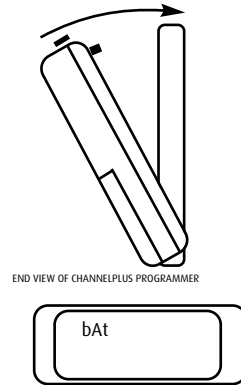


## FITTING THE PROGRAMMER

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

If the unit is installed with the commissioning switch in the OFF position, the word 'bAt' will flash on the display when the mains power is supplied. (See diagram)

The switch will need to be moved into the correct position before proceeding further.

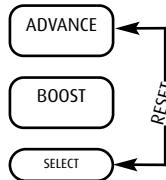


END VIEW OF CHANNELPLUS PROGRAMMER

**UPON COMPLETION OF INSTALLATION PLEASE RESET THE PROGRAMMER : DETAILED BELOW**

### RESETTING THE PROGRAMMER

Lower the front flap of the unit. On the Heating channel (H21XL/H27XL) or Zone 2(H27ZXL) press the ADVANCE and SELECT buttons together then release the buttons and the programmer will return to the preset factory settings.  
The Preset factory settings are illustrated on page 2 of the USER GUIDE.



**The unit can now be programmed to suit the User's requirements. Please refer to the User's Guide provided.**

## 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.**

## SPECIFICATION H21XL - H27XL - H27ZXL

**Contact type:** Micro dis-connection(Voltage free)  
**Contact rating:** 3(1)Amps 230-240V AC  
**Power supply:** 230-240V AC 50Hz  
**Operating Temperature range:** 0°C to 55°C  
**Double insulated.**  
**Dirt protection:** Normal situations.  
**Enclosure protection:** IP30  
**Purpose of control:** Electronic time switch  
**Independently mounted control for surface mounting.**  
**Operating time limitation:** Continuous  
**Type 1 Action**  
**Battery Reserve:** 10 months continuous operation(minimum)  
**Case material:** Thermoplastic, flame retardant

**Dimensions:** 163mm x 101mm x 33mm  
**Display:** Liquid crystal  
**Clock:** 12 hour AM/PM  
**Display time adjustment:** 1Minute steps  
**Switched time adjustment:** 10 Minute steps  
**Programme selection:** Auto, On all day, On constant, Off, Holiday  
**Operating periods per day:** Three for HW, Three for CH - (Separate daily programmes for H27XL, H27ZXL)  
**Override:** Boost, 1 or 2 Hours  
Extension to ON period, 1or 2 Hour  
Instant advance  
**Backplate:** 9 Pin terminal connection

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ISSUE 8



**CHANNELPLUS H21XL-H27XL-H27ZXL  
INSTALLATION INSTRUCTIONS**

**Horstmann's ChannelPlus XL - Two Channel Programmers** Offer up to three programmed operating periods per day with independent Boost and Advance control on Fully Pumped Systems.  
Can be used as a direct replacement for Horstmann 425 Diadem, Tiara, H525 and H527(Allowing for new programmer position).

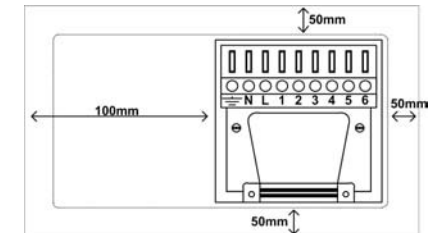
INSTALLATION AND CONNECTION SHOULD ONLY BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON AND IN ACCORDANCE WITH THE CURRENT EDITION OF THE IEE WIRING REGULATIONS.

**WARNING : ISOLATE MAINS SUPPLY BEFORE COMMENCING INSTALLATION**

## FITTING THE BACKPLATE

Once the Backplate has been removed from the packaging please ensure the programmer 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 programmer. (See diagram)



## DIRECT WALL MOUNTING

Offer the plate to the wall in the position where the programmer is to be mounted, remembering that the Backplate fits to the right hand end of the programmer.  
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 flush wiring box complying with BS4662, using two M3.5 screws.  
ChannelPlus programmers 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 programmer 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 1.0mm<sup>2</sup> or 1.5mm<sup>2</sup>.

# NEW INSTALLATIONS

Example circuit diagrams for some typical installations are shown below. These diagrams are schematic and should be used as a guide only.

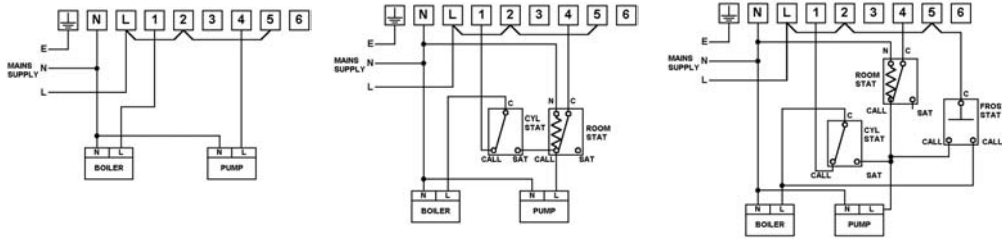
**Please ensure that all installations comply with the current IEE regulations.**

For reasons of space and clarity not every system has been included and 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. However the wiring detail can be applied to the corresponding models of most manufactures e.g. Horstmann, Honeywell, Danfoss Randall, ACL Drayton etc.

**Cylinder and Room Thermostat Key:**

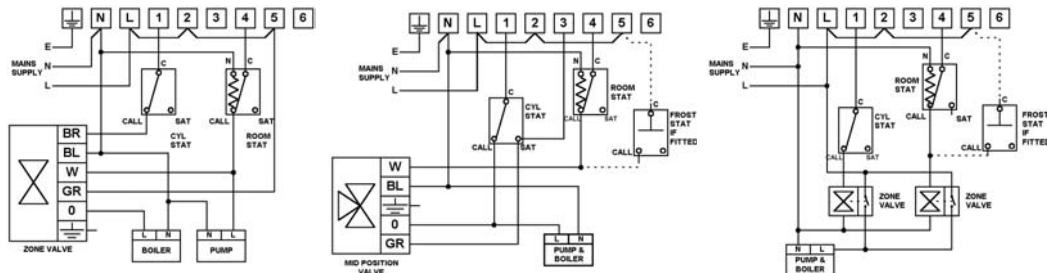
**C = Common CALL = Call for heat or break on rise SAT = Satisfied on rise N = Neutral**



1. Gravity Hot water with Pumped Heating

2. Gravity Hot water with Pumped Heating via RoomStat and CylinderStat

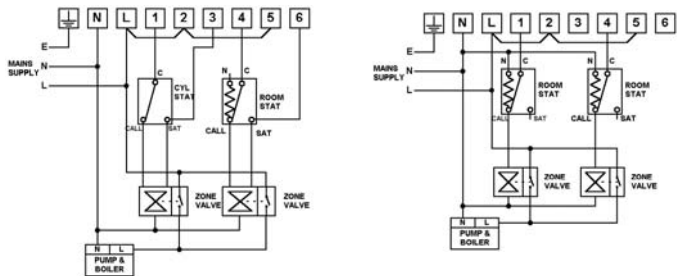
3. Gravity Hot water with Pumped Heating via RoomStat and CylinderStat including Frost protection via double pole FrostStat



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

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

6. Fully Pumped System using RoomStat and Two (2 Port) Spring Return Zone Valve with Auxiliary Switches



7. Fully Pumped System using RoomStat and CylinderStat and Two (2 Port) Motorised Valve with Auxiliary Switches

8. H27XL Controlling Two Zones of Heating Via RoomStats and 2 Port Spring Return Valves

**NOTE:**

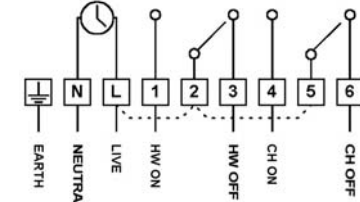
When fitted in conjunction with suitably rated contactors the H27XL can also be used to control two Zones of Electric heating

# ELECTRICAL CONNECTIONS

ChannelPlus programmers are double insulated and do not require an earth connection but an Earth terminal is provided on the Backplate for terminating any cable Earth conductors. 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.

## INTERNAL WIRING DIAGRAM H21XL - H27XL

When used to control MAINS VOLTAGE SYSTEMS Terminals L,2 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.



# COMMISSIONING THE PROGRAMMER

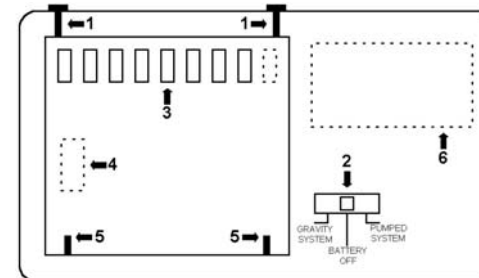
Ensure all dust and debris has been cleared away from the work area before removing the programmer from its packaging. All ChannelPlus programmers are suitable for GRAVITY HOT WATER or FULLY PUMPED systems.

On a FULLY PUMPED or CONTROLLED systems it is possible to programme independent time settings for Hot water and Heating.

On GRAVITY or PARTIALLY CONTROLLED systems the Hot water and Heating follow a common time setting. It is not usually possible to have Heating without Hot water.

Correct control of each type of system is ensured by a COMMISSIONING SWITCH located on the rear of the programmer.

## REAR VIEW OF CHANNELPLUS XL PROGRAMMER



- 1 - RETAINING SCREWS
- 2 - COMMISSIONING SWITCH
- 3 - CONNECTOR BLADES
- 4 - PRODUCTION DATE LABEL
- 5 - POSITIONING LUGS
- 6 - RATINGS LABEL

# COMMISSIONING SWITCH

When the programmer is supplied the switch is in the OFF position. Using a suitably sized screwdriver or similar, the switch should now be moved to either GRAVITY or PUMPED position, depending on the type of system being controlled.

Moving the switch from the OFF position also activates the programmer's BATTERY RESERVE. When the programmer is running on BATTERY RESERVE the clock display will remain blank.