

Regulators from 0 to 100% under PWM adjustment for loads with power supplies between 8 and 30 V.D.C. until 25 A as maximum. They allow the regulation adjustment to increase - decrease through two independent push buttons or a single common. The R-533 module is identical to the R-33 but it incorporates a basis for an installation on a DIN-RAIL.

## TECHNICAL CHARACTERISTICS

Input Voltage: From 8 up to 30 V. D.C.  
Load adjustment: PWM, 0-100%  
Maximum load: 25 A.  
Minimum / Maximum Consumption: 30 / 150 MA.  
Control adjustment: External Increase/Decrease Push button(s).  
Push buttons closing time from 0 to 100%: (min. = 2 sec. / max. 15 sec.).  
Recovery Time after output short circuit: 20 sec. Approx.  
Operating indicator: Led 5 mm.  
Operating temperature: -25 °C up to +55 °C  
Power supply input / Load output. Maximum section for wires: 6 mm.  
Net weigh: (R-33 = 220 GR.), (R-533 = 290 GR.).  
Length x width x height: (R-33 = 121,25 x 107 x 55 mm.), (R-533 = 123,7 x 112,7 x 55 mm.).  
Rule: Electromagnetic compatibility 89/336/CEE and their modifications 32/31/CEE and 93/68/CEE. RoHS free.

## INSTALLATION

### Input and Output.

To be in accordance with the CE rule, you have to install a switch and an additional fuse before the power supply Input of the module, as it is indicated in the General Wiring Map. Both are indispensable for the correct protection of the module as well as for your own security.

The section of the input cable, the fuse and the switch have to be correctly dimensioned according to the consumption/power that will control the device.

### Before activating the switch supplying the module, you have to do all module's connexions mentioned hereafter.

The input should be connected to the maximum feeding voltage specified by the load's manufacturer. The output has to be connected directly to the load. Both connections will be done respecting the indicated polarity.

### Control Inputs

For a control with two independent push buttons to increase and to decrease, you have to connect one to the "ON" input and the other to the "OFF" Input.

To control the increase and decrease with a single push button, the installation should only be done on the input "ON", leaving the "OFF" without connection.

The cable length for any input as to be as short as possible. If the distance is superior to 50 cm. it will be necessary to use shielded cable and to connecting the braid to the corresponding terminal Indicated by the ground symbol. The maximum length as to be inferior to 2 m.

The circuit's operating answer can be conditioned by the push buttons behaviour, for this reason we suggest you to use quality push buttons.

### Do not forget.

The module should not be installed in places with great humidity, very high temperatures, or where it is possible a contact with liquids.

The power supply has to be installed into an enclosure, a box or a rack correctly ventilated.

Avoid the contact between the circuit and metallic objects as bracelets, chains, etc. Once the installation done, you can supply the module. The Led will light to indicate the circuit's operating. If the module is disconnected or if there is any problem, the led will light off.

## OPERATING AND ADJUSTMENT R-33/533

### Adjustment control, (selection of one or two push buttons).

Models with adjustment by push buttons can be configured to increase or decrease with one or two push buttons. Besides the physical installation of one or two push buttons, the circuit should be configured to operate with one or another control mode. The configuration is done placing dip switch 1 in "ON" position to operate with a single push button. If the dip1 is placed in "OFF" position, the module will operate with two push buttons. The dip switch 2 is not used.

Fig. 1. Funciones del dip Config

● (Control con 1 pulsador)



Fig. 1. Funciones del dip Config

● (Control con 2 pulsadores)



## OPERATING and ADJUSTMENT, (Part II)

### Ramps Adjustment

The necessary speed to pass from the minimum to the maximum for the increase or decrease option on the output (ramp), can be independently adjusted between 2 and 15 seconds through the potentiometer of the circuit indicated as "RAMPS". This adjustment assignment will be common for the operation with one or two push buttons.

### Increase / decrease with 2 push buttons.

While the push button connected to the "ON" input is maintained pressed, it will progressively increase the output signal. At the opposite, the push button connected to the "OFF", while it remains pressed it will slowly reduce the output signal.

Besides the regulation according to the time push buttons are maintained pressed, circuits admit an immediate and complete activation and deactivation. If you quickly press on the "OFF" push button, the output will be immediately deactivated. At the opposite, a quick pulse on the "ON" will return the output at the previously adjusted level. A double and quick pulse on the "ON" input will eliminate this memory and will activate to the maximum the output.

If after a immediate activation or deactivation, you maintain pressed one of the two push buttons, the circuit will interpret that you want to adjust the output from the value in memory. The module will firstly recover this value, and then it will automatically and progressively adjust the output to the top or to the bottom, according to the pressed push button.

The memory with the last adjustment will only be stored until the circuit's power supply is disconnected

Independently of the adjustment, to completely activate or deactivate the output voltage, it will always be necessary to do a double pulsation on the corresponding push button.

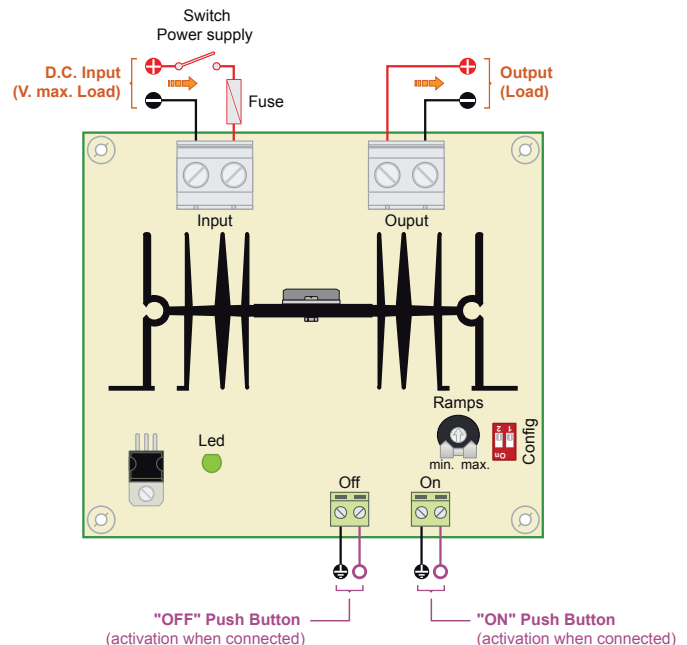
### Increase / decrease with 1 single push button.

Maintaining pressed the push button in "ON" position, you will progressively increase the output signal to the maximum. If you release it, when it arrives at the maximum, the module automatically and progressively will decrease.

After leaving it adjusted at the wished level, if you press it again, the circuit will remember the previous adjustment type (ascending/descending) that you were doing, to recovering it in the corresponding way.

To do a complete and immediate activation or deactivation, you have to quickly press on the push button. Automatically, depending on the last adjustment (ascending or descending) the output will be respectively and completely activated or deactivated.

## R-33 / R-533 WIRING MAP



## WARRANTY and TECHNICAL INCIDENTS

### Warranty.

All cebek modules have a total warranty of 3 years as concern components and labour man. All damage, error or mistake due to problems independent from the circuit, connection, installation or operating mode, as well as wrong handling are not included in this warranty. More over it will be necessary the purchase invoice of this module for any claim.

To contact our technical depart. Please contact: - sat@cebek.com or by fax (+34) 93.432.29.95 or by mail at the following address: FADISEL - c/Quetzal, 17-21 - 08014 Barcelona - SPAIN.

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**Note.** Every time you change the position of the daps, you have to reset the circuit, to allow the module to correctly recognize the new operating configuration.