

# PNEUMATRON

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## PVX2XXW Series

### ELECTRIC MOTOR - 2/2 Way STAINLESS BALL VALVE

#### SPECIFICATIONS:

Media: Compatible media with Stainless Steel, PTFE & EPDM.

Ambient temperature: Minus 15 to 50 Deg C

Media temperature: 2 to 95 Degrees C

Voltages: 9/24 VDC and 110/230VAC

(Below 1" Tests was done with 24VDC Item-9-26VDC)

Lower Voltage applied, Lowers Speed of movement.

(24VDC Still works at 3V , but slower)

(Cable Length 500 mm)



| Port & Orifice Size | Pressure Range | Wiring Diagram | Body        |
|---------------------|----------------|----------------|-------------|
| 1/2" BSP (15 mm)    | 0 to 10 Bar    | See page 2/3   | PVX215WXXDX |
| 3/4" BSP (20 mm)    | 0 to 10 Bar    | See page 2/3   | PVX220WXXDX |
| 1" BSP (25 mm)      | 0 to 10 Bar    | See page 2/3   | PVX225WXXDX |
| 1 1/2" BSP (40mm)   | 0 to 10 Bar    | See page 2/3   | PVX240WXXDX |
| 2" BSP (50 mm)      | 0 to 10 Bar    | See page 2/3   | PVX250WXXDX |

#### Wiring options:

Please refer to page 2/3 or phone/email us for assistance.

PVX - PVC=Normally/Fail Closed, PVO=Normally/Fail Open, PVD=Detend (Depends on wiring)

WXX - Describes wiring type page 2/3 (typically W22 or W31...)

DX - Describes voltage (D1=AC110-220V, D2=AC/DC9-24V)

The following diagram is a sample test to show speed comparisons at different voltages

| SPECIFICATION (1" Valve- 24VDC-W31 Spec) |         |  |                 |
|--|---------|--|-----------------|
| VOLTAGE                                  | CURRENT |  | OPEN/CLOSE TIME |
| 9.0 VDC                                  | +15 mA  |  | + 9.0 seconds   |
| 12 VDC                                   | +18 mA  |  | + 6.0 seconds   |
| 15 VDC                                   | +20 mA  |  | + 5.2 seconds   |
| 24 VDC                                   | +23 mA  |  | + 3.7 seconds   |
| 26 VDC                                   | +28 mA  |  | + 2.9 seconds   |

**NOTE:** All ball valves requires at least 1 minute to 3 minutes to charge capacitor for first time use, depending on size.

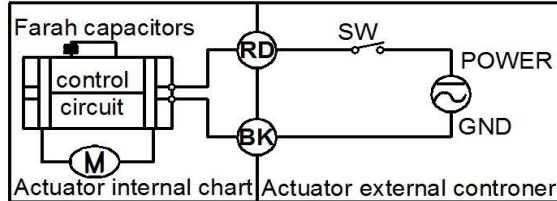
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## Wiring diagrams

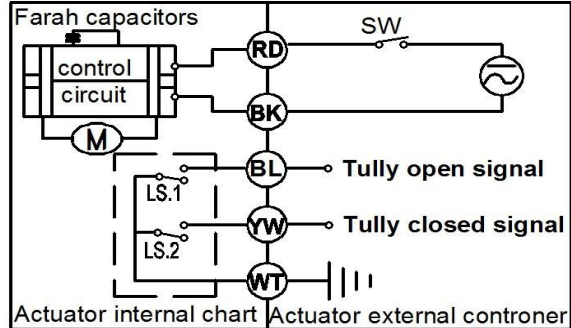
### W22 (2 Wire control - Spring return)



SW is closed, the valve opens. Actuator switches off automatically when ball valve is completely open.

SW is open, the valve closes. Actuator switches off automatically when ball valve is completely closed.

### W52 (With feedback signal)



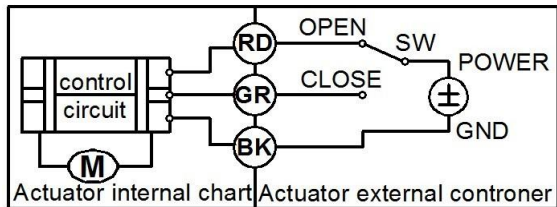
SW is closed, the valve opens. Actuator switches off automatically when ball valve is completely open.

SW is open, the valve closes. Actuator switches off automatically when ball valve is completely closed.

BL & WT connects to signal when the valve is fully open.

YW & WT connects to signal when the valve is fully closed.

### W31 (3 Wire control)

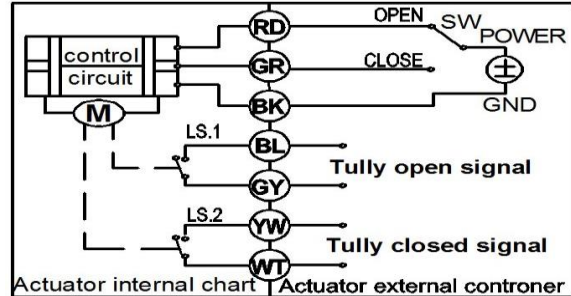


RD & GR connects to positive, BK connects to negative

When RD & SW are connected, the valve opens. Actuator switches off automatically when ball valve is completely open. Valve remains in open position

When GR & SW are connected, the valve closes. Actuator switches off automatically when ball valve is completely closed. Valve remains in closed position.

### W72 (7 Wire control with feedback signal)



RD & GR connects to positive, BK connects to negative

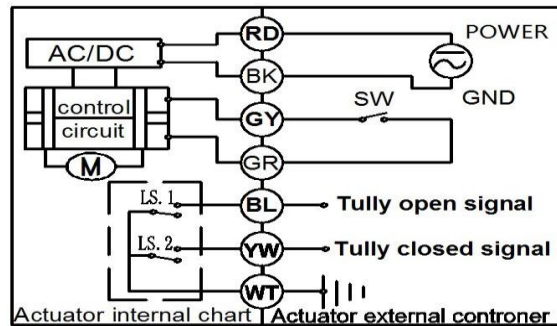
When RD & SW are connected, the valve opens. Actuator switches off automatically when the ball valve is completely open.

When GR & SW are connected, the valve closes. Actuator switches off automatically when the ball valve is completely closed.

BL & GY connects to the valve's fully-open signal wiring.

YW & WT connects to the valve's fully-closed signal wiring.

### W74 (7 Wire control with feedback signal)



RD & BK are connected to the power, WT & YW are connected to the control wiring.

When the SW is closed, the valve will be open.

When SW is open, the valve will be closed.

BL & GY connects with the valve's fully-open signal wiring.

YW & WT connects with the valve's fully-closed signal wiring.

|    |          |
|----|----------|
| SW | - Switch |
| BL | - Blue   |
| WT | - White  |
| YW | - Yellow |
| RD | - Red    |
| GR | - Green  |
| BK | - Black  |
| GY | - Gray   |

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| Torque  | Voltage     | Wiring  | A TYPE | C TYPE | B TYPE |   |
|---------|-------------|---------|--------|--------|--------|---|
| 2 Nm    | 5V          | W21     | Y      | Y      | Y      |   |
|         |             | W31/W72 | Y      | Y      | Y      |   |
|         |             | W51     | Y      | Y      | Y      |   |
|         | 12/24V      | W21     | Y      | Y      | Y      |   |
|         |             | W31/W72 | Y      | Y      | Y      |   |
|         |             | W51     | Y      | Y      | Y      |   |
|         | 9-24VDC     | W32/W71 | Y      | Y      | Y      |   |
|         | AC110-230V  | W22     |        |        | Y      |   |
|         |             | W33/W73 |        |        | Y      |   |
|         |             | W41/W74 |        |        | Y      |   |
|         |             | W52     |        |        | Y      |   |
|         | AC/DC9-24V  | W22     |        |        | Y      | Y |
| W33/W73 |             | Y       |        | Y      | Y      |   |
| W52     |             |         |        | Y      | Y      |   |
| 10 Nm   | DC12V/24V   | W21     |        | Y      |        |   |
|         |             | W33/W73 |        | Y      |        |   |
|         |             | W51     |        | Y      |        |   |
|         | AC/DC9-24V  | W22     |        |        | Y      |   |
|         |             | W22     |        |        | Y      |   |
|         | AC110V-230V | W41/W74 |        |        | Y      |   |
| W52     |             |         |        | Y      |        |   |

A TYPE: No Indicator, no Manual override.

B TYPE: With both Indicator and manual override.

C TYPE: With only Indicator.

2 Nm Actuator usually used for valves 1/8" to 1 1/2".

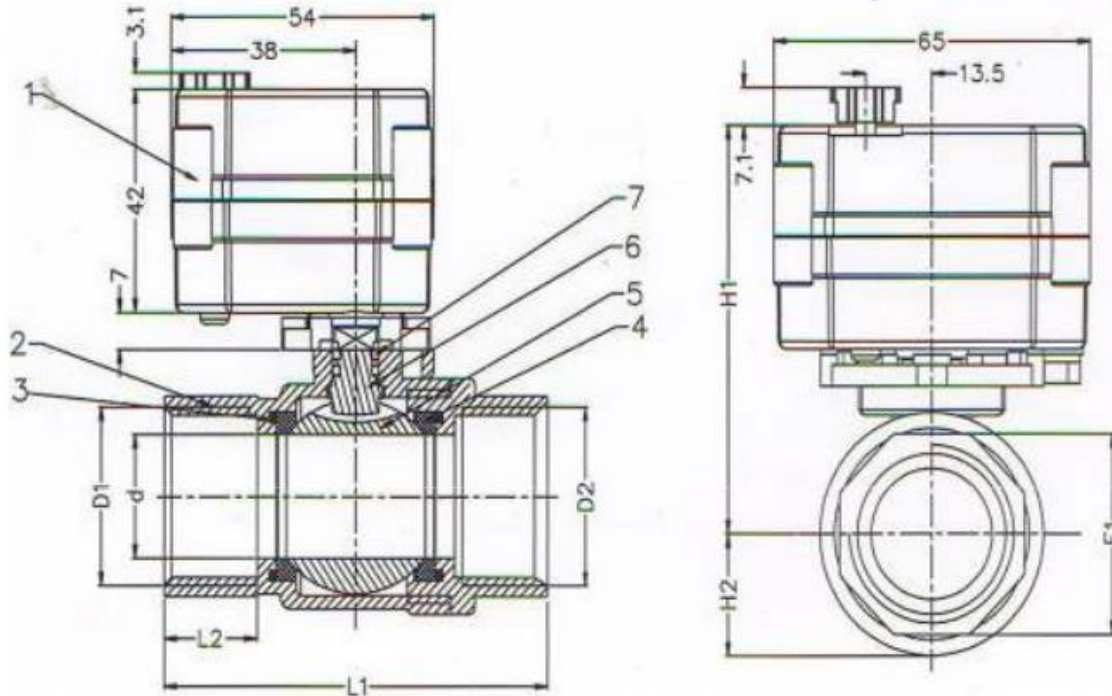
10 Nm Actuator usually used for valves 1 1/2" to 2".

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## Dimensions



| BODY DIMENSION CODE(Size in mm) |               |     |    |    |     |    |
|---------------------------------|---------------|-----|----|----|-----|----|
| Valve body                      | D1/D2         | L1  | L2 | E1 | H1  | H2 |
| PVX215WXXDX                     | 1/2" (15mm)   | 63  | 14 | 25 | 70  | 17 |
| PVX220WXXDX                     | 3/4" (20mm)   | 72  | 17 | 31 | 74  | 20 |
| PVX225WXXDX                     | 1" (25mm)     | 81  | 18 | 38 | 82  | 24 |
| PVX240WXXDX                     | 1 1/2" (40mm) | 115 | 25 | 52 | 130 | 36 |
| PVX250WXXDX                     | 2" (50mm)     | 130 | 25 | 66 | 138 | 45 |