APPLICATION
The Honeywell M7410A actuators provide floating control of specified VSOx series small linear valves.

They are used in fan-coil-units, induction units, small re-heaters and recoilers, and for zone control applications. They are employed in electronic temperature control systems with hot and/or cold water as the controlled medium.

They are suitable for Honeywell Excel Series controllers as well as for Honeywell individual room temperature controllers. These controllers track the precise valve position by counting the number of individual control pulses which move the valve from one position to another. For this reason, the actuators do not need end switches or a feedback potentiometer. The absence of these mechanical components ensures long-term reliability.

The M7410A actuators are also compatible with any controller providing intelligent position control and having a built-in shut-off function.

The M7410A actuators are well-suited for applications in which space is limited and minimum power consumption is required. They feature an attractive and rugged design.

FEATURES
- Suitable for three-position floating control without proportional feedback
- Small size allows installation where space is limited
- Low power consumption
- Reliable long-term operation because mechanical feedback potentiometers and mechanical end switches are not required
- Magnetic coupling for stem force limitation and self-adjustment of the close-off point
- Supplied with pre-wired connection cable
- Simple, standardized M30 x 1,5 valve/actuator coupling – no tools required for mounting

SPECIFICATIONS
Control type floating (three-point)
Input voltage 24 Vac +10%/-30%; 50/60 Hz
Power consumption 0.7 VA
Stroke 4 mm
Running time 53 sec at 50 Hz
Stem force 90 N
Protection standard IP43 in accordance with EN 60529
Insulation class II/III (according to EN 60730), depending upon model
Connection cables 0.9 or 3.0 meters
Ambient operating temp. 0…60 °C
Housing type A
Weight 0.4 kg
Suitable valves VSOx
Manual operation by valve protection cap, only
OPERATION

Fig. 1. Dimensions

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>OS no.</th>
<th>control type</th>
<th>stem force</th>
<th>cable length</th>
</tr>
</thead>
<tbody>
<tr>
<td>M7410A1001</td>
<td>floating</td>
<td>90 N</td>
<td>0.9 m</td>
</tr>
<tr>
<td>M7410A1001-3M</td>
<td>floating</td>
<td>90 N</td>
<td>3.0 m</td>
</tr>
</tbody>
</table>

FUNCTION

The movement of the electric actuators is produced by a screw spindle which is driven in both directions by a synchronous motor through a set of gears. A magnetic clutch limits the torque of the gear assembly and the driving force of the actuators. The actuators are fixed to the valve body by means of a coupling ring requiring no tools for mounting. The actuators are maintenance-free and supplied completely with a ready-to-wire connecting cable.

MOUNTING POSITION

The actuator may be mounted only beside or above the valve. Adjust the valve in the correct position before mounting the actuator.

Fig. 2. Mounting positions

MOUNTING

Before the actuator is fixed to the valve, the adjustment cap must be removed (see Fig. 3). Make sure that the actuator is in the open position (factory-supplied position) before fixing the actuator to the valve body.

The actuator must be mounted by hand. Do not use tools or additional force insofar as this may damage the actuator and valve.

Fig. 3. Removing the protection cap

Fig. 4. Mounting the actuator
**ELECTRICAL WIRING**

A fuse with a contact gap of at least 3 mm for each pole must be fitted with the fixed installation. The fuse rate is max. 2 A. The electrical installation must comply with the wiring diagram shown in Fig. 5 and Fig. 6.

**COMMISSIONING ADVICE**

A functional check can be carried out by changing the controller setpoint by 5 °C or more. The movement of the actuator stem (see Fig. 7) indicates whether the valve is opening or closing.

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**Fig. 5. Electrical wiring**

**Fig. 6. Cable colors**

**Fig. 7. Movement of actuator stem**