

ALEWINGS [®] via del Lavoro 41 - 20084 Lacchiarella MI - ITALY

DESIGN



Thanks to the experience accrued since 1996 in electronical, analogical and digital design, Alewings is able to give his clients a customized hardware and firmware design service and particularly it is able to follow every step of a new project, such as:

- Development of specifications and feasibility studies
- ø Development of electrical schematics and printed circuits
 - boards for SMT components assembly
 - Creation of prototypes and functional tests
 - Production run at high qualified third party collaborators

RESEARCH Thanks to a close collaboration and knowledge of most qualified distributors of electronic and electro-mechanic components, Alewings assures high quality standards of materials.



ALEWINGS was founded in January 2005 by Alessandro Torri and arises from the combination of his own passion for model making and his personal experience and practice in electronics.

Its history is the same of a typical individual company: at the beginning as a small dimension company with a limited business, afterwards it has increased gradually its business expanding both in applicational fields and in products.

Only one leitmotif: to create high quality products at competitive prices in a context of innovation and continuous improvement.



Investments in research and development have achieved fundamental goals such as becoming the first Italian producer company of accessories and electronic power supplies for RC modelmaking.

A technical dynamic staff works out customized products for clients. Alewings belief regarding standard or customized products is the same: providing high quality at the minimum cost. Every stage of the manufactoring process, from design to production and testing, is carefully followed and supervised.

Since our sale style was pointed at the beginning only to Italian market and afterwards to European market, Alewings was driven to realize and export more and more particular products.

INTRODUCTION

The purpose of using electronic devices in model-making is principally to increase the safety of our flying machines with reliable power supply systems and secondarily to obtain particular functions helping to better adapt the on board system to our needs. Alewings, on the base of the direct experience of its founder and his co-operators, has developed a production intended to cover the needs of modern pilots both in terms of safety and functionality.

You will find here 6 categories of products:

- **Power supply units:** these devices are designed and realized in order to significantly increase the safety of the on board RC system. In this sense the concept of redundancy, according to which every function is assured by a double electronic circuit, is fundamental. The use of these products, recommended for any machine of medium and large dimensions, is necessary to obtain a high level of safety and performances. Alewings power units generally feature double battery management, filtering of the signal, protection against short circuits (see the note about fuses at page three of the catalogue). They are the right devices for protecting your valued model.

- **Electronic switches:** the line of electronic switches is designed for controlling in total security the powering on and off of your model, replacing the outdated mechanical switches without losing sight of the budget; the main ones, magnetic or not, also add the great advantage of double power supplying.

- Voltage regulators: a range (from 1,5 A to 15 A current peak) of small and light devices that allow you to use Lixx batteries to power supplying your models. They guarantee a regulated voltage to the on board radio system, assuring that servos and receiver work at the top of their efficiency.

- Devices for programming servos: they offer some very useful functions such as delaying or reversing a servo, moving electronically its central position, programming sequences for controlling landing gears and doors.

- Devices for controlling definite functions: a series of switches controlled by transmitter that allow you to activate a specific function such as starting smokes, turning on and off the ignition of petrol engine, turning on light system.

- Connections: connectors, soldering pads and connection kits between fuselage and wings or between different segments of the model.

Note about fuses

* EACH SERVO OUTPUT IS PROTECTED BY A NOT <u>SELF-RESETTING</u> FUSE

Nature of fuses is to act as protection; in the case of a short circuit and/or overcurrent:

- the self-resetting fuse opens (it temporarily cuts the supplying to the servo) and, when cooled, closes again.
- the not self-resetting fuse burns (it cuts permanently the supplying to the servo).

ATTENTION: A FUSES BURNS ONLY IF SHORT CIRCUIT OR OVERCURRENT OCCUR.

A system protected by not self-resetting fuses has the advantage that, if the fuses burns, this unequivocally means that a particularly high current flow occured.

This is a clear evidence that there is something anomalous, such as:

- a defective servo
- a servo warking too hard because of a wrong positioning of the servo harm or a wrong setting of the control rod
- an extension cable with not well insulated leads
- a connector with not well insulated contacts

The not self-resetting fuse, after a short time, closes again, thus restoring a critical situation.

The not self-resetting fuse permanently escludes the critical situation, allowing a precise and immediate detection of the problem.

NOTE: each fuse is tested by a continuous current flow widely higher than the normal absorbtion of a servo.



The new double battery power unit RR16 Alewings manages up to 4 receivers of BUS type and 16 servos, divided in two groups, each of which is regulated by a voltage regulator programmable independently.

Size extremely compact, high number of channels and servos managed and mostly a deliverable current of 20+20A make it the best choice for all maxi scale models, aero-batics, gliders or jets.

It is compatible with receivers BUS of type sBUS, DSMX, HoTT, M-Link and Jeti and provides maximum safety thank to redundancy of the received signal.

It is completely programmable: all 16 servos can be freely associated to one or more channels and for each one it is possible to set direction of rotation, centre position and end point through the "Servo matching" function. Moreover servos are divided into 2 groups of 8 servos and you can select, independently for each group, the supply voltage of 6.2V or 7.4V; this means that you can easily use servos HV and servos at 6V in the same installation.

A third voltage regulator provides a separated power supply to the receivers.

Programming and visualizing all flight data such as timer, voltage, current, remaining battery charge, receivers status (FailSafe - FrameLost) is possible by connecting the programming display, that can also be installed onboard as monitor. LCD programmer is sold separately (code 90010708).

Technical details:

- Operating voltage: 6V 9V
- Power source: 2x 2S Lixx
- Current drain: 150 mA in use / 150 uA in OFF state
- Output voltage for servos 6.2V 7.4V, 20 + 20A peak
- Output voltage for receiver 5.5V 3.3V, 7A peak
- Receivers/satellites inputs: 2 / 4
- Servo Matching system for all servos
- Signal Frame rate: 7 25 msec Signal steps: 4096
- Protection agains short circuit for all outputs
- Dimensions: 65x61x35mm Weight: 100gr including external panel

LCD Programmer for RR16 - Item: 90010708

The LCD programmer for RR16 is a 3.2" colour display Touch Screen, inspired to a smartphone. It is needed for programming the RR16 and for viewing all fight data; thank to his weight and size, is it possible to let it onboard.

Technical details:

- Operating voltage: 5V 9V
- Power source: directly from RR16 power unit
- Display LCD: 3.2" RGB colour 65K Touch Screen
- Resolution 400 x 240 pix
- Adjustable brightness
- Dimensions: 65x61x25mm Weight 75gr + 40gr cable

LCD PROGRAMMER

UniPower2B power supply unit - Item: 90010601



Power supply unit managing two batteries and generating three outputs:
the first supplying servos and receiver, stabilized and settable from 5,0 to 7,4V
the second supplying the engine (spark ignition or turbine), not stabilized
the third, divided in 3 branches, supplying landing gear, brakes, smoke system or light system, not stabilized; each branch is protected by fuse (two 5A and one 10A).
Turning on and off is by the button on the device; two high light red LEDs indicate batteries status keeping memory of the lowest battery voltage; you can get the button and LEDs out of the model using the optional external panel (item 90010701) Integrated MPX connectors; all accessories for mounting are included.

Technical details:

- Operating voltage: 6V 8,4V
- Power source: 2 x 2S Lixx or 2 x 5S Nixx
- Output RX: stabilized programmable from 5V to 7.4V 30A peak
- Output THR: not stabilized 25A
- Output AUX (3 branches): not stabilized protected by fuses *(see the note on p.3)
- Dimensions: 65x61x25mm Weight 70gr

Units of Unipower series introduce a new concept of power supplying. Today medium and big scale models need many batteries: usually two for servos and receiver, one for engine or ECU, and others for smoke system, light system, landing gear and brake etc...so you will end up having from three to six batteries with redundancy only for servos and receiver. UniPower radically changes the concept of on board power supply. With only two batteries (three in the case of UniPower 3B) it generates the necessary outputs for all on board devices. It means also that you will have redundancy not only for receiver and servos but for all on board systems (exluded the separate way supplying the engine in the case of UniPower 3B) Thanks to the presence of two batteries and double circuits, if one power supply way has a problem, the other comes into operation. So the power supply of all outputs is always assured.

UniPower 3B



Power supply unit managing three batteries (two 2S LiPo for for the redundant supplying of servos, receiver and all on board devices and one 2-3S LiPo or LiFe for throttle) and generating three outputs:

- the first supplying servos and receiver, stabilized and settable from 5,0 to 7,4V
- the second supplying the engine (spark ignition or turbine), not stabilized

 the third, divided in 3 branches, supplying landing gear, brakes, smoke system or light system, not stabilized; each branch is protected by fuse (two 5A and one 10A).
 Turning on and off by button; two high light red LEDs indicate batteries status keeping memory of the lowest battery voltage; optional external panel (item 90010701).

- Operating voltage: 6V 8,4V
- Power source: 2 x 2S Lixx or 2 x 5S Nixx and 1 x 3S LiPo or LiFe
- Output RX: stabilized programmable from 5V to 7.4V 30A peak
- Output THR: not stabilized 25A
- Output AUX (3 branches): not stabilized protected by fuses *(see the note on p.3)
- Dimensions: 65x61x25mm Weight 70gr

UniServo7ADJ power supply unit - Item: 90010603



Power supply unit handling in input seven channels from receiver and in output up to eleven servos. Outputs 1,2,3 and 4 allow you to program center, end points and rotation direction of servos (servo matching system). It must be supplied by a box of UniPower series or by a battery and it accepts input voltage from 5V to 7,4V. Servos are directly supplied at the same input voltage as supplied by UniPower; you

can regulate the voltage to receiver at a value between a minimum of 5V up to a maximum same of the input voltage from UniPower.

Technical details:

- Operating voltage: 5V 8,4V
- Current drain: 50 mA
- Power source: 1 x 2S Lixx or 1 x 5S Nixx
- Receiver voltage programmable up to 15A peak
- Servo Matching system on channels 1,2,3,4
- Active filters for each input channel
- Protection against short circuit for each servo output *(see the note on p.3)
- Dimensions: 65x61x25mm Weight 50gr

UniServo7 Adjust is a programmable box for managing servos and it is specifically developed for using with UniPower2B and UniPower3b power supply boxes (Item 90010601 and 90010602), even if it can be used also by itself.

While UniPower unit manages only the power supply part of the system, UniServo7 Adjust manages servos; in this way power circuits are well separated from logician circuits. It is provided with active filters and protection against short circuit for each of the 11 servos outputs. The Servo Matching system (integrated into channel 1,2,3 and 4) allows you to program central position, end points and direction of the corresponding servos. Programming is very easy thanks to the buttons on the back side of the unit, but it can be made more easily using the optional programmer Item 90010703 (see below).

Programming keyboard - Item: 90010703



External programmer for miniMAC Adjust, UniServo7 Adjust and MAC828. 1m lenght flat cable for connection to the box is included. Very useful device for an easier and quicker setting of Alewings program-

mable boxes.

New version, more compact.

- Dimensions: 50x20x8mm
- Weight: 50gr
- Cable 1m lenght

miniMAC Adjust power supply unit - Item: 90010408





Programmable power supply unit; it allows you to program servos on three channels. It handles in input two 7,4V LiPo batteries and 6 channels from receiver. The Servo Matching system (integrated into channel 1,2 and 3) allows you to program central position, end points and direction of the corresponding servos. External panel with high light blue LEDs indicating batteries status.

All accessories for mounting included.

Technical details:

- Operating voltage: 6V 8,4V
- Power source: 2 x 2S LiPo
- Current drain: 100mA (in ON state) / 150uA (in OFF state)
- Output voltage programmable from 5V to 7,4V 30A peak
- 3 match channels (setting of central position, end points and direction)
- Signal frame rate accepted: from 7 to 25msec
- Signal steps: 4096
- Protection against short circuit for each servo output *(see the note on p.3)
- Dimensions: 65x61x25mm Weight 100gr

MiniMAC units are small and lightweight power supply units for managing the on board radio system. They are provided with a double electronic switch controlled by button and with an external panel with two battery status indicators keeping memory of the lowest battery voltage. The voltage supplied to servos and receiver is controlled by a voltage regulator managing up to 30A. You can set the output voltage from 5V to 7.4V turning the selctor by a screwdriver. The double electornic circuits assure redundancy: if one power supply way has a problem, the other comes into operation. MiniMAC are provided with active filters and protection against short circuit for each of the 9 servo ouputs. Programming is very easy thanks to the buttons on the back side of the unit. For an easier and quicker setting of servos you can purchase item 90010703.



Power supply unit with the same features of MiniMAC Adjust but without servo matching channels. It handles in input two 7,4V LiPo batteries and 6 channels from receiver. It is ideal for a safe but cheaper power supplying of models of medium dimensions (acro up to 2,5m wingspan).

External panel with high light blue LEDs indicating batteries status. All accessories for mounting included.

- Operating voltage: 6V 8,4V
- Power source: 2 x 2S LiPo
- Current drain in On state: 100mA
- Current drain in Off State: 150uA
- Output voltage programmable from 5V to 7,4V 30A peak
- Active filters for each input channel
- Double battery indicator with memory of the lowest voltage
- Protection against short circuit for each servo output *(see the note on p.3)
- Dimensions: 65x61x25mm Weight 100gr

Double Voltage power supply unit - Item: 90010303





Two batteries power supply unit with two programmable stabilized outputs. It accepts in input two batteries LiPo 2S 7,4V; the voltage of the two independent outputs can be set from 5V to 7,4V. (It is ideal also for applications with HV servos). The voltage is regulated in linear way moving with a screw driver the selector on the device. It includes two voltage regulators, two electronic switches controlled by a button. An external panel adds two battery status indicators with memory of lowest battery level. The packaging includes the external panel and a 300mm flat cable for connection. Battery inputs and outputs are equipped with MPX connectors.

Technical details:

- Operating voltage: 6V 8,4V
- Power source: 2 x 2S LiPo
- Current drain: 50mA (in ON state) / 95uA (in OFF state)
- Output1 voltage programmable from 5V to 7,4V 20A peak
- Output2 voltage programmable from 5V to 7,4V 20A peak
- Double battery indicator with memory of the lowest voltage
- Dimensions: 65x61x25mm Weight 71gr

It has been designed for supplying with redundancy receivers with two battery inputs or for supplying with only two batteries receivers, servos and electronic ignition of gas engine. Moreover it can be used with units managing servos such as MAC16 and UniServo.

Rendundancy battery system RBattery - Item: 90010102



RBattery is an electronic circuit which allows you to manage two batteries for supplying receiver, servos and any other device needing a redundant power supply. It is ideal whenever you want to increase security by creating the redundancy of the power sources. It accepts in input two batteries of the same technology (2-3S Lixx or 4-5S NiXx). The output provides the redundant power supply. It comes with connectors MPX type (Original MPX); a LED indicates when the device is on. The output voltage is not stabilized.

Technical details:

- Operating voltage: 5V 30V
- Power source: 2 x 2/3S Lixx or 2 x 5/6 Nixx
- Peak current up to 40A (20+20A)
- Voltage loss 300mV @ 10A
- Dimensions 29x27x13 mm Weight 9gr

Flat cable for external panel - Item: 90050301



Six poles 30cm flat cable for Double Energy, Double Voltage, miniMAC, MAC, UniPower and RR16.

Also available the 60cm lenght version, code 90050364.

Two leds external panel - Item: 90010701



MAC828 Matching power supply unit - Item: 90010504



Power supply unit completely programmable. For each of the 28 servos it is possible to set rotation, central position and end points. Provided with monitor indicating the real batteries voltage. Signal frame is settable at 7-14-20 for using with analogic or digital servos. Programmer included.

Technical details:

- Operating voltage: 6V 8,4V
- Power source: 2 x 2S Lixx or 2 x 5S Nixx
- Receiver output voltage: 5V 1.5A
- Servos output voltage: programmable 5.2V 6.1V 8V 35A peak
- Dropout voltage: 300mV @ 20A
- Current drain: 200mA (in ON state) / 85uA (in OFF state)
- 8 match channels (setting of central position, end points and direction) 28 servos
- Signal frame rate accepted: 7 14 20msec
- Signal steps: 4096
- Protection against short circuit for each servo output *(see the note on p.3)
 Dimensions: 130x69x27mm Weight 180gr

MAC series units are power supply units managing two batteries and eight channels from receiver (generating 28 servos outputs: 6 channels with 4 outputs and 2 channels with 2 outputs). They are equipped with two separated power supplying ways (one for each battery) working in parallel. Each way features an electronic switch managed by micro controller, a voltage regulator settable at 5,2 - 6,1 -8V and a battery charge indicator keeping memory of the lowest battery voltage. The voltage supplying servos is stabilized and programmable at 5,2V - 6,1V - 8,0V for a maximum of 35A. The receiver voltage is stabilized at 5V 1,5A. They are equipped with active filters and protections against short circuits on each of the 28 servo outputs. The ON/ OFF button and the two LEDs indicating battery charge status are on the external panel provided.



Power supply unit with the same features of MAC828 Adjust but without servo matching channels and signal frame setting. It handles in input two 7,4V LiPo batteries and 8 channels from receiver (6 channels with 4 outputs and 2 channels with 2 outputs). It is ideal for a safe but cheaper power supplying of large models (maxi acro wingspan up to 3m).

- Operating voltage: 6V 8,4V
- Power source: 2 x 2S Lixx or 2 x 5S Nixx
- Receiver output voltage: 5V 1.5A
- Servos output voltage: programmable 5.2V 6.1V 8V 35A peak
- Dropout voltage: 300mV @ 20A
- Current drain: 200mA (in ON state) / 85uA (in OFF state)
- 8 channels 28 servos
- Protection against short circuit for each servo output *(see the note on p.3)
- Dimensions: 130x69x27mm Weight 175gr

ESC HiPower 15A Stabilized - Item: 90030210



Electronic switch with ON/OFF by button. No accessoires are required for turning on and off but it is necessary to have an easy access to the button. Main features: double electronic switch managed by microcontroller, battery checker with memory of the minimum voltage, voltage regulator from 5V to 7,4V for 15A peak current. It manages 1 or 2 batteries and can be used in 3 different modalities: single battery, double battery (2 batteries discharging simultaneously) or single battery with a backup battery.

Technical details:

- Operating voltage: 5V 8,4V
- Power source: 2x 2S Lixx or 2x 5S Nixx
- Current drain: 15mA (in ON state) / 140uA (in OFF state)
- ON/OFF by button
- Stabilized output voltage from 5V to 7,4V 15A peak
- Dimensions 52x23x20mm (External panel 69x25mm) Weight 28gr

ESC Switch 12A NOT stabilized - Item: 90030207



Electronic switch with ON/OFF by button. No accessoires are required for turning on and off but it is necessary to have an easy access to the button. Main features: double electronic switch managed by microcontroller, battery checker with memory of the minimum voltage. The output is not stabilized and bears up to 12A peak current. It manages 1 or 2 batteries and can be used as single battery, double battery (2 batteries discharging simultaneously) or single battery with a backup battery.

Technical details:

- Operating voltage: 5V 8,4V
- Power source: 2x 2S Lixx or 2x 5S Nixx
- Current drain: 15mA (in ON state) / 140uA (in OFF state)
- ON/OFF by button
- NOT stabilized voltage 12A peak Voltage loss 400mV@5A
- Dimensions 52x23x20mm (External panel 69x25mm) Weight 22gr

PowerSwitch 30A Not stabilized - Item: 90030212

ALEWINGS Switch

Electronic switch specifically developed for High Power installations, perfect for scale models, maxi and jet where the use of powerful servos requires a very high current. Main features: low voltage loss under load, system controlled by a microprocessor, turning on and off by button, battery checker with memory of the minimum voltage.

- Operating voltage: 4V -12,6V
- Power source: 1x 2S LiFe, 2S Li.Poli, 5S Nixx
- Current drain: 15mA (in ON state) / 140uA (in OFF state)
- ON/OFF by button
- NOT stabilized output voltage 30A (50A peak)
- Voltage loss 55mV @ 10A
- Dimensions: 52x23x20mm (External panel 69x25mm) Weight: 17gr

ESC HiPower 15A Stabilized Magnetic - Item: 90030210M



Electronic switch with ON/OFF by magnetic key. No holes into fuselage are required, you just need to approach the magnetic key to the switch for turning it on/off. Main features: double electronic switch managed by microcontroller, battery checker with memory of the minimum voltage, voltage regulator from 5V to 7,4V for 15A peak current. It manages 1 or 2 batteries and can be used in 3 different ways: single battery, double battery (2 batteries discharging simultaneously) or single battery with backup.

Technical details:

- Operating voltage: 5V 8,4V
- Power source: 2x 2S Lixx or 2x 5S Nixx
- Current drain: 15mA (in ON state) / 140uA (in OFF state)
- ON/OFF by magnetic key
- Stabilized output voltage from 5V to 7,4V 15A peak
- Dimensions 52x23x20mm (External panel 69x25mm) Weight 28gr

ESC Switch 12A NOT stabilized Magnetic - Item: 90030207M



Electronic switch with ON/OFF by magnetic key. No holes into fuselage are required, you just need to approach the magnetic key to the switch for turning it on and off. Main features: double electronic switch managed by microcontroller, battery checker with memory of the minimum voltage. The output is not stabilized and bears up to 12A peak current. It manages 1 or 2 batteries and can be used as single battery, double battery (2 batteries discharging simultaneously) or single battery with a backup battery.

Technical details:

- Operating voltage: 5V 8,4V
- Power source: 2x 2S Lixx or 2x 5S Nixx
- Current drain: 15mA (in ON state) / 140uA (in OFF state)
- ON/OFF by magnetic key
- NOT stabilized voltage 12A peak Voltage loss 400mV @ 5A
- Dimensions 52x23x20mm (External panel 69x25mm) Weight 22gr

PowerSwitch 30A Not stabilized Magnetic - Item: 90030212M



Electronic switch specifically developed for High Power installations, perfect for scale models, maxi and jet where the use of powerful servos requires a very high current. Main features: low voltage loss under load, system controlled by a microprocessor, turning on and off by magnetic key, battery checker with memory of the minimum voltage.

Technical details:

- Operating voltage: 4V -12,6V
- Power source: 1x 2S LiFe, 2S Li.Poli, 5S Nixx
- Current drain: 15mA (in ON state) / 140uA (in OFF state)
- ON/OFF by magnetic key
- NOT stabilized output voltage 30A (50A peak)
- Voltage loss 55mV @ 10A
- Dimensions: 52x23x20mm (External panel 69x25mm) Weight: 17gr

PWR 30A MGN

ESC Micro Magnetic electronic switch - Item: 90030211



The ESC micro Switch MNG is a very compact and light magnetic electronic switch. It is ideal for turning ON and OFF receiver and servos where you have not too much space such as into particularly narrow fuselages, on cars or boats; moreover the on/off by magnetic key doesn't require any hole into fuselage or receiver box. Ideal for hot liners and other gliders. The magnetic key is included.

Technical details:

- Operating voltage: 5V 9V
- Power source: 2S Lixx or 4-5S Nixx
- Current drain: 6.5mA (in ON state) / 400uA (in OFF state)
- Voltage loss 35mV @ 6A
- ON/OFF by magnetic key
- LED indicating ON state
- Dimensions: 26x12x4mm
- Weight 6gr

ALEUINGS

Using is really simple: when you connect a battery, the device turns on and supplies the receiver; you have to put the key near to the device and keep it there for at least 2 seconds for turning the switch OFF and ON again. The project design ensures that the switch is always activated, even in case of fault, in order to provide always maximum safety.

ESC CAR Electronic switch - Item: 90030206



The ESCar is an electronic switch with button specific for RC cars (but can be used in many other cases).

It has the same dimensions of standard mechanical switches but it is more durable and it is not subject to oxidation and bad contacts for a superior safety. It is designed to be always on, even in case of failure. It is very easy to install and, having the same dimensions of the traditional mechanical switch, you can take advantage of the same placing and the same fixing holes.

Technical details:

- Operating voltage: 5V 16.8V
- Power source: 2-3S Lixx or 4-5S Nixx
- Current drain: 6.5mA (in ON state) / 400uA (in OFF state)
- Voltage loss 35mV @ 6A
- ON/OFF by button
- LED indicating ON state
- Dimensions: 26x12x10mm
- Weight 7gr

It is provided with 0,5qmm silicon wires and BEC connector to the battery and UNI connector to the receiver The button has IP67 safety degree, that means it is protected from dusty and water. It is very easy to use: keep the button pressed for at least two seconds for turning it ON / turning it OFF.

Programmable voltage regulator PVReg15A - Item: 90030110



Technical details:

- Operating voltage: 5V 9V
- Power source: 2S Lixx or 5-6S Nixx
- Stabilized output voltage from 5V to 7,4V 15A peak
- Maximum dissipable power: 10W for 60sec @ 20°C
- Voltage loss: 150mV
- Dimensions: 50x23x22mm
- Weight 14gr

Linear voltage regulator with programmable output (from 5 to 7,4V) and peak current up to 15A. PVRegulator is ideal for regulating the voltage of receiver, servos or other devices (gyros, electronic engine ignitions ecc..). A steady and safe supply voltage allows servos and other devices to work always at their best.

You can regulate the output voltage in a linear way from 5 to 7,4V moving the selector with a screwdriver. Powering ON and OFF is done plugging the jumper into the pins on the device. Original MPX connectors.



Programmable voltage regulator PVReg7A - Item: 90030109

Technical details:

- Operating voltage: 5V 9V
- Power source: 2S Lixx or 5-6S Nixx
- Stabilized output voltage from 5V to 7,4V 7A peak
- Maximum dissipable power: 10W for 30sec @ 20°C
- Voltage loss: 150mV
- Dimensions: 35x17x10mm
- Weight 10gr

Linear voltage regulator with programmable output (from 5 to 7,4V) and peak current up to 7A. PV Regulator is ideal for regulating the voltage of receiver, servos or other devices (gyros, electronic engine ignitions ecc..) It has the same features as PVR15A with the exception of the current peak of 7A.

It comes with 0,5mmq silicon cables and UNI connectors with golden pins.

Voltage regulator VReg4A 5.5V - Item: 90030112





Technical details:

- Operating voltage: 6.4V 9V
- Power source: 2S Lixx or 5-6S Nixx
- Stabilized output voltage 5.5V 4A peak
- Maximum dissipable power: 10W for 10sec @ 20°C
- Voltage loss: 0.8V @ 4A
- Dimensions: 30x13x7mm
- Weight 8gr

Stabilized voltage regulator with voltage output 5.5V for a maximum current of 4A. Perfect for power supplying receiver and servos of RC models. This type of regulator can manage a 3A continue current and a 4A peak. It works with a 2s Li.Poli / Li.fe battery. Dimensions and weight are very reduced so that you can place it easily everywhere in your radio box. It is provided with 0,5qmm wires and BEC connector to the battery and UNI connector to the receiver.



- Operating voltage: 5.2V 9V
- Power source: 2S Lixx or 5-6S Nixx
- Stabilized output voltage 5V 1.6A peak
- Maximum dissipable power: 4W for 10sec @ 20°C
- Voltage loss: 0.25V @ 1A
- Dimensions: 20x12x3mm
- Weight 3gr

Tiny 5V 1,6A voltage regulator. Weight is only 3 gr.

Ideal to obtain 5V stabilized tension starting from Li Poli 2S 7,4V battery. It bears a maximum current peak of 1,6A.

Its best use is on little gliders such as those of HLG and F3K category or any application where weight and small size are fundamental.

Extension cable with voltage regulator 7A - Item: 90030111

Technical details:

- Operating voltage: 5V 9V
- Power source: 2S Lixx or 5-6S Nixx
- Stabilized output voltage from 5V to 7,4V 7A peak
- Maximum dissipable power: 10W for 30sec @ 20°C
- Voltage loss: 150mV
- Dimensions: 35x17x10mm
- Weight 15gr

Stabilized extension with programmable voltage output. Moving a simple jumper it's possible to set output voltage at 5 - 5,4 or 6V depending on needs. Perfect for power supplying a single servo at a stabilized voltage in a 7,4V RC system. This type of regulator can manage a maximum current of 7A peak.

It can be used with 2S LiPo, 2S Life and 5 cells Nixx batteries.

Extension 7A

Voltage regulator 5.5V 7A with electronic switch strip to fly - Item: 90030113

Technical details:

- Operating voltage: 5V 9V
- Power source: 2S Lixx or 5-6S Nixx
- Stabilized output voltage 5.5V 7A peak
- Maximum dissipable power: 10W for 30sec @ 20°C
- Voltage loss: 150mV
- Dimensions: 35x17x9mm
- Weight 12gr

Electric switch with integrated voltage regulator; output voltage is stabilized at 5,5V for a maximum current of 7A peak. Perfect for power supplying receiver and servos on Pylon F3D type planes. It works with a 2s Li.xx battery. It is necessary to remove the jack to turn the device ON; if the jack is plugged the device turns off. Dimensions and weight are very reduced so that you can place it easily everywhere. It is provided with 0,5qmm wires and BEC connector to the battery and UNI connector to the receiver.



- Operating voltage: 4V 9V
- Setting of central position, end points and direction
- Signal frame rate accepted: from 7 to 25msec
- Signal steps: 4096
- Protection against short circuit for each servo output * (see the note on p.3)
- Dimensions: 27x14x5mm
- Weight 10gr

Match module is a very useful device for programming servos. It is able to manage and synchronize the movement of two servos controlling the same part. In input it works with the signal of the receiver or of any Alewings power unit (miniMac,MAC, ecc..). It has to be connected between the receiver and the servos you want to synchronize (es.: the servos for rudder or for elevator or for every single aileron). Ideal for connecting two servos (even with opposite movement activating the Reverse function) to the same receiver channel, so that you can save one channel. You can set it easily using your transmitter and the button on the device.

REVERSE HV



Y module HV with programmable servo reverse - Item: 90020306

- Operating voltage: 4V 9V
- Setting of central position of reversed servo
- Signal frame rate accepted: from 7 to 25msec
- Signal steps: 4096

Technical details:

- Protection against short circuit for each servo output * (see the note on p.3)
- Dimensions: 29x15x5mm
- Weight 5gr

Y Reverse Module is connected to a receiver channel in order to reverse the rotation sense of a servo as regards to another. Thanks to a micro-controller on board you can set the centre position of the Reverse output; the centre position of the servo with no-reverse movement is managed by Sub Trim function on your transmitter. In addition the circuit realizes servo signal filtering function and it is compatible with all kind of servos on sale. It is extremely accurate and steady with a readable resolution of 0,025° and a writing resolution of 0,1°. You can set it easily using your transmitter and the button on the device.

Y module HV with servo delay - Item: 90020307

DELAY HV



Technical details:

- Operating voltage: 4V 9V
- Setting delay for two servos
- Signal frame rate accepted: from 7 to 25msec
- Signal steps: 4096
- Protection against short circuit for each servo output * (see the note on p.3)
- Dimensions: 27x14x5mm
- Weight 7gr

Servo Delay Module is a device that lets you adjust the speed of servos. It is useful in performing realistic movements, for example opening and resealing of landing gears, doors or cockpits. You can set it easily using your transmitter and the button on the device.

Sequencer with 5 servo/valve outputs - Item: 90020401

CONTRACTOR OF CO

SEQUENCER

Programmable sequencer with five outputs, able to control servos and electronic valves. You have to connect it to a channel on the receiver contolled by an ON/OFF switch. So you can manage indipendently: waiting time, movement time, end point positions and rotation sense for each output. It is equipped with filters and protection against short circuit for each output. You can activate a "Security Control" system in order to check the completed and right movement of the landing gears. It's perfect to manage in a safe and realistic way opening and closing of landing gears and doors.

Technical details:

- Operating voltage: 5.2V 9V
- 8 pre-stored sequences
- Setting of end points for each door
- Signal frame rate accepted: from 7 to 25msec
- Signal steps: 4096
- Current drain: 40mA (display OFF)
- Protection against short circuit for each servo output * (see the note on p.3)
- Dimensions: 52x36x10mm
- Weight 18gr

Totally programmable through three buttons and a display onboard. The programming is easier thank to the eight presetted sequences that you can modify according to your needs.

Single Action valve for brake and gear - Item: 90040401



Programmable electronic valve with innovative proportional ON/OFF function; after connecting to receiver or sequencer, you will be able to chose: working mode, time of PWM (pulse wide modulation) and opening and closure end points of the valve. The two working mode are: Proportional ON/OFF (for opening landing gears, doors etc...) and Totaly Proportional (specific for pneumatic brakes). The new proportional ON/OFF function means that you can slow down the movement of landing gears and doors without narrowing the air tubes, avoiding a rough opening or closure: the air doesn't pass immediately to the maximum pressure but slowly during a programmed range of time.

Technical details:

- Operating voltage: 5.5V 7.4V
- Selectable PWM Proportional or ON/OFF proportional mode
- Opening and closure programmable end points
- Current drain: 100mA (valve opened)
- Operating pressure: up to 10 bar
- Dimensions: 28x12x29mm 18x18mm (base) Weight 27gr

It is provided with Jr cable and two 3mm air tube connectors.

Please Note: if you have a double effect landing gear system you have to use two electronic valves and to programme them so that one is open when the other is closed and vice versa.





- Operating voltage: 5.1V 9V
- Current drain: 10mA
- Commutable battery voltage: from 4.8V to 9V (2S Lixx or 5-6S Nixx)
- Stabilized output voltage from 5V to 7,4V 6A peak
- Voltage loss: 200mV @ 3A
- Fail Safe for loss of signal programmable
- Dimensions 52x23x20mm (External panel 69x25mm) Weight 20gr

Kill Switch is an electronic switch for turning on spark ignition of gasoline engine. It can be activated by transmitter (it needs a free channel on receiver) or manually by the push-button on the device. The high light LED indicator shows the status of the switch. Kill switch includes an electronic switch, an inner voltage regulator and a photocoupler which assures the complete protection from noise coming from spark ignition. It is ready to use, anyway the user can program the fail safe function in case of loss of signal.

SRC Switch Opto



Photocoupled electronic Switch SRC Opto - Item: 90040213

Technical details:

- Operating voltage: 5.2V 8.4V
- Current drain: 10mA
- Switch with not stabilized output up to 10A
- Programmable switching point and reverse mode
- Programmable Fail Safe for loss of signal
- Dimensions: 42x26mm
- Weight 9gr

The Photocoupled SRC Switch is a programmable electronic switch controlled by the receiver ideal for managing the spark ignition of gasoline engines. It joins an electronic switch controlled by the receiver and a photocoupler that assures the galvanic insulation between the receiver and the engine ignition. So you will able to control the powering on/off of the ignition with a two position switch of your transmitter. It needs no settings, only connect it to the receiver and it is ready for using, anyway it is possible to set a different switching point, the normal or reversed modality and the fail safe at signal lost.

Electronic Switch SRC 10A - Item: 90040212



Technical details:

- Operating voltage: 5.2V 8.4V
- Current drain: 10mA
- Switch with not stabilized output up to 10A
- Programmable switching point and reverse mode
- Programmable Fail Safe for loss of signal
- Dimensions: 42x26mm
- Weight 9gr

The SRC Evo is a programmable electronic switch controlled by the receiver. You can use it to power on or off any device only moving a stick, slide or switch on your transmitter. It is ideal for supplying high power loads; thanks to a high current connector you can control the switching on of glow plugs, electric motors, smoke pumps, light systems with a maximum drain of 10A. It doesn't need any setting, you have only to connect it to the receiver and it is ready for using; it is possible to set a different switching point, the normal or reversed modality and the fail safe function when signal is lost.



- Operating voltage: 5.2V 8.4V
- Current drain: 10mA
- Up to 4 ignitions possible with a corresponding number of devices
- Fail Safe for lost or not good signal
- Fail Safe for avoiding smoke starting when turning receiver On
- Dimensions: 42x26mm Weight 10gr

The SRC Smoke is an electronic switch controlled by receiver specific for activating smoke cartridge during the flight. You have to connect it to a free channel of the receiver generally controlled by a two position switch. It has a fail safe circuit for avoiding accidental starting of the smokes. If you want to activate different smokes during the same flight, you have to use many SRC Smoke (max 4) all connected to the same channel. Choosing and setting an identification number for each device, you will define the starting sequence desired (you have to activate every single SRC Smoke with a movement of the transmitter switch).

Connection kit for a couple of smokes or for two couples of smokes - Item: 90050516 or 90050517



REBEL

Useful accessory for the electric connection of smokes or other pyrotechnic effects. It is equipped with a cable with BEC plug for connecting to the switch that controls smoke ignition and with one or two two-way terminal blocks for connecting to the smoke cartridge. Two pieces of the same kind for each package.

- Lenght of the cable with BEC connector: 150mm
- Dimensions: 45x10mm
- Weight: Item 90050516 10gr (the pair) Item 90050517 18gr (the pair)



- Operating voltage: 5V 34V
- Power supply: Lixx, Nixx, Pb
- Peak current: 70A
- Voltage drop: 120mV @ 20A
- Short circuit current: 130A
- Current drain: 600uA @ 7.4V (about 400mA in a month)
- Dimensions: 48x17x8mm Weight: 7gr

Short Circuit Protector 70A is a circuit for protecting electronic devices from short circuits and/or overcurrent. Connected to the battery, it acts as a self-resetting fuse in case of short circuit or malfunctioning of the device supplied. It happens very often that, due to malfunctioning of pump systems (for smoke or for refuelling) or blocking of starter motors, current load is so high to cause dangerous fire starting of the devices or of the batteries themselves. The SCP70A is the right accessory for reducing to a minimum risks arising from the use of Lipo batteries. It comes with MPX connectors. After using always disconnect from the battery.



Servo extension with active disturb supressor filter with Jr compatible golden contacts socket and plug. Power output is protected in case of short circuit. It realizes the filtering, cleaning and amplification of servo signal. Having the servo-control signal cleaned of eventual disturbed signals, allows better precision in servo-control position and movement. In addition it realizes the amplification of the signal and its use makes all new and old generation servos compatible with 2,4GHz new receiver systems.

Peak Filter - Item: 90040301



Technical details:

- Can be connected to any free channel
- Dimensions 28x17mm
- Weight 9gr with cable

Disturb supressor filter for receiver (Peak filter).

It must be connected to a free channel of the receiver or in parallel to a particularly powerful servo to filter disturbs on the power suplying of the radio system.

Connection kit for 2 servos with 2 UNI female connectors and 1 MPX male connector



For the connection of 2 servos between fuselage and wing or between different segments of the model (fuselage-fuselage, wing-wing). It is made using only twisted silicon servo wire of 0,5 mm2 section. 2 UNI female connectors and 1 MPX male connector. Available in the following sizes:

- 2 x 50cm Item: 90050810

- 2 x 75cm Item: 90050811

- 2 x 100cm Item: 90050812

Connection kit for 2 servos with 2 UNI male connectors and 1 MPX female connector



For the connection of 2 servos between fuselage and wing or between different segments of the model (fuselage-fuselage, wing-wing). It is made using only twisted silicon servo wire of 0,5 mm2 section. 2 UNI male connectors and 1 MPX female connector. Available in the following sizes: - 2 x 100cm Item: 90050814

- 2 x 150cm Item: 90050815

Connection kit for 3 servos with 3 UNI female connectors and 1 D-SUB 9 pins female connector



For the connection of 3 servos between fuselage and wing or between different segments of the model (fuselage-fuselage, wing-wing). It is made using only twisted silicon servo wire of 0,5 mm2 section. 3 UNI female connectors and 1 D-SUB 9 pins female connector. Available in the following sizes:

- 3 x 50cm Item: 90050801
- 3 x 75cm Item: 90050802
- 3 x 100cm Item: 90050803



DSUB M - Uni M

Connection kit for 3 servos with 3 UNI male connectors and 1 D-SUB 9 pins male connector

For the connection of 3 servos between fuselage and wing or between different segments of the model (fuselage-fuselage, wing-wing). It is made using only twisted silicon servo wire of 0,5 mm2 section. 3 UNI male connectors and 1 D-SUB 9 pins male connector. Available in the following sizes:

- 3 x 100cm	Item: 90050805
- 3 x 150cm	Item: 90050806
- 1 x 25cm + 1 x 50cm + 1 x 75cm	Item: 90050807
- 1 x 50cm + 1 x 75cm + 1 x 100cm	Item: 90050808

Couple of original MPX connectors - Item: 90050116



Set of two original MPX connectors, including 1 plug, 1 socket and heat-shrink tubing.

Continuos current 35A Peak current: 60A (30 seconds)

Couple of black MPX connectors - Item: 90050117



Set of two black MPX connectors, including 1 plug, 1 socket and heat-shrink tubing.

Continuos current 35A Peak current: 60A (30 seconds)

Couple of D-Sub 9 pins connectors - Item: 90051118



Couple of D-SUB 9 pins connectors (plug and socket) for connecting 3 servos. The connectors come with dust cups for protecting contacts.

Pins resistance: 0,03 Ohm Pins cont.current: 3A (8A peak)

D-Sub 15 pins connectors - Item: 90051119



Couple of D-SUB 15 pins connectors (plug and socket) for connecting 5 servos. The connectors come with dust cups for protecting contacts.

Pins resistance: 0,03 Ohm Pins cont.current: 3A (8A peak)

MPX PCB adapter - Item: 90050513



COL BO

MPX PCB adapter with 6 soldering pads.

Practical adapter for soldering servo extensions on MPX connectors; instead of soldering single servo wires to single pins of the connector, the circuit allows you to solder easier the MPX connector on a side and servo wires on large seats on the other.

Applying the shrink tubing is also easier and quicker, since you can use only one larger piece for all six pins.

5 pieces for each package.

DSUB 9 pins PCB adapter - Item: 90050521

Practical adapters for soldering servo extensions on D-SUB 9 pins connectors with the same advantages described for MPX PCB adapters (above). 3 couples for each package.



DSUB 15 pins PCB adapter - Item: 90050522

Practical adapters for soldering servo extensions on D-SUB 15 pins connectors with the same advantages described for MPX PCB adapters (above). 3 couples for each package.

Flame retardant sleeve

Flame retardant glass sleeve, for protecting cables from heat inside the model.

- Diameter 8mm, lenght 1m Item 90050506

- Diameter 6mm, lenght 1m Item 90050507



Brided black sleeve, available in 3 sizes: - Diameter 5mm, lenght 1m Item 90050518

PVC brided sleeve

- Diameter 10mm, lenght 1m Item 90050519
- Diameter 15mm, lenght 1m Item 90050520

D-SUB PCB

MPX Connectors



All ALEWINGS's products are designed and produced entirely in Italy, in order to garantee an outstanding quality without compromises. Every single product is scrupulousy tested before being delivered to give all the safety your model deserves. *Alewings, 100% electronics made in Italy!*



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