



Data Sheet 7.36 Issue B



BS9251: 2021

Priority Demand Valve Category 1

Product Description

Rapidrop's innovative electrically driven Priority Demand valve for use with category 1 residential sprinkler systems in accordance with BS 9251: 2021 - Valve for isolating domestic supply in the event of sprinkler activation.

Upon activation of the flow switch or in the event of power loss the valve will automatically close the domestic supply allowing all water to flow to the sprinkler system. The valve will automatically open once the flow switch resets itself or power is restored.

The PDV is pre-wired to the control box (0.5m cable). The control box is powered via a 3pin power supply plug and allows quick installation to the flow switch and alarm device via 2m flying leads.

Features

- WRAS Approved
- PDV - CE and IP65 Rated
- Pre-wired control box/PDV
- Compact PDV & Control box
- External enclosure mounting
- Full bore body (No pressure loss for domestic feed)
- Connected via 3 pin plug or wired to a fused spur
- Low power consumption
- Output connection to alarm device (Volt free and 240V rated)
- Standard or manual override valve body

Operation

Rapidrop Priority demand valve is a power to open valve. In the event of power loss the valve will fail safe to the closed position by the built in super capacitors.

Note: The manual override body will enable the end user to open the valve manually in the event of power loss.

Working Pressure

Max. Working Pressure 10 bar (145 psi)

Connections

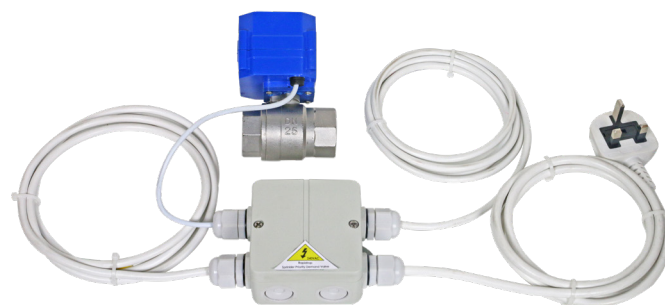
Threaded BSP (DN15 to DN25)

Testing

All Priority demand valves are electrically and functionally tested.

Sizes		Isolation Valve	Ordering Codes Standard	Ordering Codes Override
mm	Inch			
DN15	1/2"	Ball Valve	RDPDV-CAT1-015	RDPDV-CAT1-015-O
DN20	3/4"	Ball Valve	RDPDV-CAT1-020	RDPDV-CAT1-020-O
DN25	1"	Ball Valve	RDPDV-CAT1-025	RDPDV-CAT1-025-O

The above ordering codes includes the PDV full assembly (fully pre-wired as shown)



Installation

The valve may be installed in any position (Standard) and the flow may be from either direction through the valve. For best practice install the manual override version so the wheel is on top.

1. Connect the valve to the pipework.
2. Suitably fix the enclosure.
3. Wire the valve as per wiring diagram. **Ensure the priority demand valve is fully wired prior to inserting the fuse.**

Note: A fused spur can be used as an alternative to the 3 pin plug.

WARNING

Installation must be performed by qualified personnel and in accordance with BS7761:2018

Shock hazard. Disconnect power source before servicing.

Serious injury or death could result.

Specifications

	Specification
Failsafe Close	Super capacitors
Power	5W Max
Voltage	220-240VAC
Fuse Rating	1A
Cable Entries	M16 Glands
Approval	WRAS
PDV IP Rating	IP65
Opening/Closing Time	<12 Seconds

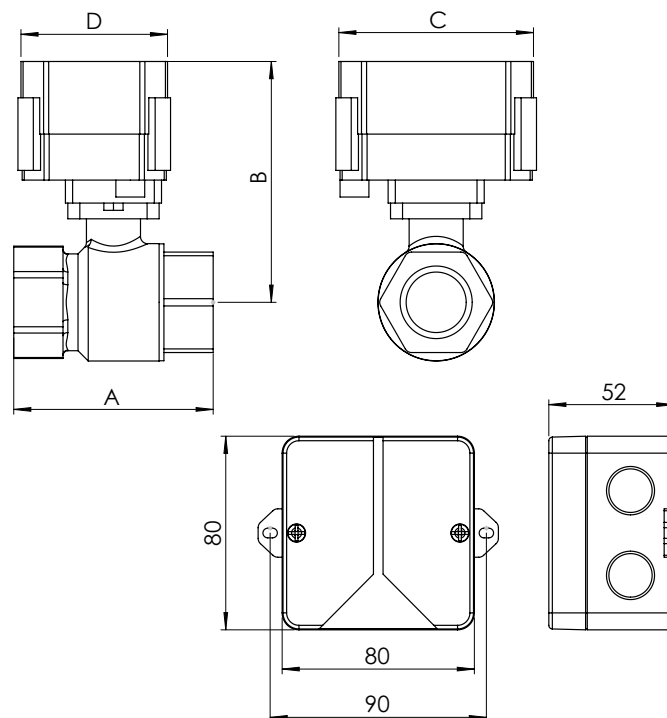
WRAS approval for valve body not owned by rapidrop



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Ball Valve Dimensions

Sizes		Dimensions (mm)			
mm	Inch	A	B	C	D
DN15	1/2"	63	83	66	52
DN20	3/4"	72	87	66	52
DN25	1"	81	95	82	61

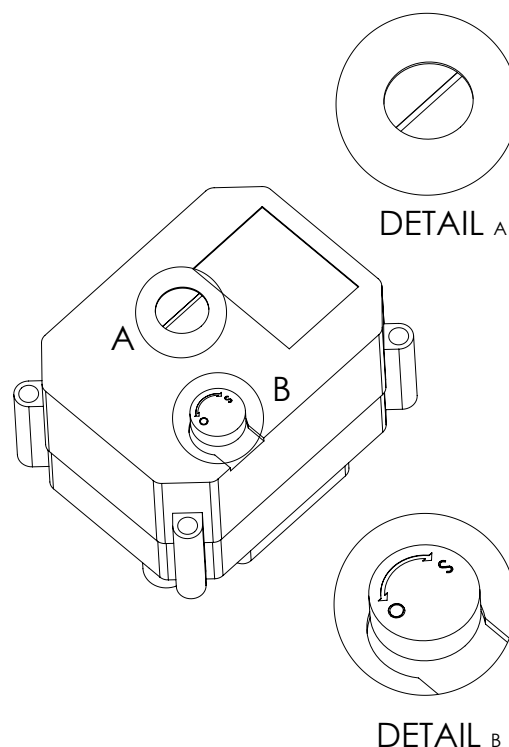


Manual Override

To operate the manual override during power loss:

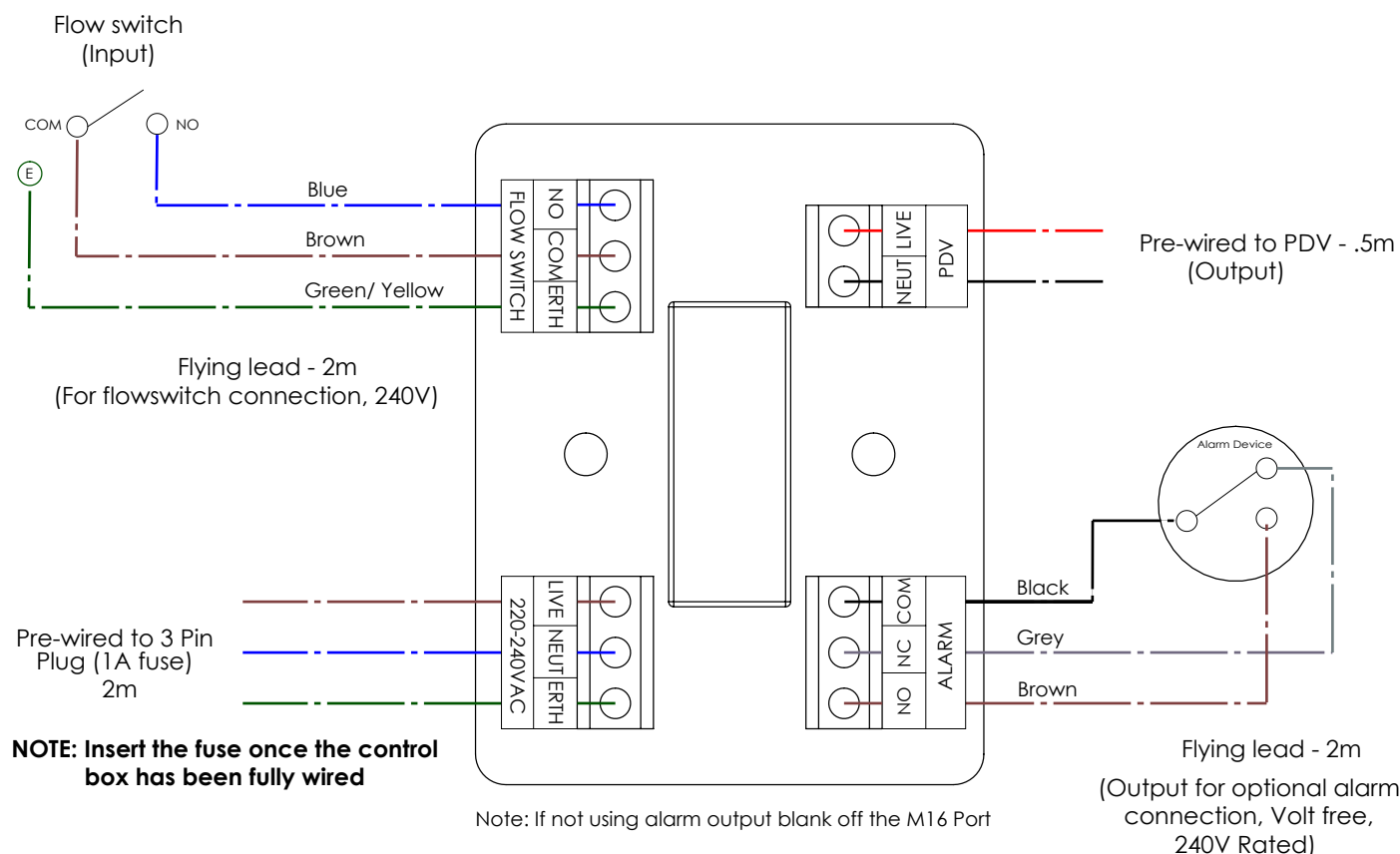
1. Lift the rotary wheel upwards - **B** (away from the valve body)
2. Rotate the wheel anti clock wise to open the valve (Use the indicator to verify the position - **A**)
3. Once power is restored and the valve is fully open, engage/press the rotary wheel downwards (towards the valve body)

Note: The rotary wheel should always be pressed downwards (towards the valve body) during normal operation.



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Wiring Diagram



Care and Maintenance

The priority demand valve requires very little maintenance, However it is advisable to inspect and verify the operation of the unit annually or in accordance with the authority having jurisdiction. It is good practice to ensure all electrical connections (glands, terminals and enclosure) are securely fastened. If not connecting to an alarm device, blank off the M16 port in order to maintain IP protection.

Important Information

- The installation and maintenance of the priority demand valve must only be made by qualified personnel.
- Do not power/ plug the PVD in, until the unit is fully wired.
- Failure to follow these instructions could cause improper operation, resulting in personal injury and/or property damage.
- For further details and technical support please contact your Rapidrop sales representative.

RESPONSIBLE DISPOSAL

- Rapidrop recommend that the product needs to be disposed of correctly when the product reaches the end of it's life cycle.
- Disposal of business or commercial waste should be in compliance and accordance with government guidance and regulations.
- Disposal of electrical waste should be in compliance and accordance with "Waste Electrical and Electronic Equipment recycling" (WEEE).

