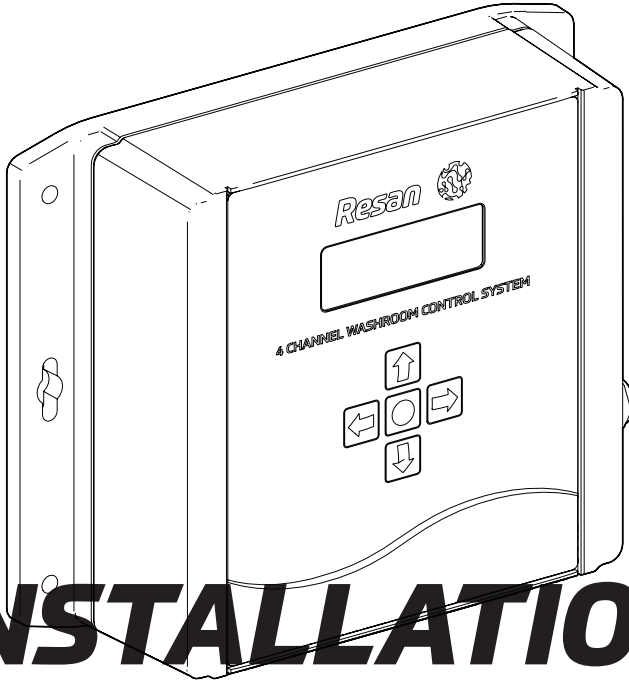


**Resan**



**WASHROOM CONTROL SYSTEM**  
4 CHANNEL



# **INSTALLATION GUIDE**

## IMPORTANT NOTES

Electrical installation of this product must be carried out and checked by a qualified electrician in accordance with IEE regulations.

During installation do not expose the electronics to fluids, dust, dirt or damp

No after-market parts/accessories to be used. Exclusive use of OEM supplied parts and accessories only.

### Control Unit

Must be installed vertically as pictured Pg3.

3 AMP input power protection required.

It is recommended that the mains power connection can be **easily** isolated.

Product for internal use ONLY.

Control unit to be installed into a dry environment away from direct risk of water ingress and leaks. **MUST** be installed outside of wet zones.

Control unit to be installed in an optimal location for keypad and display screen access.

Transient overvoltage category 2:  
Temporary overvoltages occurring on the mains supply.

### IR Sensors

Sensors should be positioned to avoid nearby obstacles and risk of unintentional activation.

### WC Direct Flush Valve

Installation of an isolator valve to the supply pipework is recommended.

Fluid category 5 protection required (supplied).

If mains supply flow is insufficient (<100LPM), flush performance will be reduced.

### Wash Basin / Shower Valves

Installation of wash basin / shower solenoid valves to be positioned as close to outlet device as possible.

### General

Both direct flush WC and wash basin / shower solenoid valve electrical connections have no polarity so can be reversed.

## TECHNICAL DATA

### Control Unit

<b>Model No.</b>	RWC - 4C
<b>Mains Supply</b>	220 - 240V AC 50Hz Single Phase
<b>Power Output</b>	12V DC 30W Max.
<b>IP Rating</b>	IP44
<b>Battery</b>	CR2032 3V
<b>Application</b>	Indoor Only
<b>Altitude</b>	≤2000m
<b>Temperature</b>	5 - 40°C
<b>Relative Humidity</b>	80% up to 31°C decreasing linearly to 50% @ 40°C
<b>Mains Supply Voltage</b>	Fluctuations of up to ±10% of nominal
<b>Overvoltage</b>	Transient Cat2 Temporary overvoltages occurring on mains supply
<b>Pollution</b>	Pollution degree 2
<b>Unit Weight</b>	0.75 Kg

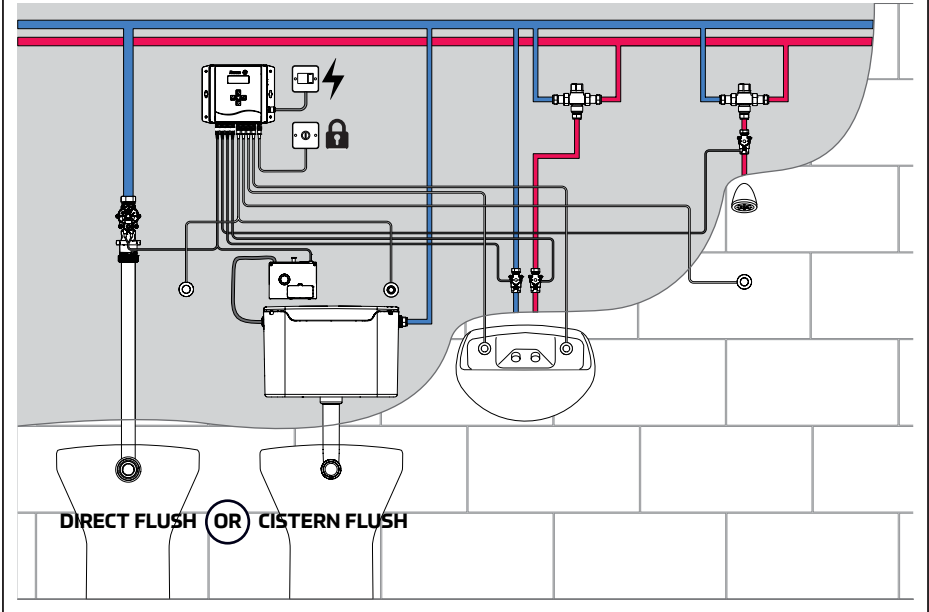
### WC Direct Flush Valve

<b>Valve Type</b>	12V DC 5.4W Normally closed, none latching
<b>Inlet Connection</b>	1" BSP Male
<b>Outlet Connection</b>	1½" BSP Male
<b>Operating Pressure</b>	0.5 - 10 bar
<b>Max Operating Temperature</b>	60°C
<b>WRAS Approved</b>	Yes

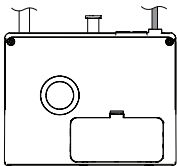
### Wash Basin / Shower Valve

<b>Valve Type</b>	12V DC 5.4W Normally closed, none latching
<b>Inlet Connection</b>	½" BSP Male
<b>Outlet Connection</b>	½" BSP Male
<b>Operating Pressure</b>	0.2 - 10 bar
<b>Max. Operating Temperature</b>	60°C
<b>WRAS Approved</b>	Yes
<b>WC Flush Interface</b>	
<b>Operating Voltage</b>	12V DC

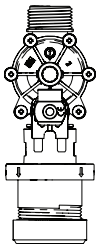
## TYPICAL INSTALLATION



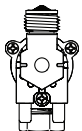
## OUTPUT OPTIONS



**WC Cistern Flush Kit**  
 WC Flush Interface  
 4m Extension Cable  
*Cistern sold separately*



**WC Direct Flush Kit**  
 Solenoid Valve  
 DC Pipe Interrupter  
 4m Output Cable  
 Pan Connector  
 Flush Pipe Cap Nut  
 Sealing Washers



**Wash Basin / Shower Valve Kit**  
 Solenoid Valve  
 Strainer  
 4m Output Cable  
 15mm Compression fittings

## INPUT OPTIONS

### IR Sensors



### Touch Buttons



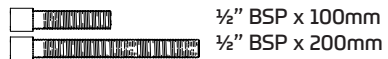
## OPTIONAL EXTRAS

### Lock-out Switch



2x Keys  
 4m Input Cable  
 Flush-fit back box

### Sensor / Button Mount Extension



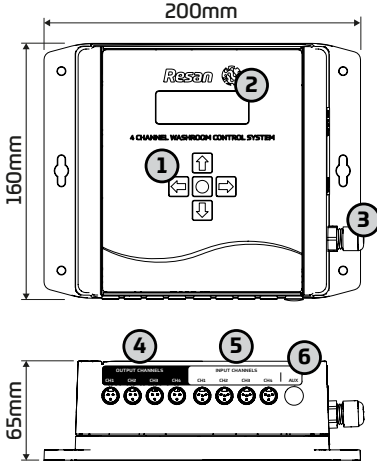
### 4m Extension Cables



# CONTROL UNIT

4 CHANNEL

## REFERENCE INFORMATION



### 1 Menu Navigation Keys

- Up / down - Menu navigate
- Increase / decrease - Variables
- Back / previous - Menu navigate
- Forward - Menu navigate
- Enter - Expand menu

### 2 LCD Screen

- Cursor - Indicates menu position
- Expandable menu

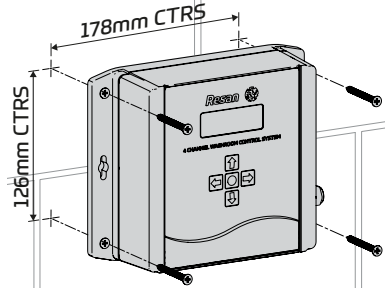
### 3 Mains Power Connection

### 4 Output Connections (3 Pin Black)

### 5 Input Connections (4 Pin White)

### 6 Auxilliary Connection (4 Pin White)

1



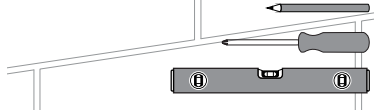
### FIXINGS NOT SUPPLIED

Select suitable fixings for the required application



### FIXING SUBSTRATE

Ensure the unit is level and mounted to a stable surface



2



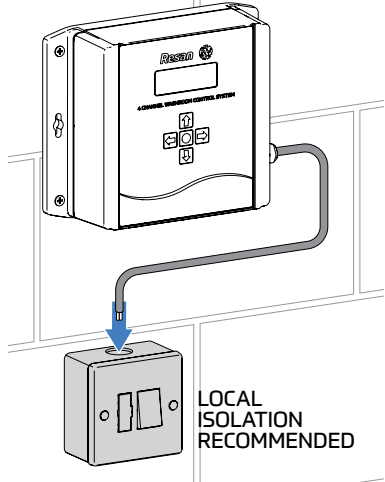
**AVOID  
INGRESS  
RISKS**



**EASY  
ACCESS  
REQUIRED**



**3A  
FUSE  
PROTECT**



## HOME SCREEN

```
RESAN
12:00
Mon 01 Jan
```

## SYSTEM MANAGEMENT

### HOME SCREEN OPTIONS

```
RESAN
12:00
Mon 01 Jan
```



Hold (3s) to turn beeper on/off



Hold to display last purge data

```
      C1 TI:ME DA/TE
Last  C2 TI:ME DA/TE
Purge C3 TI:ME DA/TE
      C4 TI:ME DA/TE
```



Hold (3s) to display/hide system monitoring.

```
Ver  X.X.X   HH:MM:SS
  ↓   ↓       ↓   ↓
Ch1  Ch2  Ch3  Ch4
  0    0    0    0
```



Input detection



Lockout active



Output active



Purge active



Cistern re-filling

## MAIN MENU



Press for main menu

```
>+System settings
+Channel settings
+Manual Purge
```

## SYSTEM SETTINGS

Home > Main menu > System settings

```
>+Time and Date
Remote Lockout  No
Exclusivity     No
Factory Reset
```

### TIME AND DATE

Set the time and date settings.

```
> Year  2023
Date   Mon-01-Jan
Time   12:00 GMT
```

### REMOTE LOCKOUT

**NO** (Default).

**YES** Remote lockout key switch fitted.

```
+Time and Date
> Remote Lockout  Yes
Exclusivity       No
Factory Reset
```

### EXCLUSIVITY

**NO** Simultaneous channel usage.

**YES** One channel used at any one time.

```
+Time and Date
Remote Lockout  No
> Exclusivity   Yes
Factory Reset
```

### FACTORY RESET

```
+Time and Date
Remote Lockout  No
Exclusivity     No
> Factory Reset
```

```
Restore factory
settings?
<ENTER> for YES
<BACK> for NO
```

**YES** Reset and return to home.

**NO** Abandon back to system settings.

## CHANNEL SETTINGS

Home > Main menu > Channel settings

Default channels

```
>+Ch1 On    WC
  +Ch2 On    Shower
  +Ch3 On    Tap Cold
  +Ch4 On    Tap Hot
```

Each channel can be set to on/off/ timed and changed between; WC, Shower, Tap Cold or Tap Hot outputs using navigation keys.

Press  on any channel to enter the channel configuration menu.

### CHANNEL CONFIGURATION

Independently configure the behaviour of each channel.

```
>+Channel Options
  +Time Slots
  +Purge Settings
  +Lockout Settings
```

### CHANNEL OPTIONS

See the 'CHANNEL OPTIONS' section within the installation instructions of each output device.

### TIME SLOTS

Configure 24h on/off times for each channel across 8 available time slots.

```
> T1 00:00-06:00 On
  T2 06:00-12:00 On
  T3 12:00-18:00 On
  T4 18:00-00:00 On
  T5 00:00-00:00 Off
  T6 00:00-00:00 Off
  T7 00:00-00:00 Off
  T8 00:00-00:00 Off
```

Default time programme shown.

Channel must be set to 'Timed' in channel settings screen to activate.

```
>+Ch1 On    WC
  +Ch2 Timed Shower
  +Ch3 On    Tap Cold
  +Ch4 On    Tap Hot
```

## PURGE SETTINGS

Independently configure the purge mode and timings for each channel.

```
> Purge Mode Hygiene
  Idle Time  1 days
  Duration   30 secs
```

### Purge Mode

**Hygiene** Purge will automatically function if controls remain inactive for 48 hours.

**Off** No purge set

**Auto** Purge will activate at set 'auto purge times' every day

### Idle Time (0 - 30 days)

Sets the delay between purge activations for 'Hygiene' or 'Auto' purge times

### Duration (2 - 960 seconds)

Sets the duration of purge run time for the selected channel.

**Note:** WC Cistern channels do not include a purge duration, purge will operate one flush and fill cycle.

### Auto Purge Times

Sets the schedule of purge times for the selected channel.

```
> T1 00:00 Off
  T2 03:00 Off
  T3 06:00 Off
  T4 09:00 Off
  T5 12:00 On
  T6 15:00 Off
  T7 18:00 Off
  T8 21:00 Off
```

Default time schedule shown.

Purge mode must be set to 'Auto' to activate set schedule.

### LOCKOUT SETTINGS

See next page...

## LOCKOUT SETTINGS

Independently configure the lockout settings for each channel.

```
>Auto Lockout      Off
  Activations      4
  Time Window      15 min
  Lock Period      30 min
```

### Auto Lockout

**OFF** (Default) No auto lockout active.

**ON** Lockout active to current settings.

### Activations (1 - 250)

Sets the number of activations that the lockout feature can record before initiating lockout period.

### Time Window (1 - 240 minutes)

Sets the time window that the lockout feature will monitor for excess activations. Time will begin from the first triggered activation.

### Lock Period (1 - 240 minutes)

Sets the period of time that the channel will be locked for once the set number of 'activations' has occurred within the set 'time window'.

### Default Lockout Settings

Channel	Activations	Time Window	Lock Period
WC (Cistern)	3	15	30
WC (Direct)	3	15	30
Shower	4	15	30
Tap Cold	6	15	30
Tap Hot	6	15	30

## MANUAL PURGE

Home > Main menu > Manual Purge  
manual purge options...

```
Purge Selection
All Channels
```

```
Purge Selection
Ch? Channel Type
```



Use up/down to navigate through manual purge options; All channels, Ch1, Ch2, Ch3, Ch4.



Press enter to activate purge. Press any button to abort.

```
PURGE ACTIVE
ANY BUTTON TO STOP
Ch1x Ch2x Ch3x Ch4x
  0   0   0   0
```

During purge sequence the timer will count down the set purge duration for each channel.

## SAVE SETTINGS

Navigate back to the home screen to save/abandon any changes. You will be prompted as follows...

```
Configuration
has changed
<ENTER> to Save
<DOWN> to Abandon
```



Press down to abandon changes and return to home screen.



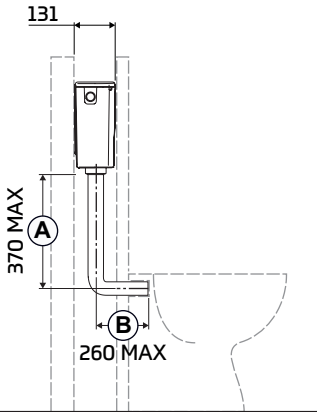
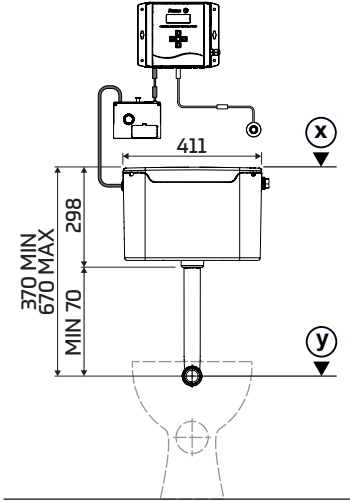
Press enter to save changes...

```
Configuration
Saved !
```

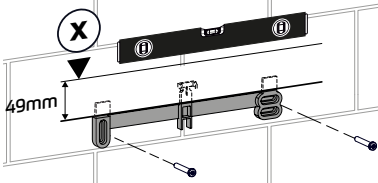
# OUTPUT

PNEUMATIC WC CISTERN

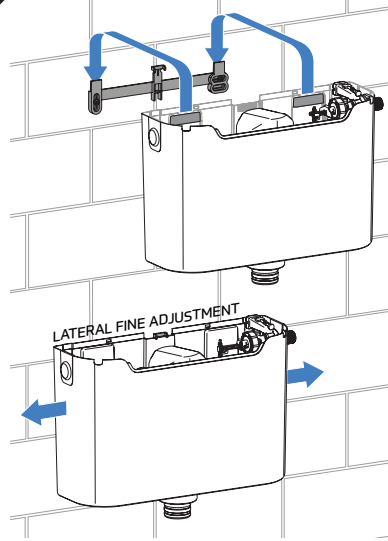
## REFERENCE INFORMATION



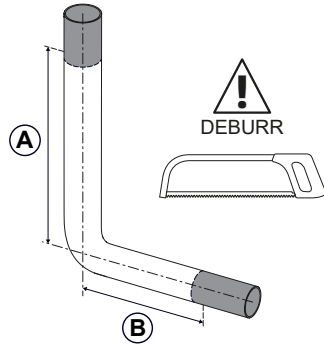
1



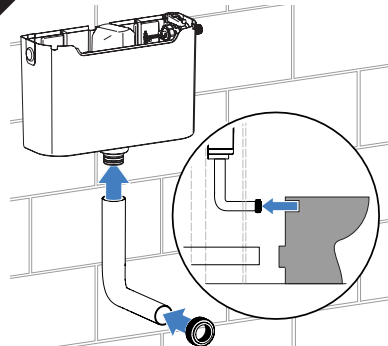
2



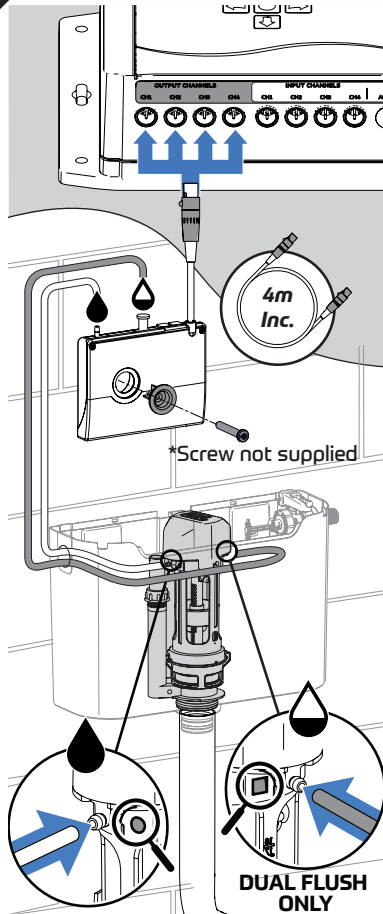
3



4



3



#### Default Channels

CH1	WC (Cistern)
CH2	Shower
CH3	Tap Cold
CH4	Tap Hot

4

CONFIGURE WC CISTERN CHANNEL  
Home > Main menu > Channel settings

```
>+Ch1 On   WC
+Ch2 On   Shower
+Ch3 On   Tap Cold
+Ch4 On   Tap Hot
```

Set any channel to WC (Ch1 default).

Press  on any WC channel to enter the channel configuration menu.

```
>+Channel Options
+Time Slots
+Purge Settings
+Lockout Settings
```

Select 'Channel Options'.

**Note:** See 'Channel Settings' section for information on Time Slots, Purge Settings, and Lockout Settings.

#### CHANNEL OPTIONS: WC CISTERN

```
Flush Type   Cistern
Dual Flush   No
Open Time    1.8 sec
Fill Time    30 sec
```

Set the flush type to 'Cistern' (Ch1 default) and configure the cistern flush options as desired.

#### WC Cistern Channel Options

Flush Type	CISTERN
Dual Flush	Yes / No
Open Time	1.8 - 2.5 secs
Fill Time	10 - 120 secs

#### DUAL FLUSH

**NO** Mono flush only.

**YES** Dual flush Active.

**IR Sensor:** Wave for full flush, Hold hand for reduced flush.

**Touch Button:** 1 press for full flush, 2x press for reduced flush.

#### OPEN TIME

Factory set to 1.8 secs. This setting should only be increased if troubleshooting advises to do so.

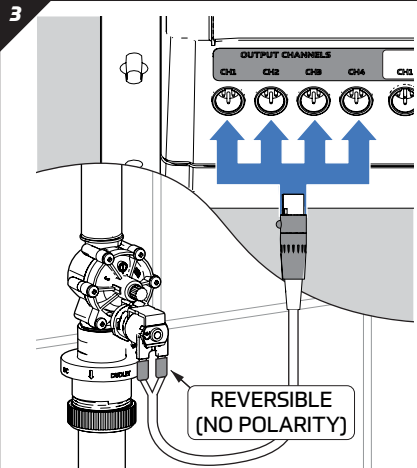
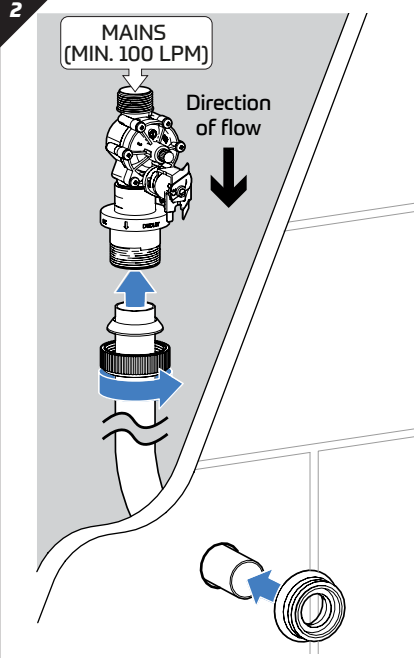
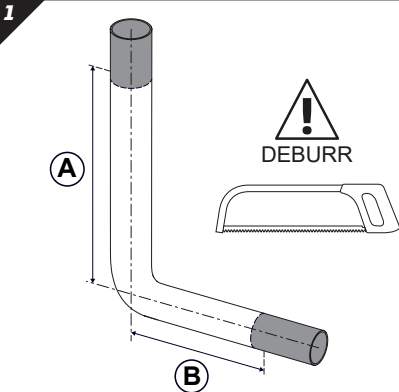
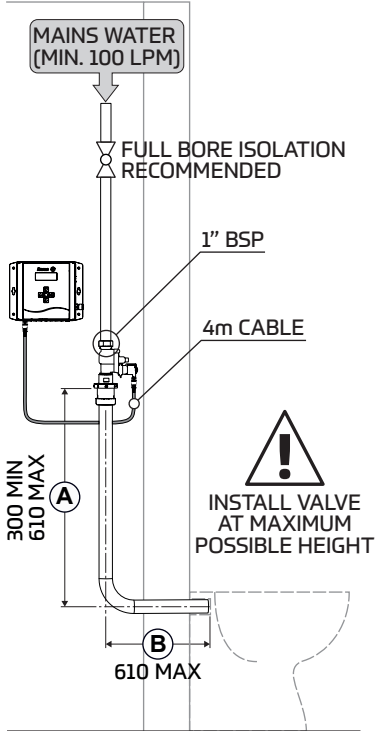
#### FILL TIME

Factory set to 30 secs. The IR sensor or Touch Button will remain inactive for this period to allow the cistern to refill.

# OUTPUT

DIRECT FLUSH VALVE

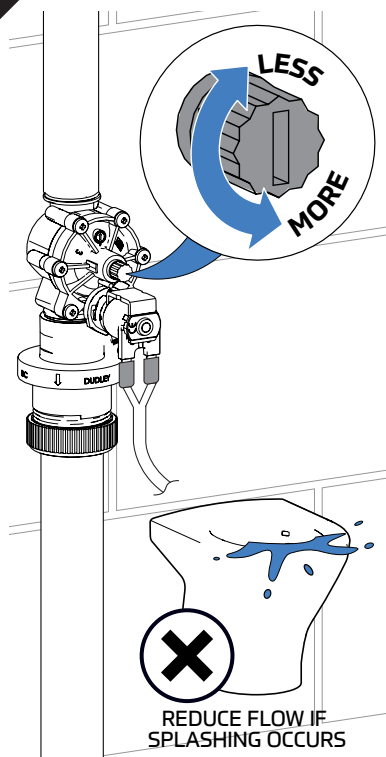
## REFERENCE INFORMATION



### Default Channels

CH1	WC (Cistern)
CH2	Shower
CH3	Tap Cold
CH4	Tap Hot

4



5

#### CONFIGURE WC DIRECT FLUSH CHANNEL

Home > Main menu > Channel settings

```
>+Ch1 On   WC
+Ch2 On   Shower
+Ch3 On   Tap Cold
+Ch4 On   Tap Hot
```

Set any channel to WC (Ch1 default).

Press  on any WC channel to enter the channel configuration menu.

```
>+Channel Options
+Time Slots
+Purge Settings
+Lockout Settings
```

Select 'Channel Options'.

**Note:** See 'Channel Settings' section for information on Time Slots, Purge Settings, and Lockout Settings.

#### CHANNEL OPTIONS: WC DIRECT FLUSH

```
Flush Type   Direct
Dual Flush   No
Open Time    7.1 sec
```

Set the flush type to 'Direct' and configure the cistern flush options as desired.

#### WC Cistern Channel Options

Flush Type	DIRECT
Dual Flush	Yes / No
Open Time	1 - 25 secs

#### DUAL FLUSH

**NO** Mono flush only.

**YES** Dual flush Active.

**IR Sensor:** Wave for full flush, Hold hand for reduced flush.

**Touch Button:** 1 press for full flush, 2x press for reduced flush.

#### OPEN TIME

Factory set to 7.1 secs to deliver a 6L full flush and a 4L reduced flush where dual flush is active.

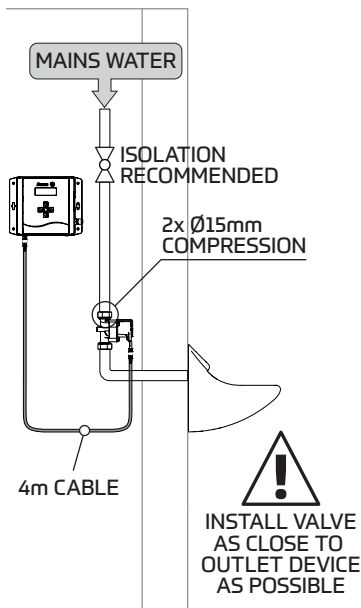
**Warning:** Changing the factory set open time may affect compliance to water regulations.

```
WARNING! CHANGING
THIS VALUE MAY
AFFECT COMPLIANCE TO
WATER REGULATIONS
```

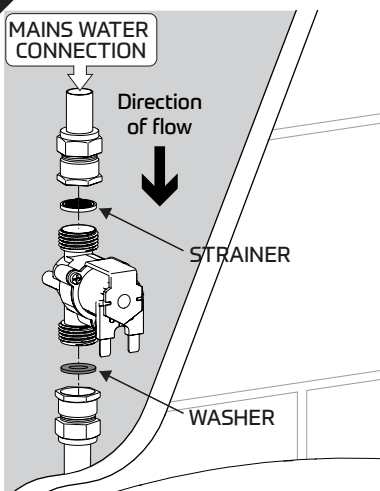
# OUTPUT

TAP / SHOWER VALVE

## REFERENCE INFORMATION

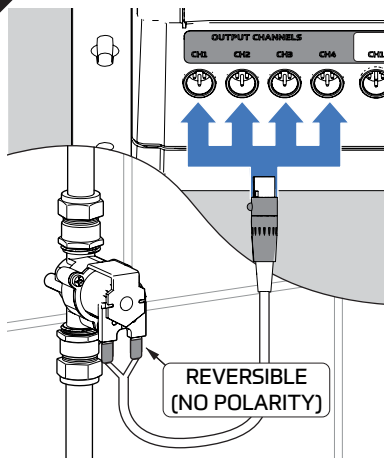


1



Fit a suitable TMV upstream of valve for hot water applications

2



### Default Channels

CH1	WC (Cistern)
CH2	Shower
CH3	Tap Cold
CH4	Tap Hot


3

### CONFIGURE TAP / SHOWER VALVE

Home > Main menu > Channel settings

```
+Ch1 On WC
>+Ch2 On Shower
+Ch3 On Tap Cold
+Ch4 On Tap Hot
```

Set any channel to; Shower, Tap Cold, or Tap Hot. Default channels shown.

Press  on any Shower or Tap channel to enter the channel configuration menu.

Select 'Channel Options'.

```
>Open Time 180 secs
```

**OPEN TIME** (2 - 960 secs)

**Tap:** factory setting 15 secs.

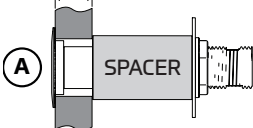
**Shower:** factory setting 180 secs.

# INPUT

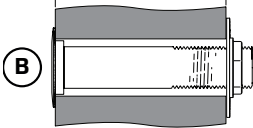
IR SENSOR & TOUCH BUTTONS

## INSTALLATION OPTIONS

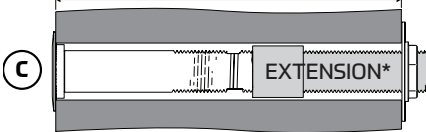
5 - 40mm



55 - 90mm



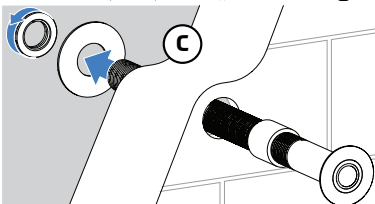
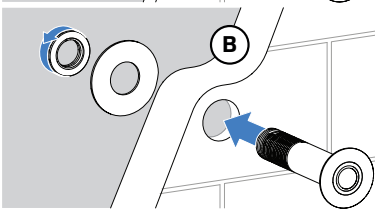
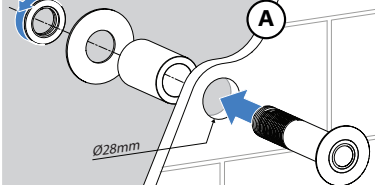
>90mm



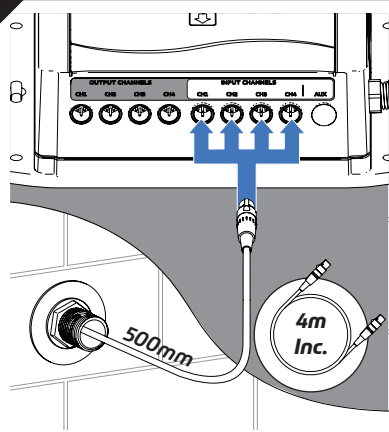
\*sold separately.

1

! Position IR sensors to avoid un-intentional activations



2



## Default Channels

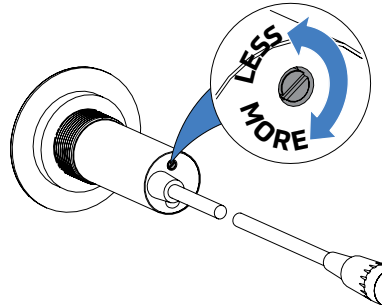
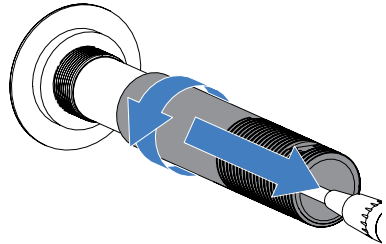
CH1	WC (Cistern)
CH2	Shower
CH3	Tap Cold
CH4	Tap Hot

3

## SENSOR RANGE ADJUST (IR ONLY)

Adjustment Range: 20 - 250mm

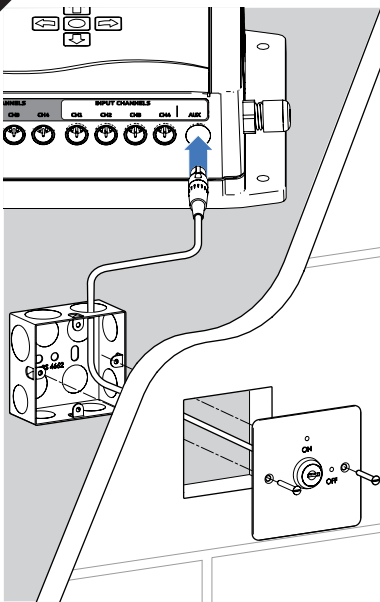
Factory Setting: 115 - 120mm



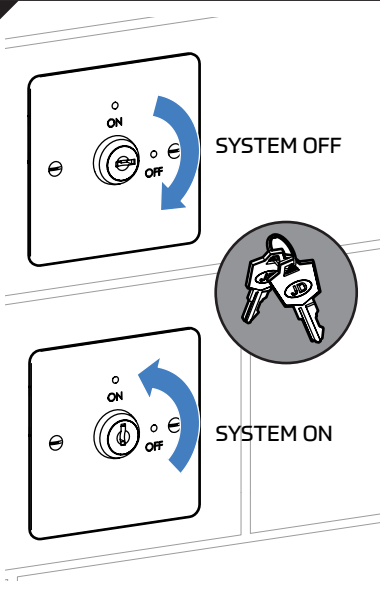
## AUXILIARY INPUT

LOCK OUT KEY SWITCH

1



2



3

ACTIVATE REMOTE LOCKOUT  
Home > Main menu > System settings

```
+Time and Date  
> Remote Lockout Yes  
Exclusivity No  
Factory Reset
```

If the remote lockout key switch is installed, set Remote Lockout setting to 'Yes' to activate functionality of this device. Ensure settings are saved when returning to the home screen.

## TROUBLESHOOTING

### GENERAL

Display inactive	Check power supply
Menu navigation not working	Contact Thomas Dudley plumbing technical
Touch button/IR sensor not working	Check all cable connections are made correctly
	Check touch button/IR sensor is connected into the correct input channel
Touch button not working	Ensure button is pressed firmly
IR sensor not working	Ensure hand activation is within the preset operating range (115 - 120mm)

### WC - CISTERN

Not flushing	Check water supply
	Check all cable connections are made correctly
	Check all cables for damage
	Check input & output connections are correct
	Check all air tube connections
	Check 'Cistern' is selected in... Channel Settings > WC > Channel Options
Dual flush not working	Check air tube connections are correct Check dual flush is selected in... Channel Settings > WC > Channel Options
False activation	Check location of IR sensor Possible interference from high visibility clothing

### WC - DIRECT FLUSH

Not flushing	Check water supply
	Check all cable connections are made correctly
	Check all cables for damage
	Check input & output connections are correct
	Check 'Direct' is selected in... Channel Settings > WC > Channel Options
Dual flush not working	Check dual flush is selected in... Channel Settings > WC > Channel Options
WC splashing	Adjust flow control screw on WC solenoid - See page 10
False activation	Check location of IR sensor Possible interference from high visibility clothing

### TAP / SHOWER

Not working	Check water supply
	Check all cable connections are made correctly
	Check all cables for damage
	Check input & output connections are correct
	Check correct orientation of valve

### LOCK OUT KEY SWITCH

Not working	Check all cable connections are made correctly
	Check all cables for damage
	Check key switch is connected to the AUX input channel
	Check that lock out feature is turned on in System Settings

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When installing the system, current national electrical regulations regarding the installation site must be complied with. It should be noted that the conformity referred to above and the performance of the product may be compromised by:

- Incorrect electrical power supply;
- Incorrect installation or incorrect, improper or otherwise inconsistent use of the instructions provided in the installation and user manual or in the instructions provided with the devices;
- Replacement of original parts or accessories with other types that have not been approved by Thomas Dudley Ltd, or performed by unauthorised personnel.

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Please ensure this manual is passed to the end user. The instruction manual forms an integral part of the product and should be kept for its working life. Additional copies of this and other supporting documents are available by visiting [www.thomasdudley.co.uk/plumbing](http://www.thomasdudley.co.uk/plumbing).

## END OF LIFE DISPOSAL



The use of this crossed out wheeled bin logo indicates that this product needs to be disposed of separately to any other household waste.

It will be necessary to dispose of this product at your local community waste collection or recycling centre. In order to help preserve our environment we ask that you dispose of this product correctly.

Please contact your local city council for collection centre details.