R-35 / R-535

Light or Speed regulators for D.C. Control by push button

english v.0816

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 adjustment or the regulation control through external signal from 0 to10 V DC or using a standard 10K potentiometer (Not includeed).
The R-535 module is identical to the R-35 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: o-10 V DC input signal or 10K Ohms potentiometer.
Minimum Adjustment: Variable resistor inserted in the circuit.
Recovery Time after output short circuit: 20 sec. Approx.
Operating indicator: Led 5 mm.
Operating temperature: -25 ºC up to +55 ºC
Power supply input / Load output. Maximum section for wires: 6 mm.
Net weigh: (R-35 = 222 GR.), (R-535 = 295 GR.).
Length x width x height: (R-35 = 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

The cable length for anyone of the two control inputs has to be as short as possible. If the distance is superior to 50 cm. it will be necessary to use shielded cable and to connect the braid to the corresponding terminal indicated by the ground symbol, or to the terminal indicated by the "A" character (for the potentiometer). Anyway the maximum length is 2 m.
0-10 V.DC External signal. The connection should be done on the "D.C Control" input, respecting the indicated polarity.
External Potentiometer. Indicated as "Ext. Pot", this input only accepts 10K ohms linear potentiometers. The "A" terminal corresponds to the minimum extremity, the " B " terminal to the axis Input and the " C " to maximum extremity.

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

Adjustment control, (selection).

Besides the installation on the Indicated input, the module has to be configured to identify the Control Mode, (potentiometer or external signal). The configuration is done placing the dip switch 1 or thee dip 2 in "ON" position as it corresponds. Do never place both in the same position, or neither in "ON", otherwise the device won't correctly operate. See the fig.1.

Fig.1 Dip Functions
- (Control by Potentiometer)

Fig.1 Dip Functions
- (Control by 0-10 V.DC Signal)

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

Adjustment by 0-10 V Signal.

With the dip 2 placed in the "ON" position and the dip 2 in "Off" position, the module will be configured to adjust the output according to the input external signal from 0 to 10 V.
This D.C voltage has to be perfectly stabilized and it never can exceed 10 V. otherwise it could damaged the circuit.

Adjustment by Potentiometer.

With the dip switch 1 placed in "ON" position and the dip 2 in "OFF", the module will adjust the output according to the position (turn) of the external potentiometer connected to the circuit. This one is not supplied with the module and it should be acquired for separate. Its value has to be 10 K ohms.

Minimum Adjustment.

The potentiometer of the circuit indicated as " Adjust " allows, through its regulation, to adjust the minimum point for the load activation.

Ascending / Descending Adjustment.

For the adjustment by 0-10V signal, if you don't connect the "Config" Input, the output will supply the voltage form the minimum to the maximum, in direct proportion with the value of the control

OPERATING and ADJUSTMENT, (Part II)

signal. At the opposite, if you connect both terminals of this input, the output will operate in inverse proportion to the control input. See fig. 2.
For the adjustment by external Potentiometer, the "Config" Input will only affect to the turn way of this component.

Fig. 2. "Config" Input Function
- ("Config" in OFF. Output behaviour)

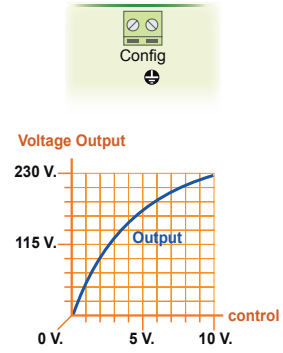
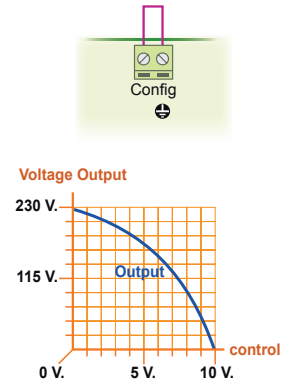
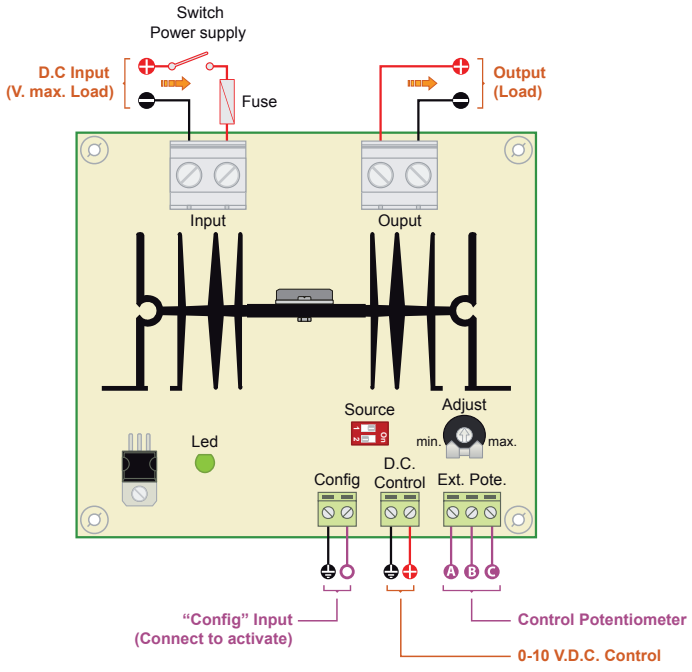


Fig. 2. "Config" Input Function
- ("Config" in ON. Output behaviour)



R-33 / R-533 WIRING MAP



WARRANTY and TECHNICAL INCIDENCES

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.

Technical Department.

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CEBEK offers a Wide and complete modules range which can be of your interest.

Please visit www.cebek.com