Drayton

by Schneider Electric

Motorised Valves

2-Port, Diverter & Mid-Position

Drayton motorised valves now incorporate a 'snap-on' actuator, which simplifies future servicing. The actuator can be removed from the body simply by pressing the release button on the side and lifting the actuator off the body. This allows easy access for replacement of the motor or for convenience the actuator can be replaced as a complete unit.

Installation

DO NOT ATTACH THE ACTUATOR UNTIL THE VALVE BODY HAS BEEN FITTED AND ALL PIPEWORK CONNECTIONS ARE MADE. ENSURE MINIMUM CLEARANCES ARE ADHERED TO.

Install the valve in a clean, dry location where the ambient temperature does not exceed 52°C. The body must not be installed with the actuator below the horizontal so as to avoid any potential ingress of water from leaking pipework. The body should be installed such that the actuator release button, manual lever and motor cover retaining-screw are left accessible and the valve position indicator visible when the actuator is fitted.

Cut connecting copper tubes to allow 10-15mm penetration (22mm valve) or 22-25mm penetration (28mm valve) into the valve body, and ensure pipe ends are square and free of burrs. Slip the compression nuts over the ends of the pipe, followed by the copper olives so that these fit within the threaded sections of the nuts. Offer up to the valve body, screw on and tighten the compression nuts by hand until finger tight and then tighten fully with a spanner or adjustable wrench, using another wrench on the flats of the body to stop it rotating. Care must be taken not to overtighten or to put any mechanical force on the plastic parts of the valve.

Before the actuator is fitted to the body, the manual lever must be moved to the right and pushed in to lock in place (this manual lever is used when filling, venting and draining the installation).

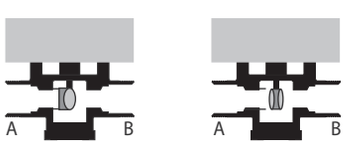
Position the actuator over the spindle ensuring the two locating pins on the actuator mate with the bosses on the body and press down. The actuator will lock into place automatically (an audible click will be heard).

Wiring

The flexible cable from the valve should be wired into a suitable wiring centre or junction box. The circuit must be protected by a fuse with a maximum rating of 3 amps. (Note: Cable is not field replaceable) Valves must be earthed. Wiring should be carried out by a competent Electrician and to current IET regulations.

Two-Port

Model ZA5/679-2 (22mm), ZA6/779-2 (28mm)



Operation

Drayton two port Valves are supplied normally closed, (they have to be powered to open). They spring return to the closed position when the power is removed. Flow direction should be in through Port 'A' and out through Port 'B'.

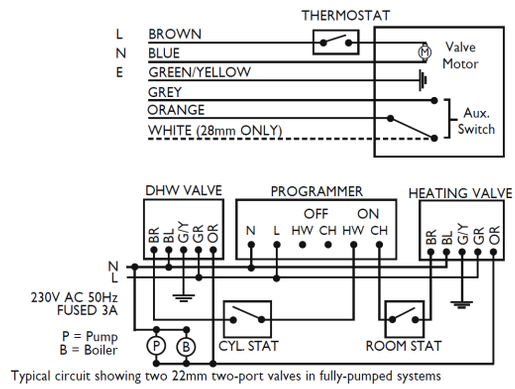
Auxiliary Switch

A micro-switch is fitted inside the actuator (rated 3 (1)A 230V AC resistive) which makes contact when the valve is fully open. In the 22mm valve, this switch is SPST, and in the 28mm model it is SPDT (changeover). The auxiliary (or end) switch is used to switch boilers, pumps etc. It is not electrically connected to the drive motor.

Manual Lever

When the manual lever is moved to the right and pushed in to 'lock', the valve is open, it automatically releases when the valve is powered.

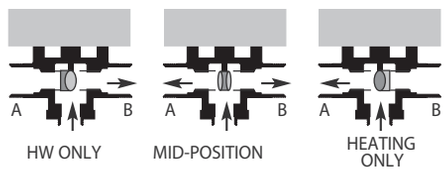
Valve Position Indicator



Typical circuit showing two 22mm two-port valves in fully-pumped systems

Mid-Position

Model MA1/679-3 (22mm), MA1/779-3 (28mm)



Operation

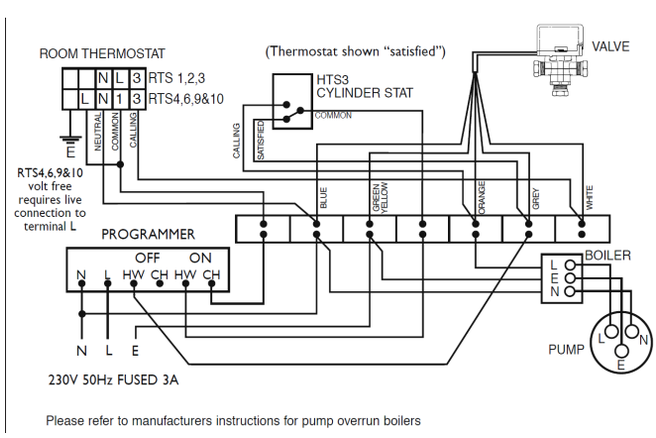
Drayton mid-position valves allow the flow of water from the valve inlet to be directed to either of two outlets, or through both at the same time (mid-position). Power from room and cylinder thermostats enable the valve's electronic circuitry to close either one of the outlet ports or to hold the swivel seal in the mid-position with both outlets open.

Manual Lever

When the manual lever is moved to the right and pushed in to 'lock', both outlet ports A and B are open. The lever must be released manually when the valve is powered.

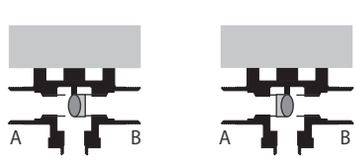
Valve Position Indicator

This indicates which outlet ports are open.
W - Domestic Hot Water (Port B)
M - Both Water and Heating (Ports A and B) - 'Mid-position'
H - Central Heating (Port A)



Please refer to manufacturers instructions for pump overrun boilers

Three-Port Diverter



Model ZA3/679-3 (22mm), ZA5/679-3 (22mm with aux switch), ZA3/779-3 (28mm)

Operation

Drayton diverter valves are spring return valves which allow water to be directed out of either one of two outlets. When the drive motor is de-energised the flow is from inlet Port C and out of Port B. When the motor is energised, flow is out of Port A.

Auxiliary Switch

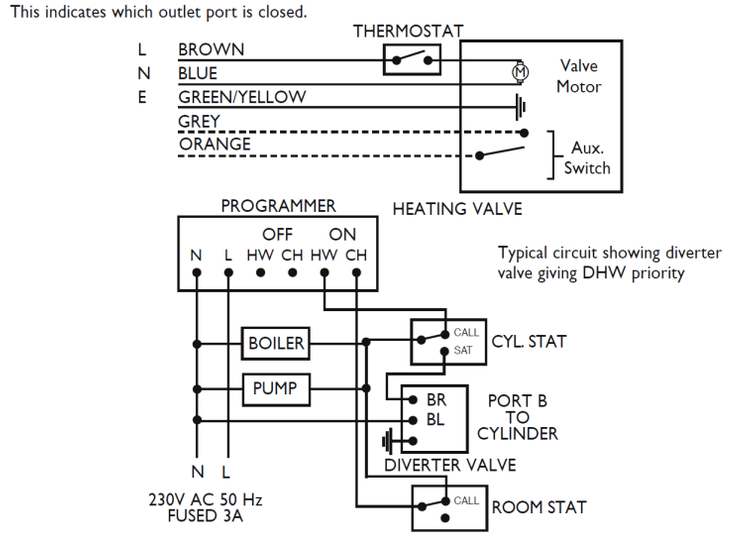
There is an occasional requirement for diverter valves with auxiliary switch, this is met by the Drayton ZA5/679-3 22mm model. The switch is rated 3 (1)A 230V AC resistive and is of the SPST type. (See wiring).

Manual Lever

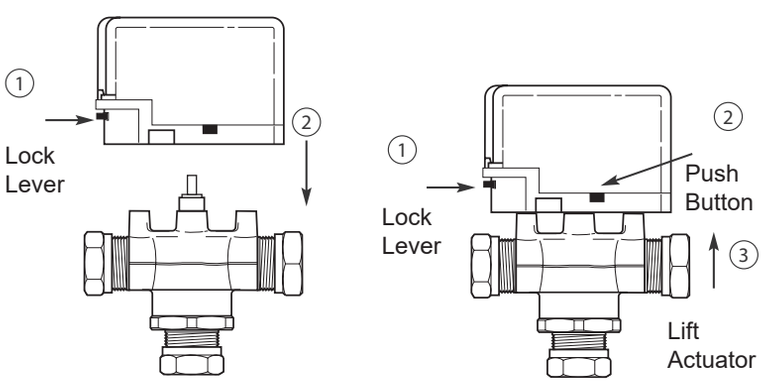
When the manual lever is moved to the right and pushed in to 'lock', the valve is open, it automatically releases when the valve is powered.

Valve Position Indicator

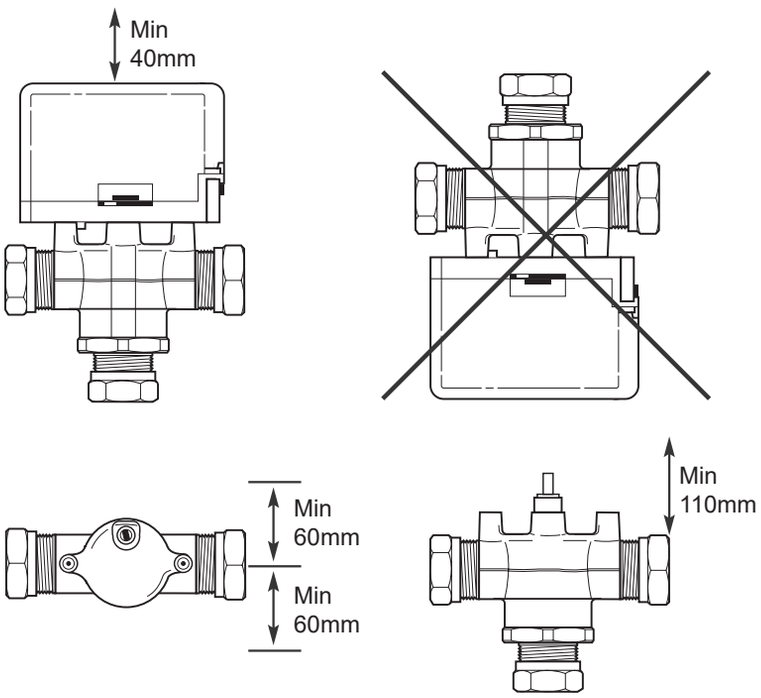
This indicates which outlet port is closed.



Fitting / Removing Actuator



Minimum Clearances



Spares

The following spares are available for Drayton valves:

Synchron motor pack

ZA3 - 3 wire actuator	679-2 - 22mm 2 port body
ZA5 - 5 wire actuator	679-3 - 22mm 3 port body
ZA6 - 6 wire actuator	779-2 - 28mm 2 port body
MA1 - Mid position actuator	779-3 - 28mm 3 port body

Recycling

This product should not be disposed of with household waste. Please recycle the products where facilities for electronic waste exist. Check with your local authorities for recycling advice.

CONFORMS TO THE ESSENTIAL REQUIREMENTS OF THE FOLLOWING DIRECTIVES:
2014/30/EU - Electromagnetic compatibility directive
2014/35/EU - Low voltage directive
2011/65/EU - RoHS - Restriction of Hazardous Substances.
2012/19/EU - WEEE directive

Drayton Controls continuously seek to improve products and reserve the right to make changes without notice.

Specification / Technical Information

Purpose of control	Heating – water valve
Cable & Mounting	Independently Mounted, Non-Detachable Cord, Type Z
Action	Type 1.C
Pollution Degree	2
Rated Impulse voltage	2.5kV
Ball Pressure Temperature	76˚C
Maximum static pressure	8.6 bar
Operating voltage	230V, 50Hz, ≈ 5W
System fuse rating	3A maximum
Auxiliary switch rating	3(1)A 230V AC
Max. differential pressure	0.7 bar
Body	Brass forging
Flow characteristics	22mm Kv 5.0, 28mm Kv 7.0
Max. water temperature	93°C (200°F)
Min. water temperature	5°C
Max. ambient temperature	52°C
Min. ambient temperature	5°C

WARRANTY
T & C'S

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