PREMIUM SERIES

Designed & Manufactured
by ELECTRON SA

YOU SAY IT, WE MAKE IT!

CUSTOM-MADE
Wall-Mounted Multi-Functional Power Controllers

- Power Control for different kinds of loads in the same enclosure.
- Stage Power Controller with architectural capabilities.
- Architectural Power Controller with emergency capabilities.
- Compatibility with a large range of architectural control panels.
- Leading edge dimmers in power range from 1380W up to 5750W per channel.
- Three basic models with 3 to 48 channel capacity.

The PREMIUM Wall-Mounted Multi-Functional Power Controllers are developed, designed, and manufactured by ELECTRON SA.

The PREMIUM Controllers are designed not as simple dimmers, but as power control systems of multiple channels. Thus, they have features that make them ideal to use as stage power controllers, as architectural controllers, or both.

To be more precise, ELECTRON SA has developed independent Power Units with 1-4 channels, 6A-25A per channel, for different loads. More specifically, the Power Units are provided as Leading Edge Dimmers, Trailing Edge Dimmers, Relay Switches, Fluorescent Controllers, Sine Wave Dimmers, LED Drivers and DALI Drivers. ELECTRON SA offers a variety of types of Power Units with different channels, output loads etc.

Given the above, the PREMIUM are custom-made Wall-Mounted Multi-Functional Power Controllers. Every PREMIUM Controller is manufactured with Power Units according to the specific requirements of an application and its exact installation needs. Therefore, a PREMIUM Controller may incorporate, for instance, leading edge dimmers, relay switches and fluorescent controllers to meet particular lighting specifications.

This means that the PREMIUM Controllers are designed and developed in order to have control of an installation from one only PREMIUM enclosure, eliminating the need of having many different devices for controlling different loads.

The PREMIUM Series consists of three different models depending on the configuration (number and capacity) of Power Units in the same enclosure.
- Premium 79 is supplied with 12 Power Units,
- Premium 68 is supplied with 6 Power Units ,
- Premium 37 is supplied with 3 Power Units.

Thus, the PREMIUM Controllers are manufactured to provide great flexibility to meet your own control needs.

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NEW POWER UNITS WITH HYBRID RELAY SWITCHES
FOR PREMIUM 79-68-37 DIMMERS

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The new HYBRID RELAY SWITCH technology protects the relay's contacts from sparks created upon their activation and deactivation. Activating and pausing states are been handled by a Triac, which means that they occur on every zero cross of the AC power supply. In this way, both the high surge currents and the high voltage spikes are been reduced at the maximum possible level, while in the active state (ON state) the thermal losses are been reduced since the whole current is running through the relay.

Features – Technical specifications.

• Maximum contact protection on relay's activation and deactivation.
• Capable of withstanding high inrush currents up to 250A.
• Output activation always at zero cross of AC power supply.
• Output deactivation always at zero output current.
• Load protection against high surge currents.
• Connection capability of resistive, capacitive and inductive loads.
• No high voltage spikes when switching off inductive loads.
• Multiple choices in power and channels per unit.
• Negligible heat losses.
• Can be placed in all models, (37,68 and 79), of PREMIUM family.

The new Power Units with HYBRID RELAY SWITCHES are available in the following versions:

1. 4 x 6A. 1 pole relay.
2. 4 x 6A. 2 pole relay.
3. 3 x 10A. 1 pole relay.
4. 3 x 10A. 2 pole relay.
5. 2 x 16A. 1 pole relay.
6. 2 x 16A. 2 pole relay.
7. 4 x 16A. 1 pole relay. (Only for Premium 37)

| 4x6A. 2pole relay | 3x10A. 2pole relay | 2x16A. 2pole relay | 4x16A. 1pole relay |

PREMIUM 79-68-37 SERIES Of Multifunctional Custom Made Power Controllers
NEW POWER UNITS WITH TRAILINIG EDGE DIMMERS for:

■ LED lamps dimmable with Trailing Edge dimmers
■ CFLs and electronic transformers for Trailing Edge dimming
■ Designed and manufactured by ELECTRON SA

Available versions:

■ **Premium 79 with 24 channels x 6A per channel**
■ **Premium 79 with 36 channels x 4A per channel**
■ **Premium 79 with 48 channels x 3A per channel**

Available versions:

■ **Premium 68 with 12 channels x 6A per channel**

Available versions:

■ **Premium 37 with 12 channels x 3A per channel**
■ **Premium 37 with 9 channels x 4A per channel**
■ **Premium 37 with 6 channels x 6A per channel**

✔ *Trailing edge dimmers*
✔ *Leading edge dimmers*
✔ *HF fluorescent controllers*
✔ *Relay switches*

NOTE: You can have different power units that control different types of loads in the same Premium!

Thus, one Premium can have Trailing edge dimmers, Leading edge dimmers, HF fluorescent controllers (1/10V) and relay switches, in the same enclosure!

PREMIUM 79

- **Innovative**
- **Advanced**
- **Flexible**
- **High-Tech**
- **Reliable**
- **User Friendly**

are the words that characterize

the NEW **Multifunctional Power Controller**

PREMIUM 79

Designed & Manufactured
by ELECTRON SA

YOU SAY IT, WE MAKE IT!

Multifunctional Power Controller PREMIUM 79

PREMIUM 79: the ideal single device when capabilities, such as the ones described below, are required:

- up to 288 channels as stage dimmer system
- up to 512 channels as architectural controller system
- up to 512 scenes
- up to 128 chasers
- up to 2 DMX-512 inputs one of which can be assigned as output
- 48 analogue inputs with six operating modes

- USB downstream & upstream ports*
- Ethernet port*
- RS232 port*
- EIB/KNX port with built-in power supply 640mA*
- 3 DALI circuits with built-in power supply*

PREMIUM 79 is classified on the top of the range of the PREMIUM Series due to its immense capabilities.

Innovative

When PREMIUM 79 functions as a stage dimmer system the user can have up to 288 independent channels: 48 for traditional dimmers, 48 for the corresponding outputs 1/10V, and 192 channels shared in three DALI circuits. For each DALI circuit, Premium has an independent built-in power supply.

When it functions as an architectural control system the channels can reach up to 512. In this case, one of the two DMX inputs functions as output and it can drive any DMX device.

Premium 79 has RS232, USB, and Ethernet ports and it can receive data from a PC, while the user can monitor the status of Premium when it functions as architectural control system. At the same time the user can program the memories, the chasers, etc in a PC and can transfer the data to Premium with a USB flash memory.

It has 48 analogue inputs that can be divided into groups. This means that the user can activate with any simple push button (available in the market), memories, chasers, or channels. By pressing a button of a group the user activates the assign function and deactivates all the other functions (of the buttons) of the same group. This operation is called 'one active'. Thus, the user can successively change the lighting scheme and in parallel can adjust the intensity. There is also the possibility of assigning a button as 'OFF' in each group.

Premium has a EIB/KNX port with built-in power supply of 640mA, thus it can be connected to an already existing Instabus system. Also, it can be connected directly and without any other device to any control panel that supports EIB/KNX. Moreover, Premium can function as a control panel to give data to any connected EIB/KNX actuator.

In DALI circuits there is the possibility to connect, besides DALI control panels, and all the DALI accessories like motion detectors, light sensors, presence sensors, infrared controls etc.

All the features above, together with the built-in Real Time Counter (RTC) and the 'event creator' (with which the user can program the events in daily, weekly, or yearly base) constitute Premium 79 the most innovative power controller of the market.

Expansion ports

* To be available in the near future.

PREMIUM 79

**Interior connections
Upper front part (door) opening**

Advanced

PREMIUM 79 is very innovative, yet advanced management of it is also required. For that, Premium 79 has two DMX inputs with patching capabilities, HTP merge, LTP merge, Priority merge, Sequence merge, and Last merge.
It can operate with two lighting desks. Several channels can be programmed from each desk, or all channels can operate in parallel function from the two desks (ale retour). In addition, a DMX packet can be recorded and stored into Premium 79 as a scene.
One of the DMX inputs can also function as output with the possibility of connecting any DMX device. In this case, Premium 79 functions as controller of these devices by getting commands from external control panels connected to DALI, EIB/KNX ports, to analogue inputs or commands from a PC through USB, Ethernet, or RS232 ports. Also, one of the two DMX inputs can be programmed as architectural port for the new RS485 architectural control panels of ELECTRON.

Premium 79 (full configuration) has in total 48 analogue inputs and 9 I/O ports (DMX1, DMX2, RS232, USB, EIB/KNX, DALI1, DALI2, DALI3, Ethernet). For all these ports it functions as a large merger router.
With the correct programming, the command from one of the above inputs can be merged with a command from any other of these inputs with HTP merge or LTP merge or Last merge, and can control any channel, memory, or chaser of Premium 79. Also, a channel from one input can be routed exclusively to one channel of another output. With this way, it is possible to transfer commands or control from anywhere to everywhere without limits.

Management of the memory allows the user to have a scene that can include commands or control for any I/O port of Premium 79 at the same time.

Because the channels are many and the power units may be different a 'chaser creator' makes, together with the user's contribution, a custom made chaser with the minimum possible allocation of memory.

Special functions are included for chasers regarding RGB LEDs.

Flexible

Up to 4 RCDs can be fitted

or

Heavy duty mains switch

Premium 79 is the most flexible model of the Premium Series. It can have up to 12 power units and each can have 1-4 channels with an output of 25A, 16A, 10A, and 6A. The power units can have leading and trailing edge dimmers, relay switches, fluorescent controllers, sine wave dimmers, LED drivers. The outputs can have one pole MCB, MCB P+N, and RCBO. For the supply input the user can choose up to 4 RCDs by sharing the loads in each RCD or heavy duty mains switch.
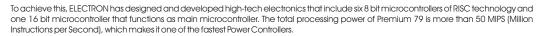
The basic version of Premium 79 includes the above options and one DMX input. The price of this basic version is very economic and competitive, making the controller ideal for a user that does not need more features.

The second DMX input, the 48 analogue inputs, the ports RS232, USB, EIB/KNX, DALI1, DALI2, DALI3, and Ethernet are available optionally as extra features.
With all these options you can develop your own custom-made Premium to fit your exact requirements and specific needs.

High-Tech

Interior connections

Premium 79 is developed to be by its own a complete power control system for the total control and management of all the needs of a space.

To achieve this, ELECTRON has designed and developed high-tech electronics that include six 8 bit microcontrollers of RISC technology and one 16 bit microcontroller that functions as main microcontroller. The total processing power of Premium 79 is more than 50 MIPS (Million Instructions per Second), which makes it one of the fastest Power Controllers.

This means that any command that comes into Premium 79 from any input is executed almost instantly. Also, due to this speed there is the possibility to manage up to 512 memories and 128 chasers.
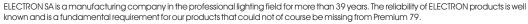
It can easily be connected to a computer and have a Software Update, or the user can download the new Software from ELECTRON site to a USB flash memory and then transfer it to Premium 79.

By connecting a PC to Premium 79 and through the Ethernet port the user can easily follow up the status of the outputs, make some changes, block things, and have full control of the lighting scheme.
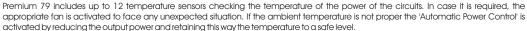
Reliable

Heavy duty lifting eye bolts

ELECTRON SA is a manufacturing company in the professional lighting field for more than 39 years. The reliability of ELECTRON products is well known and is a fundamental requirement for our products that could not of course be missing from Premium 79.
Reliability is also secured with the 7 watchdogs that check constantly the operation of the microcontrollers (7 when Premium 79 is on full configuration). Moreover, the main microcontroller observes the operation of the peripheral ones and if there is a malfunction detected it drives it back to the correct operation.

Premium 79 includes up to 12 temperature sensors checking the temperature of the power of the circuits. In case it is required, the appropriate fan is activated to face any unexpected situation. If the ambient temperature is not proper the 'Automatic Power Control' is activated by reducing the output power and retaining this way the temperature to a safe level.
In case the main microcontroller faces a fatal error then automatically memories are activated so that the space has lighting. These memories are programmed by the user.
The outputs of Premium 79 are managed by two microcontrollers for extra safety. For any malfunction the user is informed through the display.

User Friendly

When having a device such as Premium 79 with so many functions and capabilities, the user may ask what and how needs to be programmed. If Premium 79 is going to function as a simple dimmer, then the user only needs to set the start address of the DMX.

If programming is required, this can easily be done with the use of the two encoders and the large graphic display. The first encoder enables the user to move through the menu with a great speed and find what needs to be changed (selector). The second encoder enables the user to directly make changes (value).

Moreover, the user manual of Premium 79 is carefully developed and written in such a way so that the user can easily and quickly find answers to questions such as 'How do I...'

Also, for the specific model the user can get the necessary software, and by connecting it to a PC the programming is made on the screen of the PC.

Finally, by loading the software to a computer away from Premium 79, the user can make all the programming and then transfer the data with a USB flash memory to the Premium79.

User interface using Keyboard, 128x64 dot matrix display, and two encoders for easy programming

Accessory for easy wall mounting (available with Premium 79)

SPECIFICATIONS OF THE BASIC VERSION OF PREMIUM 79

- Stage and/or architectural operation.
- Up to 96 channels as stage dimmer system
  (48 ch. for traditional dimmers or relay switches,
  48 ch. for 1/10V analogue outputs.
- 1 optical isolated DMX-512 input.
- Individual DMX address / channel is possible.
- Programmable DMX assigns.
  Each DMX channel can be programmed to activate a
  channel or a scene or a chaser.
- DMX merge capability (HTP merge, LTP merge,
  Last merge).
- Programmable DMX termination.
- 48 fully programmable analogue inputs (optional).
- Programmable analogue input assigns. Each
  analogue input can be programmed to activate a
  channel or a scene or a chaser.
- Six programmable operating modes for each analogue
  input (0/+10V, 0/+5V, Contact normal open,
  Contact normal closed, Easy Net, Push Button).
- Programmable Blocking function for each analogue
  input. Each analogue input can be blocked by a programmable DMX
  channel, or by DMX signal present.
- Control capability from all E Series architectural
  control panels of Electron.
- Control capability from simple faders, dry contacts,
  motion detectors, cinema projectors (using the cinema
  adaptor of Electron), push button switches (like legrand).
- Analogue input grouping capability. When an input in
  a group receives a signal, this cancels all other input assigns of that
  group offering the "one active" capability.
- Up to 512 programmable scenes with programmable
  fade in/out (0 - 59min 59,9sec.)
- Up to 128 programmable chasers with programmable
  fade in/out (0 - 59,9sec.), speed rate (0,05 - 59,99sec.).
- Chaser creator. For easy chaser creation.
- DMX packet capture for easy scene or step creation.
- Programmable preheat level per channel.
- Programmable soft start per channel.

- Programmable fade in/out (0 - 59,9sec.) per channel.
- Law selection per channel (9 factory set laws +5 user laws).
- Programmable maximum output level per channel.
- Programmable behaviour on DMX signal loss
  (Blackout, hold of last DMX data packet, scene).
- Three programmable function keys.
- Panic Key (External heavy duty push button
  connection is possible).
- Emergency input.
- Standby Key.
- Two encoders for easy selection and value setting.
- 128x64 graphic display (8 lines x 21 characters can
  be displayed).
- Password protected.
- Seven microcontrollers offering processing power of
  more than 50MIPS (Millions Instructions per Second).
- Seven watchdogs.
- Up to 12 temperature sensors checking all the time
  the output power units.
- Automatic power control to prevent over-heating.
- Individual configuration of power units in the same
  enclosure.
- MCB protection for each channel.
- P+N MCBs or RCBOs on each channel is possible.
- Heavy duty mains switch can be fitted.
- Up to 4 RCDs in power supply input can be fitted.
- Easy wall mounting with provided metal plate.
- Heavy duty lifting eye bolts.
- No need of removing the front cover of the metal enclosure. The upper
  front part (door) opens by unscrewing 2 screws allowing access to all
  screw terminals.
- Screw terminals with live, neutral, and earth per output.
- Power supply screw terminals, 70mm².
- Three phase power supply (400/230V~ 3/N/PE/50Hz)
- Delta models available on request.

Dimensions in mm (WxHxD)

PREMIUM 79: 750x1115x155