

## COMMISSIONING

To check whether the valve is operating correctly, carry out the following checks after the system is filled and vented. Ensure that the override lever is in the Auto position and the insert guide is removed.

### FOR GRAVITY SYSTEMS:

#### HOT WATER ONLY.

Set the room thermostat to minimum or turn the CH off at the programmer.  
Set the cylinder thermostat to maximum and turn the HW on at the programmer.  
The valve should be open and the boiler only should fire.

#### CENTRAL HEATING ONLY.

Set the cylinder thermostat to minimum or turn the HW off at the programmer.  
Set the room thermostat to maximum and turn the CH on at the programmer.  
The valve should remain closed but the boiler should fire and the pump should run.

#### HOT WATER AND CENTRAL HEATING.

Set the room and cylinder thermostat to maximum and turn the HW and CH on at the programmer.  
The valve should be open. The boiler should fire, pump run and the pipes on the Port B should get hot.

### FOR A FULLY PUMPED SYSTEM:

#### If the valve is fitted on a HW circuit.

Set the cylinder thermostat to maximum or turn the HW on at the programmer. The valve should open. The boiler should fire, the pump run and the pipe on the Port B side should get hot.

#### If the valve is fitted on a CH circuit.

Set the room thermostat to maximum or turn the CH on at the programmer. The valve should open. The boiler should fire, the pump run and the pipe on the Port B side should get hot.

Reset both thermostats and the programmer to their normal settings.

**Please note** the above assumes that both programmer and thermostats are being used. If this is not the case, ignore the action described for the item not fitted.

ZONEPLUS F228m / F228e  
INSTALLATION AND  
COMMISSIONING INSTRUCTIONS



HORSTMANN

The F228m / F228e valve with auxiliary switch has been designed to control the water circulation in fully pumped systems, which employs a single pump for both Hot water and Central heating circuits, by allowing the flow to either or both circuits using separate valves.

INSTALLATION AND CONNECTION SHOULD ONLY BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON AND IN ACCORDANCE WITH THE CURRENT EDITION OF THE I.E.E. WIRING REGULATIONS. A CLASS 'A' SWITCH (HAVING CONTACT SEPARATION OF AT LEAST 3MM IN ALL POLES) MUST BE INCORPORATED IN THE FIXED WIRING AS A MEANS OF DISCONNECTING THE SUPPLY, NORMALLY AT THE CONSUMER UNIT. THE SYSTEM MUST BE APPROPRIATELY FUSED.

**WARNING : ISOLATE MAINS SUPPLY BEFORE COMMENCING INSTALLATION**

## SPECIFICATION

**Motor supply voltage:** 230V AC, 50Hz

**Power consumption:** <6.5W

**Lead supplied:** 1 metre 6 core cable. Industry standard colours used

**Earth connection required.**

**Olive Size:** F228m - 28mm (Metric)

F228e- 1 1/4 inch (Imperial)

**Operating flow temperature:** Up to 80°C

**Switch rating:** 5 Amps

**Maximum ambient temperature:** 50°C

**Maximum static pressure:** 21 Bar

**Maximum differential pressure:** 2 Bar

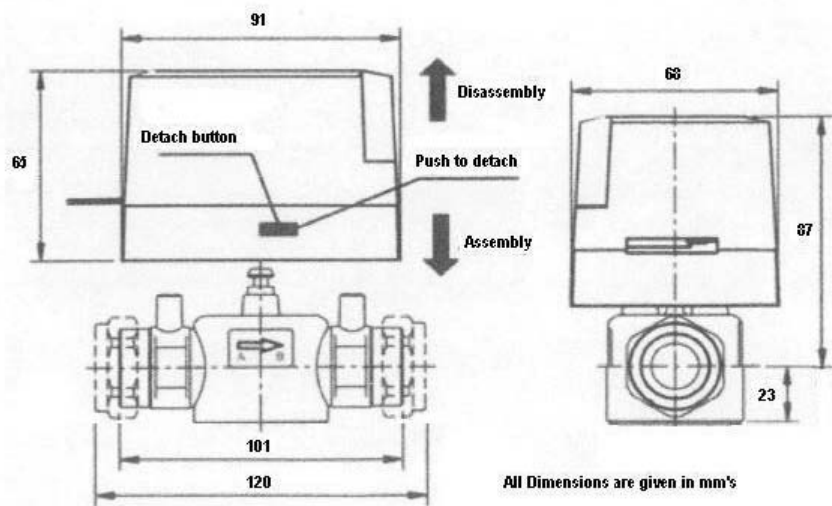
**Pipe fitting size:** 22mm compression

**Actuator:** Maximum time to power open - 20 seconds

Maximum time to spring close - 10 seconds

**Override lever:** For manual operating to open valve for system draining or filling.  
During normal operation, the lever must be in the auto position.

## OPERATION



Valve position - In the event that mains power is disconnected the valve automatically spring-returns to the closed position (Port A).

## INSTALLATION AND OPERATING INSTRUCTIONS

### POSITIONING OF VALVE

On new installations fit the valve ensuring that the actuator head is NOT below the horizontal level of the pipework and that flow is in the direction of the arrow. Also check that neither the open vent or the cold feed are isolated. This will ensure system and product safety at all times.

Remember to make allowances for working, maintenance and replacement.

### FITTING OF VALVE BODY TO PIPEWORK

Fit the valve body using the compression fittings provided.

Tighten the compression nuts sufficiently to make a watertight seal, only gripping the valve by its body. **Take care not to over tighten.**

### FITTING OR REMOVAL OF ACTUATOR TO VALVE BODY

**PLEASE NOTE; Before beginning the installation, or any subsequent removal of the actuator, please ensure that the override lever, located on the side of the actuator is in the raised bypass position.**

Position the actuator on the valve body, taking care to line up the 4mm flat spindle, located on the valve body, with the receiving shaped slot located on the underneath of the actuator. The actuator guide holes should line up with the spigot on the valve body. The actuator locking mechanism will click into place, locking the head to the valve body.

Set the override lever to manual. Fill, test and thoroughly flush the system (See instruction under the Specification section located on page 4 of this guide).

To remove the Actuator from the valve body please ensure that the override lever is placed in the override position.

## WIRING CONNECTIONS

The 6 core cable fitted to the actuator can now be connected to the system following the simple colour-coded guide below.

Wire Colour	System Connection
	<b>FOR A GRAVITY HW SYSTEM:</b>
Blue	Any Neutral supply.
Brown	'Call' terminal of cylinder stat if fitted, otherwise the HW on terminal of the programmer.
White	Live terminal on pump and 'Call' terminal of room stat if fitted, otherwise the CH on terminal of the programmer.
Orange	Live terminal on boiler
Grey	Any permanent live supply.
Yellow/ Green	Earth terminal or the wiring centre
	<b>FOR A FULLY PUMPED SYSTEM AND FITTED TO THE HW CIRCUIT:</b>
Blue	Any Neutral supply.
Brown	'Call' terminal of cylinder stat if fitted, otherwise the HW on terminal of the programmer.
White	Not used. Make electrically safe.
Orange	Live terminal of pump and boiler
Grey	Any permanent live supply.
Yellow/ Green	Earth terminal or the wiring centre
	<b>FOR A FULLY PUMPED SYSTEM AND FITTED TO THE CH CIRCUIT:</b>
Blue	Any Neutral supply.
Brown	'Call' terminal of room stat if fitted, otherwise the CH on terminal of the programmer.
White	Not used. Make electrically safe.
Orange	Live terminal of pump and boiler
Grey	Any permanent live supply.
Yellow/ Green	Earth terminal or the wiring centre

An earth connection is required on the F228m and F228e valve. Ensure all connections are good and the screw secure. A torque of 0.75Nm is recommended for fixing the wires in place.

**NOTE:** In the event that the F228m or F228e is being used in an unconventional system, the above connections may be incorrect. In this case, please seek advice.