

PROXIMITY DETECTION "SHUT-OFF" VALVES

Save Water: Automatic Water Shut-Off Control

Save Water + Energy: Control both the Water Supply & Lights etc.

Can help achieve BREEAM Credits*

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The Problem: Leaking and damaged ball valves (taps etc.) are not only an expensive waste of water, but also pose a possible risk of damage from flooding.

The Solution: A PIR switch is used to control the water supply (+ lights etc.) into a room. When the PIR switch detects that the room is occupied, it will automatically turn the water supply (+ lights etc.) "ON" so the appliances work as normal.

Once the washroom has been unoccupied for a pre-set but adjustable time, the system will automatically turn the water supply (+ lights etc.) "OFF" again, thus saving water if the appliances are prone to leak, or are deliberately left on. As such it is ideal in commercial buildings with public toilets (e.g. Office Blocks, Hotel Rooms, Swimming Pools etc.) or where there is a risk of vandalism (e.g. Schools, Municipal Public Toilets, Universities, Military Barracks etc.).

This system can also be used to control special indoor water features that you only want to operate when the room is occupied (e.g. pre-swim showers for swimming pools).

Pilot Operated (HP) 230v Normally Closed **WRAS Approved** Solenoid Valves

Order Codes:

½"	230v HP NC Solenoid Valve
¾"	230v HP NC Solenoid Valve
1"	230v HP NC Solenoid Valve
1¼"	230v HP NC Solenoid Valve
1½"	230v HP NC Solenoid Valve
2"	230v HP NC Solenoid Valve

Rated to 10 bar water pressure.

n.b. ½", ¾" and 1" require **minimum 0.35 bar pressure differential** to operate

n.b. 1¼", 1½" and 2" require **minimum 0.5 bar pressure differential** to operate



Temperature up to 85°C

Power Absorption:

Pilot Operated HP Valves

For valve sizes ½", ¾" & 1"

Inrush	Holding	DC
12 va	6 va	5.5W

For valve sizes 1¼", 1½" & 2"

Inrush	Holding	DC
23 va	14 va	9W

- Strainers are recommended to protect the valves from debris
- Optional 12vDC or 24v available on request
- Optional manual override available. Must be specified at time of order
- Optional magnetic valve opener (to temporarily energise valves if there is currently no electricity provided on site [see page 4])

Zero Rated Normally Closed Solenoid Valves Operate from 0 Bar Pressure Differential

Pilot Operated Hung Diaphragm (POHD) 230v Normally Closed **WRAS Approved** Solenoid Valves

Suitable for water pressure:

0 Bar – 9 Bar (AC Coils)
0 Bar – 3 Bar (DC Coils)

Order Codes (POHD):

1/2" 230v POHD LP NC Solenoid Valve

3/4" 230v POHD LP NC Solenoid Valve

Power Ratings:

230v/50Hz			24v DC	
Inrush	Holding		Hot	Cold
(VA)	(VA)	(W)	(W)	(W)
55	23	10.5	9	11.2



- Strainers are recommended to protect the valves from debris
- Mounting position: piping horizontal, solenoid upright
- 24vAC and 24vDC options available on request
- Optional magnetic valve opener. Allows you to open valve without power
- Voltage $\pm 10\%$. Continuous Duty 100 %
- WRAS EPDM Seals as standard** | NBR, FPM and CR seals available on request

Zero-Rated "Normally Closed" LP(v2) **WRAS Approved** Solenoid Valves

Standard c/w 15 Watt Coil

Suitable for water pressure:

0 Bar – 7 Bar (AC Coils)
0 Bar – 5 Bar (DC Coils)

Order Codes LP(v2):

1/2" 230v LP(v2) NC

3/4" 230v LP(v2) NC

1" 230v LP(v2) NC

Power Absorption:

Inrush	Holding
23 vA	17 vA



- We recommend you mount coils upright
- Strainers are recommended to protect the valves from debris
- Optional 12v or 24v Valve available on request please specify AC or DC
- Optional magnetic valve opener

Compact Failsafe Closed Actuated WRAS Approved Ball Valve

IP67 Actuator available in 9–24vAC/DC option or 110–240vAC option

Does not get hot | Can be plumbed in either way round

When power is applied the RP/ABVM-Failsafe compact actuator will actuate the ball valve into the 'OPEN' position. This takes approximately 5 seconds. Allow a minimum power on time of 60 seconds per operation to allow the failsafe close capacitor to charge. When in 'OPEN' position and recharged the actuator only takes reduced 'holding' power and the valve stays in that position. When electrical power is removed the actuator detects the power loss and draws power from its internal capacitor (electrical storage) which enables the ball valve to automatically return to the default 'CLOSED' position.

A 60 second (capacitor) charge period is required between operations.



Power

Moving: **5 Watts**
 Holding: **0.22 Watts (9–24vAC/DC option)**
0.6 Watts (110–240vAC option)

Media: **air – water – gases – liquid**
 Pressure range: **0 Bar – 10 Bar maximum**
 Media temperature: **–15°C to +100°C**
 Ambient temperature: **–15°C to +50°C**
 Media viscosity: **500 Centistokes max**
 Continuous duty: **100%**
 Duty cycle: **100,000**
 Operating time: **5 Sec approx.**

Valve Body: 304 stainless steel
 Seals: Stem 2 × FKM
 Ball – WRAS PTFE
 Actuator: ABS Engineering Plastic; Gears – Metal
 IP67 Enclosure; Torque – 2 Nm; Pre-wired – 0.5 metre;
 Visual position indication
 Option: Manual Override for 9–24vAC/DC only (**must be specified at time of order**)
 Option: Volt free position feedback switches (**must be specified at time of order**)

9–24vAC/DC Option

Suitable for water pressure:

0 Bar – 10 Bar

Failsafe CLOSED Order Codes:

1/2" RP/ABVM/9-24V/FSC
 3/4" RP/ABVM/9-24V/FSC
 1" RP/ABVM/9-24V/FSC

110–240vAC Option

Suitable for water pressure:

0 Bar – 10 Bar

Failsafe CLOSED Order Codes:

1/2" RP/ABVM/110-240V/FSC
 3/4" RP/ABVM/110-240V/FSC
 1" RP/ABVM/110-240V/FSC

Option: Manual Override for 9–24vAC/DC only (**must be specified at time of order**)



Failsafe Closed Actuated WRAS Approved Ball Valve: 1¼" to 2" sizes

IP67 Actuator available in 12–24vDC option, 24vAC option or 110–240vAC option

c/w Manual Override as standard

Does not get hot | Can be plumbed in either way round

When power is applied the RP/ABVM-Failsafe actuator will actuate the ball valve into the 'OPEN' position and will then recharge the internal capacitor. Allow a minimum power ON time of 60 seconds per operation to allow the failsafe close capacitor to charge. When in position and recharged the actuator only takes greatly reduced 'holding' power and the valve stays in that position. When electrical power is removed the actuator detects the power loss and draws power from its internal capacitor (electrical storage) which enables the ball valve to automatically return to the default 'CLOSED' position.



Power

Moving: 22 Watts - Max 1 Amp

Torque 15 Nm

Media: air – water

Pressure range: 0 Bar – 10 Bar maximum

Media temperature: 0°C to +90°C

Ambient temperature: –15°C to +60°C

Continuous duty: 100%

Duty cycle: 70,000

Operating time: 10 Sec approx.

Valve Body: 304 stainless steel

Seals: WRAS EPDM + PTFE

Actuator: ABS Engineering Plastic; Gears – Metal
IP67 Enclosure; Pre-wired with 0.5m cable

As standard: Visual position indicator

Manual override

E2 volt free fully open and fully closed position
feedback switches 0–36vDC 0.4 Amp max.

110–240vAC Option

Suitable for water pressure:

0 Bar – 10 Bar

Failsafe CLOSED Order Codes:

1¼" RP/ABVM/110–240V/FSC

1½" RP/ABVM/110–240V/FSC

2" RP/ABVM/110–240V/FSC

12–24vDC Option

Suitable for water pressure:

0 Bar – 10 Bar

Failsafe CLOSED Order Codes:

1¼" RP/ABVM/12-24vDC/FSC

1½" RP/ABVM/12-24vDC/FSC

2" RP/ABVM/12-24vDC/FSC

24vAC Option

Suitable for water pressure:

0 Bar – 10 Bar

Failsafe CLOSED Order Codes:

1¼" RP/ABVM/24vAC/FSC

1½" RP/ABVM/24vAC/FSC

2" RP/ABVM/24vAC/FSC

PIR Switches

230v Standard (optional 24v on request) Indoor PIR Switches featuring:

Adjustable overrun time from 10 secs – 40 mins. This is the time the load will stay on for after the last time the PIR detects someone.

Adjustable Photocell to inhibit the lights from switching on when somebody is detected by the PIR if there is enough ambient light. Range 100 – 1000 Lux and inactive.

NB: Photocell MUST be set to maximum/inactive when using PIR to switch valves / motor load.

Loading: All models can switch up to 6 amps (1500W at 230VAC) of resistive and fluorescent lighting loads or up to 3amps (750W) of electronic and wire wound transformer loads, or up to 2amps (500W) of CFL, 2D Lamps LED Drivers and LED Lamps and fittings or up to 1 amp (250W) of valve, fan or motor loads.

Single PIR can control several valves, or several PIRs can be wired in parallel to control the same load.

Ceiling PIR Switches

Perspective view of detection zone

For optimum coverage recommended mounting height between 2.4 and 5m.

PIR occupancy switch

Strong detection zone

Secondary detection zone

Up to 5m

Up to 7m

Several PIR occupancy switches

In open plan areas
For best coverage the PIR occupancy switches should be spaced every 5m in either direction

Up to 5m

Plan view of detection zone

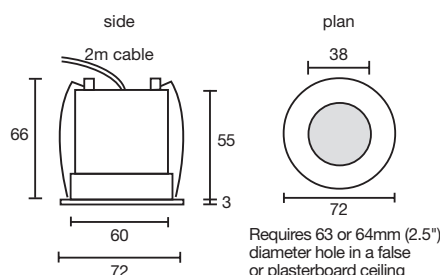
Up to 5m

Up to 7m

- Strong detection zone
i.e. person moving arm
- Secondary detection zone
i.e. person walking (less sensitive when walking straight towards PIR switch)

PIR Quad detector gives 124 detection areas within the zone

Ceiling Recessed PIR Switch



Order Codes:

PIR/D/REC

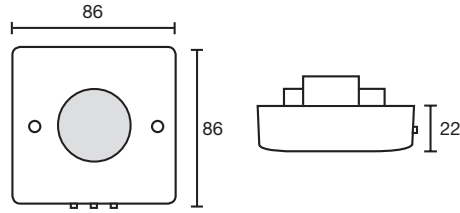
72mm diameter

PIR/D/REC/Sealed

IP44 rated ceiling recessed PIR

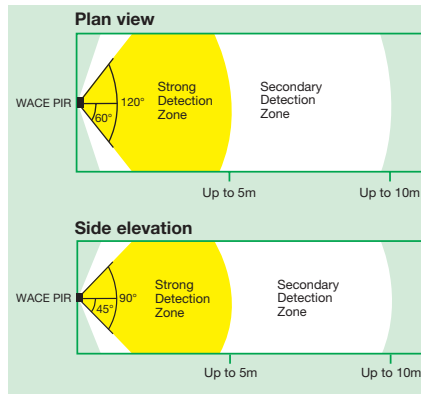
Available on request.

Ceiling Mounted PIR Switch



Order Code:
PIR/D/SM
 86mm x 86mm

Wall Mounted PIR Switch



Order Code:
PIR/D/WM
 86mm x 86mm

Magnet Solenoid Valve Openers



To operate MVO, remove coil to access valve-stem

Operation: Ensure that power is switched off before removing the electrically operated valve coil. Place the Solenoid Valve Operating Magnet fully over the valve-stem. You will hear a click - this indicates the valve is now open.

When the manual operation is complete, remove the Solenoid Valve Operating Magnet and reinstate the electrically operated valve coil normally.

WARNING: Do Not re-energize the electrically operated valve coil unless it is correctly seated on the valve stem.

Order Code	Suitable for:	Order Code	Suitable for:	Order Code	Suitable for:
MVO/10mm	1/2" - 1" NC HP	MVO/15mm	1 1/4" - 2" NC HP 1/2" - 1" NC LP(v2) 1/2" NC LP	MVO/18mm	3/4" - 2" NC LP



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