



### Important: Keep this document

The D1PF range of actuators c/w auxiliary switch are specifically designed for use in domestic applications only.

They are not designed for use in commercial or industrial applications such as schools, nursing homes or hotels where large commercial pump sets are fitted.

**Warranty will be void if a valve is fitted in any application other than domestic.**

Please note we have a full range of commercial and industrial valves to suit every application.

**CAUTION!** Installation and connection should only be carried out by a qualified person and in accordance with wiring regulations.

- Do not open the products. There are no serviceable or adjustable parts inside. The system must be fused to no more than 3 Amps.
- Isolate mains supply before installation commences.
- Isolate mains supply before attaching cable to actuator.
- Isolate mains supply before detaching cable from actuator.
- If this equipment is installed or used in a way not specified by the manufacturer, its safety may be impaired.

## TECHNICAL SPECIFICATION

ACTUATOR	MANUFACTURER	MODEL	SIZE & TYPE	MAX. CLOSE OFF PRESSURE
D1PF replacement for	EPH	B322P(F)	22mm Compression	1.0 Bar
	EPH	B328P(F)	28mm Compression	0.6 Bar
	Honeywell	V4073A	22mm Compression	1.0 Bar
	Honeywell	V4044C	28mm Compression	0.6 Bar
	Horstmann	Z322	22mm Compression	1.0 Bar
	Horstmann	Z328	28mm Compression	0.6 Bar

### ACTUATOR

Motor supply voltage	230V	Impedance protected motor
Rated impulse voltage	2500V	Max. ambient temperature 50°C
Power consumption	5W	Protection rating IP20

<b>LEAD SUPPLIED</b>	1.2 metre cable. Earth Connection required.
<b>ACTUATOR OPERATION</b>	230V Power to open - Spring return to close.
	This is not a fail safe, a no fail or a safety product.
	This control is designated Type 1. AA. C in accordance with EN60730.
<b>MANUAL OVERRIDE</b>	Type of action is multi position. Type of movement is rotary.
	Valve may be manually opened for filling or draining the system.
	In normal operation, the lever must be in the Auto position
	If the mains power is disconnected, the valve will automatically spring return to the closed position (Port A)

# INSTALLATION & OPERATING INSTRUCTIONS

## 1. Valve positioning

Install the valve so the actuator head is not below the horizontal level of the pipework. The open vent and cold feed must not be isolated. The flow must be in the direction of the arrow. (from the centre port to either Port A or Port B).

## 2. Fitting the valve body to the pipework

Fit the valve body using the nuts and olives provided. When tightening the compression nuts ensure that only the valve body is used for grip. Take care not to overtighten.

## 3. Removal of actuator from the valve body

To remove the actuator head from the valve body ensure that the manual override lever is in the manual position. Remove the two screws that fix the actuator cover to the base. Remove the actuator cover. Remove the two screws that fix the base to the valve body. Remove the base of the actuator.

## 4. Fitting of actuator to the valve body

Before fitting the actuator, please ensure that the manual override lever is in the raised manual position and the fixing screw is loosened. The actuator is mounted by aligning the 4mm flat spindle on the valve body to the identically sized slot on the actuator. Tighten the two fixing screws on the base of the actuator. Fit the actuator cover and tighten the two screws to hold the cover in place.

Once the valve is fitted, place the manual override lever in the raised manual position. It is now possible to flush and drain the system to remove any foreign matter. The system can now be refilled and corrosion inhibitor may be added if required.

## 5. Wiring Connections

### 5.1 The 1.2 metre cable can be connected as follows:

WIRE COLOUR	DESCRIPTION
Blue	Neutral supply
Orange	Hot Water <b>ON</b> from cylinder stat or <b>ON</b> from programmer Also connect to boiler and pump live.
Grey	Hot Water <b>OFF</b> from cylinder stat or <b>OFF</b> from programmer
White	Central Heating <b>ON</b> from room stat or <b>ON</b> from programmer
Yellow / Green	Earth connection

### CAUTION!

- Ensure that no more than a 3A fuse is used to supply all controls.
- It is not permissible to use any voltage other than 230V on the auxiliary switch.
- Electrical installation must conform with current I.E.E. regulations.

5.2 For use as a Diverting Valve, see table below:

ELECTRICAL CONNECTION	CABLE CONNECTION	VALVE POSITION
Not connected	Not connected	Hot Water "Port B" open.
230V connected to	Orange core	Hot Water "Port B" open.
230V connected to	Grey core	Hot Water "Port B" open.
230V connected to	White core	Mid position "Port A" and "Port B" open.
230V connected to	Grey & White cores	Central Heating "Port A" open.

## 6. Commissioning

Once the system has been filled and vented, ensure the manual override lever is in the auto position.

## 7. For Hot Water only

Switch the Central Heating **'OFF'** at the programmer or set the room thermostat to the minimum. Switch the Hot Water **"ON"** at the programmer and set the cylinder thermostat to the maximum. Port "B" should open on the valve. The boiler should fire and the pump should run. The pipe connected to Port "B" should get hot.

## 8. For Central Heating only

Switch the Hot Water **"OFF"** at the programmer or set the cylinder thermostat to the minimum. Switch the Central Heating **"ON"** at the programmer and set the room thermostat to the maximum. Port "A" should open on the valve. The boiler should fire and the pump should run. The pipe connected to Port "A" should get hot.

## 9. For Hot Water and Central Heating

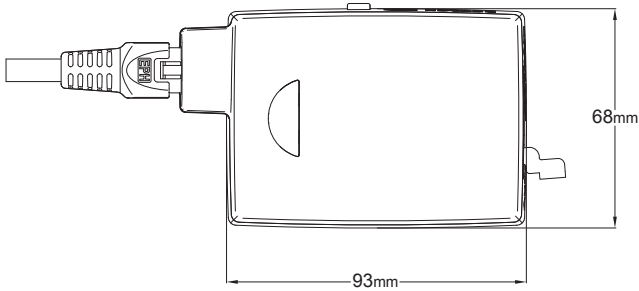
Switch both the Hot Water and the Central Heating **"ON"** at the programmer. Set both the room thermostat and the cylinder thermostat to the maximum. The valve should go to the mid position with both Port "A" and Port "B" open. The boiler should fire and the pump should run. The pipes connected to Port "A" and Port "B" should get hot.

Once satisfied with the valve operation, reset the programmer and the thermostats to normal control settings.

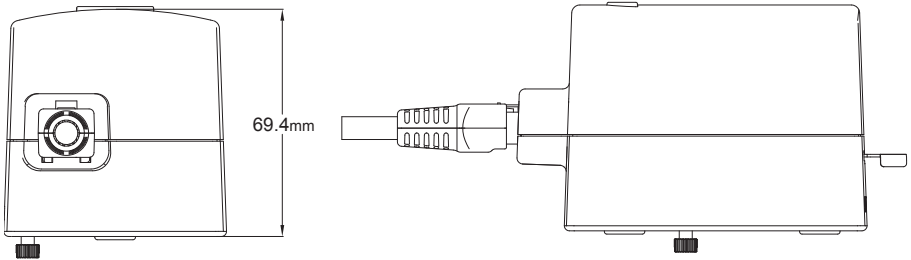
## WARNING!

- Under no circumstances should the actuator be insulated or covered by any other material.
- Lack of ventilation will cause the actuator to heat up beyond the maximum permissible ambient temperature of 50°C.

### Top view



### Side view



## WARNING!

- Under no circumstances should the actuator be insulated or covered by any other material.
- Lack of ventilation will cause the actuator to heat up beyond the maximum permissible ambient temperature of 50°C.

The crossed out wheelee bin symbol on this product indicates that this product must not be disposed of in your general waste. It can be taken to your Local Authority Civic Amenity site for free or returned to your retailer for free when you are buying a replacement. Inappropriate waste handling could lead to negative effects on the environment and human health. With your cooperation you contribute to the correct disposal, reuse, recycling and recovery of the components of this product and the protection of the environment.



### EPH Controls IE

T 021 471 8440  
technical@ephcontrols.com  
www.ephcontrols.com

### EPH Controls UK

T 01933 322 072  
technical@ephcontrols.co.uk  
www.ephcontrols.co.uk