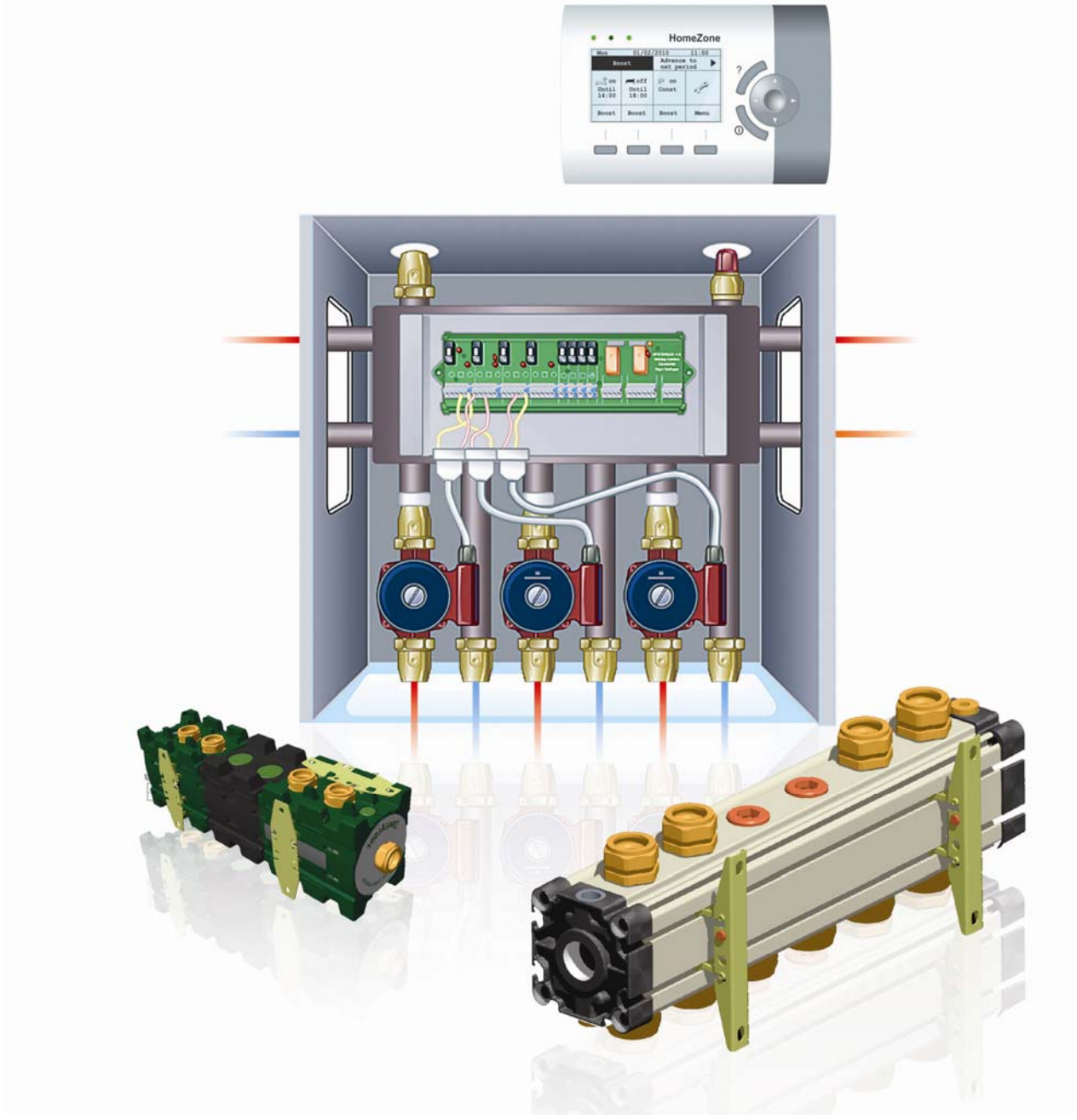
SCHEMATIC BROCHURE 2011

systemlink

ZONED HEATING AND CONTROLS



systemlink
energy saving solutions

SYSTEMLINK

Distribution manifold &
Wiring centre

INDEX

SystemLink Zoning Centre	Page	1 – 10
SystemZone Section	Page	4 – 6
SystemLex & Minilex Section	Page	7 – 9
Bi-Valent Solution Section	Page	10
Schematics Section	Page	11 – 22

ABOUT ZONED HEATING

SystemLink Zoning Centre is a complete central heating zone control system, comprising a plumbing and electrical solution for single heat source to multi heat source applications, delivering zoning and hot water generation. The SystemLink Zoning Centre has two elements, a water distribution manifold (SystemZone) and an electronic time and temperature central wiring control unit (SystemLex).

SystemLink Zoning Centre incorporates circulating pumps, automatic de-aeration, safety valve, built-in bypass and pump isolation valves.

SystemLink Zoning Centre, SystemZone and SystemLex may be used together in endless configurations for maximum flexibility.

Unlike conventional methods, the SystemLink Zoning Centre ensures that the heat source (boiler, heat pump, etc.) only fires when there is a definite demand for heat or hot water.

SystemLink Zoning Centre ensures maximum fuel efficiency and longer heat source life due to the complete elimination of dry-cycling and unnecessary activation.

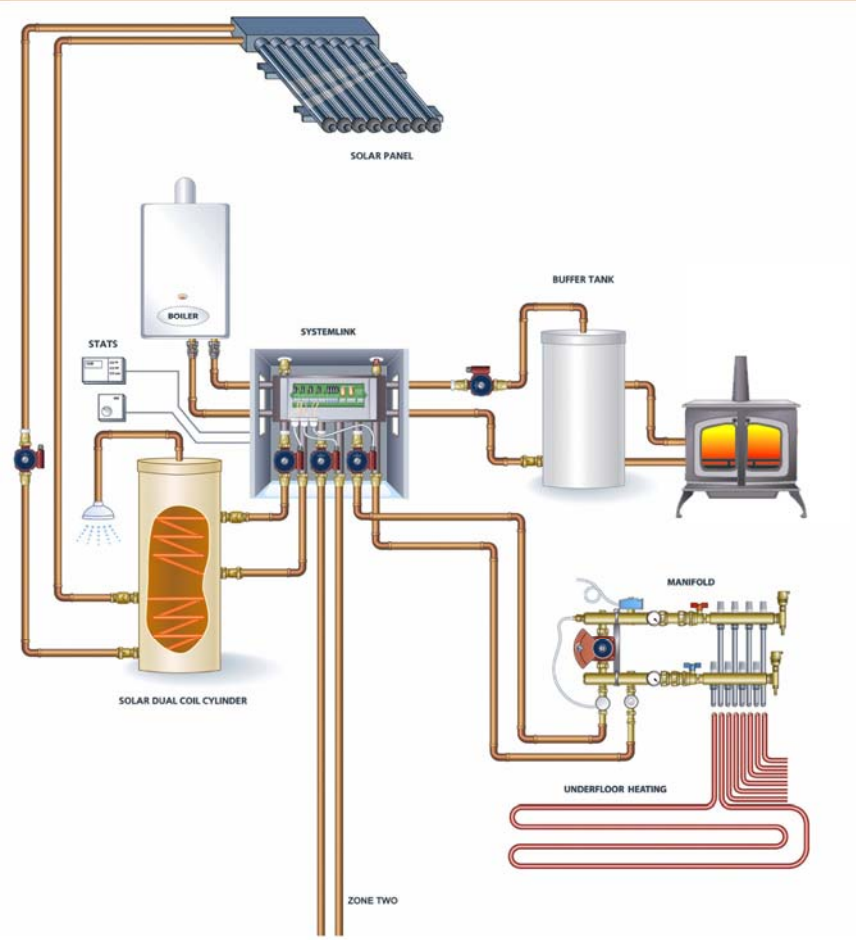
SystemLex, the internal electronic control system, is designed to make electrical installation as easy as possible. It is powered from the mains supply, but individual zones are fused for safety.

The schematics detailed on pages 11-22 of this manual are intended to provide an understanding of the most commonly installed system designs which are possible when using Systemlink technology. Sample system designs are included for sealed and open systems using 3 and 4 zone SystemLink units to control single and multiple heat sources.

The schematics also cover heat source arrays, multiple radiator circuits, under-floor heating circuits and domestic hot water.

"Zoned Heating is Energy Efficient Heating"

SystemLink 5 & 6



Features:

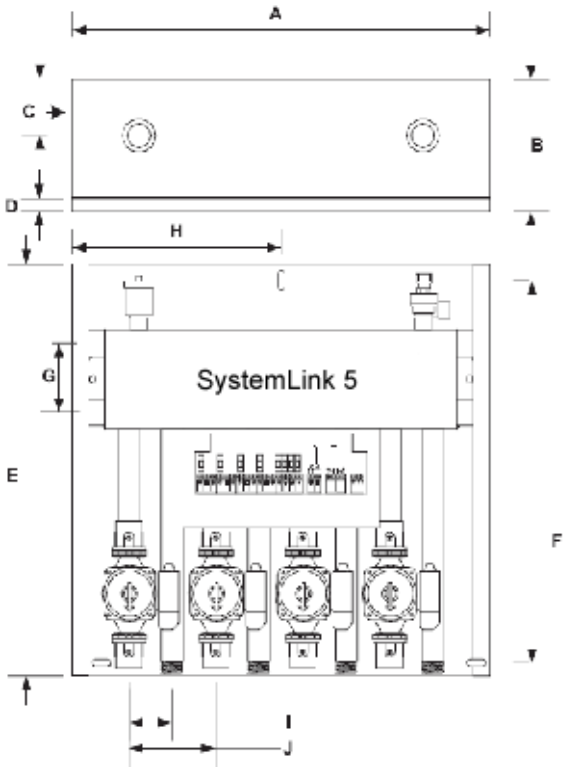
- Permits time and temperature control over multiple zones in a uniquely user-friendly and logical assembly
- Can distribute heat from one or more heat sources or from multiple types of heat sources
- Combines gravity circuit boilers with high velocity, low water content models with ease
- Equally suitable for open and sealed systems
- Handles domestic as well as light commercial applications
- Simple system layout with a built-in system bypass
- Motorised valves are not required
- Built in neutral point
- Zones and heat source circuits are independent of each other
- Unobstructed cold feed, vent and expansion facility
- System pumps placed perfectly for optimum effectiveness
- Removes air from the system by design
- Built-in dedicated wiring panel
- Push-fit wiring terminals offering thermostat, time control, pump and heat source power connections as well as automated heat source control.

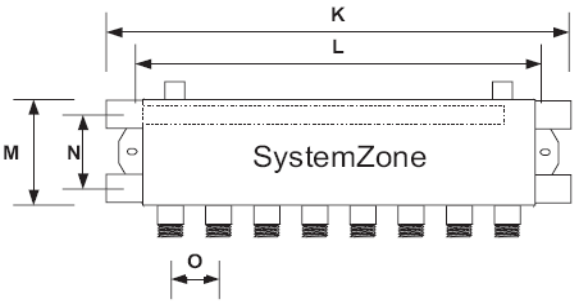
SYSTEMLINK – Technical Specifications

SystemLink 5 & 6 – Technical Specifications

SystemLink Zoning Centre is a complete plumbing and electrical solution for zoned central heating incorporating SystemZone and SystemLex.

- Cuts down installation costs and improves the energy efficiency of the entire heating system
- SystemLex is a built-in wiring centre which offers the same level of versatility to the electrician as SystemZone does to the plumber

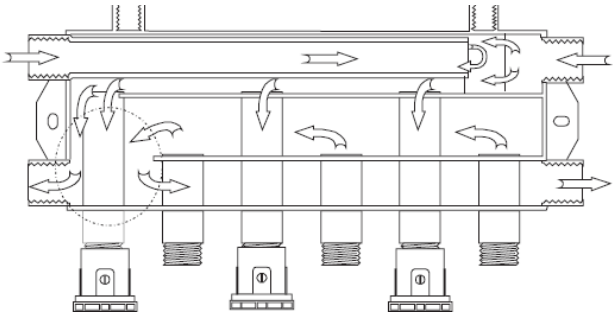




SYSTEMLINK 5									
A	B	C	D	E	F	G	H	I	J
50.5	20.0	8.5	2.0	62.5	58.0	10.5	25.5	7.0	14.0

SYSTEMLINK 6									
A	B	C	D	E	F	G	H	I	J
63.8	20.0	8.5	2.0	62.5	58.0	10.5	31.9	7.0	13..2

SYSTEMZONE									
SZD5					SZD6				
K	L	M	N	O	K	L	M	N	O
51.0	42.0	21.0	9.5	7.5	66.0	62.0	21.0	9.5	7.5



The diagram on left demonstrates how water flows within the SystemZone unit. The unit contains no obstructions, so water flow is unrestricted. The unit therefore acts as a full-flow system by-pass for both the heat sources and the zone distribution circuits. The internal plates act as water flow wave guides, which separate the heated water arriving from the heat sources from the cooler water returning from the zones. As a result, motorised valves are not required, as zone and heat source water movement is driven by independent circuit pumps.

SPECIFICATION	ZONE CONNECTIONS	CODE
SystemLink 5	3 sets of 1″ connections	SLK5-28-28-28
SystemLink 6	4 sets of 1″ connections	SLK6-28-28-28

SYSTEMZONE – DOMESTIC

SystemZones 4, 5 and 6

THE SYSTEMZONE 4*

Up to three heating zones and one heat source

THE SYSTEMZONE 5*

*Up to **four** heating zones and **one** heat source OR Up to **three** heating zones and **two** heat sources*

THE SYSTEMZONE 6*

*Up to **five** heating zones and **one** heat source OR Up to **four** heating zones and **two** heat sources*

Features:

- Automatic neutral point
- No need for motorised valves
- Opportunity for independent time and temperature control over multiple zones and hot water generation
- Compatible with oil, gas, solid fuel, heat pumps & solar
- Suitable for single or multiple heat source applications
- Built-in system bypass

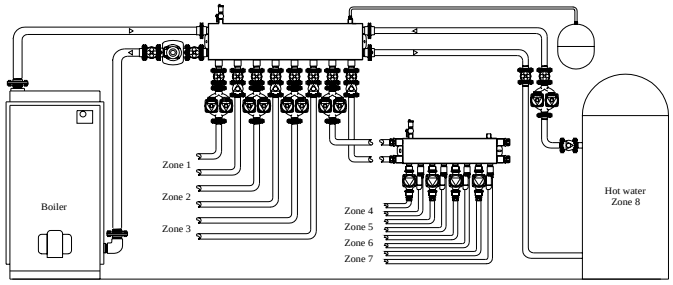
SYSTEMZONE 4 SPECIFICATIONS	ZONE CONNECTIONS	CODE
1″ Heat Source Connections	1″ Zone Connections	SZD4-28-28-28
1 ¼″ Heat Source Connections	1″ Zone Connections	SZC4-32-32-28
1 ½″ Heat Source Connections	1 ¼″ Zone Connections	SZC4-40-40-32
2″ Heat Source Connections	1 ¼″ Zone Connections	SZC4-50-50-32

SYSTEMZONE 5 SPECIFICATIONS	ZONE CONNECTIONS	CODE
1″ Heat Source Connections	1″ Zone Connections	SZD5-28-28-28
1 ¼″ Heat Source Connections	1″ Zone Connections	SZC5-32-32-28
1 ½″ Heat Source Connections	1 ¼″ Zone Connections	SZC5-40-40-32
2″ Heat Source Connections	1 ¼″ Zone Connections	SZC5-50-50-32
2″ Heat Source Connections	1 ½″ Zone Connections	SZC5-50-50-40

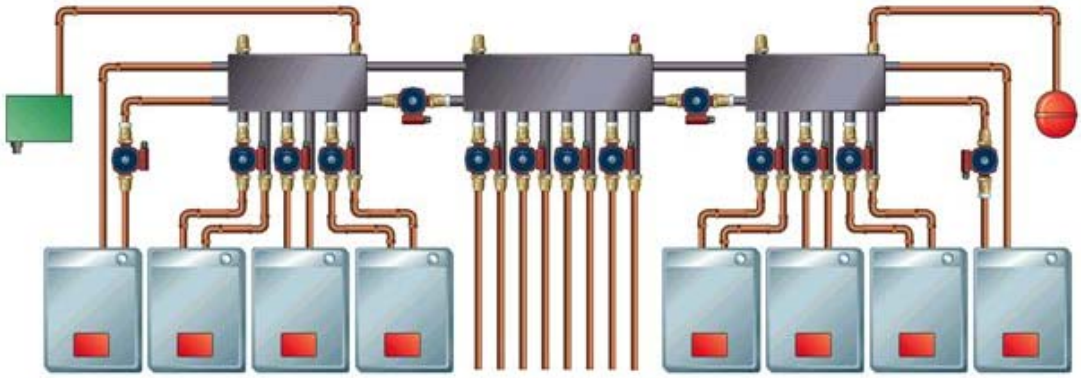
SYSTEMZONE 6 SPECIFICATION		CODE
1″ Heat Source Connections	1″ Zone Connections	SZD6-28-28-28
1 ¼″ Heat Source Connections	1″ Zone Connections	SZC6-32-32-28
1 ½″ Heat Source Connections	1 ¼″ Zone Connections	SZC6-40-40-32
2″ Heat Source Connections	1 ¼″ Zone Connections	SZC6-50-50-32
2″ Heat Source Connections	1 ½″ Zone Connections	SZC6-50-50-40

***Please see the SystemZone technical specifications page for more details**

COMMERCIAL APPLICATIONS

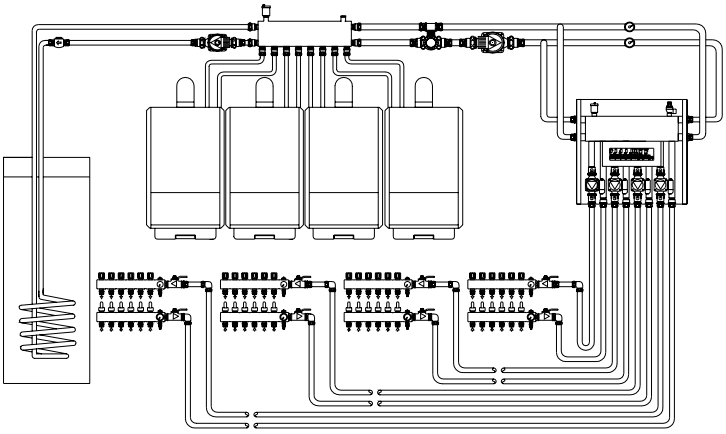


LARGE APPLICATIONS [left]
SystemZone is suitable for the largest industrial or commercial applications and is available to handle all heating loads. It is particularly suitable for multiple fuel projects such as oil, gas and combined heat and power. Additional SystemZone units can be used to distribute the heated water to multiple sub-zones. This is a simple method of solving the zone distribution issues in heating systems for large and complex buildings. It is also easy to understand and explain to onsite contractors and end-users.



MODULAR BOILER INTERCONNECTION ARRANGEMENT [top]
Modular arrangements using multiple smaller boilers are cheaper to operate because boilers run at optimum capacity. It is simple to arrange maintenance with the system running, and there is greater assurance of continuous operation. They are usually cheaper to install, more conveniently located, more reliable, and service personnel for smaller boilers are more readily available. However, they have generally been avoided because of design and installation complications, and plant unreliability due to failure of critical mechanical components.

SystemZone easily solves this problem without moving parts. The water activity through each boiler is independent. The patented principle of SystemZone's operation is that no water activity will take place either to or from a boiler (or a zone) unless created by the action of a pump on its circuit.



SYSTEMZONE FOR UNDERFLOOR HEATING WITH CONDENSING BOILERS [left]
An interesting aspect of this layout is that the boiler flow can be reduced to lower condensing temperatures when only underfloor heating is required. This is achieved by the use of an overriding thermostat to maximise the boiler's fuel efficiency. This thermostat can then be eliminated from the control protocol when hot water is being generated and higher boiler temperatures are required. While this is happening, the underfloor temperature-mixing valve is temporarily called into action to regulate the desired floor water temperature.

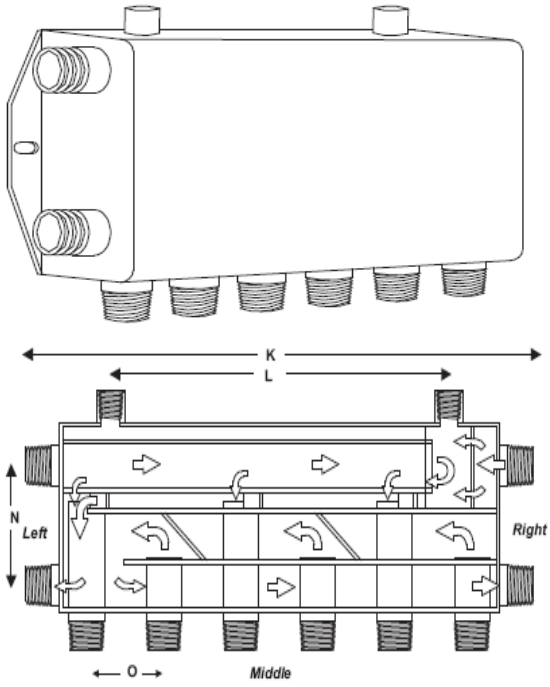
Note that the heat input to the SystemZone may be doubled by paralleling the pipework to both sets of side connections as shown.

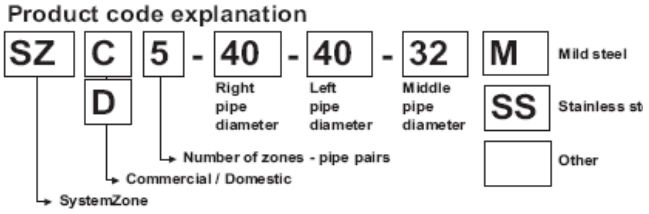
SYSTEMZONE – Technical Specifications

SystemZone 4, 5 & 6 – Technical Specifications

SystemZone is a patented distribution manifold that collects heated or cooled fluid from one or more sources and distributes it to one or more zones. Pumps are used to circulate the fluid and safety routes are always open. SystemZone is a cheap and simple alternative to custom designed, valve controlled zoning methods:

- SystemZone isolates and controls heating water collection and distribution circuits. Each circuit is independent of all others – no water flows if the circuit's pump is not operating.
- SystemZone stratifies hot and cold water, ensuring that zones draw from only the hottest water.
- SystemZone has connection points for ancillary safety devices, safety valves and expansion tanks. It has an unobstructed internal baffle system and contains no moving parts for long-term trouble-free use. SystemZone also eliminates the need for motorised valves, non-return valves and a system bypass.
- In a standard, simple, configuration one or two heat sources may be connected to the SystemZone.
- SystemZone is particularly suited to systems where high velocity is required. This means independent pump speeds may be selected to closely match a particular zone's water velocity requirements.
- SystemZone is suitable for the largest commercial, industrial and district heating applications.
- SystemZone makes it simple to use multiple heat sources because each heat source is automatically isolated from all the others without the need for valves.





Description	Product Code	Made Of	Pipe Sizes (inches BSP)				Dimensions (cm)						Heat capacity		
			Left	Rt	Mid	Top	K	L	M	N	O	P	Left	Rt	Mid
4 Port	SZD4-28-28-28 MS	Mild Steel	1	1	1	½	36.0	29.0	21.0	9.5	7.5	6.4	43	43	43
5 Port	SZD5-28-28-28 MS	Mild Steel	1	1	1	½	51.0	42.0	21.0	9.5	7.5	6.4	43	43	43
6 Port	SZD6-28-28-28 MS	Mild Steel	1	1	1	½	66.0	62.0	21.0	9.5	7.5	6.4	43	43	43
4 Port	SZC4-32-32-28 MS	Mild Steel	1 ¼	1 ¼	1	½	32.1	28.4	15.0	9.5	7.0	10.0	56	56	43
5 Port	SZC5-32-32-28 MS	Mild Steel	1 ¼	1 ¼	1	½	46.1	42.5	15.0	9.5	7.0	10.0	56	56	43
6 Port	SZC6-32-32-28 MS	Mild Steel	1 ¼	1 ¼	1	½	60.1	56.4	15.0	9.5	7.0	10.0	56	56	43
4 Port	SZC4-40-40-32 MS	Mild Steel	1 ½	1 ½	1 ¼	½	42.0	39.8	18.0	11.7	10.0	12.5	87	87	56
5 Port	SZC5-40-40-32 MS	Mild Steel	1 ½	1 ½	1 ¼	½	62.0	58.6	18.1	11.7	10.0	12.5	87	87	56
6 Port	SZC6-40-40-32 MS	Mild Steel	1 ½	1 ½	1 ¼	½	82.0	78.6	18.1	11.7	10.0	12.5	87	87	56
4 Port	SZC4-50-50-32 MS	Mild Steel	2	2	1 ¼	¾	52.2	50.0	20.0	12.5	12.5	15.0	137	137	56
5 Port	SZC5-50-50-32 MS	Mild Steel	2	2	1 ¼	¾	77.2	74.2	20.0	12.5	12.5	15.0	137	137	56
6 Port	SZC6-50-50-32 MS	Mild Steel	2	2	1 ¼	¾	103.7	100.7	20.0	12.5	12.5	15.0	137	137	56
4 Port	SZC4-50-50-40 MS	Mild Steel	2	2	1 ½	¾	52.2	50.0	20.0	12.5	12.5	15.0	137	137	87
5 Port	SZC5-50-50-40 MS	Mild Steel	2	2	1 ½	¾	77.2	74.2	20.0	12.5	12.5	15.0	137	137	87
6 Port	SZC6-50-50-40 MS	Mild Steel	2	2	1 ½	¾	103.7	100.7	20.0	12.5	12.5	15.0	137	137	87

NOTE: SPECIFICATIONS MAY CHANGE

SystemLex and MiniLex

THE SYSTEMLEX

Controls up to four zones with two heat sources and four independent inputs to an auxiliary double pole relay

THE MINILEX

Controls up to three zones with one heat source. The auxiliary function is not included.

Features:

- Simplifies wiring of multiple heat sources *and* heating zones
- Easier to set up. Pre-fused power supply with independently fused zone provision and clearly identified terminals for clock and thermostat connections
- Suitable for gas, geothermal, oil and solid fuel installations
- Built-in lights to indicate correct operational status and assist in system fault finding
- Versatile - works with all forms of heating control including clocks, thermostats and programmers
- Please see the SystemLex and MiniLex technical specifications page for more details
- SystemLex has been designed with the electrician in mind, featuring push-fit wiring terminals, connections for zone thermostats, time controls, zone pumps, boiler power and automatic boiler control.
- SystemLex incorporates full board and independent zone fusing with built in indicator lights to identify power, zone and heat source call.

SPECIFICATION	CODE
SystemLex	SLX-V4E
MiniLex	MLX-V5

SystemLex – Technical Specifications

SystemLex is pre-configured to automatically fire the heat source(s), only when one or more time/temperature zone controls call for heat.

Wiring external to the SystemLex printed circuit board MUST be in accordance with the current regulations and any manufacturer's instructions that apply. The power supply must be 230Vac ~ 50Hz.

Devices attached to SystemLink MUST be properly earthed. A fused double-pole switch, with at least 3mm (1/8") contact separation in both poles, serving only the SystemLex panel should be used.

Zones 1-4: four sets of terminals, to which external time and temperature controls may be attached, fused at 1 amp. The LEDs on the board show which zone elements are operating and help make fault diagnosis easy. All neutral terminals are cross connected on the board with preinstalled tracks.

Supply	230Vac 5A 50Hz 1 Phase
Zones	4
Main Relay Rating	DPNO 5A
Heat sources	2
Heat source Supply	2
Clock Supply	1
Auxiliary Inputs	4
Auxiliary Outputs	DPCO 5A
Operating Temperatures	0 - 50°C
Enclosure Rating	IP20
Main Fuse	230Vac 5A TAnti-surge
Heat source/Clock Fusing	230Vac 3A TAnti-surge
Zone Fuses	4 of 230Vac 1A TAnti-surge
Zone Call Indicators	4
Mains Supply Indicators	1
Heat source Call Indicators	1
Auxiliary Call Indicators	1
Transient Suppression	Yes
Terminals	2.5mm-Sq.

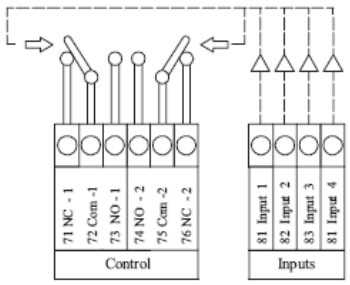
Power Supply: one set of terminals for electrical mains supply connection fused at 5amps (57, 58). A general control power supply to facilitate use of a multi-zone clock, fused at 3amps (51, 52). Two sets of terminals for power supply connection to the heat sources, fused at 3amps (53, 54 and 55, 56).

Control: two sets terminals to provide either Switched or Voltage-Free control to heat sources (61, 62 and 63, 64).

Auxiliary Outputs: two sets of auxiliary Output Relay terminals to facilitate auxiliary functions (71, 72, 73 and 74, 75, 76).

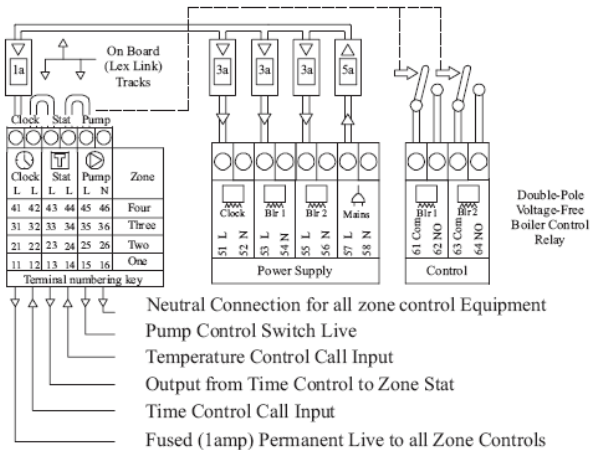
Auxiliary Input: four auxiliary input terminals (81, 82, 83, 84) to receive 230Vac supplies, any one of which will cause the auxiliary double-pole relay to switch contacts, without back feeding to any other input.

Operation of Auxiliary Relay



The Auxiliary relay is an optional control opportunity that works independently of the boiler control relay. Applying mains to any auxiliary input (81, 82, 83, or 84) will operate the double-pole auxiliary relay contacts but will not back feed to other auxiliary inputs.

The Heat Source Control Relay works independently of the Auxiliary Relay. When any zone-control call provides mains power to its zone 'Stat' input (14, 24, 34, or 44), the heat source control will operate the double-pole relay contacts to switch on the heat source but will not back feed to other zones' controls or pumps.



* Note: *Under no circumstances should high and low voltage circuits be conducted through contacts on the same relay, as this would not comply with the clearances (minimum distance between switching contacts) specified by IE and international wiring regulations. If a control is required on a circuit of different voltage to the primary circuit, the auxiliary relay or a separate external relay should be used.*

MiniLex– Technical Specifications

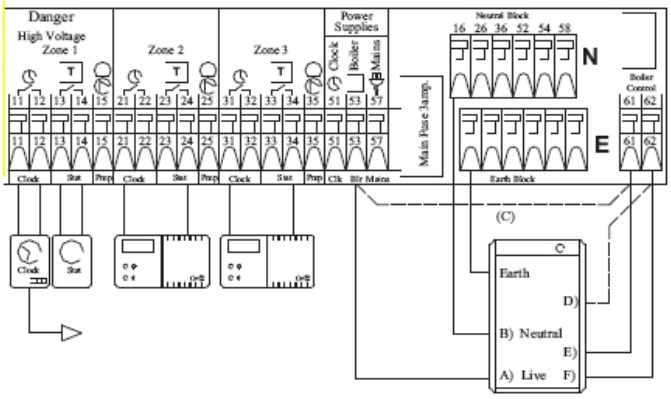
Zones 1-3: three sets of terminals, to which external time and temperature controls may be attached, fused at 1 amp. The LEDs on the board show which zone elements are operating and help make fault diagnosis easy.

All neutral terminals are already connected on the board with on-board tracks.

Power Supply: one set of terminals for electrical mains supply connection fused at 3.15 amps (57, 58).

A general control power supply to facilitate use of a multi-zone clock (51, 52). One set of terminals for power supply connection to the heat source (53, 54).

Control: one set terminals to provide either Switched or Voltage-Free control to the heat source (61, 62).

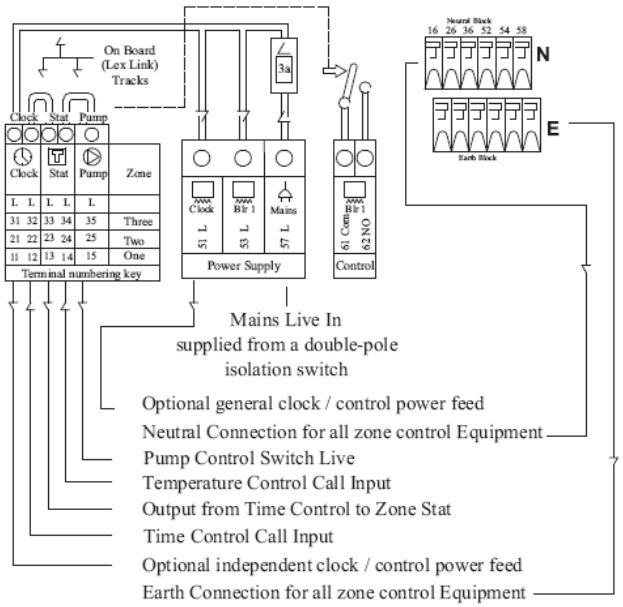


Example above shows a conventional clock / hot water thermostat arrangement on zone 1, and battery powered programmable room thermostats on zones 2 and 3. The heat source shown may have a number of alternative wiring procedures.

Wire connections A & B are used to provide an optional permanent heat source power supply. Wire (link) C is used to feed the voltage free relay contacts with power, with wire D supplying that power when the control relay switches. The final method may be used if the proposed heat source requires voltage free switching where wire E & F are switched by the control relay

Supply	230Vac 5A 50Hz 1 Phase
Zones	3
Main Relay Rating	SPNO 3A
Heat sources	1
Heat source Supply	1
Clock Supply	1
Operating Temperatures	0 - 50°C
Enclosure Rating	IP20
Main Fuse	230Vac 5A 3.15AT Anti-surge
Zone Call Indicators	3
Mains Supply Indicators	1
Transient Suppression	Yes
Terminals	2.5mm-Sq.
Coil/Contact Creepage/Clearance	8mm/8mm

The Heat source Control Relay operates when any zone-control call provides mains to its zone 'Stat' input (14, 24 or 34,), but will not back feed to other zone's controls or pumps. The single-pole relay contacts are voltage free and are used to fire the heat source on zone call demand.



NEW Product - ZONEALONE

ZoneAlone 4

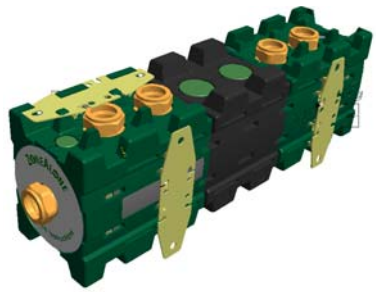
Features:

- Three heating zones and one heat source, or two heating zones and two heat sources
- Insulated
- Mounting brackets
- Simple to install with no need for motorised valves
- Compatible with oil, gas, solid fuel, heat pumps and solar
- Precisely controlled flows with no cross talk
- NRVs built in

Available in the connection sizes listed below.

SPECIFICATION	CODE	
1″ Boiler Connections, 1″ Zone Connections	ZAD4-0-28-BD-DD	
1″ Boiler Connections, 1″ Zone Connections	ZAD4-0-28-BB-DD	
	See back page for explanation of codes.	

ZoneAlone 5



Features:

- Three heating zones and two heat sources
- Insulated
- Mounting brackets
- Simple to install with no need for motorised valves
- Compatible with oil, gas, solid fuel, heat pumps and solar
- Precisely controlled flows with no cross talk.
- Unit weight – 3.6 kilograms
- NRVs built in

SPECIFICATION	CODE	
1″ Boiler Connections, 1″ Zone Connections	ZAD5-28-28-E-BD-DD	

NEW Product - ZONEALONE

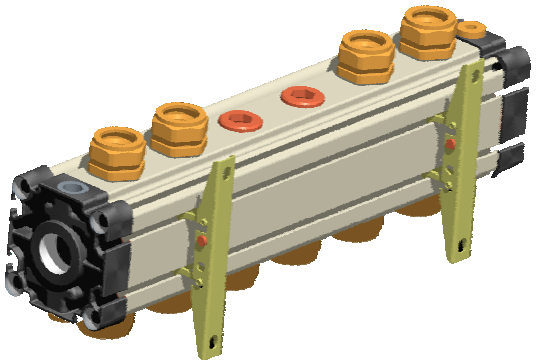
ZoneAlone 7

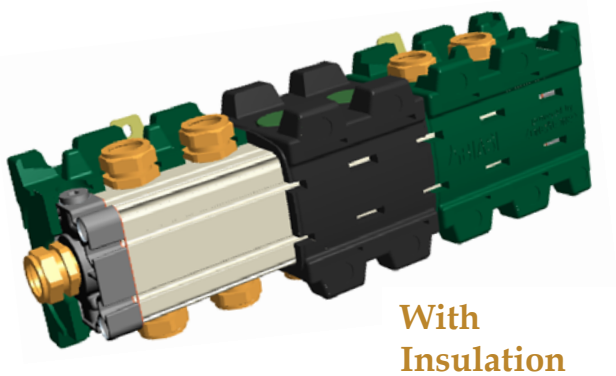
Features:

- Up to five heating zones and two heat sources
- Insulated
- Mounting brackets
- Simple to install with no need for motorised valves
- Compatible with oil, gas, solid fuel, heat pumps and solar
- Precisely controlled flows with no cross talk
- Unit weight – 3.6kilograms
- NRVs built in

SPECIFICATION	CODE	
1″ Boiler Connections, 1″ Zone Connections	ZAD 7-28-28-E-BDD-DDD	

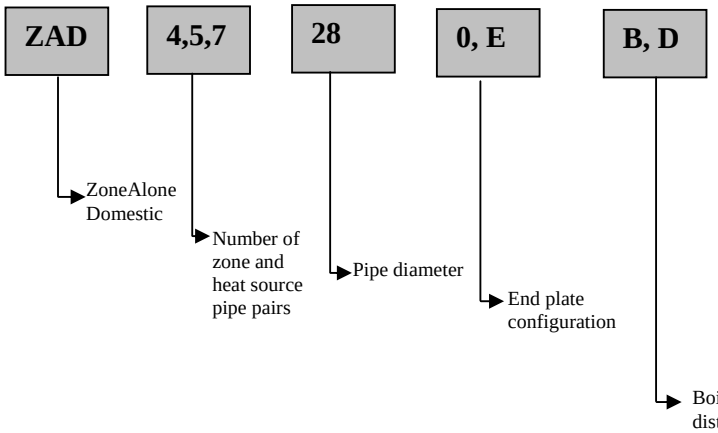
Without insulation





With Insulation

Product code explanation



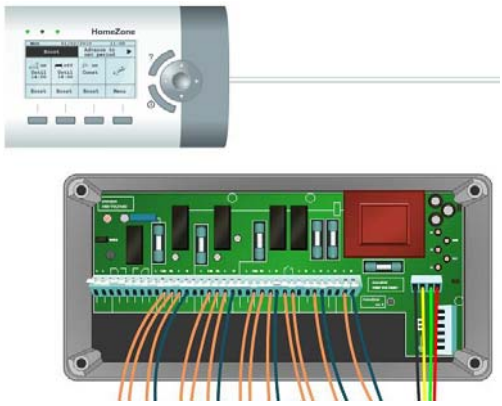
0 = Blank end plate, 4 zone only
E = Open end plate, can be used as **Either** boiler or distribution ports

NEW Product – ZONEALONE Benefits

All zones are hydraulically independant	ZoneAlone's unique patented design ensures that each heat source and heating zone operates independently of each other. When the pump in a particular zone or boiler circuit is inactive, no water moves in that circuit. Eliminates time consuming circuit balancing and air bleeding problems
Versatile	Can be ordered in a range of sizes based on the number of zones and heating sources required. Simple upgrade. New heat sources or loads (e.g. loft conversions) are simply integrated by adding zones without disturbing the behaviour of the existing system.
Reduced form factor and packaging with insulation included	Insulation is innovatively designed to protect the manifold during transport and storage. Unit is compact and light
Orientate in any direction for installation	Zonealone can be orientated in **ANY** direction for installation.
Built in Non-Return Valves	No need for NRVs and associated external fittings as they are built into the manifold.
The hottest water is used for heating without any mixing	High energy efficiency. Patent-pending pressure relief valves in ZoneAlone manifolds maximise thermal separation of hot supply and cooler return flows, minimising internal leakage of heat.
Less expensive installation	With Zonealone, fewer parts, simpler design and easier fitting significantly reduces installation costs.
Different flow rates automatically catered for	A further advantage of the independence of each circuit is that different flow rates can be specified without creating any conflicts provided that the primary pump is sized to cater for the total flow rate leaving the manifold. This makes it easy to create mixed systems with a variety of heat sources and heat emitters.
Efficient, continuous de-aeration	Resists performance loss. ZoneAlone manifolds provide four instrument ports for connection of circuit ancillaries - auto air vents; expansion reservoirs, gauges and filling loops. Air separation performance is very good, boosting thermal efficiency. The pumps in the system therefore work with maximum silence and efficiency, air locks are minimized and radiators are much less prone to need bleeding.
Built-in boiler bypass	Simplifies installation
Simplifies integration of multiple heat sources	Zonealone is essentially a plug & play device and schematics are freely available showing typical installations.
Motorised valves are not required	Pumps are used instead which are more reliable than motorised valves.

NEW Product – HomeZone

HomeZone



Features:

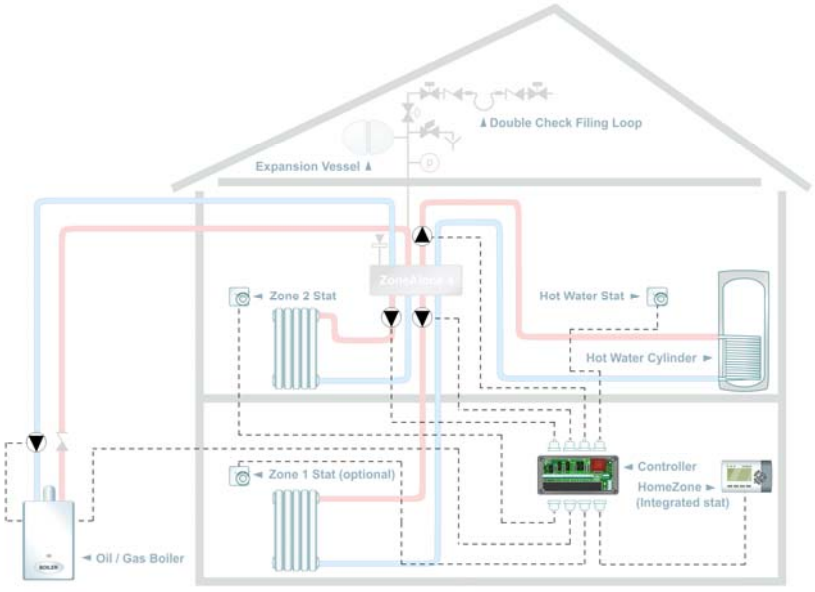
- Intuitive programmer and controller that provide time and temperature control for three zones.
- Built in thermostat
- Simplifies wiring of multiple heat sources *and* heating zones
- Pre-fused power supply with independently fused zone provision and clearly identified terminals for clock and thermostat connections
- Built-in lights to indicate correct operational status and assist in system fault finding
- Suitable for gas, geothermal, oil and solid fuel installations

SPECIFICATION	CODE	
Homezone Controller	HZC-3	

HomeZone

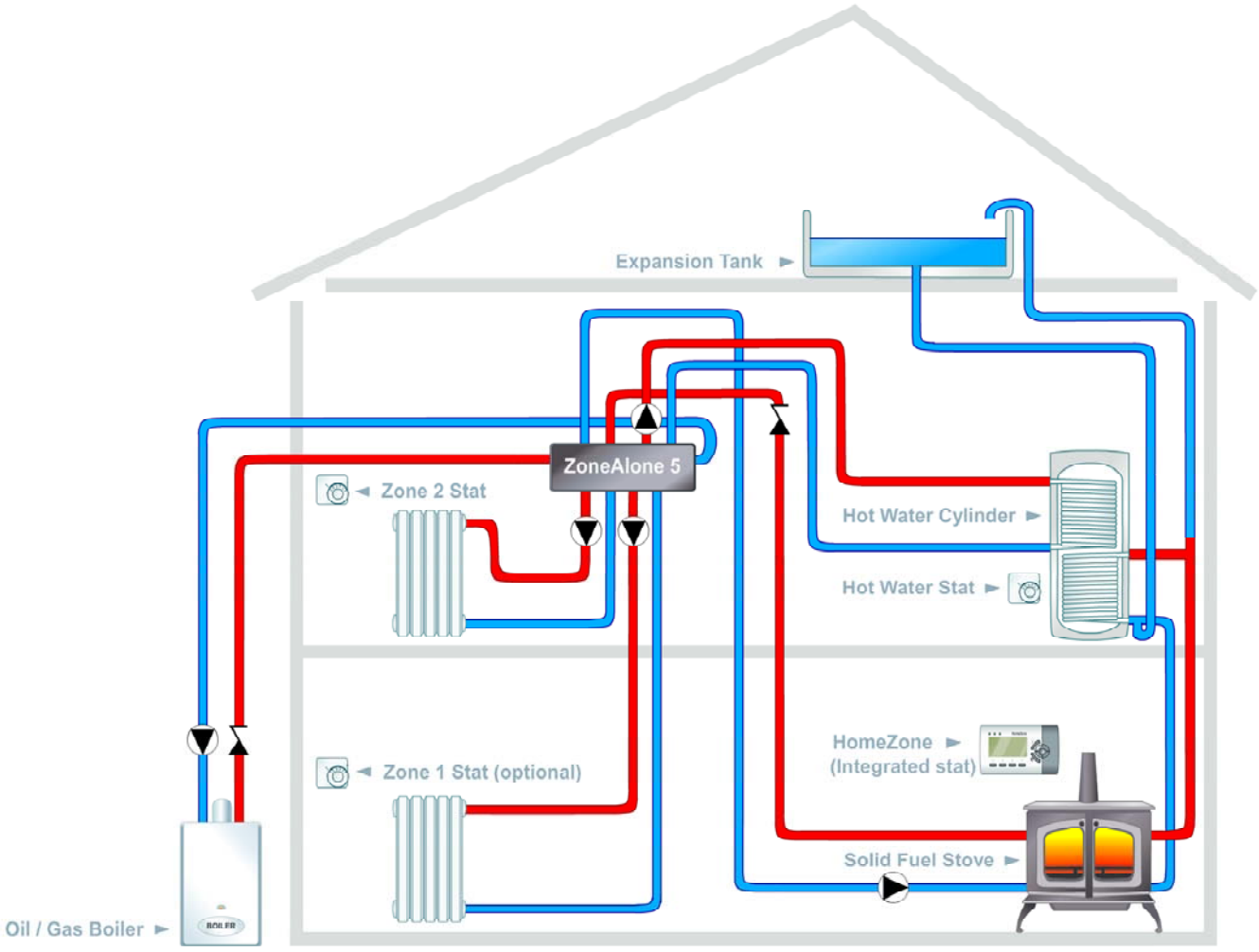
HomeZone is a two part heating control system comsisting of a ***Programmer*** and a ***Controller.***
The Programmer is a user-friendly graphical interface with LCD display that clearly indicates the status of your heating system at all times, zone by zone, including DHW.
Boost is used to provide instant *heat* or *hot water* regardless of the mode the zone is in. Any zone can be **boosted** from one hour to three hours to constantly on. The navigation screen shows the number of hours the zone has been boosted for.
Advance: When a specific zone has been advanced, the system will automatically adopt the next pre-programmed mode. The screen shows the next programmed time that the zone has been set for. When the 'programmed' time arrives the system will revert to the pre-programmed mode. By **advancing** the programme the heat will switch on immediately and will revert to normal pre-programmed mode at the next period.

The Controller is a pre-configured electronic wiring centre that connects the controls (clocks, thermostats, pumps, heat sources) together in a logical and easy to understand way. The controller and the programmer are connected together by means of a 4 wire BUS.



SYSTEMLINK/ZONEALONE – BI-VALENT SOLUTION

Bi-Valent System



A ***Bi-Valent System*** is a system in which two or more heat sources, classified as 'Primary' and 'Secondary', are used to satisfy heating demand. There are a number of variations of these systems and some examples are listed below. This list is by no means exhaustive and by using the SystemZone or ZoneAlone distribution manifold as part of the system design, almost any configuration is possible.

1. Gas heat source with solid fuel heat source
2. Oil heat source with solid fuel heat source
3. Heat pump with gas or oil heat source
4. Gas or oil heat source with wood pellet heat source

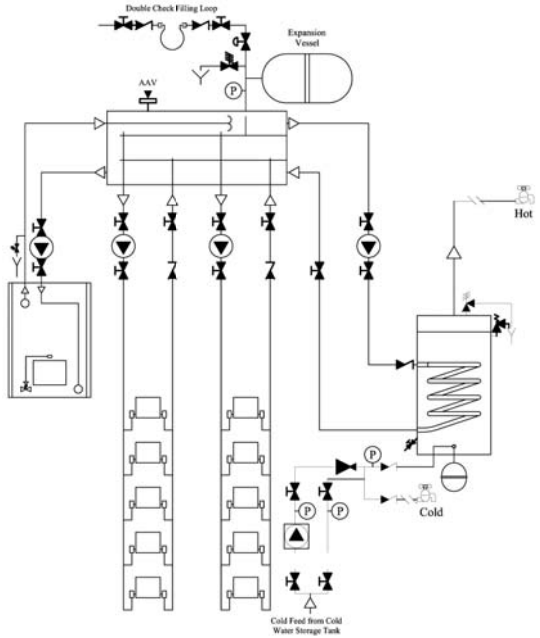
In the example illustrated above, the stove is supplemented by a gas or oil heat source which backs up heating demand on unusually cold days or when the stove is not in use. The Stove is classified as the **'primary'** heat source and the gas or oil boiler as the **'secondary'** heat source.

The system can be designed to utilise the secondary heat source when the demand for heat exceeds the capability of only the primary heat source.

EXAMPLE 1: Heating Schematic (Plumbing)

SystemZone 4, 1 Oil Boiler, 2 Radiator Zones, 1 DHW Zone

(Please refer to Electrical Schematic 1 for wiring with SystemLex or 8 for wiring with HomeZone)



Information

Notes

Non-return valves are required on SystemLink's outward zone flow pipe-work only when the zone to be piped is at a higher level than the SystemLink. In that situation, a non-return valve must be positioned in front of the zone pump. This will prevent the creation of a gravity fed, thermo-syphoning loop, which would cause continued supply of heated water to the radiators in that zone, even when the zone's pump is no longer required and has been switched off.

This schematic shows the key components in the mechanical system and the list of materials shown is not exhaustive. All systems should be installed by a qualified installer and should be installed in accordance with building regulations. Systemlink will not be held responsible for any errors shown in the schematic.

LEGEND

Motorised Valve	Oil Fire Slam Valve	Temperature Mixing Valve	Oil Tank Filter	Gas Slam Valve
Isolating Valve	Temperature Relief Valve	Automatic Air Valve	Strainer	Binder Test Point
Safety Valve	Pressure Regulating Valve	Pressure Guage	DW Pressurisation Pump	Direction Arrow
Non Return Valve	Flow Regulating Valve	Temperature Guage	Drain Cock	Hi-Pressure Switch
Pressure Refief Valve	Pressure Reducing Valve	Temperature Sensor	Circulating Pump	Low Pressure Switch

Example: Heating Schematic
1 Oil Boiler, 2 Radiator Zones, 1 DHW Zone

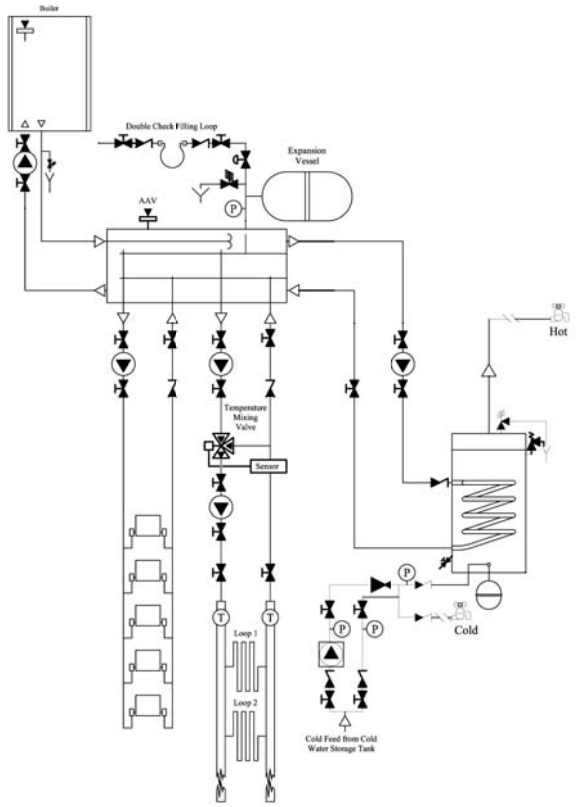
SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e:mail, info@systemlink.ie
e:mail, info@systemlink.co.uk

Scale: NTS | Rev: 001 | Drawing No. 00102010

EXAMPLE 2: Heating Schematic (Plumbing)

SystemZone 4, 1 Gas Boiler, 1 Radiator Zone, 1 Underfloor Zone, 1 DHW Zone

(Please refer to Electrical Schematic 2 for wiring with SystemLex or 10 for wiring with HomeZone)



Information

Notes

Non-return valves are required on SystemLink's outward zone flow pipe-work only when the zone to be piped is at a higher level than the SystemLink. In that situation, a non-return valve must be positioned in front of the zone pump. This will prevent the creation of a gravity fed, thermo-syphoning loop, which would cause continued supply of heated water to the radiators in that zone, even when the zone's pump is no longer required and has been switched off.

This schematic shows the key components in the mechanical system and the list of materials shown is not exhaustive. All systems should be installed by a qualified installer and should be installed in accordance with building regulations. Systemlink will not be held responsible for any errors shown in the schematic.

LEGEND

Motorised Valve	Oil Fire Slam Valve	Temperature Mixing Valve	Oil Tank Filter	Gas Slam Valve
Isolating Valve	Temperature Relief Valve	Automatic Air Valve	Strainer	Binder Test Point
Safety Valve	Pressure Regulating Valve	Pressure Guage	DW Pressurisation Pump	Direction Arrow
Non Return Valve	Flow Regulating Valve	Temperature Guage	Drain Cock	Hi-Pressure Switch
Pressure Refief Valve	Pressure Reducing Valve	Temperature Sensor	Circulating Pump	Low Pressure Switch

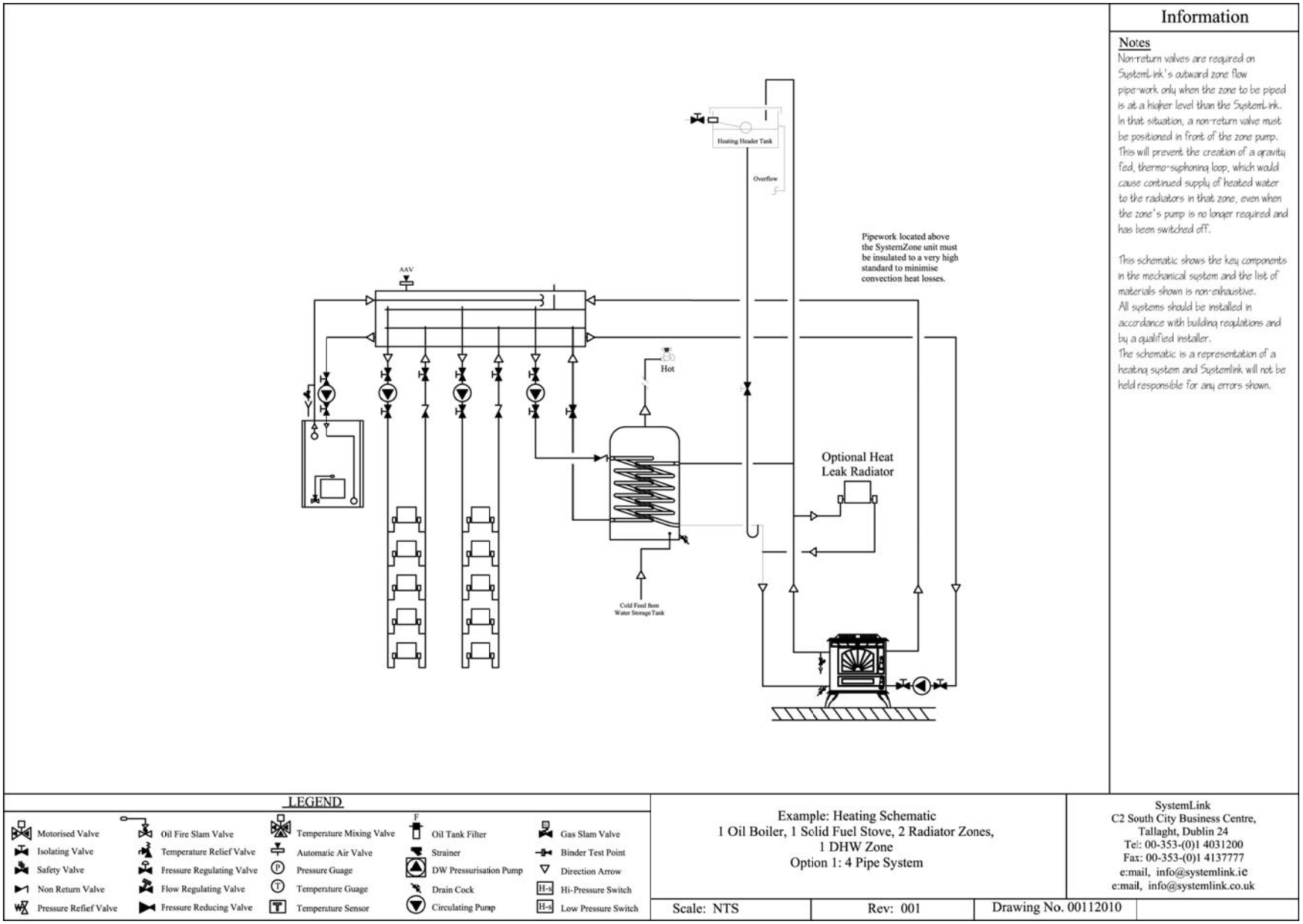
Example: Heating Schematic
1 Gas Boiler, 1 Radiator Zone, 1 Underfloor Zone, 1 DHW Zone

SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e:mail, info@systemlink.ie
e:mail, info@systemlink.co.uk

Scale: NTS | Rev: 001 | Drawing No. 01001110

EXAMPLE 3: Heating Schematic Option 1 (Plumbing)

SystemZone 5, 1 Oil Boiler, 1 Solid Fuel Stove, 2 Radiator Zones, 1 DHW Zone (Option 1: 4 Pipe System)
(Please refer to Electrical Schematic 3 for wiring with SystemLex or 11 for wiring with HomeZone)



Information

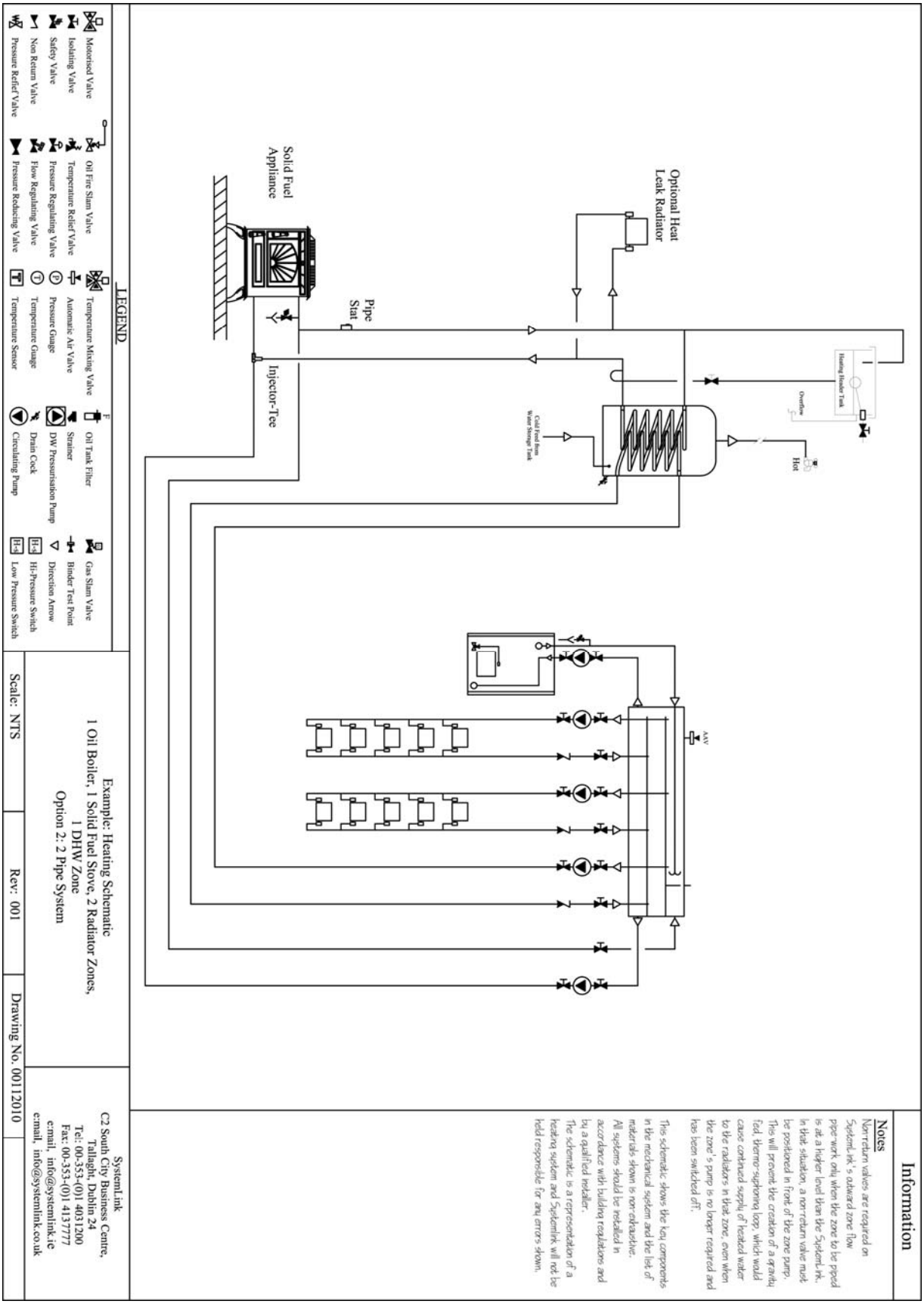
Notes

Non-return valves are required on SystemLink's outward zone flow pipe-work only when the zone to be piped is at a higher level than the SystemLink. In that situation, a non-return valve must be positioned in front of the zone pump. This will prevent the creation of a gravity fed, thermo-syphoning loop, which would cause continued supply of heated water to the radiators in that zone, even when the zone's pump is no longer required and has been switched off.

This schematic shows the key components in the mechanical system and the list of materials shown is non-exhaustive.
All systems should be installed in accordance with building regulations and by a qualified installer.
The schematic is a representation of a heating system and SystemLink will not be held responsible for any errors shown.

EXAMPLE 3: Heating Schematic Option 2 (Plumbing)

SystemZone 5, 1 Oil Boiler, 1 Solid Fuel Stove, 2 Radiator Zones, 1 DHW Zone (Option 2: 2 Pipe System)
(Please refer to Electrical Schematic 3 for wiring with SystemLex or 11 for wiring with HomeZone)



Information

Notes

Non return valves are required on SystemLink's outward zone flow pipe work only when the zone to be piped is at a higher level than the SystemLink. In that situation, a non return valve must be positioned in front of the zone pump. This will prevent the creation of a gravity fed, thermo-syphoning loop, which would cause continued supply of heated water to the radiators in that zone, even when the zone's pump is no longer required and has been switched off.

This schematic shows the key components in the mechanical system and the list of materials shown is non-exhaustive. All systems should be installed in accordance with building regulations and by a qualified installer. The schematic is a representation of a heating system and SystemLink will not be held responsible for any errors shown.

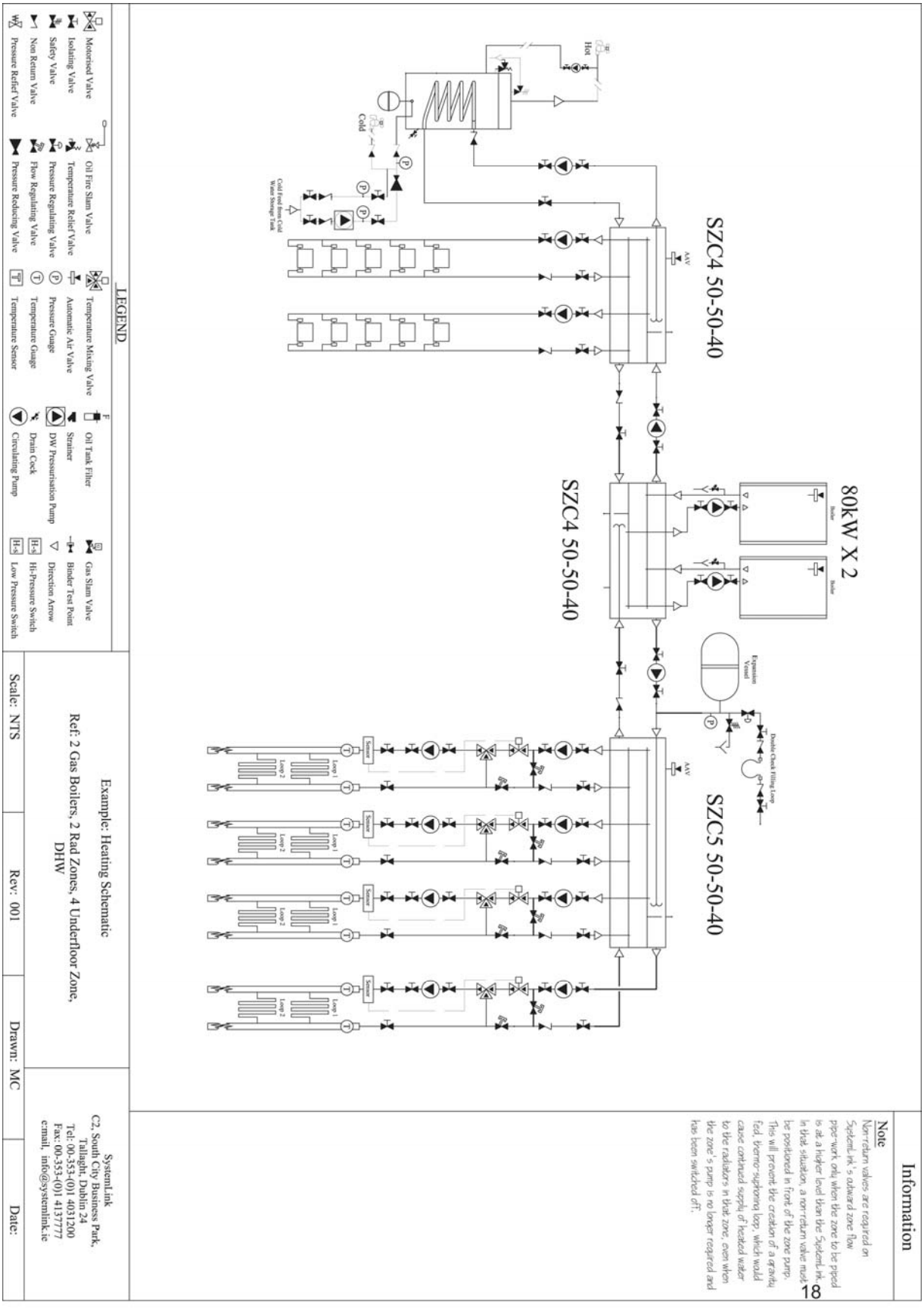
Example: Heating Schematic
1 Oil Boiler, 1 Solid Fuel Stove, 2 Radiator Zones,
1 DHW Zone
Option 2: 2 Pipe System

Scale: NTS | Rev: 001 | Drawing No. 00112010

SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e:mail, info@systemlink.ie
e:mail, info@systemlink.co.uk

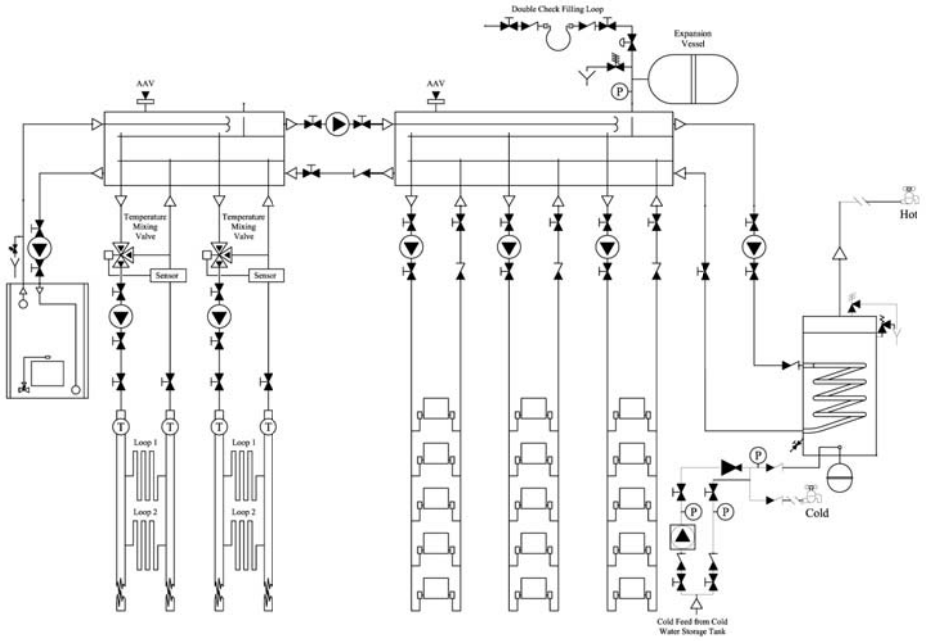
EXAMPLE 4: Heating Schematic (Plumbing)

2 X SystemZone 4 & 1 X SystemZone 5, 2 Gas Boilers, 2 Rad Zones, 4 Underfloor Zones, DHW
(Please refer to Electrical Schematic 4 for wiring with SystemLex)



EXAMPLE 5: Heating Schematic

1 X SystemZone 4 & 1 X SystemZone 5, Oil Boiler, 3 Radiator Zones, 2 Underfloor Zones, DHW, Shunt Pump, SZD4, SZD5
(Please refer to Electrical Schematic 5 for wiring with SystemLex)



Information

Note

Non-return valves are required on SystemLink's outward zone flow pipe-work only when the zone to be piped is at a higher level than the SystemLink. In that situation, a non-return valve must be positioned in front of the zone pump. This will prevent the creation of a gravity fed, thermo-syphoning loop, which would cause continued supply of heated water to the radiators in that zone, even when the zone's pump is no longer required and has been switched off.

LEGEND

Motorised Valve	Oil Fire Slam Valve	Temperature Mixing Valve	Oil Tank Filter	Gas Slam Valve
Isolating Valve	Temperature Relief Valve	Automatic Air Valve	Strainer	Binder Test Point
Safety Valve	Pressure Regulating Valve	Pressure Guage	DW Pressurisation Pump	Direction Arrow
Non Return Valve	Flow Regulating Valve	Temperature Guage	Drain Cock	Hi-Pressure Switch
Pressure Refief Valve	Pressure Reducing Valve	Temperature Sensor	Circulating Pump	Low Pressure Switch

Example: Heating Schematic

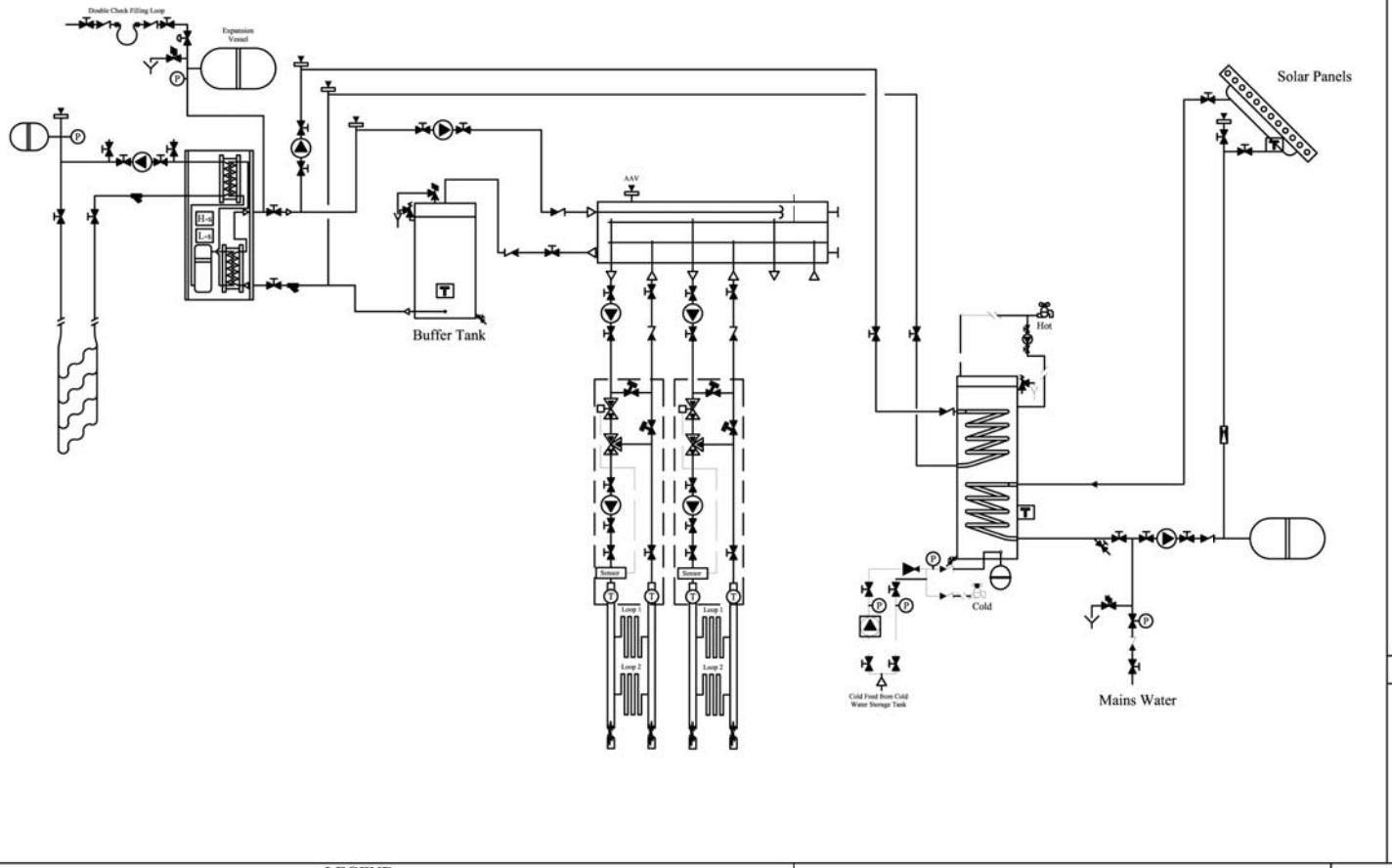
Oil Boiler, 3 Rad Zones, 2 Underfloor Zones, DHW, Shunt Pump, SZD4, SZD5

SystemLink
C2, South City Business Park,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e:mail, info@systemlink.ie

Scale: NTS	Rev: 001	Drawn: AK	Date:

EXAMPLE 6: Heating Schematic

SystemZone 5, Geothermal Heat Pump, Domestic Hot Water Cylinder, 2 Underfloor Heating Zones and Solar Panel



Information

Note

Non-return valves are required on SystemLink's outward zone flow pipe-work only when the zone to be piped is at a higher level than the SystemLink. In that situation, a non-return valve must be positioned in front of the zone pump. This will prevent the creation of a gravity fed, thermo-syphoning loop, which would cause continued supply of heated water to the radiators in that zone, even when the zone's pump is no longer required and has been switched off.

LEGEND

- Motorised Valve
- Isolating Valve
- Safety Valve
- Non Return Valve
- Pressure Relief Valve
- Temperature Relief Valve
- Pressure Regulating Valve
- Flow Regulating Valve
- Pressure Reducing Valve
- Temperature Mixing Valve
- Automatic Air Valve
- Pressure Guage
- Temperature Guage
- Temperature Sensor
- Strainer
- DW Pressurisation Pump
- Drain Cock
- Circulating Pump
- Direction Arrow
- Hi-Pressure Switch
- Low Pressure Switch

Example- SystemZone 5, Geothermal Heat Pump, Domestic Hot Water Cylinder, 2 Underfloor Heating Zones and Solar Panel

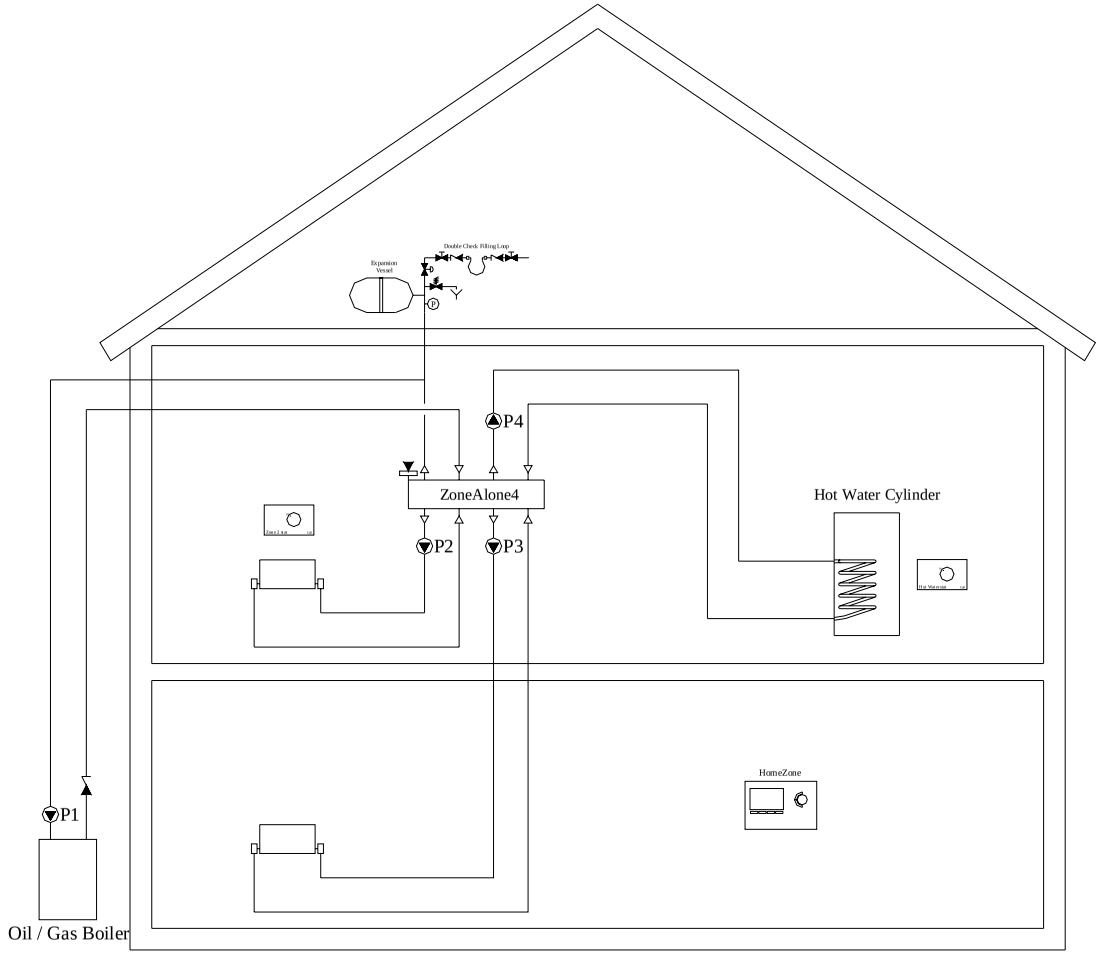
SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e:mail, info@systemlink.ie

Scale: NTS	Rev: 003	Drawn: MC	Date:

EXAMPLE 7: Heating Schematic

ZoneAlone 4, 1 Oil Boiler, 2 Radiator Zones, 1 DHW Zone

(Please refer to Electrical Schematic 1 for wiring with SystemLex or 8 for wiring with HomeZone)



Information

Notes:

LEGEND

- Motorised Valve
- Isolating Valve
- Safety Valve
- Non Return Valve
- Pressure Refief Valve
- Circulating Pump
- Temperature Relief Valve
- Pressure Regulating Valve
- Flow Regulating Valve
- Pressure Reducing Valve
- Temperature Mixing Valve
- Automatic Air Valve
- Pressure Guage
- Temperature Guage
- Temperature Sensor
- Direction Arrow
- Strainer
- DW Pressurisation Pump
- Drain Cock

Example Schematic showing a ZoneAlone4 interconnecting an Oil Boiler, 2 Radiator Zones and a DHW Zone

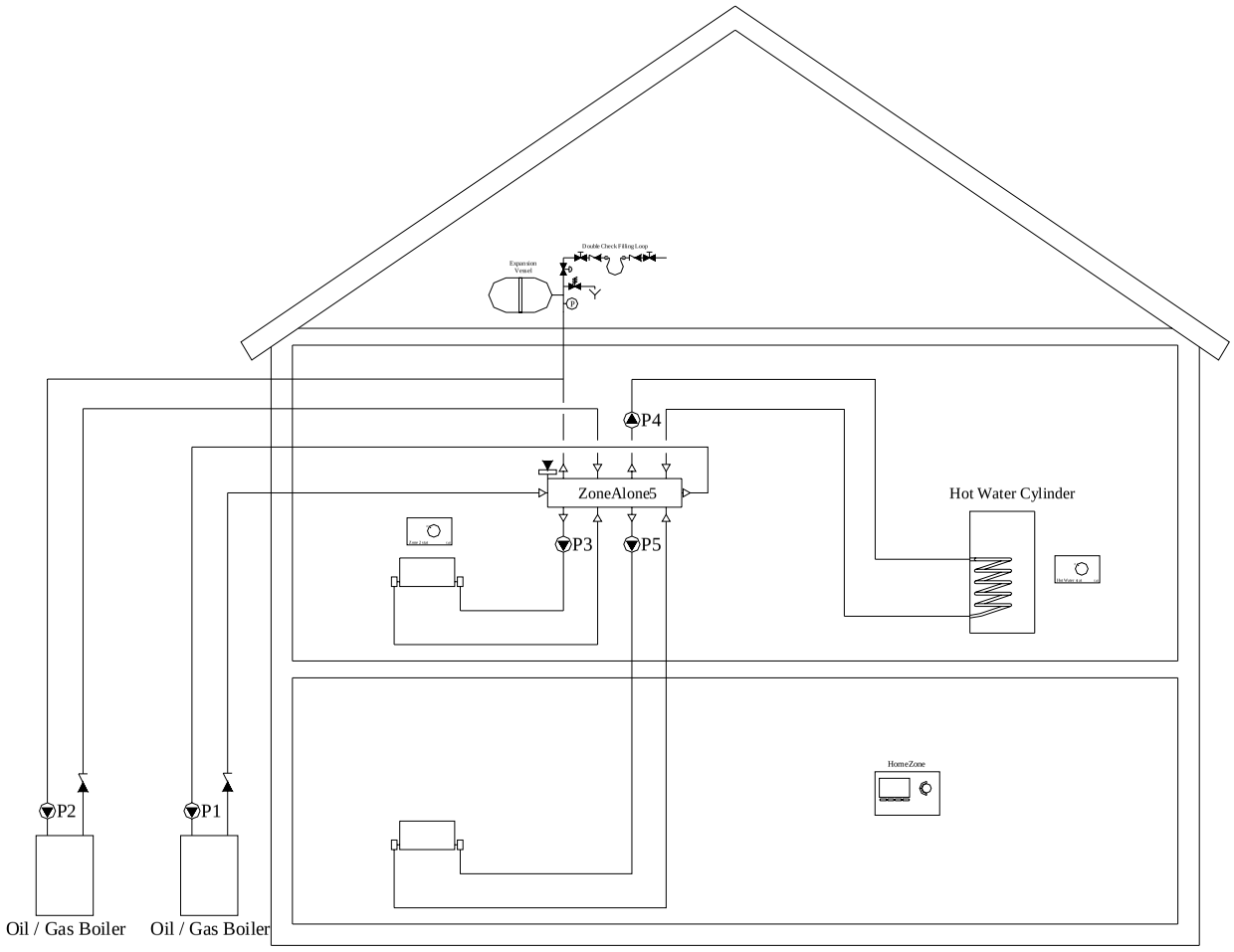
SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e-mail: info@systemlink.ie

Scale: NTS	Rev: ---	Drawn: --	Date: -------

EXAMPLE 8: Heating Schematic

ZoneAlone 5, 2 Oil Boilers, 2 Radiator Zones, 1 DHW Zone

(Please refer to Electrical Schematic 6 for wiring with SystemLex or 9 for wiring with HomeZone)



Information

Notes:

LEGEND

- Motorised Valve
- Isolating Valve
- Safety Valve
- Non Return Valve
- Pressure Refief Valve
- Circulating Pump
- Temperature Relief Valve
- Pressure Regulating Valve
- Flow Regulating Valve
- Pressure Reducing Valve
- Temperature Mixing Valve
- Automatic Air Valve
- Pressure Guage
- Temperature Guage
- Temperature Sensor
- Direction Arrow
- Strainer
- DW Pressurisation Pump
- Drain Cock

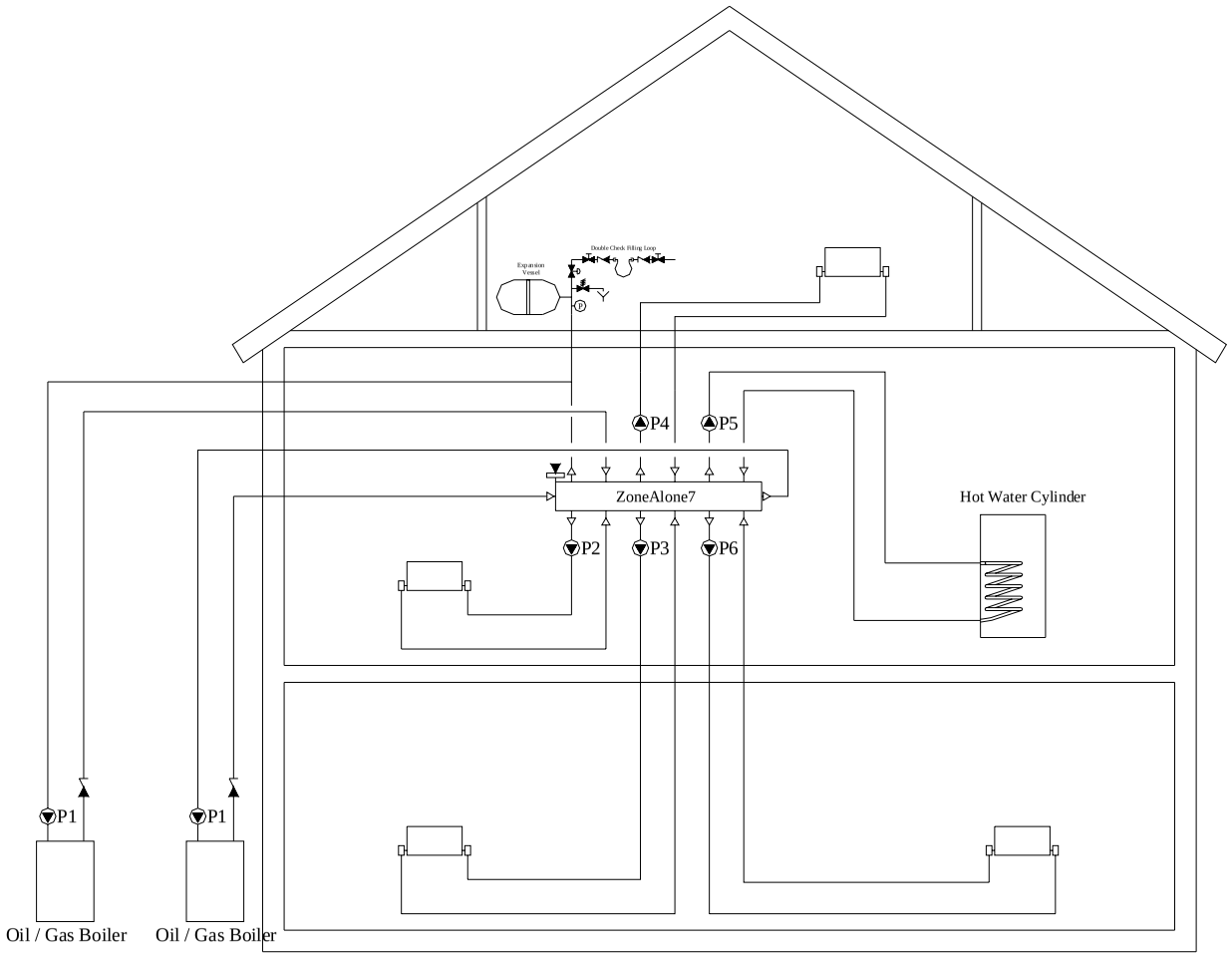
Example Schematic showing a ZoneAlone5 interconnecting 2 Oil Boilers, 2 Radiator Zones and a DHW Zone

SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e-mail: info@systemlink.ie

Scale: NTS	Rev: ---	Drawn: --	Date: -------

EXAMPLE 9: Heating Schematic

ZoneAlone 7, 2 Oil Boilers, 2 Radiator Zones, 1 DHW Zone
(Please refer to Electrical Schematic 7 for wiring with SystemLex)



Information

Notes:

LEGEND

- Motorised Valve
- Isolating Valve
- Safety Valve
- Non Return Valve
- Pressure Refief Valve
- Circulating Pump
- Temperature Relief Valve
- Pressure Regulating Valve
- Flow Regulating Valve
- Pressure Reducing Valve
- Temperature Mixing Valve
- Automatic Air Valve
- Pressure Guage
- Temperature Guage
- Temperature Sensor
- Direction Arrow
- Strainer
- DW Pressurisation Pump
- Drain Cock

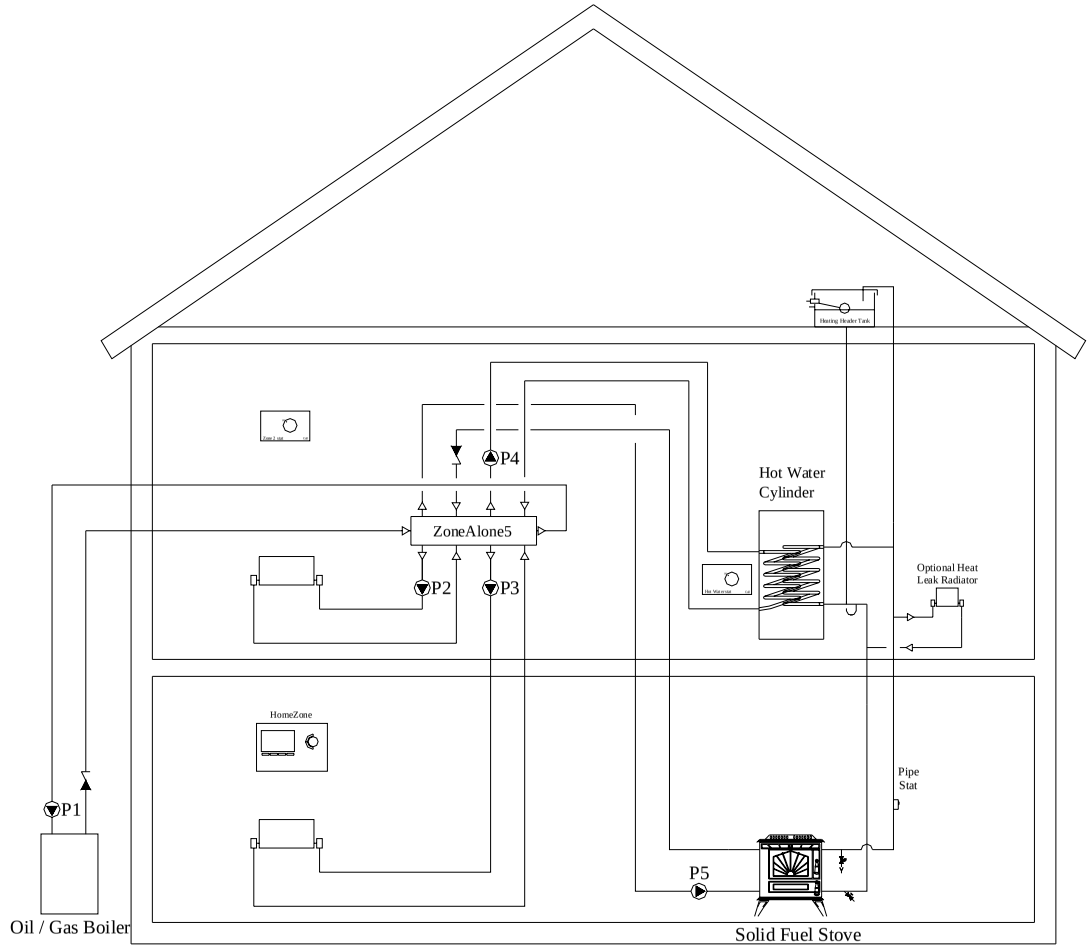
Example Schematic showing a ZoneAlone7 interconnecting 2 Oil Boilers, 4 Radiator Zones and a DHW Zone

SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e-mail: info@systemlink.ie

Scale: NTS	Rev: ---	Drawn: --	Date: -------

EXAMPLE 10: Heating Schematic

ZoneAlone 5, 1 Oil Boiler, 1 Solid Fuel Stove, 2 Radiator Zones, 1 DHW Zone (Option 1: 4 Pipe System)
(Please refer to Electrical Schematic 3 for wiring with SystemLex or 11 for wiring with HomeZone)



Information

Notes:

LEGEND

- Motorised Valve
- Isolating Valve
- Safety Valve
- Non Return Valve
- Pressure Refief Valve
- Circulating Pump
- Temperature Relief Valve
- Pressure Regulating Valve
- Flow Regulating Valve
- Pressure Reducing Valve
- Temperature Mixing Valve
- Automatic Air Valve
- Pressure Guage
- Temperature Guage
- Temperature Sensor
- Direction Arrow
- Strainer
- DW Pressurisation Pump
- Drain Cock

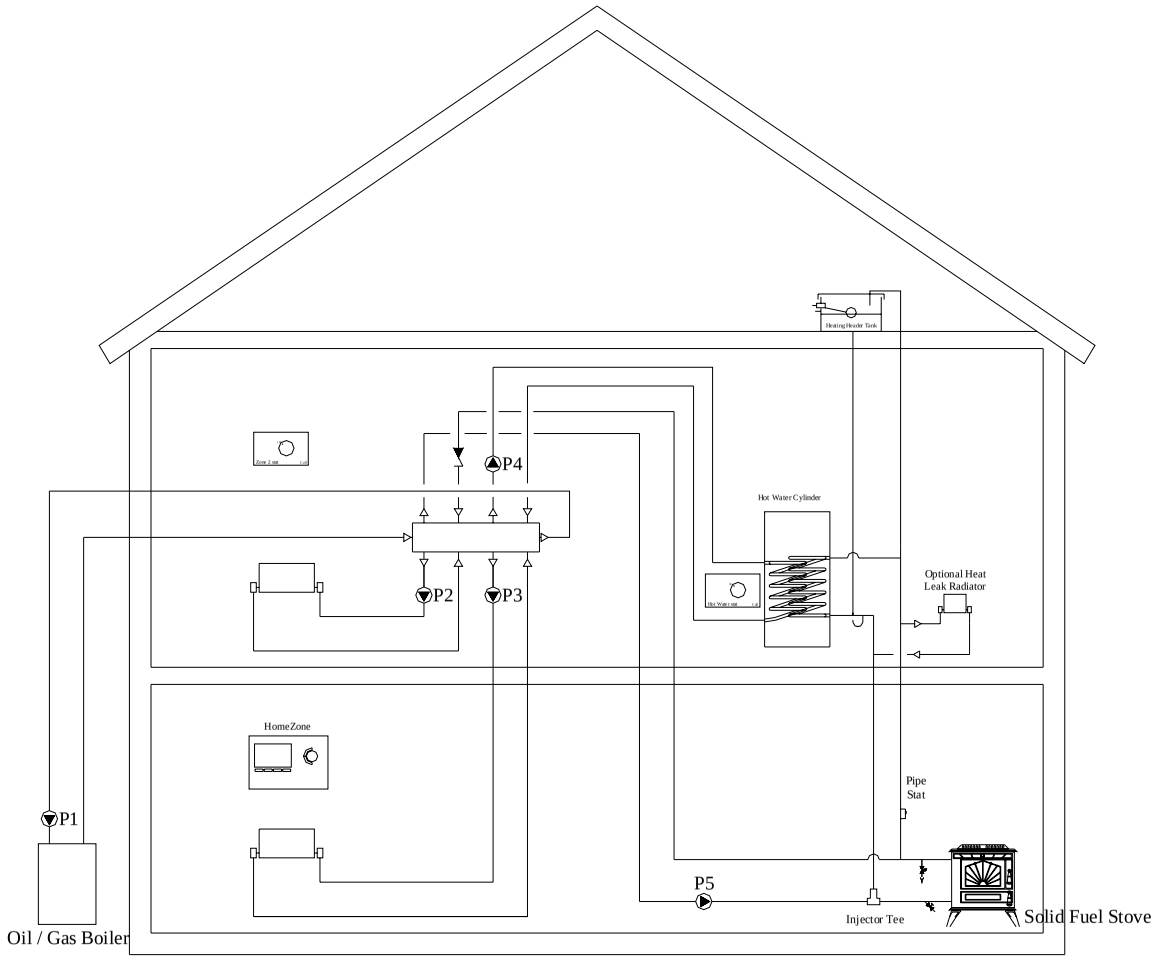
Example Schematic showing a ZoneAlone5 interconnecting an Oil Boiler with Solid Fuel Stove (4-Pipe), 2 Radiator Zones and a DHW Zone

SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e-mail: info@systemlink.ie

Scale: NTS	Rev: ---	Drawn: --	Date: -------

EXAMPLE 11: Heating Schematic

ZoneAlone 5, 1 Oil Boiler, 1 Solid Fuel Stove, 2 Radiator Zones, 1 DHW Zone (Option 2: 2 Pipe System)
(Please refer to Electrical Schematic 3 for wiring with SystemLex or 11 for wiring with HomeZone)



Information
Notes:

LEGEND

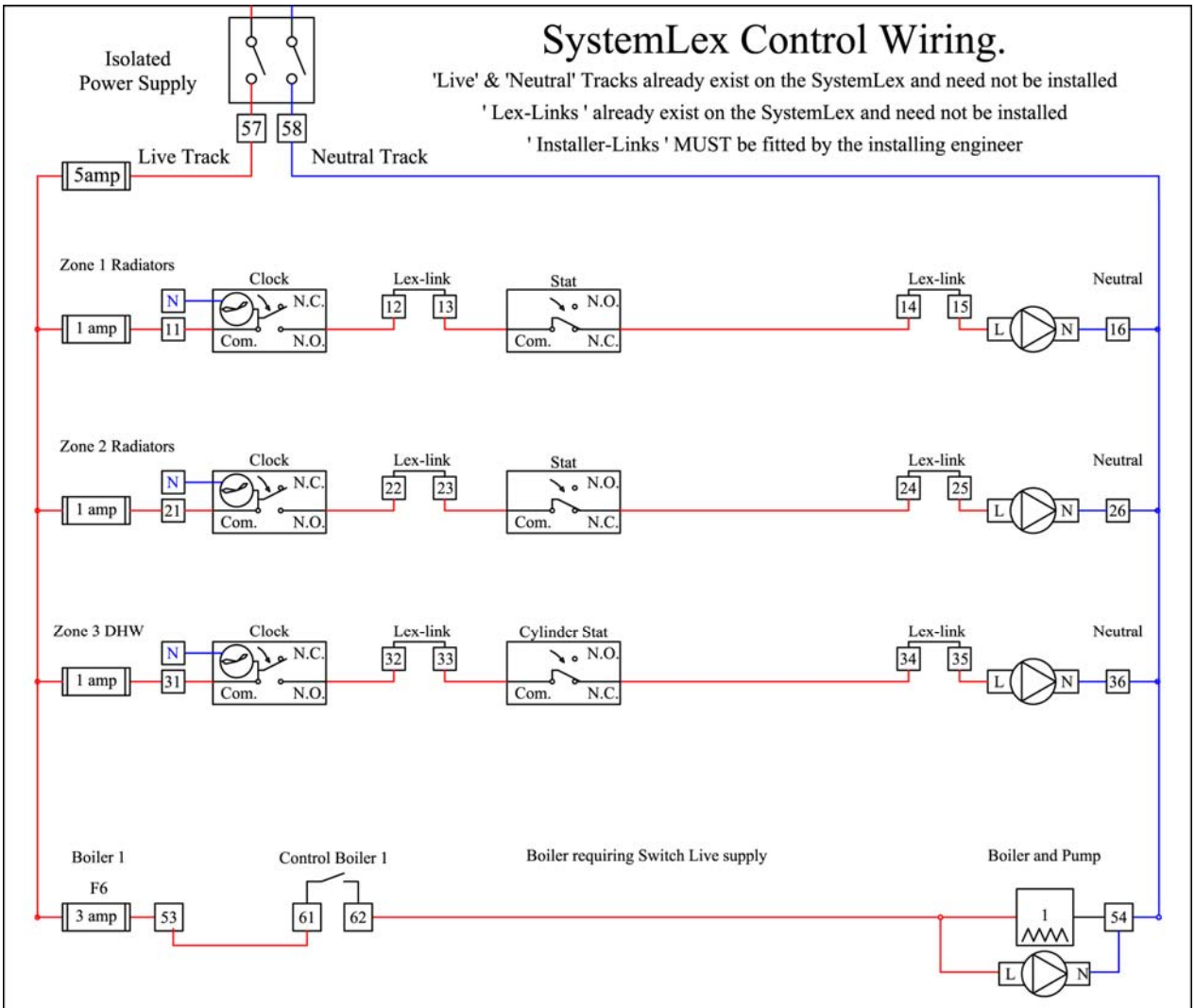
Motorised Valve	Circulating Pump	Temperature Mixing Valve	Direction Arrow
Isolating Valve	Temperature Relief Valve	Automatic Air Valve	Strainer
Safety Valve	Pressure Regulating Valve	Pressure Guage	DW Pressurisation Pump
Non Return Valve	Flow Regulating Valve	Temperature Guage	Drain Cock
Pressure Refief Valve	Pressure Reducing Valve	Temperature Sensor	

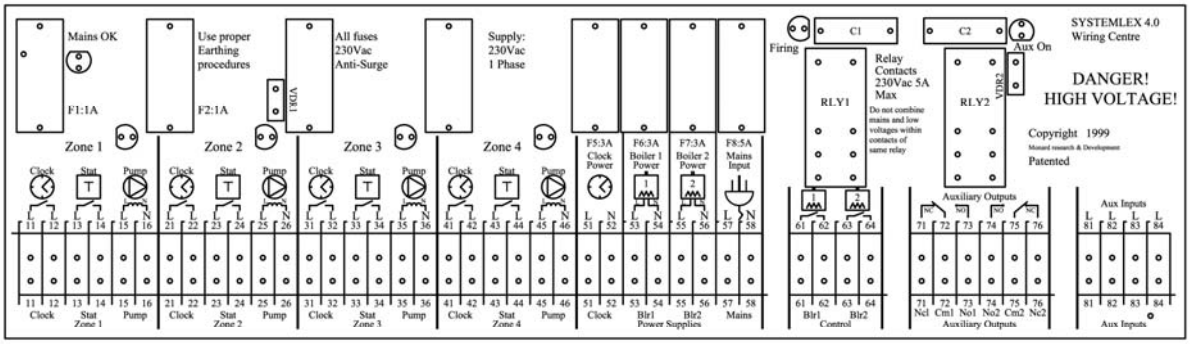
Example Schematic showing a ZoneAlone5 interconnecting an Oil Boiler with Solid Fuel Stove (2-Pipe), 2 Radiator Zones and a DHW Zone

SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e-mail: info@systemlink.ie

Scale: NTS	Rev: ---	Drawn: --	Date: -------

ELECTRICAL SCHEMATICS





SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e:mail, info@systemlink.ie
e:mail, info@systemlink.co.uk

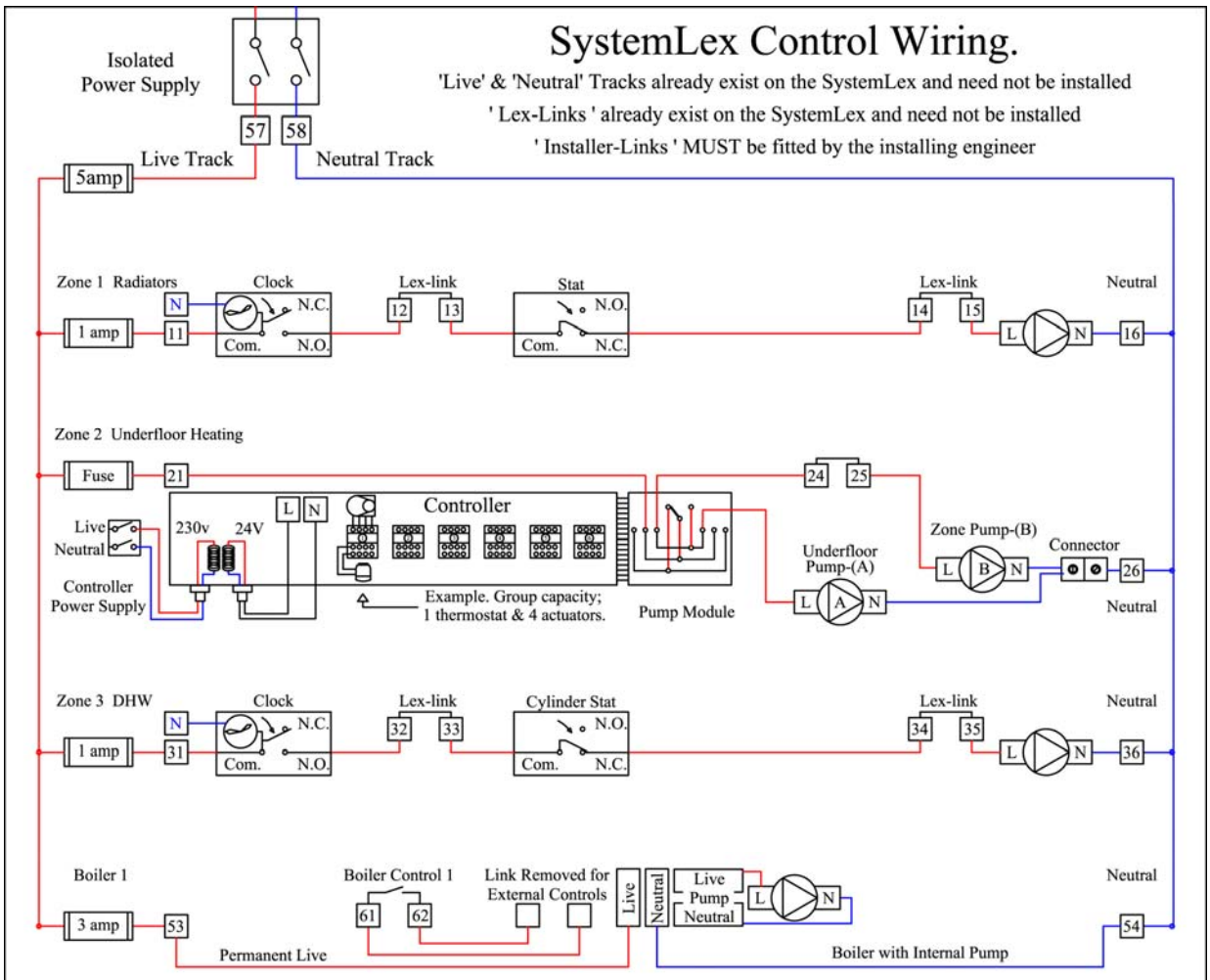
Example - Controls Wiring Schematic with SystemLex
1 Oil Boiler, 2 Radiator Zones, 1 DHW Zone

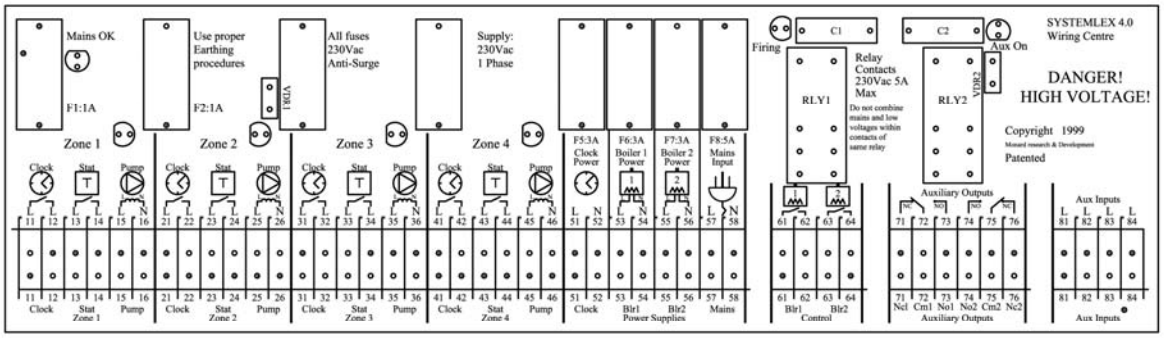
DETAILS	
Scale: NTS	Rev: 001
Drawing No. 00102010	

To aid diagram clarity, EARTH connections are not shown but must be installed in accordance with manufacturers instructions

Electrical Schematic 1:

1 Oil Boiler, 2 Radiator Zones, 1 DHW Zone wired through a SystemLex



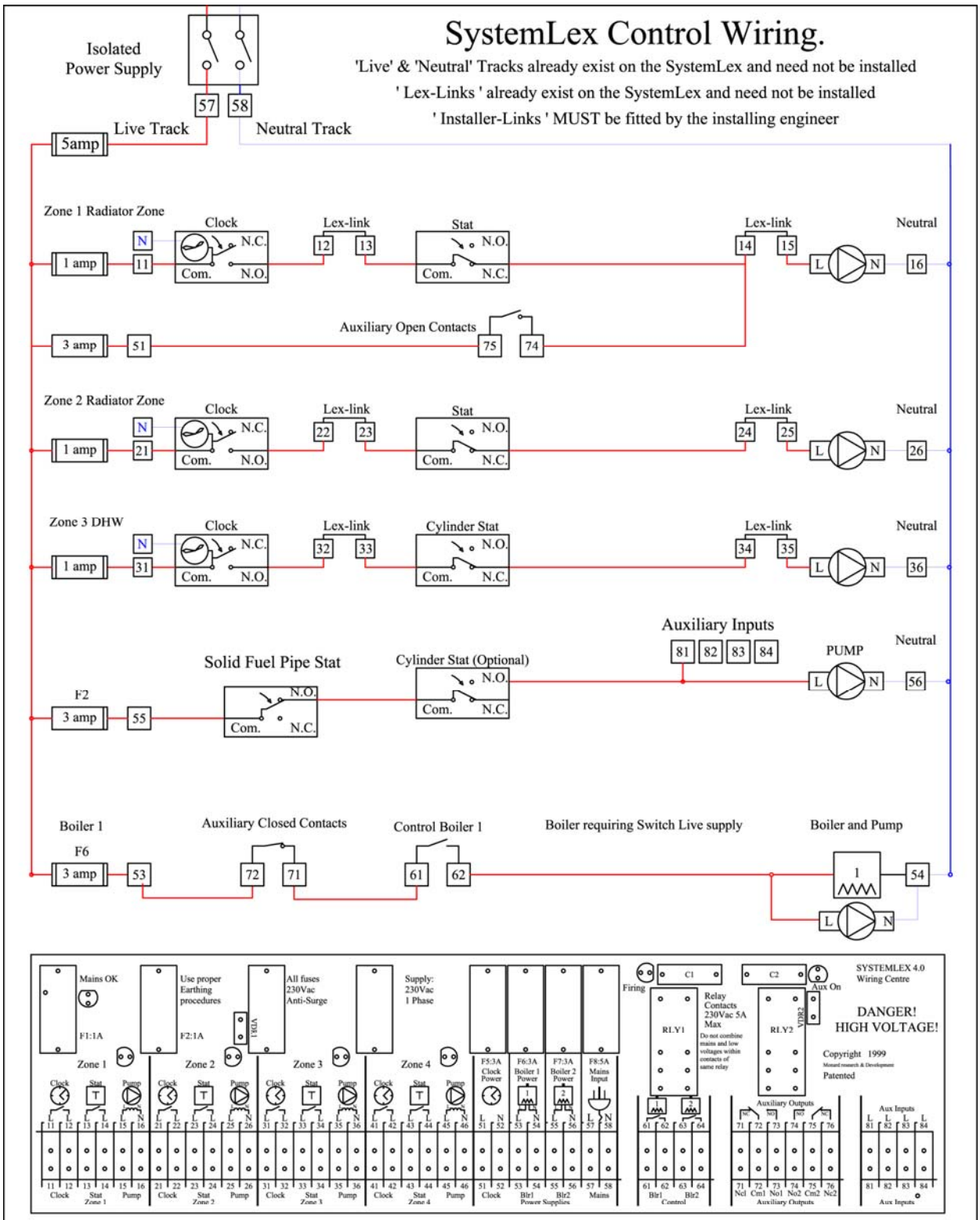


SystemLink C2 South City Business Centre, Tallaght, Dublin 24 Tel: 00-353-(0)1 4031200 Fax: 00-353-(0)1 4137777 e:mail, info@systemlink.ie e:mail, info@systemlink.co.uk	Example - Controls Wiring Schematic with SystemLex 1 Gas Boiler, 1 Radiator Zone, 1 Underfloor Zone, 1 DHW Zone	DETAILS Scale: NTS Rev: 001 Drawing No. 01001110

To aid diagram clarity, EARTH connections are not shown but must be installed in accordance with manufacturers instructions

Electrical Schematic 2:

1 Gas Boiler, 1 Radiator Zone, 1 Underfloor Zone, 1 DHW Zone wired through a SystemLex



SystemLink C2 South City Business Centre, Tallaght, Dublin 24 Tel: 00-353-(0)1 4031200 Fax: 00-353-(0)1 4137777 e:mail, info@systemlink.ie e:mail, info@systemlink.co.uk	Example - Controls Wiring Schematic with SystemLex 1 Oil Boiler, 1 Solid Fuel Stove, 2 Radiator Zones, 1 DHW Zone. Solid Fuel Heat Disapation to Largest Rad Zone and also Lock-out of Boiler	DETAILS Scale: NTS — Rev: 001 Drawing No. 00112010

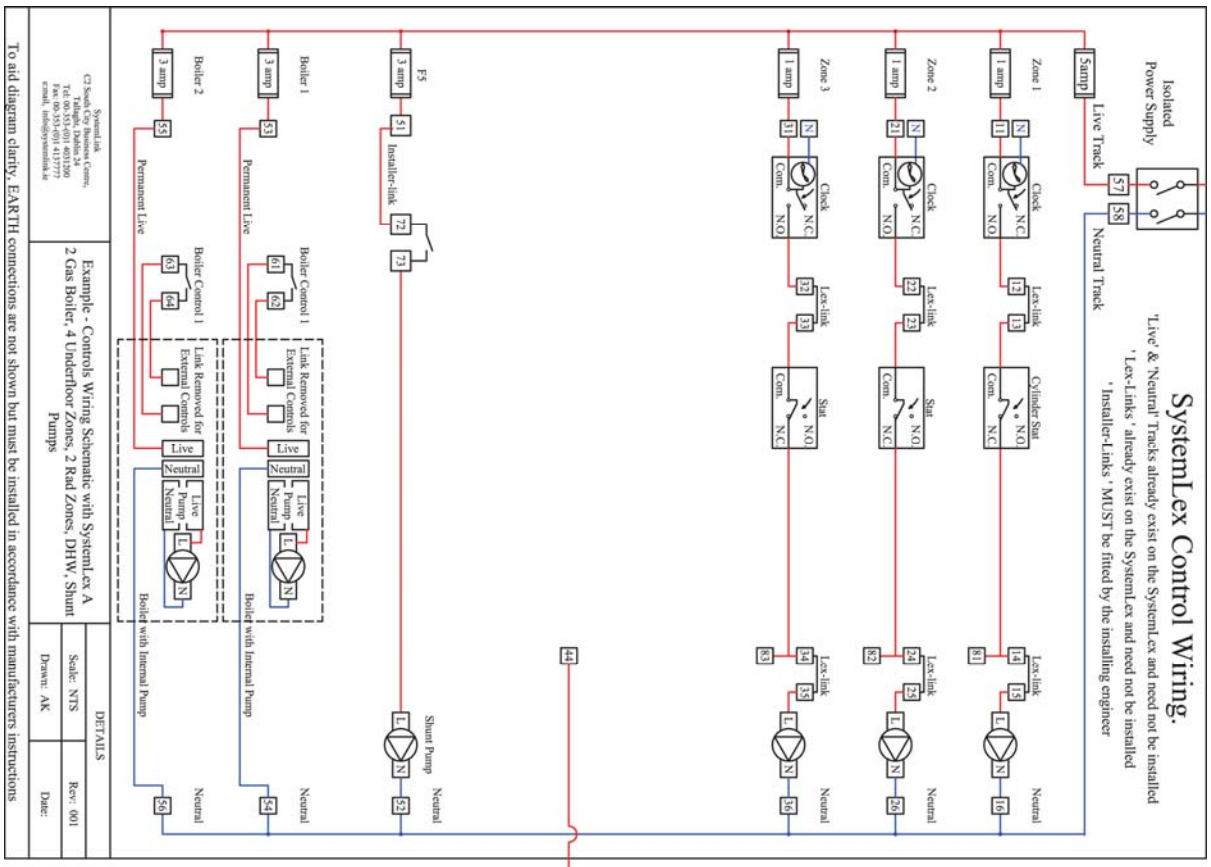
To aid diagram clarity, EARTH connections are not shown but must be installed in accordance with manufacturers instructions

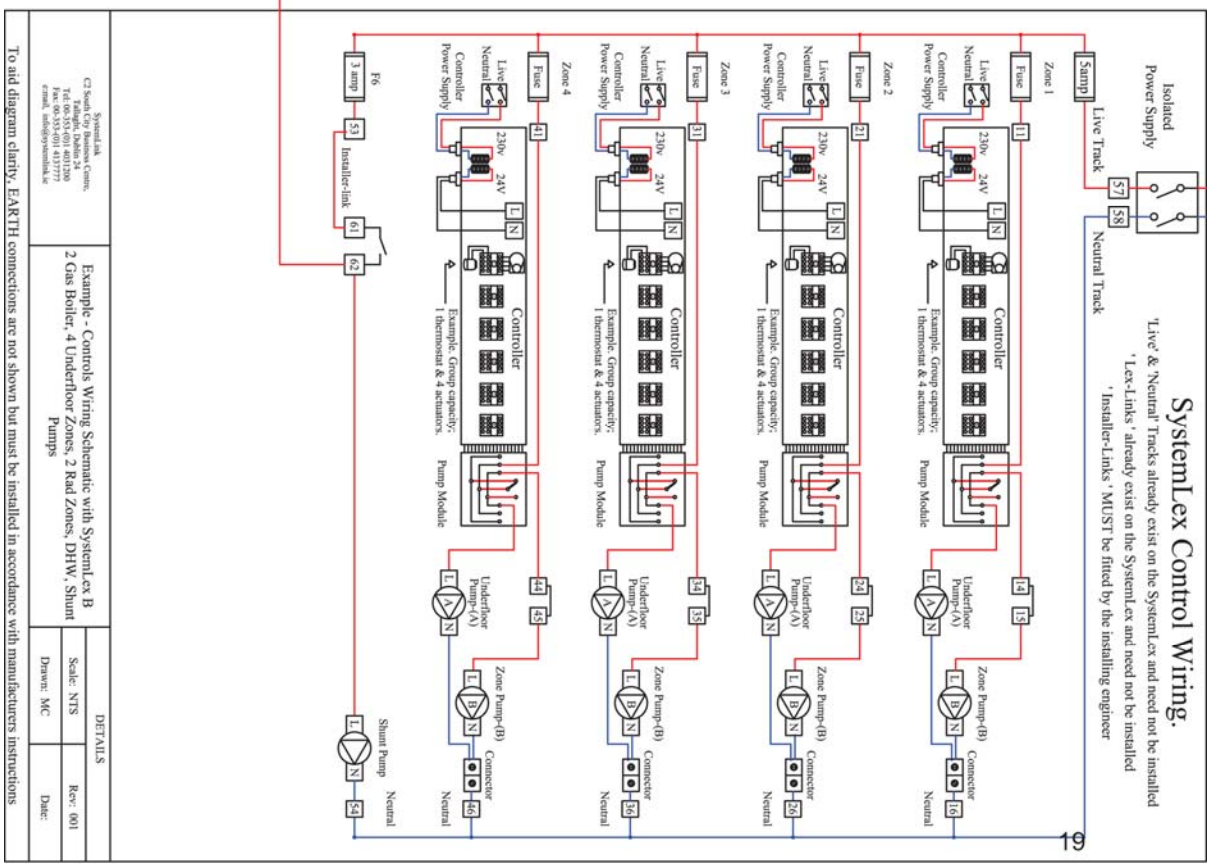
Electrical Schematic 3:

1 Oil Boiler, 1 Solid Fuel Stove, 2 Radiator Zones, 1 DHW Zone wired through a SystemLex

Electrical Schematic 4:

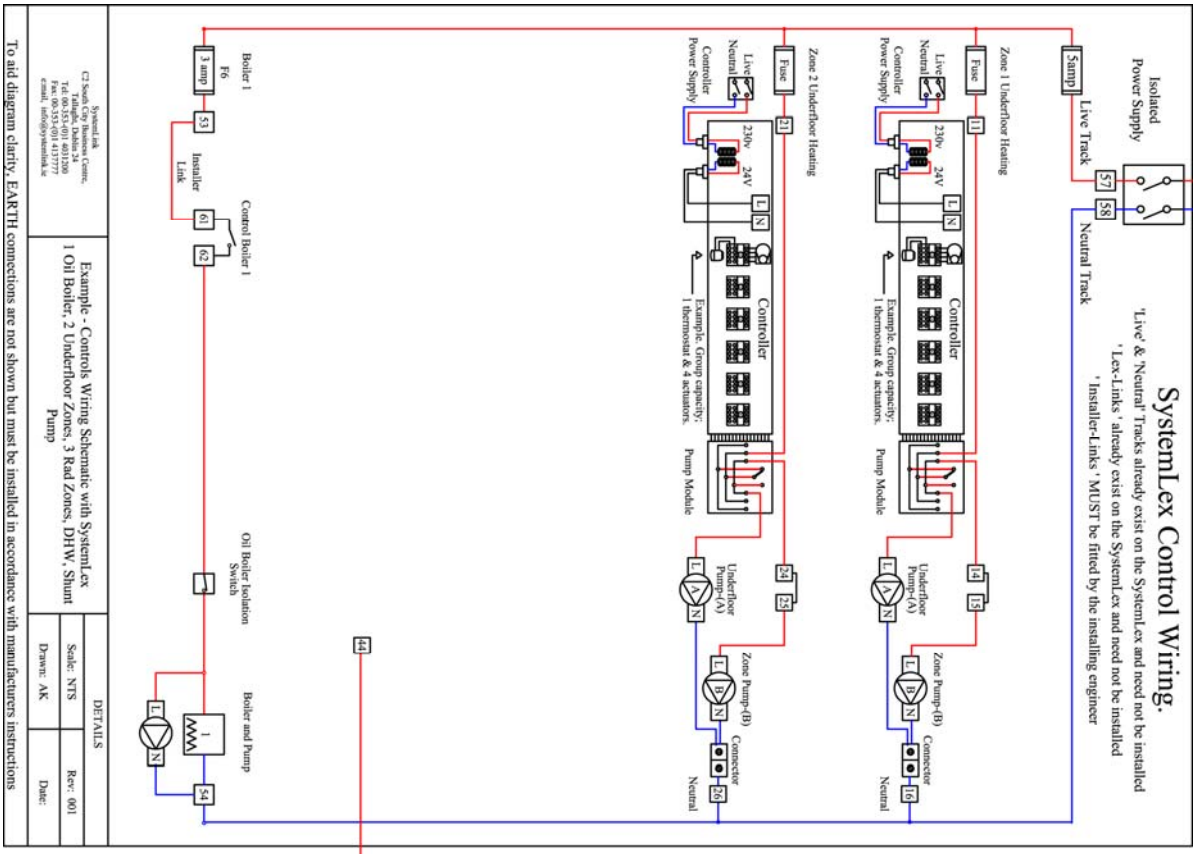
2 Gas Boilers, 2 Rad Zones, 4 Underfloor Zones, DHW wired through two SystemLex's

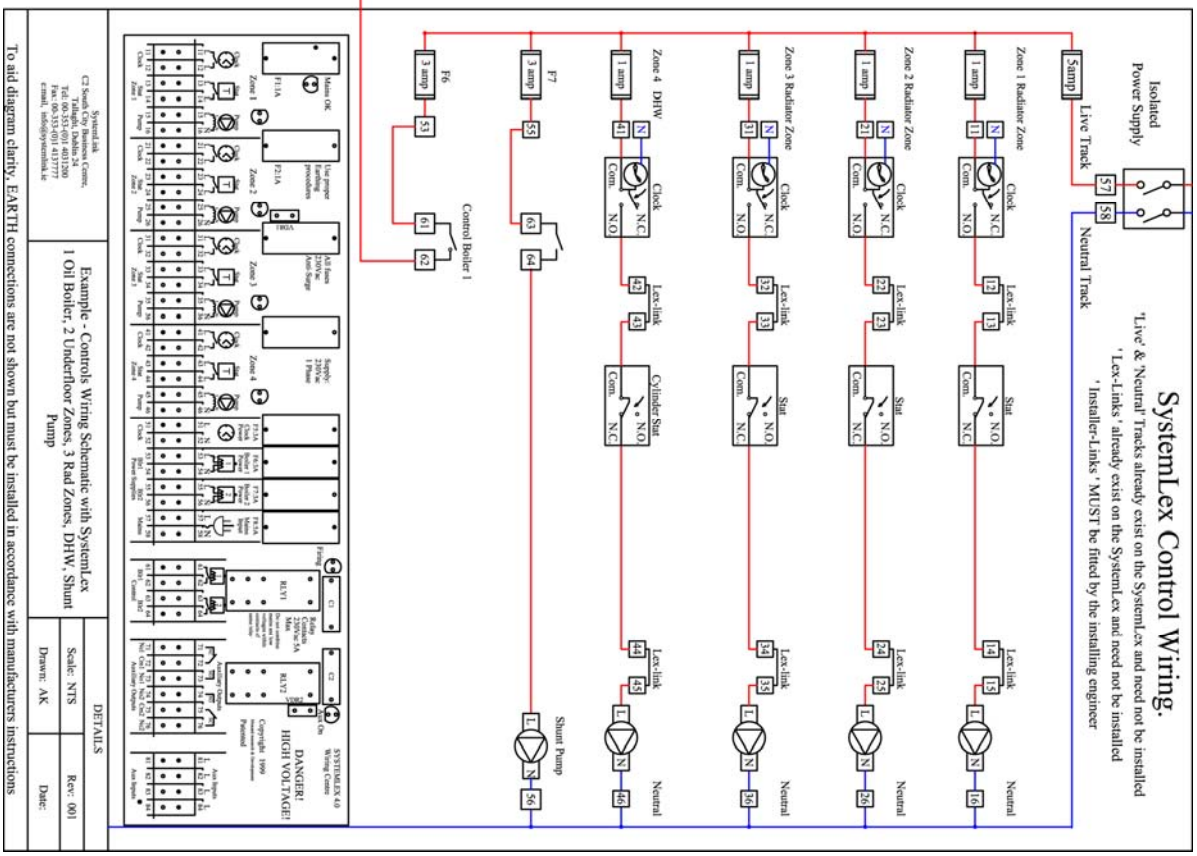


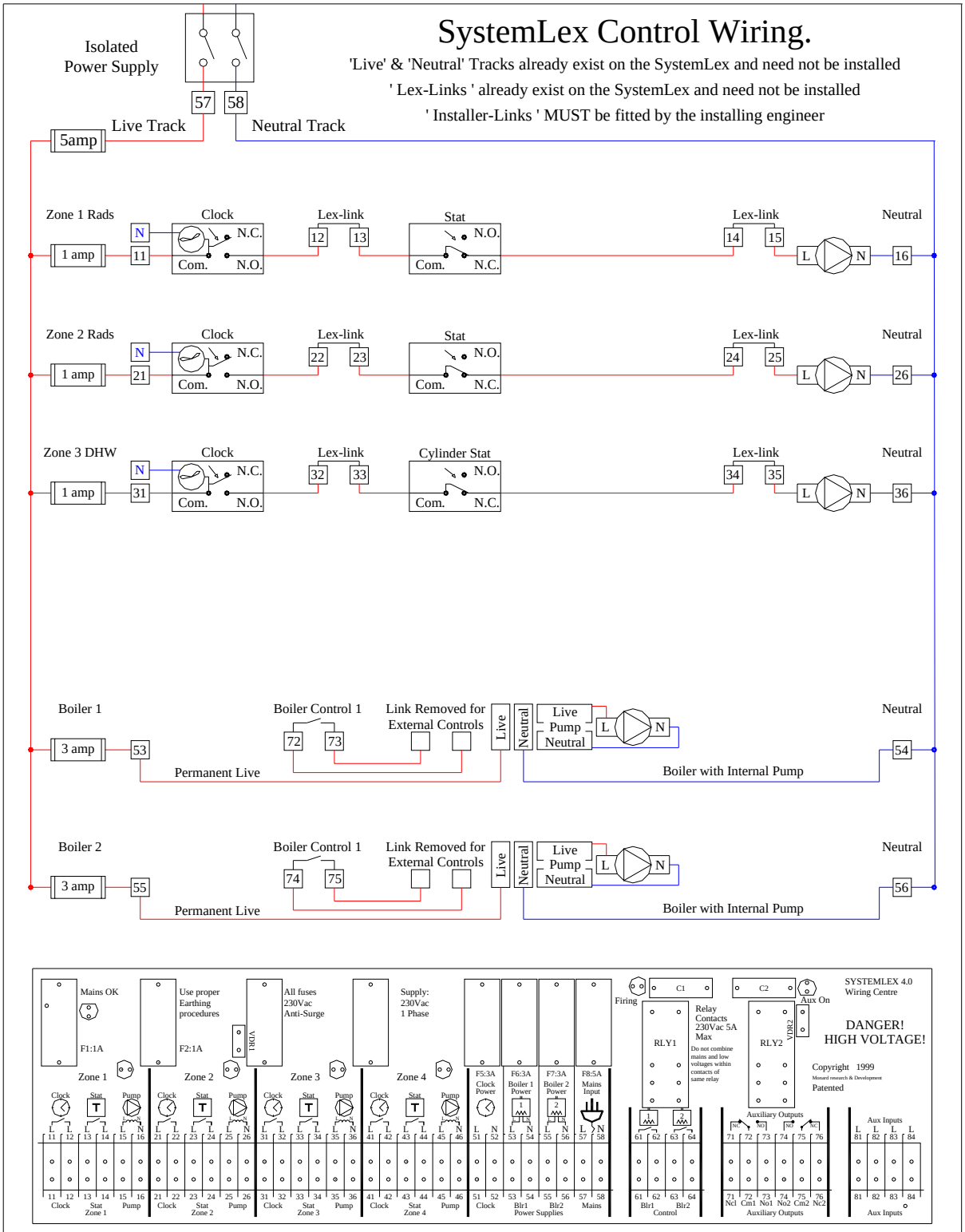


Electrical Schematic 5:

Oil Boiler, 3 Radiator Zones, 2 Underfloor Zones, DHW, Shunt Pump wired through two SystemLex's







SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e:mail, info@systemlink.ie

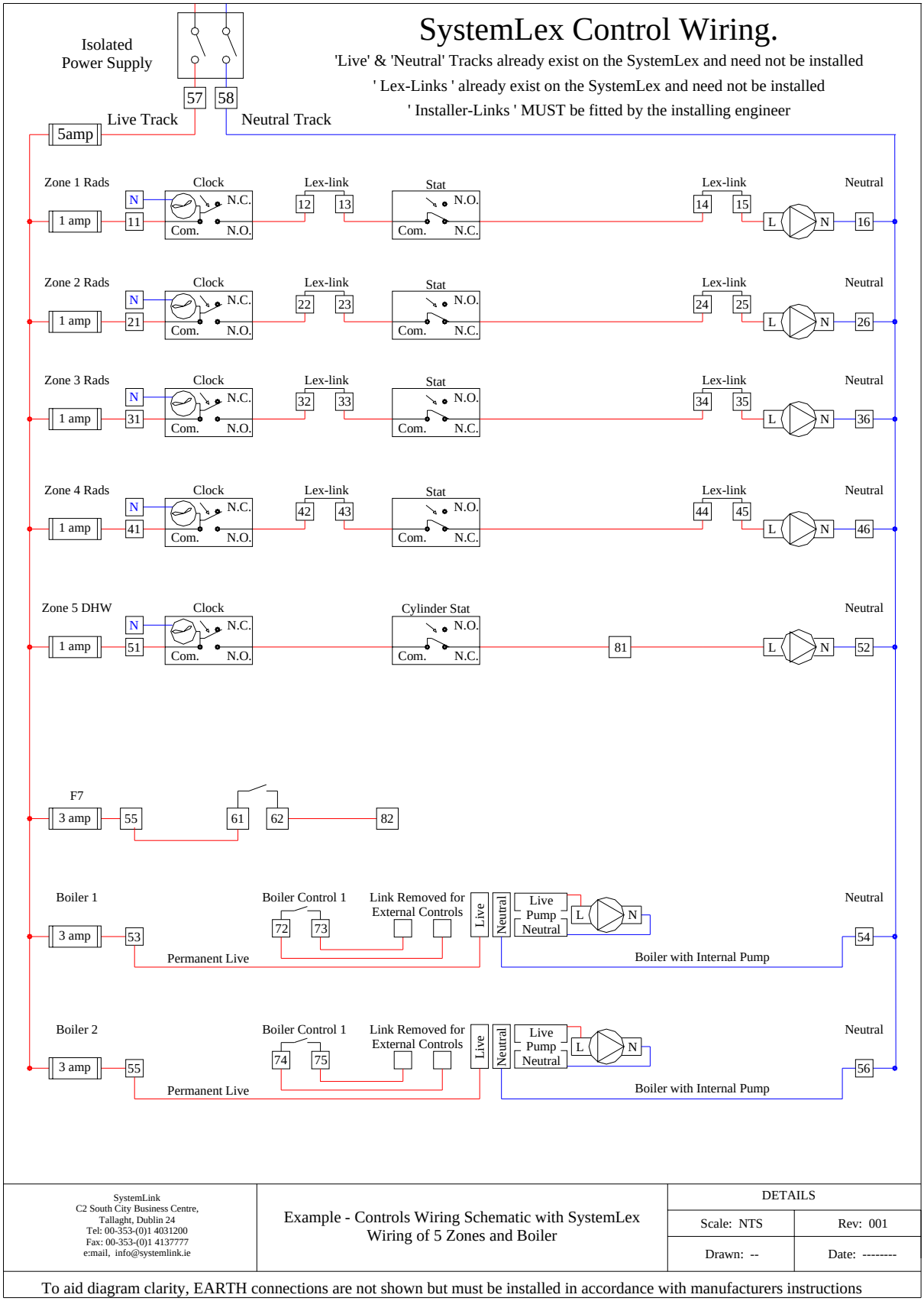
Example - Controls Wiring Schematic with SystemLex
Wiring of 3 Zones and 2 Boilers

DETAILS

Scale: NTS	Rev: 001
Drawn: --	Date: --------

To aid diagram clarity, EARTH connections are not shown but must be installed in accordance with manufacturers instructions

Electrical Schematic 6:
Oil Boiler, 3 Radiator Zones, 2 Underfloor Zones, DHW, Shunt Pump wired through two SystemLex's



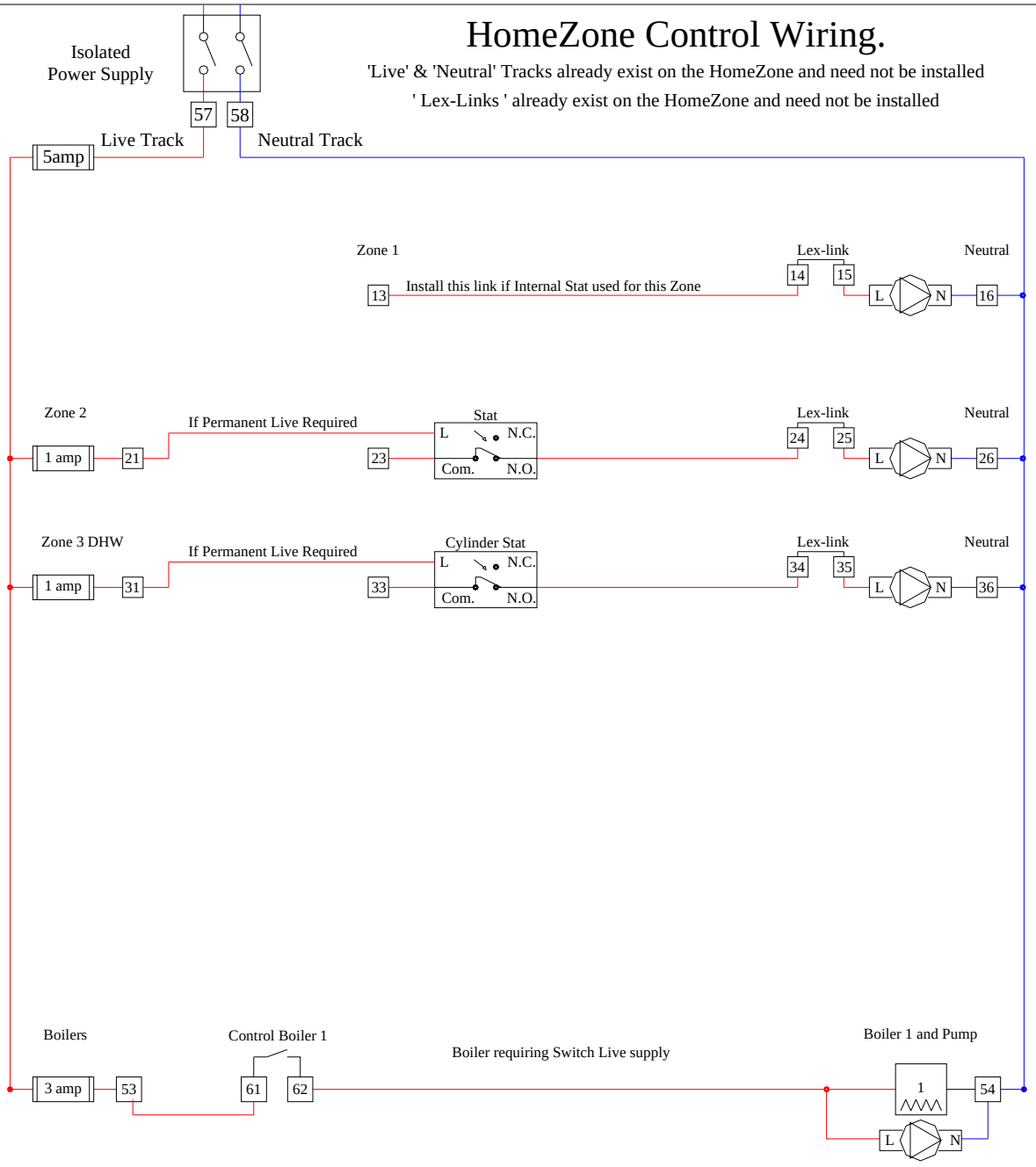
SystemLink C2 South City Business Centre, Tallaght, Dublin 24 Tel: 00-353-(0)1 4031200 Fax: 00-353-(0)1 4137777 e:mail, info@systemlink.ie	Example - Controls Wiring Schematic with SystemLex Wiring of 5 Zones and Boiler	DETAILS Scale: NTS / Rev: 001 Drawn: -- / Date: --------

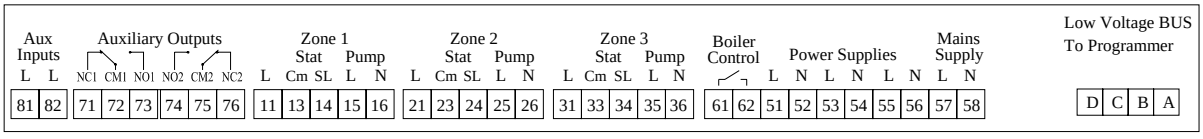
To aid diagram clarity, EARTH connections are not shown but must be installed in accordance with manufacturers instructions

HomeZone Control Wiring.

'Live' & 'Neutral' Tracks already exist on the HomeZone and need not be installed

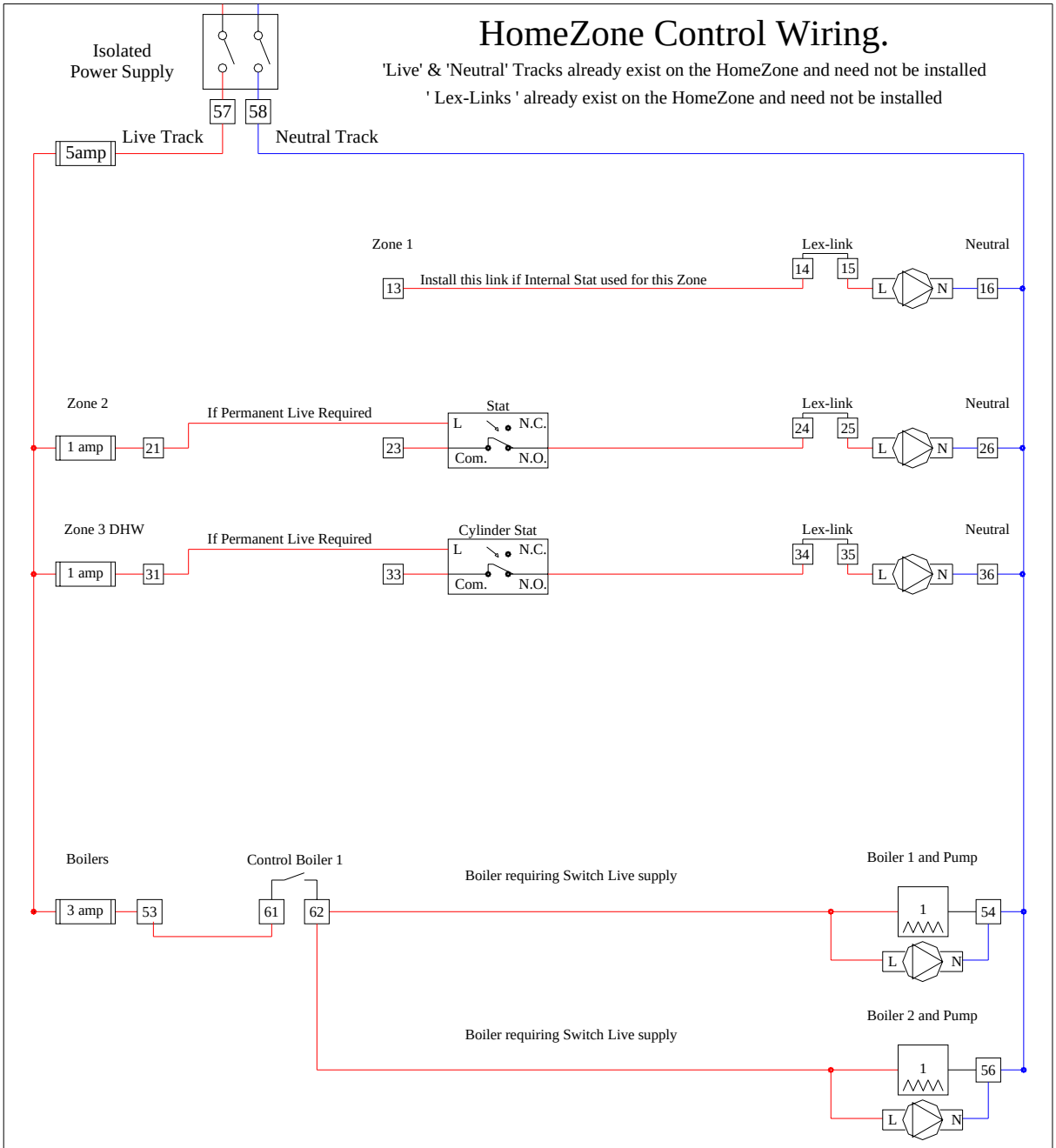
' Lex-Links ' already exist on the HomeZone and need not be installed





SystemLink C2 South City Business Centre, Tallaght, Dublin 24 Tel: 00-353-(0)1 4031200 Fax: 00-353-(0)1 4137777 e:mail, info@systemlink.ie	Example - Controls Wiring Schematic with HomeZone 3-Channel Time/Temp Controller	DETAILS Scale: NTS / Rev: 001 Drawn: -- / Date: -------

To aid diagram clarity, EARTH connections are not shown but must be installed in accordance with manufacturers instructions



SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e:mail, info@systemlink.ie

Example - Controls Wiring Schematic with HomeZone
3-Channel Time/Temp Controller

DETAILS	
Scale: NTS	Rev: 001
Drawn: --	Date: --------

To aid diagram clarity, EARTH connections are not shown but must be installed in accordance with manufacturers instructions

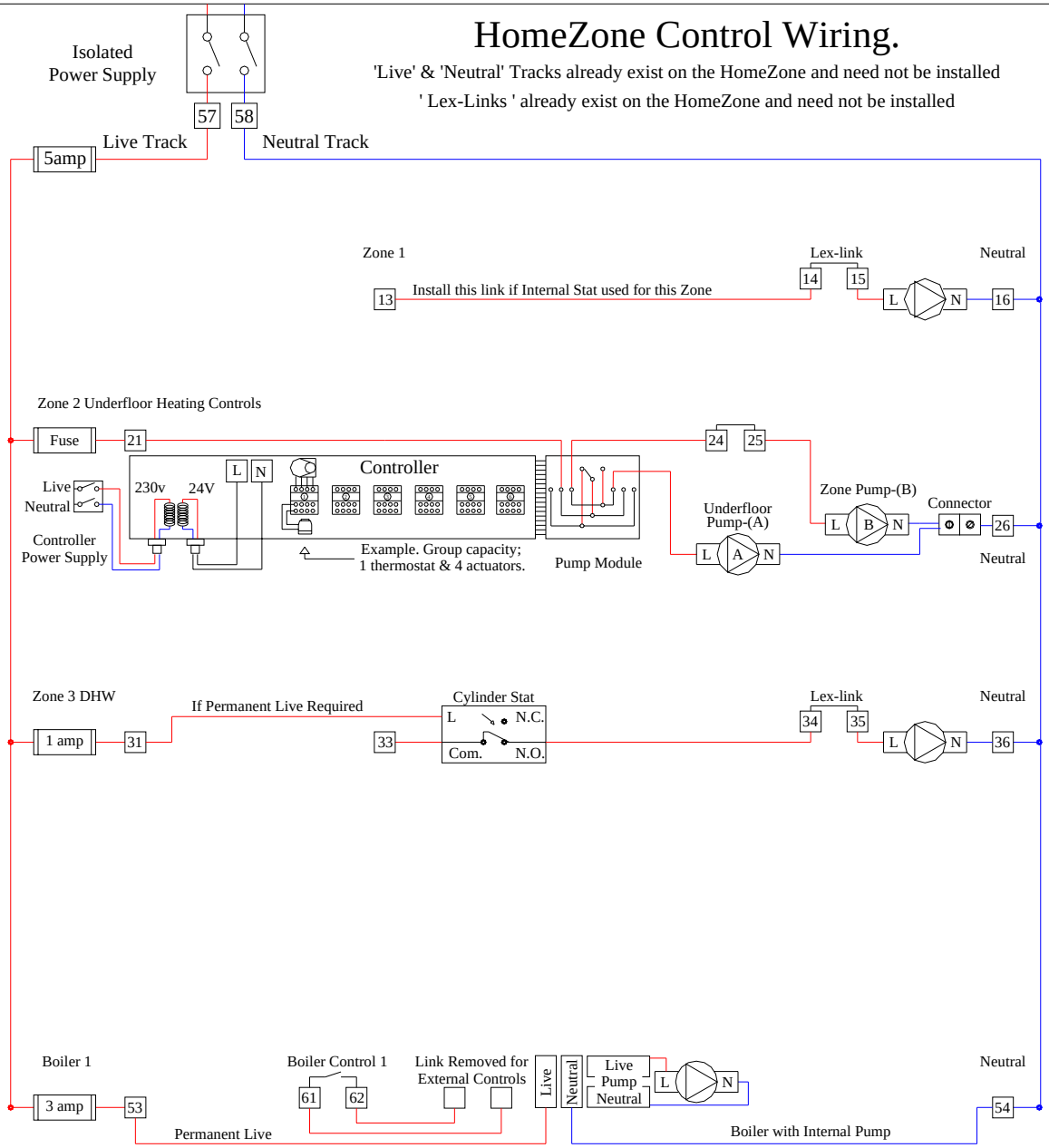
Electrical Schematic 9:

2 X Oil Boilers, 2 Radiator Zones, DHW wired through a HomeZone

HomeZone Control Wiring.

'Live' & 'Neutral' Tracks already exist on the HomeZone and need not be installed

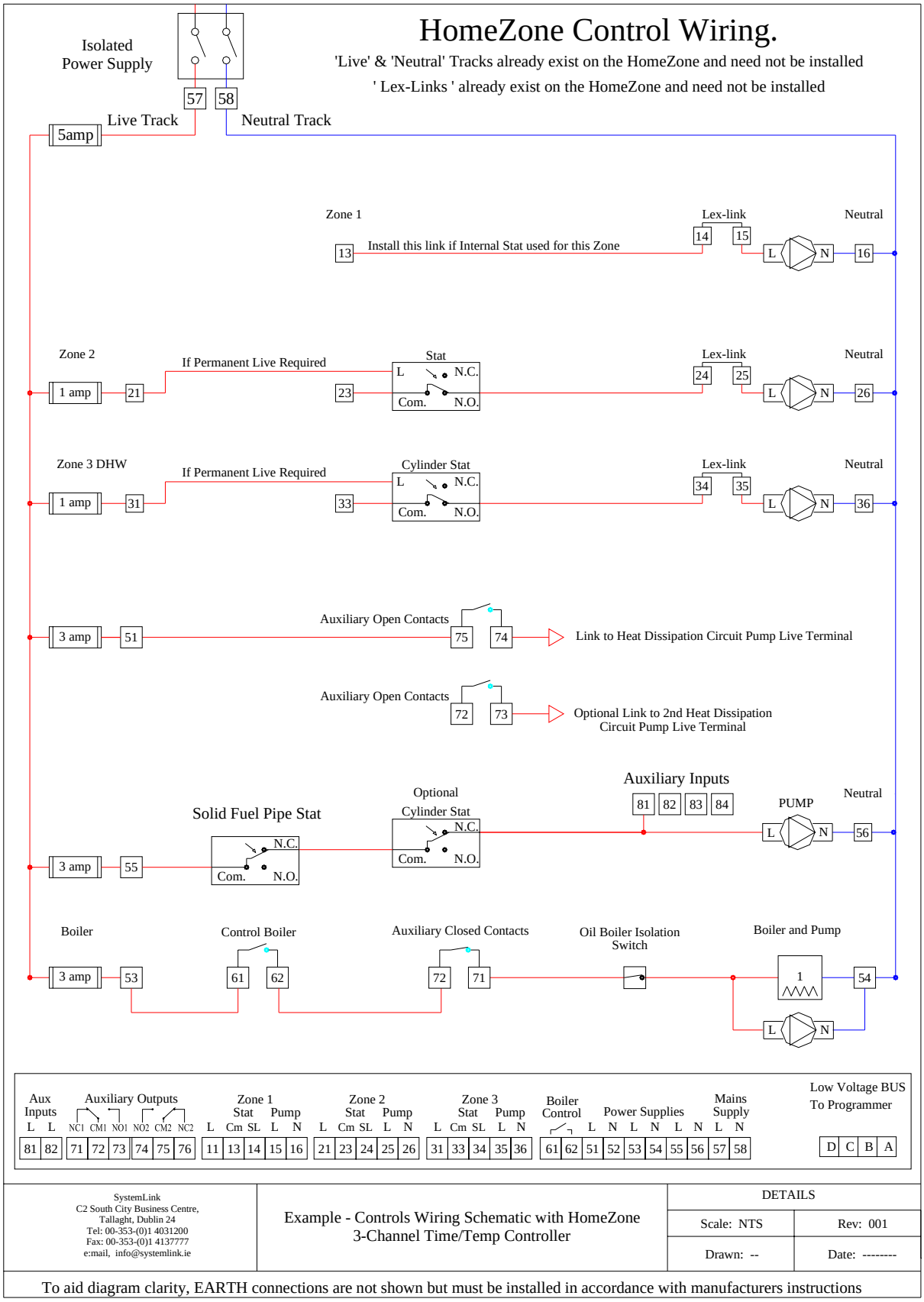
' Lex-Links ' already exist on the HomeZone and need not be installed



Aux Inputs		Auxiliary Outputs						Zone 1					Zone 2					Zone 3					Boiler Control	Power Supplies								Mains Supply		Low Voltage BUS To Programmer
L	L	NC1	CM1	NO1	NO2	CM2	NC2	L	Stat Cm	Stat SL	Pump L	Pump N	L	Stat Cm	Stat SL	Pump L	Pump N	L	Stat Cm	Stat SL	Pump L	Pump N												
81	82	71	72	73	74	75	76	11	13	14	15	16	21	23	24	25	26	31	33	34	35	36	61	62	51	52	53	54	55	56	57	58	D C B A

SystemLink C2 South City Business Centre, Tallaght, Dublin 24 Tel: 00-353-(0)1 4031200 Fax: 00-353-(0)1 4137777 e:mail, info@systemlink.ie	Example - Controls Wiring Schematic with HomeZone 3-Channel Time/Temp Controller	DETAILS Scale: NTS / Rev: 001 Drawn: -- / Date: -------

To aid diagram clarity, EARTH connections are not shown but must be installed in accordance with manufacturers instructions



SystemLink
C2 South City Business Centre,
Tallaght, Dublin 24
Tel: 00-353-(0)1 4031200
Fax: 00-353-(0)1 4137777
e:mail, info@systemlink.ie

Example - Controls Wiring Schematic with HomeZone 3-Channel Time/Temp Controller

DETAILS	
Scale: NTS	Rev: 001
Drawn: --	Date: --------

To aid diagram clarity, EARTH connections are not shown but must be installed in accordance with manufacturers instructions

Electrical Schematic 11:
Solid Fuel Boiler, Oil Boiler, 2 Radiator Zones, DHW wired through a HomeZone

NOTES

SALES OFFICE:

SystemLink Limited
Unit C2
South City Business Centre
Tallaght
Dublin 24
Republic of Ireland

systemlink
energy saving solutions

(353) 1 403 1200 | (353) 1 413 7777 | www.systemlink.ie | info@systemlink.ie