

AquiTron

AT-OFC

Occupancy Flow Controller

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DATA SHEET



aquilar
leak detection solutions



AT-OFC

Occupancy Flow Controller

The Aquitrone Occupancy Flow Controller (AT-OFC) is a BREEAM Wat 03 Part 2 compliant controller (BREEAM credit available: 1). The system is used as a flow control device that isolates the water supply to WC's and other areas when they are not in use, thereby limiting the risk of water wastage and damage from undetected water leaks. The AT-OFC connects to Aquilar's PIR sensors and WRAS approved water solenoid valves. Flexible connection options mean compatible third party PIR's and valves can also be used if required.

APPLICATIONS

The system comprises of a main controller, ceiling mounted recessed or surface mounted PIR sensor (maximum of 10 PIR sensors) and a range of 6Vdc brass and plastic latching solenoid valves 15mm to 42mm (½" to 1½"). Up to 3 valves can be powered by the controller.

The AT-OFC is ideally suited to projects where PIR control is required for water shut off in commercial buildings: WC's, tea points, kitchens, utility rooms and shower areas. This system helps towards compliance with BREEAM WAT 03 Part 2. It can also be combined with all Aquitrone or TraceTek leak detection systems to act as a master valve controller. The AT-OFC can provide an important element for a complete leak detection and prevention solution.

The AT-OFC will detect movement via the attached PIR sensor(s), while movement is detected the AT-OFC will activate any Aquitrone solenoid valves and allow water to flow. When no further movement is detected a user selectable countdown time period will start (adjustable between 6 seconds to 20 minutes). After this time has expired the controller will close the valves and reset the two volt free relays which can be used to control third party equipment such as lighting or valves.

The AT-OFC system can be supplied with high quality Aquitrone PIR sensors, however, customers can choose to use existing/alternative brands of compatible PIR lighting switches. Multiple controllers or PIR's can be daisy chained to suit most applications.

TECHNICAL INFORMATION

Power supply	100 - 240 Vac 50/60Hz
Input Control Types	PIR (230Vac) or N/O volt free trigger
Power Cable Size	3 Core Flex 1.0mm ² to 1.5mm ²
Maximum Number of 6Vdc Latching Solenoid Valves	3
Module housing	ABS 180 mm x 130 mm x 64 mm (L x W x D) IP 65
Maximum Number of PIR sensors	10
Outputs	3 x 6Vdc Pulse for AT-V-XX Latching solenoid valve outputs 2 x SPDT volt free relay contacts. Max load 3A @ 230Vac
Timer adjustment	6 sec to 20 minutes
Indicator	Power on LED (visible when enclosure cover is removed)
Maximum Distance to 6Vdc Valves from controller	50M
PIR sensor location	Ceiling or Wall mounting (Flush recessed or Surface)

PIR TECHNICAL INFORMATION



Product Code	AT-OFC-PIR-F	AT-OFC-PIR-S	AT-OFC-PIR-W	AT-OFC-PIR-M
Mounting	Flush (Recessed)	Surface	Wall	Semi-Flush
Dimensions (mm)	Ø 78 x D 54	Ø 115 x D 51	L 55 x W 78 x H 120	L 64 x W 94 x H 94
Mains Power	230 Vac / 50 – 60 Hz	230 Vac / 50 – 60 Hz	230 Vac / 50 Hz	230 Vac / 50 – 60 Hz
Sensor Technology	Passive Infrared	Passive Infrared	Passive Infrared	High Frequency
Installation Position	Ceiling	Ceiling	Wall, Corner	Wall, Ceiling, Corner
Optimum Mounting Height	2,2 – 4 m	2 – 4 m	1,8 – 4 m	2 – 4 m
Reach Radial	Ø 4 m (13 m ²)	Ø 3 m (7 m ²)	r = 1.5 m (4 m ²) / r = 3 m (14 m ²)	Ø 8 m (50 m ²)
Reach Tangential	Ø 8 m (50 m ²)	Ø 7 m (38 m ²)	r = 5 m (39 m ²) / r = 12 m (226 m ²)	Ø 8 m (50 m ²)

PIR APPLICATIONS - PIR VS MICROWAVE

PIR sensors are neither objectively better or worse than microwave sensors. Both sensor types have their own advantages and are better for different spaces and tasks.

PIR sensors detect heat and only pick up movement from living things, meaning they will give fewer false alarms. They do this by measuring the ambient temperature of the room using several detection beams. When a difference in temperature is detected by one of the beams, the sensor is activated, triggering the AT-OFC

Microwave High-frequency motion detectors detect moving objects regardless of temperature, HF-sensor technology also detects movement through adjacent glass, wood and stud walls. High-frequency technology is the perfect alternative in areas that can pose problems for temperature-based infrared sensors such as odd shaped rooms. These motion detectors emit microwave signals and measure the time taken for the signal to be reflected back to the sensor. A person moving into the detection zone causes a disruption in the microwave signal, triggering the AT-OFC.



LATCHING SOLENOID VALVE N/C 6V DC - 15 TO 42MM

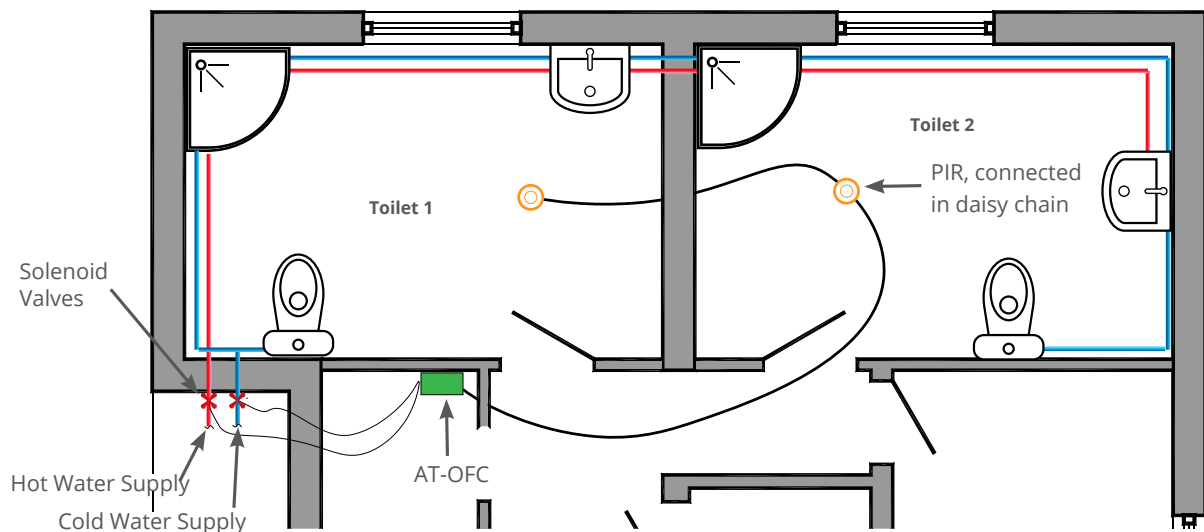
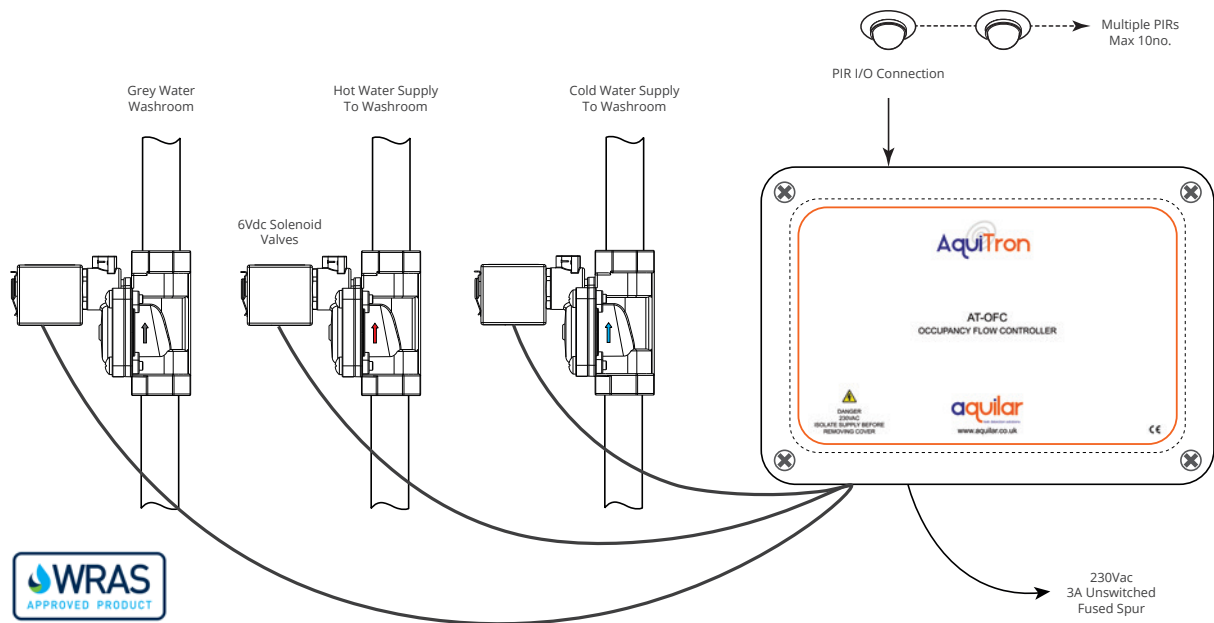
PIPE SIZES COPPER/MDPE (mm)	15	22	28	35	42
IMPERIAL	½"	¾"	1"	1¼"	1½"
Body Thread	BSP Female Thread				
Length (mm)	66	79	95	113	140
Height (mm)	76	83	100.5	132	140
Depth (mm)	40	50	71	81	110
Weight (kg)	0.36	0.5	1.06	1.6	2.5
Fluid Temperature °C	-10 to +140			-10 to +85	
Material	Brass				
Manual Override	No				



LATCHING SOLENOID VALVE 6V DC - 15 TO 35MM

PIPE SIZES COPPER/MDPE (mm)	15	22	28	35
IMPERIAL	½"	¾"	1"	1¼"
Body Thread (Inlet/Outlet)	BSP Female Thread			
Length (mm)	114.2	104.68	128	129.6
Height (mm)	63.84	63.75	80.25	88.8
Depth (mm)	68.42	68.42	92.34	92.34
Max Fluid Temperature	60 °C			
Material	Plastic			
Manual Override	Yes			

TYPICAL CONFIGURATION



APPROVALS

Electromagnetic compatibility (EMC) 2014/30/EU:

CE **UK** **CA** Compliant with standards for emissions BS EN61000-6 3:2007+A1:2011
Compliant with standards for immunity BS EN IEC 61000-6 1:2019

ORDERING INFORMATION

Catalogue number	5725 AT-OFC Aquitron Occupancy Flow Controller, 230VAC
	5726 AT-OFC-PIR-S Ceiling Mount Surface PIR, White, 230Vac
	5727 AT-OFC-PIR-F Ceiling Mount Flush (Semi-Recessed) PIR, White, 230Vac
	5724 AT-OFC-PIR-W Wall Mount Surface PIR, White, 230Vac
	5723 AT-OFC-PIR-M Ceiling Mount Flush (Semi-Recessed) Microwave PIR, White, 230Vac

ANCILLARY PRODUCTS



Plastic Valves	5790 AT-V-P-15 15mm Valve, Plastic, 6Vdc
	5795 AT-V-P-22 22mm Valve, Plastic, 6Vdc
	5800 AT-V-P-28 28mm Valve, Plastic, 6Vdc
	5805 AT-V-P-35 35mm Valve, Plastic, 6Vdc

Brass Valves	5740 AT-V-B-15 15mm Valve, Brass, 6Vdc
	5745 AT-V-B-22 22mm Valve, Brass, 6Vdc
	5750 AT-V-B-28 28mm Valve, Brass, 6Vdc
	5755 AT-V-B-35 35mm Valve, Brass, 6Vdc
	5760 AT-V-B-42 42mm Valve, Brass, 6Vdc
	5765 AT-V-B-54 54mm Valve, Brass, 6Vdc

All valves are WRAS approved

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Unit 30, Lawson Hunt Industrial Park,
Broadbridge Heath, Horsham, West Sussex,
RH12 3JR

+44 (0) 1403 216100

info@aquilar.co.uk

www.aquilar.co.uk