T: +44 (0)1825 764737
F: +44 (0)1825 768330
E: info@appeng.co.uk
www.appeng.co.uk

AE VS-A1-M2 - Monitored Potter Fire Sprinkler Valve Set

BS 9251:2021

Applications Engineering Dual port fire sprinkler valve set has been specifically designed for the residential & Domestic market using a Potter VSR-S series flow switch. A monitored Ball valve can be retro fitted and using our unique design also gives the option to monitor to the flow switch.

Features

- Dual ports that enable the flow switch to be mounted on either side.
- Uses Potter VSR-S series flow switch with an inbuilt adjustable time delay
- 100% pressure tested.
- Lockable inlet valve handle
- 1” full bore test valve
- Space saving butterfly handle fitted to drain valve, free of charge
- butterfly handle tool available on request for easy opening
- Glycerine filled 16 bar pressure gauge
- No loss connector fitted to pressure gauge allows replacement without draining the system
- Easy access for servicing
- Space saving - 244mm end to end
- Less joints minimise risk of leaks

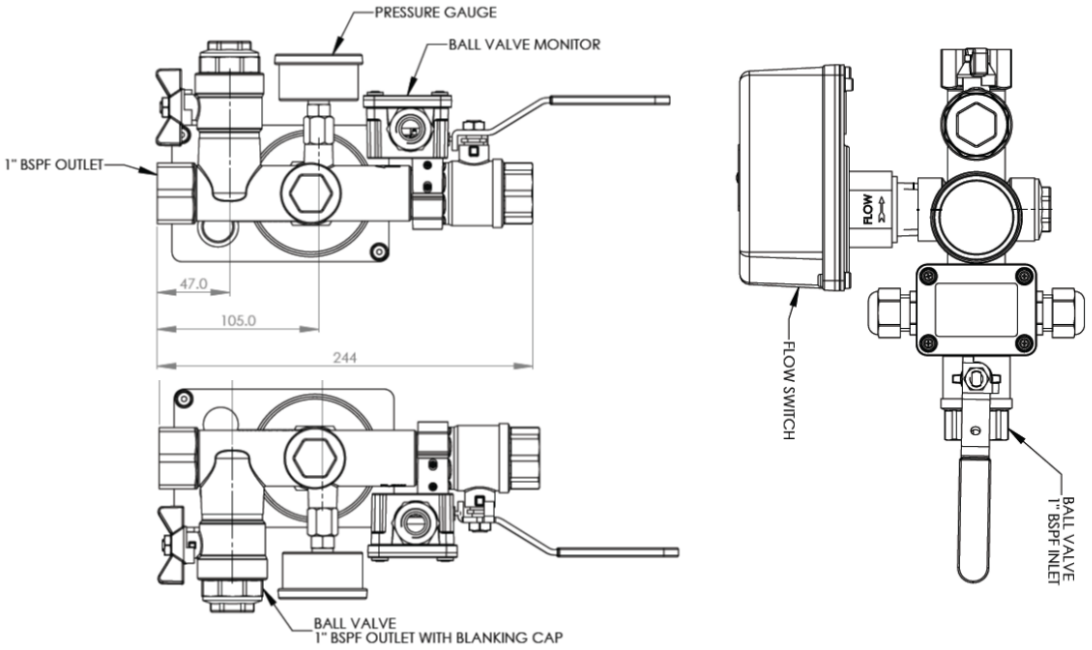
A full range of fittings and adaptors can be fitted and sealed in house by our team to any of our Valves & Valve sets, additional & Bespoke attachments can be fitted on request

Potter switch orientation differs depending on valve set size. On 1” and 1 1/4” valve set, the Potter flow switch can be fitted to either of the dual ports found on each side of the manifold. For the 1 1/2” & 2” valve set, the flow switch is fitted to the 1” port on the top of the manifold.

T: +44 (0)1825 764737
F: +44 (0)1825 768330
E: info@appeng.co.uk
www.appeng.co.uk

APPLICATIONS ENGINEERING LTD

AE VS-A1-M2 - Monitored Dual Port Fire Sprinkler Valve Set

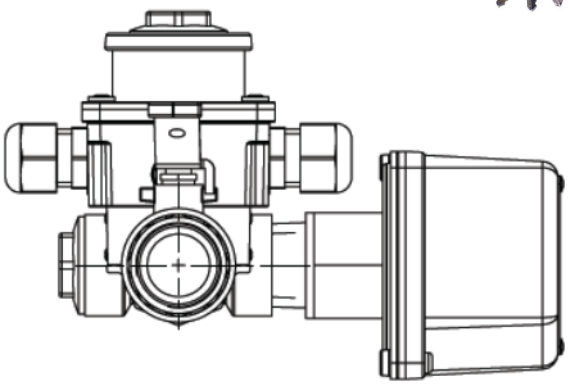


Order Number	Description
AE VS1-A1-M1	DN25 (1") Dual Port Valve set with Potter Flow switch and Monitored Ball Valve pre-wired
AE VS2-A1-M1	DN32 (1 ¼") Dual Port Valve set with Potter Flow switch and Monitored Ball Valve pre-wired
AE VS3-A1-M2	DN40(1 1/2") Dual Port Valve set with Potter Flow switch and Monitored Ball Valve pre-wired
AE VS4-A1--M2	DN50 (2") Dual Port Valve set with Potter Flow switch and Monitored Ball Valve pre-wired
AE VS1-A1-BB-M1	DN25 (1") Dual Port Valve set with Potter Flow switch and Monitored Ball Valve pre-wired, fitted with CPVC adaptors on Inlet & Outlet
AE VS2-A1-BB-M1	DN32 (1 ¼") Dual Port Valve set with Potter Flow switch and Monitored Ball Valve pre-wired, fitted with CPVC adaptors on Inlet & Outlet

*Many more options available, just ask a member of the team for details

Optional Keyed alike padlock compatible with all AEL Valves & Valve Sets. Ordering code: AE-PAD-

Technical Data	
Pressure Rating	16 Bar
Temperature Range	4.5° C to 49° C
Flow Range	15-38 LPM
Flow Switch Protection Class	IP54
Monitored Ball Valve Protection	IP54
Switching Current	Max 10 A
Switching voltage	Max 250 VAC
Maximum Surge	5.5 m/s



T: +44 (0)1825 764737
F: +44 (0)1825 768330
E: info@appeng.co.uk
www.appeng.co.uk

AE VS-A1-M2 - Monitored Dual Port Fire Sprinkler Valve Set

Installation of Monitor

All Applications Engineering monitored ball valves come pre-fitted and wired, eliminating the need for on-site installation, however, the below instructions can be used for retro-fitting a monitor onto an existing Applications Engineering ball valve.

IMPORTANT NOTE - Applications Engineering monitors can only be used on Applications Engineering ball valves, this is due to the positioning of the handle and clamp. Monitors fitted to other ball valves are not covered by warranty and we can't be held responsible for faults.

The latest versions of the Applications Engineering ball valves come with an integrated clamp within the valve, eliminating the use of the retro-fitted two part plastic clamps used on previous version, these are still compatible with the current monitors

To attach the monitor to the valve, use the locating lugs on the bottom of the monitor to fit onto the two locating holes on the top of the clamp. Then, using the two captive screws within the monitor housing, screw both into the corresponding screw holes within the clamp, ensuring the monitor is secure.

Ensure the ball valve is fully open and the toggle is fully engaged against the handle when housing is secure, as per figure 1, any movement from this position will result in an activation.

After wiring as required, secure the lid to the MBV housing with the four captive screws in the lid.

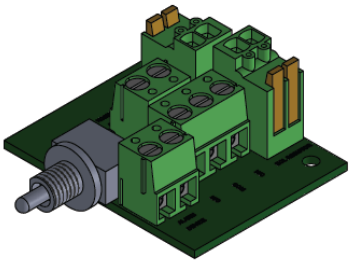
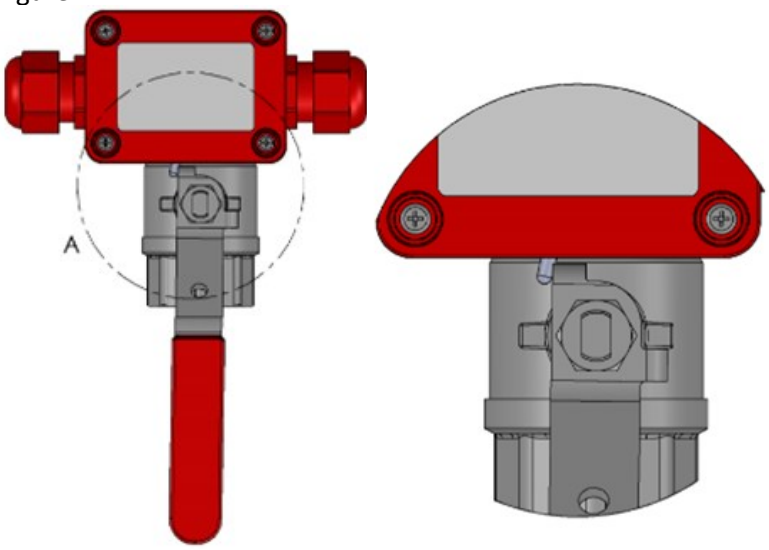
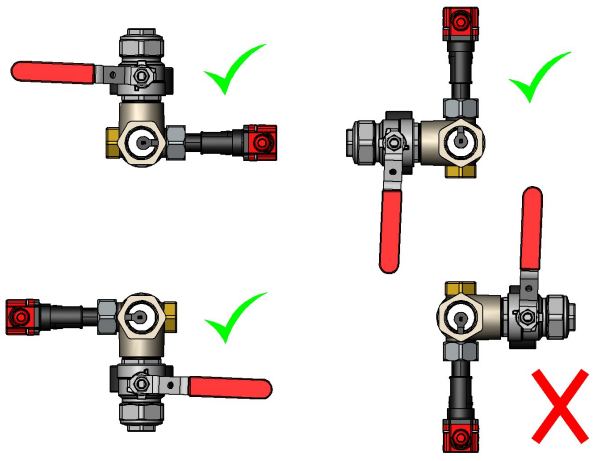


Figure 1



The Monitor is a 1-piece construction that makes mounting easy and fully retrofittable to any Applications Engineering ball valve or valve set. The housing can be easily screwed into place from the top into the pre-moulded clamps.

Flow Switch Installation Orientation



- **NEVER ALLOW FLOW SWITCH ORIENTATION TO DROP BELOW 90° FROM UPRIGHT POSITION**
- **Ensure that the flow direction arrows on both the valve set and top of flow switch align**

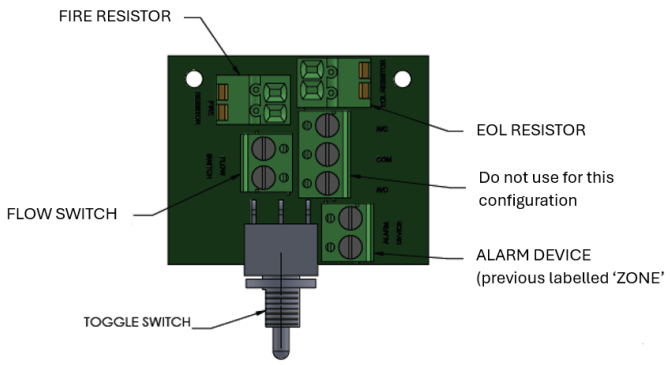
T: +44 (0)1825 764737
F: +44 (0)1825 768330
E: info@appeng.co.uk
www.appeng.co.uk

AE VS-A1-M2 – Monitored Dual Port Fire Sprinkler Valve Set

Monitored Valve Set Wiring Instructions:

Applications Engineering Monitored valve sets come pre-wired with two lengths of FP200 cable, 1/2m into the flow switch and a 1m flying lead.

There are two different wiring configurations to suit all situations.



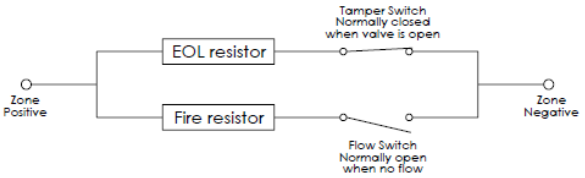
Monitoring Flow Switch and Monitored Ball Valve as one Output (This is how they come pre-wired)

- Wire the 1m flying lead from the 'ALARM DEVICE' terminal into the zone on the fire panel. The flow switch is pre-wired into the terminal marked 'FLOW SWITCH'. Make sure the flow switch is wired Common & Normally Open.

- Insert an EOL resister and FIRE resistor into the corresponding lever terminals. Ensure use of the panel's correct resistor value terminals for full circuit supervision.

- The panel will then signal fault when the ball valve handle is moved or signal fire in the event of an activation of the flow switch.

SYSTEM SCHEMATIC



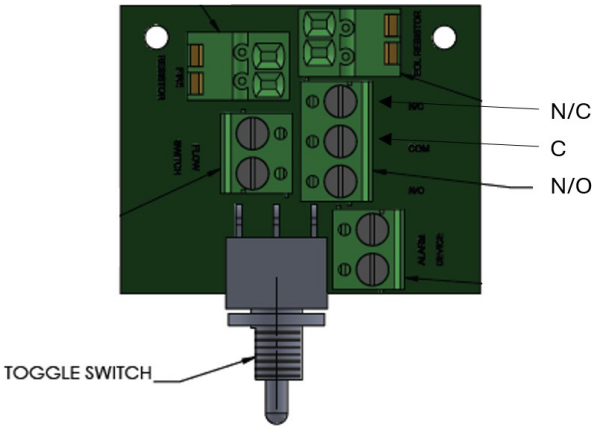
- Ensure the isolation valve is locked in the fully open position. In this position, the circuit will be running at the panel's resistor value when the isolation valve is fully open.

Monitoring the flow switch and isolation valve as separate outputs

- Remove the flow switch cable from the 'FLOW SWITCH' terminal and take straight to alarm panel.

- Remove the 1m flying lead from the 'ALARM DEVICE' terminal and rewire to the common/normally open or common normally closed terminals, depending on preference.

- To monitor fault and activation of each device, install an EOL & ALARM resistor within the flow switch and monitor output terminals separately. Each panel manufacturer require different resistor values, ensure use of the panel's correct resistor value for circuit supervision.



Maintenance

All Applications Engineering valves & monitored ball valves requires no regular maintenance, however, it is advisable to inspect and ensure proper operation of the unit annually.