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*

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 puiblic 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 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 85ºC

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 please specify AC or DC 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" LP(v2) Solenoid Valves

- 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

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):

½" 230v LP(v2) NC
¾" 230v LP(v2) NC
1" 230v LP(v2) NC

Power Absorption:

Inrush	Holding
23 vA	17 vA

Optional c/w 18.5 Watt Coil

Suitable for water pressure:

0 Bar – 10 Bar (AC Coils)
0 Bar – 10 Bar (DC Coils)

Order Codes LP(v2):

½" 230v LP(v2)18.5W NC
¾" 230v LP(v2)18.5W NC
1" 230v LP(v2)18.5W NC

Power Absorption:

Inrush	Holding
33 vA	24 vA

Direct Acting "Normally Closed" LP Solenoid Valves [½" – ¾" sizes]

WRAS APPROVED PRODUCT

Suitable for water pressure:

0 Bar – 8 Bar (AC Coils)
0 Bar – 3 Bar (DC Coils)

Order Codes (LP):

½" 230v LP NC Solenoid Valve
¾" 230v LP NC Solenoid Valve

Power Absorption:

	Inrush	Holding	DC
½"	23 va	14 va	9W
¾"	44 va	24 va	13W

- Strainers are recommended to protect the valves from debris
- Optional 12vDC or 24v available on request

  please specify AC or DC
- Optional magnetic valve opener.

Direct Acting "Normally Closed" LP Solenoid Valves [1" size]

Suitable for water pressure:

0 Bar – 8 Bar (AC Coils)
0 Bar – 3 Bar (DC Coils)

Order Code (LP):

1" 230v LP NC Solenoid Valve

Power Absorption:

	Inrush	Holding	DC
1"	65 va	33 va	17W

- Strainers are recommended to protect the valves from debris
- Optional 12vDC or 24v available on request

  please specify AC or DC
- Optional magnetic valve opener.

Direct Acting "Normally Closed" LP Solenoid Valves [1¼" – 2" sizes]

Suitable for water pressure:

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

Order Codes LP(v2):

1¼" 230v LP NC Solenoid valve
1½" 230v LP NC Solenoid valve
2" 230v LP NC Solenoid valve

Power Absorption:

Inrush	Holding	DC
18.7 vA	15.3 vA	18.5W

- Strainers are recommended to protect the valves from debris
- Optional 12vDC or 24v available on request

  please specify AC or DC
- Optional magnetic valve opener.

Compact Failsafe Closed Actuated WRAS Ball Valve

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

WRAS APPROVED PRODUCT

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 viscocity: **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 postion 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:

½" RP/ABVM/9-24V/FSC
¾" 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:

½" RP/ABVM/110–240V/FSC
¾" 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 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 postion 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.

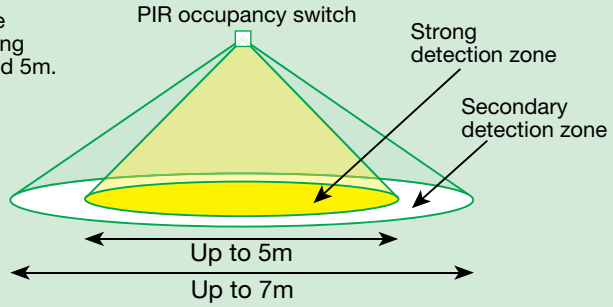
Loading: All models can switch up to 6 amps (1500W at 230VAC) of resistive and fluorescent lighting loads or up to 3amps (750W) of electronic and wire wound transformer loads, or up to 2amps (500W) of CFL, 2D Lamps LED Drivers and LED Lamps and fittings or up to 1 amp (250W) of valve, fan or motor loads.

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

Ceiling PIR Switches

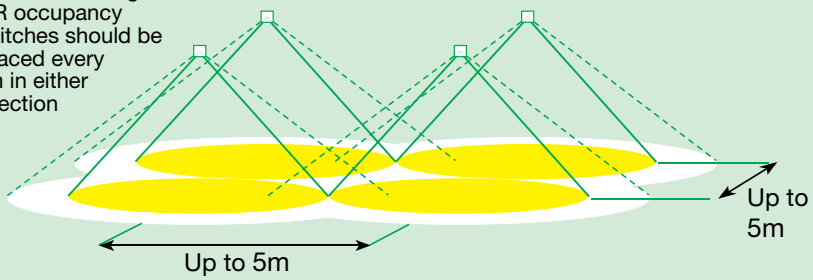
Perspective view of detection zone

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

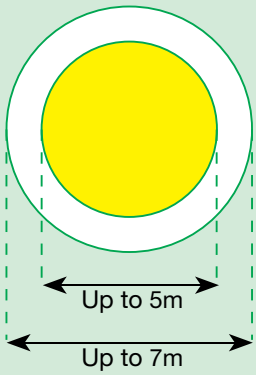


Several PIR occupancy switches

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



Plan view of detection zone

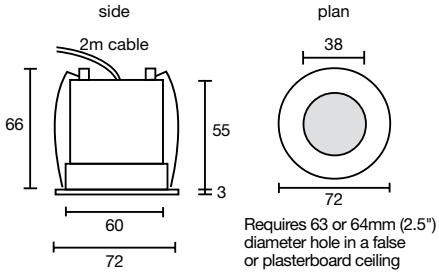


Strong detection zone
i.e. person moving arm

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

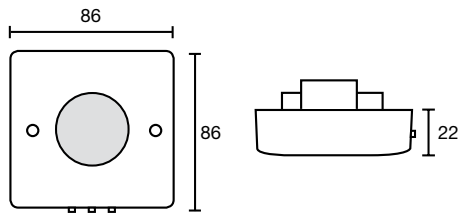
72mm diameter

PIR/D/REC/Sealed

IP44 rated ceiling recessed PIR

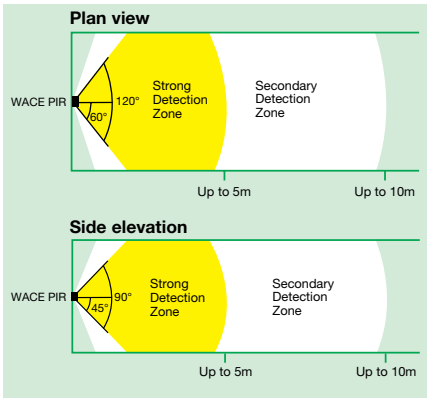
Available on request.

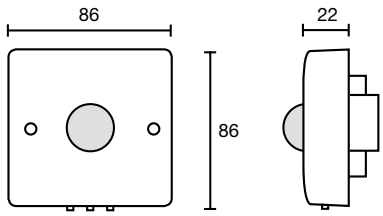
Ceiling Mounted PIR Switch



Order Code:
PIR/D/SM
86mm × 86mm

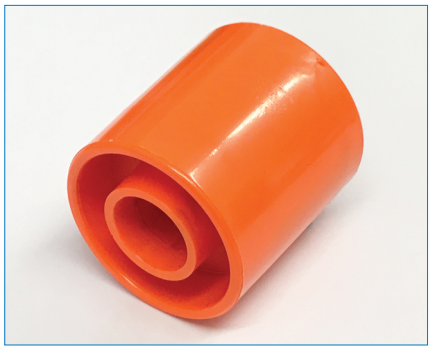
Wall Mounted PIR Switch





Order Code:
PIR/D/WM
86mm × 86mm

Magnetic 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	½" – 1" NCHP	**MVO/15mm**	1¼" – 2" NCHP ½" – ¾" NCLP/NCLP(v2)	**MVO/18mm**	1" – 2" NCLP/NCLP(v2)

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