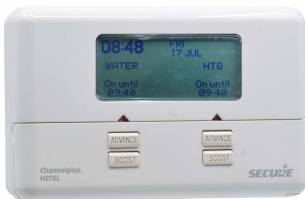




## ChannelPlus H21XL - H27XL Series 2 Installation Instructions



The ChannelPlus XL Series 2 - Two Channel Programmer. Each channel offers up to three programmed operating periods per day, with independent Boost and Advance control on Fully Pumped Systems. This model has a fully graphical, back-lit display combined with simple menu driven programming.

It is also a suitable direct replacement for existing ChannelPlus H21XL, H27XL and H27ZXL programmers, utilising existing wiring and backplate connections.

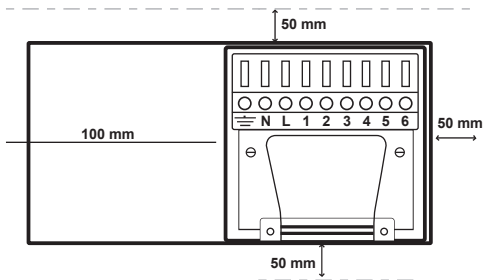
**Installation and connection should only be carried out by a suitably qualified person in accordance with the current edition of the IET wiring regulations.**

**Warning: Isolate mains supply before commencing installation.**

## Fitting the Backplate

Once the Backplate has been removed from the packaging please ensure the timeswitch is re-sealed to prevent damage from dust, debris etc.

The Backplate should be fitted with the wiring terminals located at the top and in a position which allows the relevant clearances around the timeswitch. (See diagram)



## Direct Wall Mounting

Offer the plate to the wall in the position where the timeswitch is to be mounted, remembering that the Backplate fits to the right hand end of the timeswitch.

Mark the fixing positions through the slots in the Backplate (Fixing centres 60.3mm), drill and plug the wall, then secure the plate in position. The slots in the Backplate will compensate for any misalignment of the fixings.

## **Wiring Box Mounting**

The Backplate may be fitted directly on to a single gang steel flush wiring box complying with BS4662, using two M3.5 screws.

ChannelPlus timeswitches are suitable for mounting on a flat surface only, they must not be positioned on a surface mounted wall box or on unearthed metal surfaces.

## **Electrical Connections**

All necessary electrical connections should now be made. Flush wiring can enter from the rear through the aperture in the Backplate. Surface wiring can only enter from beneath the timeswitch and must be securely clamped.

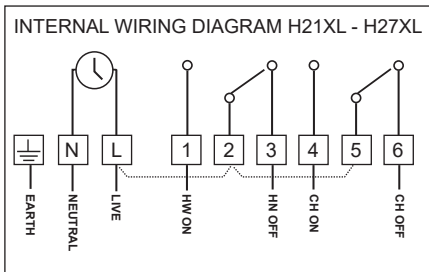
The mains supply terminals are intended to be connected to the supply by means of fixed wiring. The recommended cable sizes are  $1.0\text{mm}^2$  or  $1.5\text{mm}^2$ .

ChannelPlus timeswitches are double insulated and do not require an Earth connection but an Earth terminal is provided on the Backplate for terminating any Earth connections. Earth continuity must be maintained and all bare Earth conductors must be sleeved. Ensure that no conductors are left protruding outside the central space enclosed by the Backplate.

When used to control MAINS VOLTAGE SYSTEMS Terminals L and 5 should be electrically linked by means of a suitable piece of sleeved conductor. When used to control EXTRA LOW VOLTAGE SYSTEMS these links MUST NOT be fitted.

## Electrical Connections

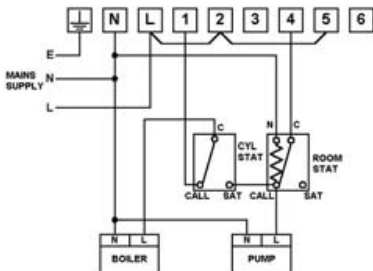
Example circuit diagrams are shown on page 5, 6 & 7. These diagrams are schematic and should be used as a guide only. Please ensure that all installations comply with the current IET regulations.



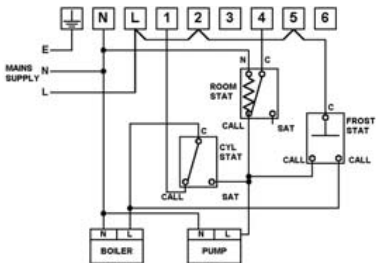
For reasons of space and clarity the diagrams have been simplified, for instance some Earth connections have been omitted. Other control components shown in the diagrams i.e. Valves, RoomStats etc. are general representations only.

Cylinder and Room Thermostat Key: C = Common CALL = Call for heat or break on rise SAT = Satisfied on rise N = Neutral

## Electrical Connections

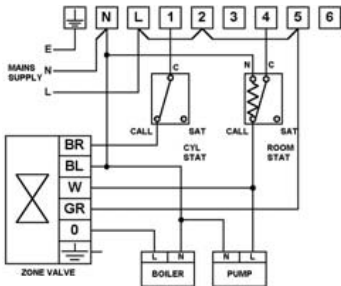


Gravity Hot water with Pumped Heating via RoomStat and CylinderStat

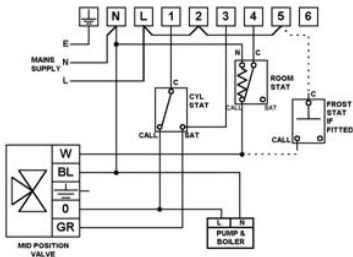


Gravity Hot water with Pumped Heating via RoomStat and CylinderStat including Frost protection via double pole FrostStat

# Electrical Connections

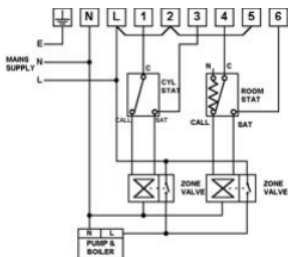


Gravity Hot water with Pumped Heating via RoomStat, CylinderStat and Two Port Zone Valve (with Changeover Auxiliary Switch) on Hot Water circuit

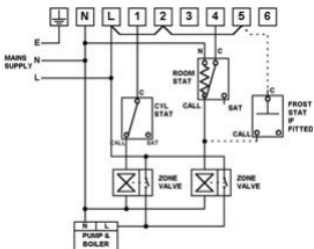


Fully Pumped Heating System using RoomStat, CylinderStat and Three Port Mid-Position Valve

## Electrical Connections



Gravity Hot water with Pumped Heating via RoomStat, CylinderStat and Two Port Zone Valve (with Changeover Auxiliary Switch) on Hot Water circuit

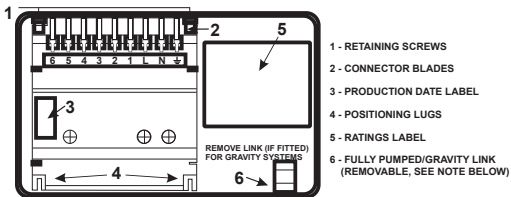


Fully Pumped Heating System using RoomStat, CylinderStat and Three Port Mid-Position Valve

## Commissioning the Timeswitch

Ensure all dust and debris has been cleared away from the work area before removing the timeswitch from its packaging. All ChannelPlus controls are fitted with battery reserve which maintains programmed times in the event of a mains power failure.

### Rear View of ChannelPlus Timeswitch



### Fully Pumped / Gravity Link

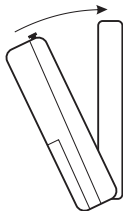
All ChannelPlus programmers are suitable for either gravity or fully pumped systems. On fully pumped systems it is possible to programme independent time settings for each channel, gravity systems allow only one common time setting. As supplied the ChannelPlus is suitable for fully pumped systems and the link should remain in situ. If the programmer is to control a gravity system this link should be removed by simply pulling it out of the back of the programmer.



## Fitting the Timeswitch

If surface wiring has been used, remove the knockout/insert from the bottom of the timeswitch to accommodate it. Loosen the two 'captive' retaining screws on the top of the unit. Now fit the timeswitch to the Backplate, line the lugs on the timeswitch with the flanges on the Backplate.

Swing the top of the timeswitch into position ensuring that the connection blades on the back of the unit locate into the terminal slots in the backplate. Tighten the two 'captive' retaining screws to fix the unit securely, then switch on the mains supply.



END VIEW OF CHANNELPLUS  
TIMESWITCH

## Initial Setup

Once the mains power has been switched on the ChannelPlus, the display will illuminate. The timeswitch has a number of pre-programmed functions to assist the installation which are detailed below;

**TIME AND DATE** - The timeswitch has been pre-set with the current time and date during manufacture. No alteration should be required to the time and date, however if any modification is required, please refer to the 'Adjusting Time and date' section of the user guide.

**PROGRAMME TIMES** - The timeswitch has been pre-set with default ON and OFF times, these can be altered to meet the requirements, please refer to the 'Setting the Programme Times' section of the user guide.

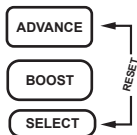
**PLEASE ENSURE THAT THE USER GUIDE IS HANDED OVER TO THE END USER.**

## RESETTING THE CHANNELPLUS

Electronic equipment can in some circumstances be affected by electrical interference. If the display becomes frozen or scrambled; or if you wish to revert back to the default settings please use the following procedure.

### RESET PROCEDURE

PLEASE NOTE; Using this procedure will restore the ChannelPlus to the original factory programme settings, the time setting will remain correct.



Lower the front flap of the unit. On the far right (forth) Channel press the ADVANCE (Enter) and SELECT (Blue) buttons together then release the buttons and the programmer will return to the preset factory settings.

### General Information

Before handing over the installation to the user, always ensure that the system responds correctly on all control programmes and that other electrically operated equipment and controls are correctly adjusted.

EXPLAIN HOW TO OPERATE THE CONTROLS AND HAND OVER THE USERS OPERATING INSTRUCTIONS TO THE USER

## Battery

The programmer is fitted with a non-rechargeable, non-serviceable long life battery, which will maintain the programmed time settings with the mains supply disconnected. THIS RESERVE SHOULD BE SUFFICIENT TO COVER POWER INTERRUPTIONS DURING THE LIFE OF THE UNIT. During power interruptions the display will be blank.

## Specification H21XL - H27XL

### *Electrical*

Purpose of Control	Electronic Central Heating Programmer (2 Channel)
Contact Rating	3(1) Amp 230V AC
Contact Type	Micro-disconnection
Supply	230V AC 50Hz only
Protection	Class II
Control Action	Type 1B,R
Operating Time Limitation	Intermittent
Software Class	Class A
Battery Type	Lithium
Battery Life	10 months continuous operation (minimum)
Display	Full Graphical LCD, Backlit
Clock	24 Hour / 12 hour AM/PM
Display Time Adjustment	1 Minute Intervals
Switch Time Adjustment	10 Minute Steps
Programme Selection	Auto, On, All Day, On Constant, Off, Holiday
Operating Periods per Day	3 for each Channel Independently
Override	Boost 1 or 2 Hours (If pressed during ON Period, will extend ON Period). Instant Advance.

### ***Mechanical***

Dimensions	163mm x 101mm x 37mm
Case Material	Thermoplastic, flame retardant
Ball Pressure Test Temperature	75°C
Mounting	Industry standard 9 pin British Gas Wallplate, independently mounted

### ***Environmental***

Impulse Voltage Rating	Cat II 2500V
Enclosure Protection	IP30
Pollution Degree	Degree 2
Operating Temperature Range	0°C to +40°C

### ***Compliance***

Design Standard	EN 60730-2-7 BS EN 60730-2-7
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Part Number - P82694 Issue 10