

# MOTORIZED BUTTERFLY VALVE ACTUATOR

## ON/OFF CONTROL & MODULATING CONTROL

- Wide size range (50-3500Nm)
- For On-Off or Modulating Control
- Manual override non-clutch design. Manual operation can be operated without any lever, clutch or brake.
- Mechanical position indicator for accurate visual reference of valve position.
- Anti-condensation heater and 2 aux. limit switches on standard model
- Enclosure IP67



### General

OM-E series motorized actuators are developed for heating or cooling application in building water system, or other systems with similar requirements.

The OM-E modulating models can accept 4-20mA/1-5V/2-10V input signals (by setting jumper in field).

The OM-E series can also provide feedback signals: 2 dry-contacts outputs for On/Off version; and 4-20mA/2-10V for modulating version.

### Technical Specification

|                       |   |
|-----------------------|---|
| Power Supply          | 220Vac, 50/60 Hz  |
| Running time          | See table (1)   |
| Stroke                | 90° ± 5°  |
| Control (Modulating)  | 4~20mA/1~5V/2~10V   |
| Feedback (Modulating) | 4~20mA/1~5V/2~10V   |
| Enclosure             | IP66  |
| Ambient Temperature   | -30° C to +65° C  |
| Indicator             | Continuous Position Indicator                               |
| Manual Override       | Non-clutch design   |
| Space Heater          | 15W 220V Anti-condensation                                  |
| Material              | Aluminum  |
| Housing Coating       | anodized powder epoxy-coated                                |
| Stall Protection      | built-in thermal protection, cut-off at 125.5, reset 95 ± 5 |

**Table (1) Actuator Data**

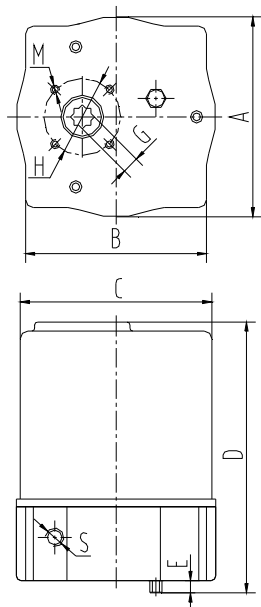
| OS#<br>On-Off | OS#<br>Modulating | Max<br>Torque<br>Nm) | Run Time<br>at 50Hz<br>sec) | Power<br>Watts) | Manual<br>Override | Weight<br>Kg) |
|---------------|-------------------|----------------------|-----------------------------|-----------------|--------------------|---------------|
| OM-1-E        | OM-P1-E           | 5                    | 25                          | 6               | Hand-wheel         | 4             |
| OM-2-E        | OM-P2-E           | 90                   | 35                          | 25              | Hand-wheel         | 11            |
| OM-3-E        | OM-P3-E           | 150                  | 35                          | 40              | Hand-wheel         | 11            |
| OM-4-E        | OM-P4-E           | 400                  | 45                          | 60              | Hand-wheel         | 19            |
| OM-5-E        | OM-P5-E           | 500                  | 45                          | 60              | Hand-wheel         | 19            |
| OM-6-E        | OM-P6-E           | 650                  | 45                          | 60              | Hand-wheel         | 19            |
| OM-7-E        | OM-P 7-E          | 1000                 | 46                          | 90              | Hand-wheel         | 38            |
| OM-8-E        | OM-P8-E           | 1500                 | 55                          | 120             | Hand-wheel         | 38            |
| OM-9-E        | OM-P9-E           | 2000                 | 55                          | 120             | Hand-wheel         | 78            |
| OM-10-E       | OM-P10-E          | 2500                 | 95                          | 140             | Hand-wheel         | 78            |
| OM-12-E       | OM-P12-E          | 3500                 | 95                          | 200             | Hand-wheel         | 82            |

Note:

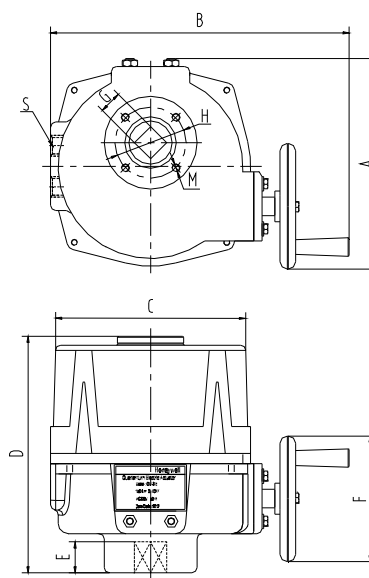
1. The manual operation by handlever for OM-1-E and OM-P1-E is located at the bottom of actuator.
2. The default input/output signals for modulating control models are set to 4-20mA.

**Table (2a) Actuator Dimension (mm)****OM1/OM-P1**

| OS#           | A   | B   | C   | D   | E | G  | H  | M  | S           | Flange<br>Type |
|---------------|-----|-----|-----|-----|---|----|----|----|-------------|----------------|
| OM-<br>(P)1-E | 140 | 128 | 130 | 176 | 8 | 11 | 50 | m6 | M16<br>*1.5 | F05            |

**Table (2b) Actuator Dimensions (mm)****OM-2...6/OM-P2...P6**

| OS#               | A   | B   | C   | D   | E  | F   | G<br>Max | H   | M   | S       | Flange<br>Type |
|-------------------|-----|-----|-----|-----|----|-----|----------|-----|-----|---------|----------------|
| OM-<br>(P)2&3-E   | 220 | 325 | 185 | 230 | 30 | 160 | 22       | 70  | m8  | M20*1.5 | F07            |
| OM-<br>(P)4,5,6-E | 270 | 350 | 205 | 300 | 42 | 200 | 27       | 102 | m10 | M20*1.5 | F10            |



Ta ble (2c) Actuator Dimension (mm)

OM-7...8/OM-P7...P8

| OS#         | A   | B   | C   | D   | E  | F   | G  | H   | M   | S       | Flange Type |
|-------------|-----|-----|-----|-----|----|-----|----|-----|-----|---------|-------------|
| OM-(P)7&8-E | 345 | 360 | 245 | 365 | 42 | 250 | 27 | 140 | m16 | M20*1.5 | F10         |

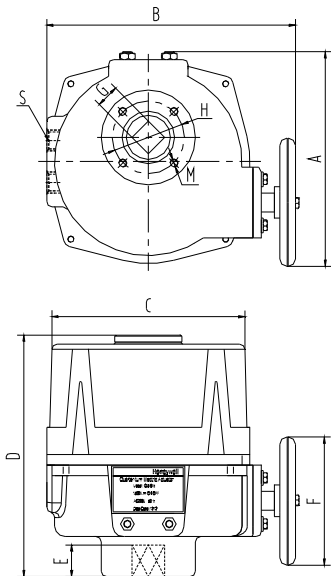
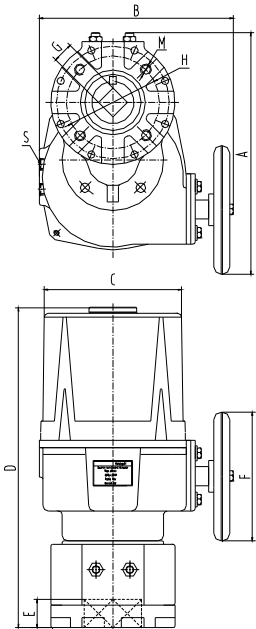


Table (2d) Actuator Dimension (mm)

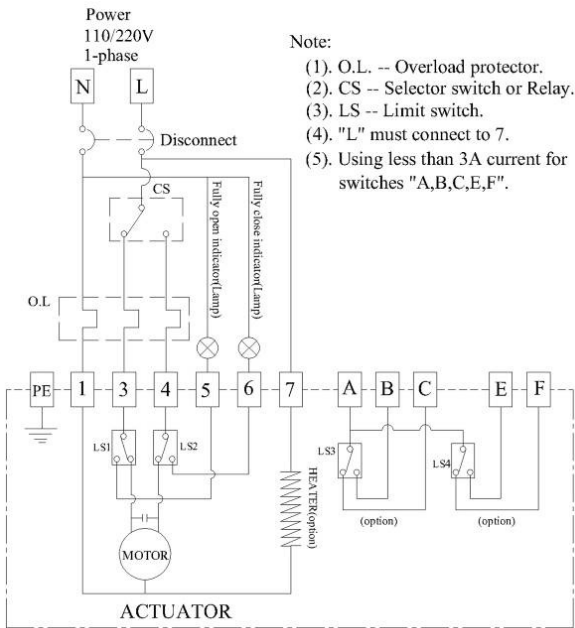
OM-9...12/OM-P9...P12

| OS#             | A   | B   | C   | D   | E  | F   | G  | H   | M   | S       | Flange Type |
|-----------------|-----|-----|-----|-----|----|-----|----|-----|-----|---------|-------------|
| OM-(P)9 to 12-E | 460 | 360 | 240 | 575 | 50 | 250 | 36 | 165 | m20 | M20*1.5 | F16         |

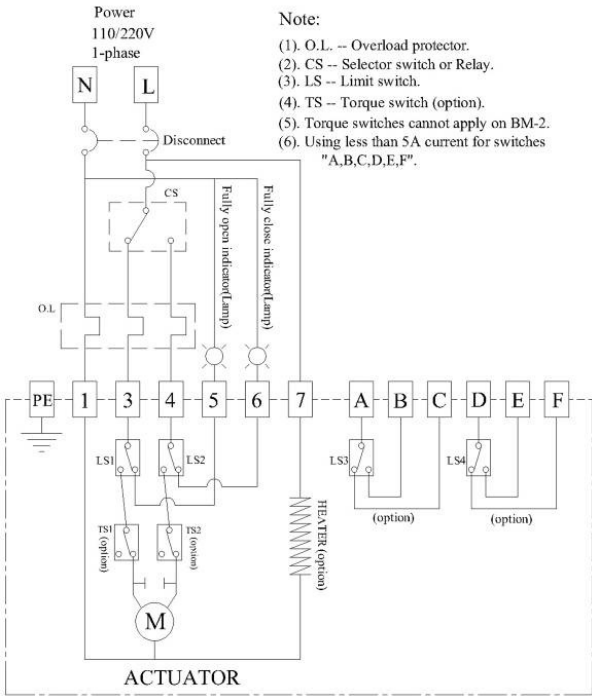


WIRING DIAGRAM FOR ON/OFF

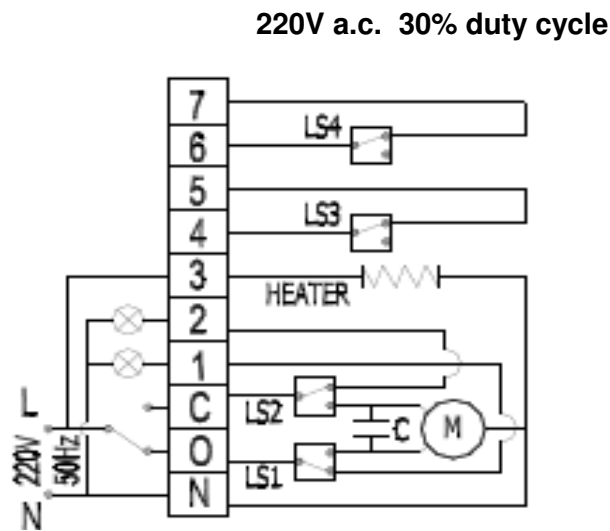
[ OM-1 & OM-A 110V / 220V AC 1-PH ]



[ BM-2,OM-2 ~ OM-12 110V / 220V AC 1-PH ]



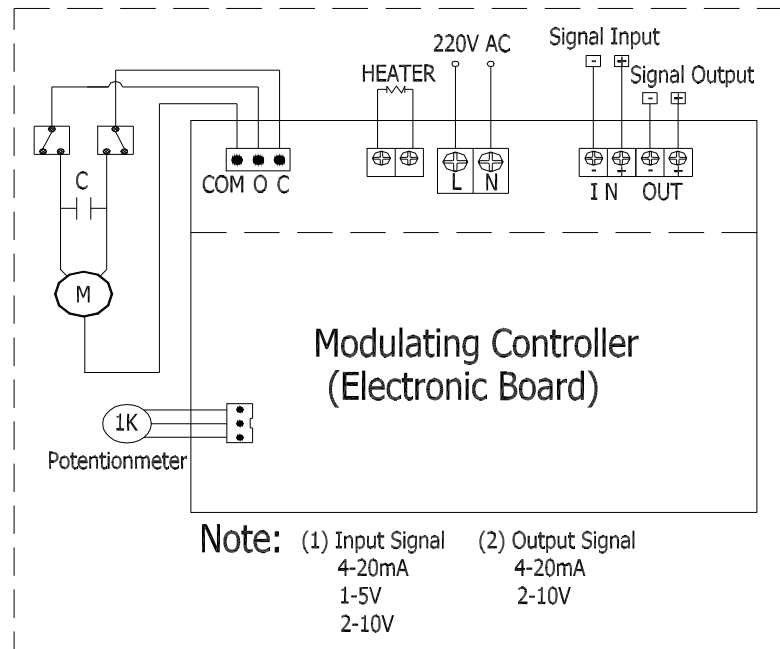
**Table (3a) Wiring - On/Off Control**



| Terminal # | Actuator      |
|------------|---------------|
| 7          | Full Close    |
| 6          | Full Close    |
| 5          | Full Open     |
| 4          | Full Open     |
| 3          | Heater        |
| 2          | Lamp (Closed) |
| 1          | Lamp (Opened) |
| C          | to Close      |
| O          | to Open       |
| N          | Neutral       |

**Table (3a) Wiring - Modulating Control**

**220V AC, 30% duty cycle**



**Note:**

The signal cables shall be of shield type, and the length less than 30m.

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