

Retarder of servo movement NF – SD3

NF-SD3 controller serves to limit the speed of movement of servo at response to a change of position. The SD3 is designed for aeromodellers to slow down pushing out of landing gear and wing flaps. The SD3 can be used inside ships and military models for fluent positioning of gibs, opening of bars and tops and for slow starts of engines . You will appreciate big range from **0,7** to **14,7** sec.

The SD3 receives information about the desired position of servo from the receiver and sends it to output. When a fast change occurs on input, the output starts changing slowly so that the maximum speed of servo movements is not exceeded. With switch-controlled channels it makes possible a fluent linear servo movement on a model. The speed of movement can be set by trimmer using a small screwdriver.

Installation procedure

The SD3 can be just connected between a receiver and a servo. ATTENTION, the output connector is not secured against change of polarity of cables. The order of colors must be kept the same as on the cable to receiver, as is indicated on the first picture. The same colors must be towards each other, not the other way! The power wires (red and brown) pass through SD3 unchanged, see Fig.1.

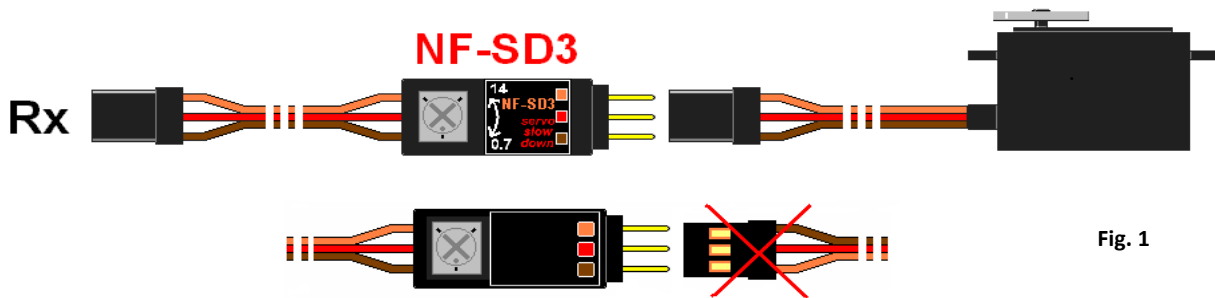


Fig. 1

The operational voltage range is from **3,0** to **12,0 V**. The level of the signal against the ground (brown wire) cannot exceed **5 V** and the level of power voltage supplied by **Rx** (red wire) against the ground. The chart on Fig.2 shows the minimal level of the input signal **MIN INP** and the level of the output signal **OUT** depending on the power supply voltage. The level of the signal from a receiver must be inside the space between the MIN INP and OUT. Most of receivers in the market meet this requirement.

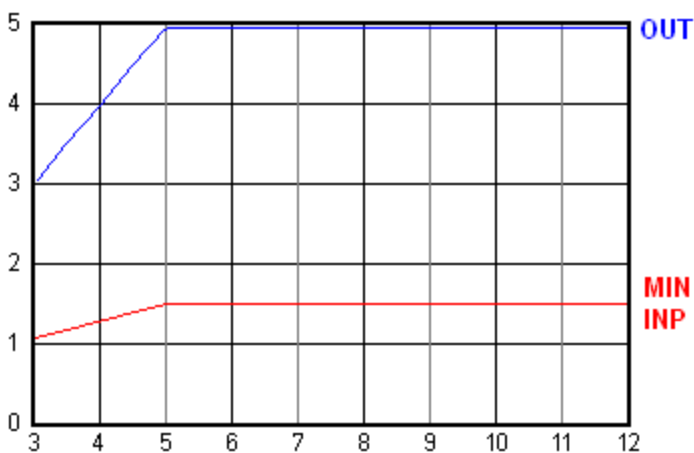


Fig. 2

The time it takes the servo to run from one end position to the other one is called “running time”. The shortest settable running time is **0,7 sec**, the longest is **14,7 sec**. The first half turn of the trimmer is used to set short times and is linear with **0,5 sec** step. The second half of the scale is exponential for longer times. A total of 16 values can be set. A small point on the trimmer serves as an indicator of the trimmer’s setting (turned to 4 sec. on the Fig.3). Don’t turn the trimmer over the red area indicated between the values 0.7 and 14 sec.



Fig. 3

If the SD3 is sensitive to touch, the likely cause is a free overthrust of the servo-cable to the module connector. A good contact can be ensured by bending down the middle contact by a half of its thickness. Bend it with small pliers, holding the module in your fingers as close as possible to the connector to reduce the risk of the contact’s breaking, see Fig.4.



Fig. 4

The manufacturer is not liable for damages caused by the operation of the unit beyond the technical parameters and the above recommendations. Instructions for the implementation of socket adapters, cabling and more information about diodes can be found on the website.

Technical parameters NF-SD3

	min	typ.	max.
Provisional volage [V]:	3	5	12
Consumption [mA]:		< 2.5	
Rx pulse width [ms]:	0,95	– 2,05	
Rx pulse period [ms]:	10	20	40
Running time [s]:	0.7	4.0	14.7
Operational temperature:		0 - 70°C	
Dimensions [mm]:		40 x 10.5 x 6.5	
Weight [g]:		4,5	

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