



Introduction

Levolux designs, manufactures and installs a wide range of blinds and shading systems for both internal and external applications. With the move towards naturally ventilated buildings, the optimisation of natural daylight and the use of clear glazing, the installation of effective shading systems has assumed increasing importance.

An increasing number of these shading systems are motorised, allowing them to be easily adjusted in response to the prevailing conditions. More frequently, a control system is also being specified to allow the shading system to react immediately to changes in daylight, ensuring the optimum control of both light and solar gain.

In response to these requirements, Levolux has developed a range of electronic control systems, including:

- The Levolux Multicontroller, a highly sophisticated and flexible control system for the current generation of environmentally friendly buildings.
- The Levolux remote control system, and custom control systems, using programmable logic controllers (PLCs).

The Levolux Multicontroller

The Levolux Multicontroller employs the most up to date microprocessor technology for the control of a wide range of solar shading systems. It is capable of operating up to 4 independent groups of mixed blind types, with signals being received from up to 11 linear sensors and 2 anemometers. In addition, volt free contacts allow signals to be received from manual switches, fire alarms and the Building Management System. The Levolux Multicontroller also incorporates a digital clock, allowing the control of the shading systems to be switched from manual to automatic control, and vice-versa, at user defined times.

Standard software is available for the control of roller blinds, venetian blinds and the Skyvane rack arm system. In addition, software can be modified or developed to meet the specific requirements of a project.

The system is easy to use, with all inputs and commands being entered via the digital keypad, using a simple menu system. The configuration and status of the shading systems that are being controlled can be observed on the backlit display.

In addition to the Multicontroller, Levolux is also able to supply a wide range of other control components including photocells, anemometers and relays, ensuring that the specific requirements of a project can be met.

The Levolux Remote Control System

The Levolux Remote Control System has been developed to control any type of shading system, including vertical

blinds, venetian blinds, roller blinds, Slimgroove room darkening blinds and the Skyvane rack arm system.

The system is comprised of a radio receiver and transmitter, allowing two groups of blinds to be operated. The transmitter has a range of up to 300m, making it suitable for both residential and commercial applications, including, for example, the operation of blinds in an atrium.

The transmitter is only 100 x 50 x 25mm deep and incorporates four buttons: two to raise / lower (open / close) one group of blinds and two to operate the other group of blinds. The transmitter can be set up to provide momentary latching or timed pulse operation, to suit the particular requirements of the project.

The Levolux Remote Control System incorporates a high security protocol which ensures that it is not affected by other radio control devices and cannot be willfully interfered with.

Components that are to be used in North America will have the relevant UL & FCC ratings.

Bespoke control systems

Levolux is able to provide bespoke control systems, to meet the specific requirements of a project. Using programmable logic controllers (PLCs), a control system can be quickly developed and programmed to meet requirements that are not addressed by the Levolux Multicontroller.

Programmes for PLCs can be input directly via buttons on the PLC itself, or can be written on a computer and downloaded into the PLC. The ease of programming means that a control system can be easily modified to take account of changes that might occur following the installation of the original programme.

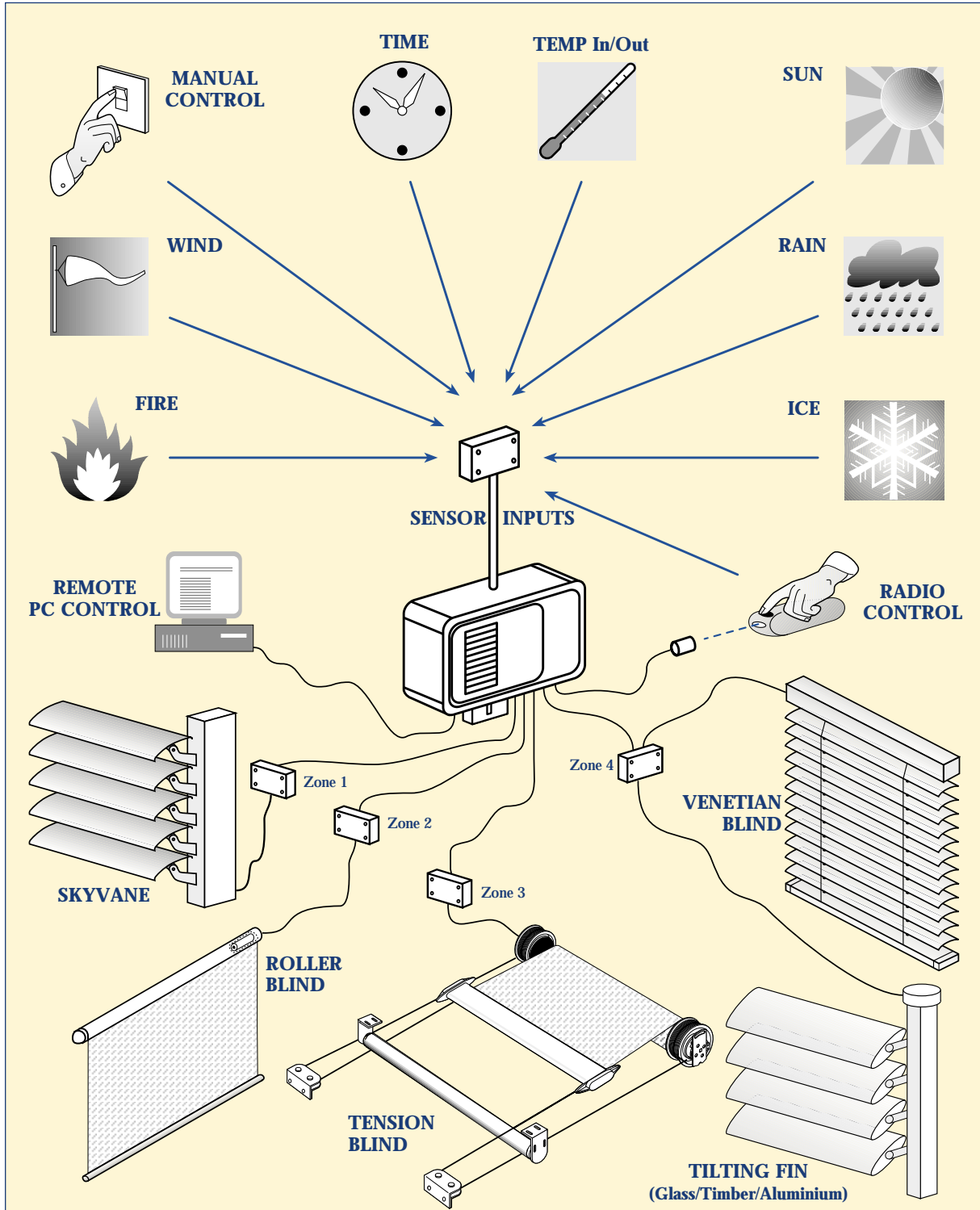
Examples of bespoke PLC control systems include:

- A control system to adjust venetian blind slats to a number of pre-set positions, depending upon external light levels.
- The use of optocouplers to count motor revolutions, ensure that roller blinds are always set to the same level.
- The programming of PLCs to initiate a number of blind functions, the action being dependent upon the type of signal being received from the Building Management System.
- Operation of louvres to their maximum 'glare-free' opening by calculating solar geometry minute-by-minute

Technical support

Full technical support is provided by Levolux. This includes the preparation of wiring diagrams, coordination with the electrical and M&E contractors and the on-site commissioning of the control systems.



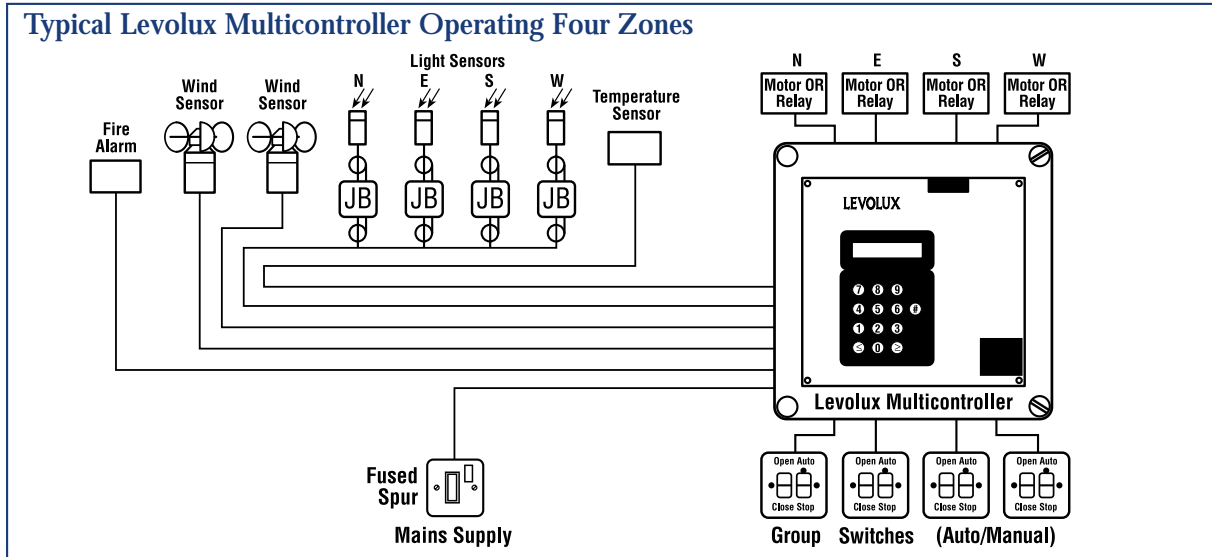


Standard Multicontroller software allows the automatic operation of blinds in the following configurations:-

- Roller and tensioned systems – fabrics deployed and retracted automatically.
- Skyvane (non-retractable blinds) – continuous adjustments of slats to maintain a specific light level.
- Venetian and Vertical blinds – open, closed and up to 3 intermediate tilt positions.
- Glass/Timber/Aluminium fins – continuous adjustment of slats to maintain a specific light level



Typical Levolux Multicontroller Operating Four Zones



Levolux Multicontroller Specification

Supply	230VAC 50Hz (Fuse to 13 or 16A) 2A to drive internal circuits 10A total for motor drives	Outputs	8 Relays	Blind Group 230VAC 16(4) A (fused to 2A)
Enclosure	IP54 (IP65 available) Polycarbonate with ABS base 280(h) x 280(w) x 154(d) mm Incorporating keypad and 80 character lcd display		4 Relays	Auto Indication direct 5V led drive and 24VAC/DC 5A
Inputs	11 Inputs Analogue 0-5V 12 bit resolution Light, Temperature 2 Inputs Pulse 5V, 0-380pps 8 bit resolution Wind 1 Input 5V Alarm - Fire, Intruder 4 Inputs Auto/Manual Switch 8 Inputs Volt free contacts	Timeclock	7 day timeclock - 6 operations per group per week	
		Communication	2 x RS485 non-isolated serial ports (for special projects)	
		Controlling	4 groups of blinds of mixed types. Roller and tension roller blinds, venetian and vertical blinds, skyvane and fins.	

In line with the policy of continuous product development Levolux reserves the right to alter specifications without prior notice.



For further information on Levolux sunscreening systems and effective ways to control light, heat and glare please contact:

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