG5000 3-way (left) and 2-way (right) valves**

| Features and Benefits | |
|---|---|
| ❑ **Low or Line voltage models available** | Provides application flexibility |
| ❑ **AC stall type motor** | Ensures quiet operation |
| ❑ **Manual lever** | Allows manual position mode for servicing |
| ❑ **Flat profile design with small side clearance** | Provides mounting close to flat surfaces; saves space |
| ❑ **Actuator can be mounted after valve body is installed** | Simplifies installation in confined spaces; allows application flexibility |
| ❑ **Actuator can be rotated after mounting** | Provides easier wiring by locating the wiring conduit entry in any direction |

## Ordering data

**VA-7010-810** ☐

| Supply voltage | |
|---|---|
| **1** | 24 VAC |
| **3** | 230 VAC |

UL approved models are available on request.

## Actuator combinations

The VA-7010 series electric on/off actuators are specifically designed to be used with the VG5000 valve series. The ordering data for these valve bodies are as follows:

- **VG5000 series**

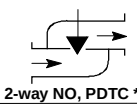
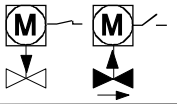
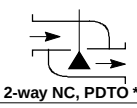
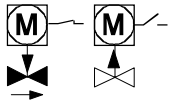
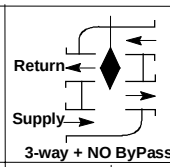
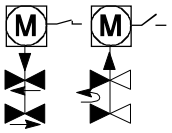
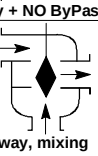
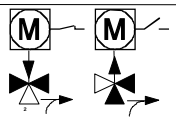
| | | |
|---|---|---|
| **VG52** | **0☐C ☐** | **2-way Push Down To Close (Normally Open) series** |
| **VG54** | **0☐C ☐** | **2-way Push Down To Open (Normally Closed) series** |
| **VG55** | **0☐C ☐** | **3-way mixing with built-in Normally Open bypass** |
| **VG58** | **0☐C ☐** | **3-way mixing series** |

Please refer to the product bulletin "VG5000 Forged Brass Valves" for complete ordering information.

## Operation

When energised, the actuator motor drives a sector gear and arm assembly, which pushes down axially on the valve stem against the force of the return spring.
When the actuator is de-energised, the return spring in the valve brings back the valve to its normal position. (see "valve action summary")

## Valve Action Summary

| Valve Code | Valve Type | ▲▼ = Stem movement ▶ = flow / ▷ = no flow |
|---|---|---|
| **VG52x0xC** |  2-way NO, PDTC *) |  |
| **VG54x0xC** |  2-way NC, PDTO *) |  |
| **VG55x0xC** |  3-way + NO ByPass |  |
| **VG58x0xC** |  3-way, mixing |  |

*) PDTC = Push down to close
PDTO = Push down to open

## Manual Override

The VA-7010 actuator features a manual operating lever (shown in "Dimensions") for manually opening 2-way Push Down To Open valves or Normally Closed port of 3-way valves. The lever will not fully close 2-way Push Down To Close valves or the Normally Opened port of 3-way valves.

## Mounting instructions

**⚠ WARNING**

**Shock Hazard**

When servicing make sure that:

- The electrical supply to the actuator is switched off to avoid possible damage to the equipment, personal injury or shock.
- You do not touch or attempt to connect or disconnect wires when electric power is on.

Observe the following recommendations when mounting the actuator:

- Make sure the actuator is easily accessible for the electrical connections.
- Make sure actuator is free of thermal insulation material.
- Leave at least 20 mm clearance above the actuator for mounting purposes. (See "Dimensions")

To mount the actuator on a VG5000 valve:

1. Place the threaded coupling over the valve stem on the bonnet.
2. Rotate the actuator to desired position and tighten the coupling securely by hand.

Note: Never use actuator as a mounting lever

## *W* irings instructions

When wiring the actuator, please follow the instructions below:

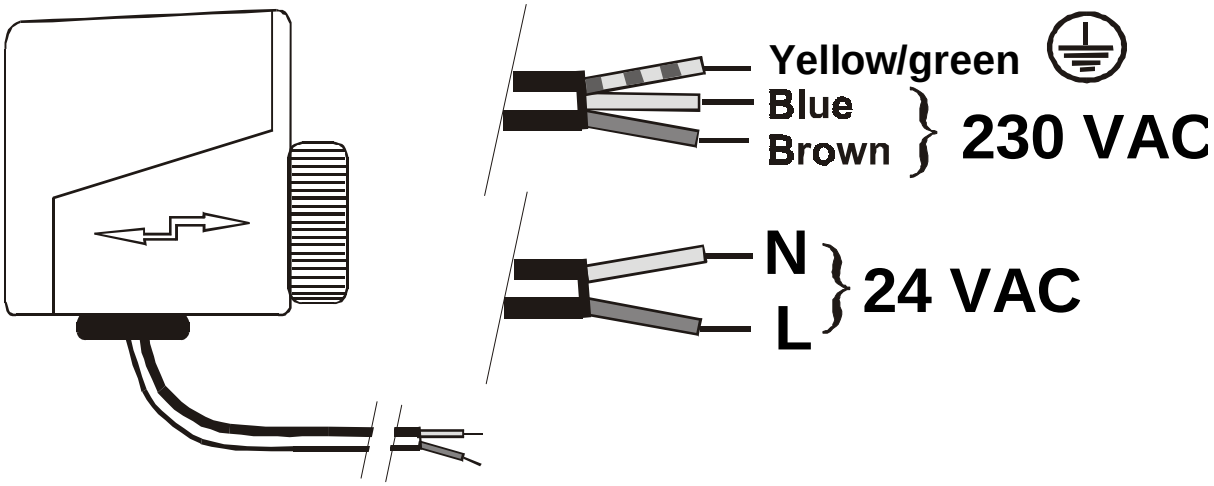
- Before mounting, wiring or adjusting the actuator, make sure that the power supply has been disconnected to avoid possible harm to material or person.
- Make sure that the line power supply is in accordance with the power supply specified on the actuator.
- All wiring should conform to local codes and must be carried out by authorised personnel only.

**WARNING**

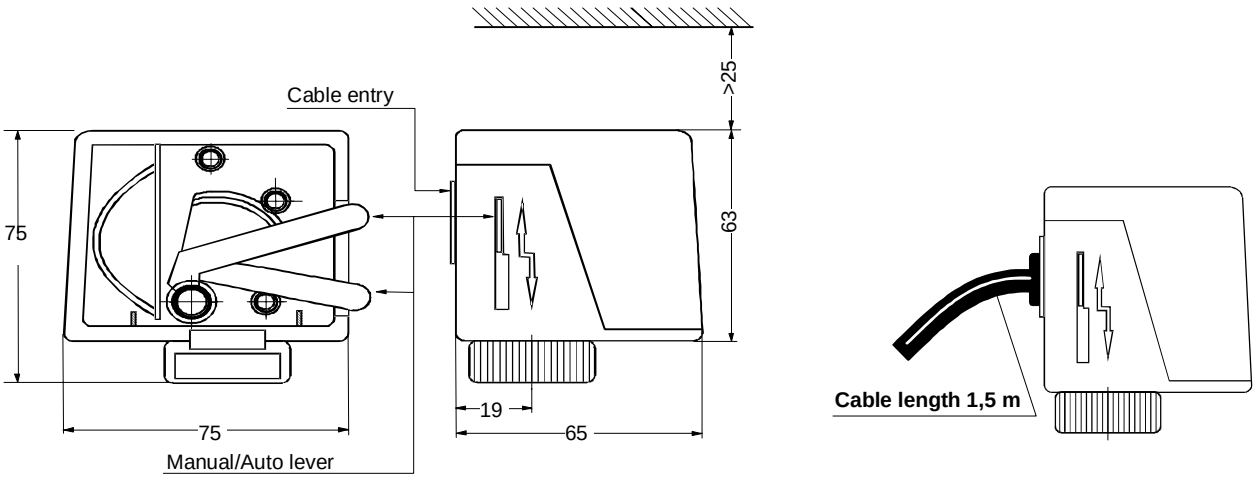
When servicing make sure that:

- The electrical supply to the actuator is switched off to avoid possible damage to the equipment, personal injury or shock.
- You do not touch or attempt to connect or disconnect wires when electric power is on.
- Do not open or repair, contact the nearest Johnson Controls commercial system wholesaler

## *W* irings diagrams




## *D* imensions (in mm)



# Specifications

| Models: | VA-7010-8101 | VA-7010-8103 |
|---|---|---|
| **Type of motor:** | Synchronous stall | |
| **Action:** | On / Off | |
| **Supply voltage (50/60 Hz):** | 24 ±10% VAC | 230 ±10% VAC |
| **Power consumption:** | 7 VA | |
| **Minimum force:** | 90 N at minimum power supply and maximum temperature (50°C) | |
| **Nominal stroke:** | 3 mm (max. 5 mm) | |
| **Full stroke time "On":** | ≈ 10 s | |
| **Full stroke time "Off":** | ≈ 5 s | |
| **Protection:** | IP40 EN 60529), NEMA 1 | |
| **Connection to Valves:** | M28x1.5 for VG5000 series valves | |
| **Ambient Operating condition:** | +2 to +50 °C, non condensing | |
| **Ambient Storage condition:** | -20 to +65 °C, non condensing | |
| **Shipping Weight:** | 0.5 Kg | |
| CE **Compliance:** | EMC directive (89 / 336 EEC) according to standard EN 50081-1, EN 50082-1<br>LVD directive (73 / 23 / EEC) according to standard EN 60335 | |

*The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.*

Johnson Controls International, Inc.
Headquarters: Milwaukee, WI, USA
European Headquarters: Westendhof 8, 45143 Essen, Germany
European Factories: Lomagna (Italy), Leeuwarden (The Netherlands), Essen (Germany)
Branch Offices: principal European Cities
This document is subject to change without notice
Printed in Europe