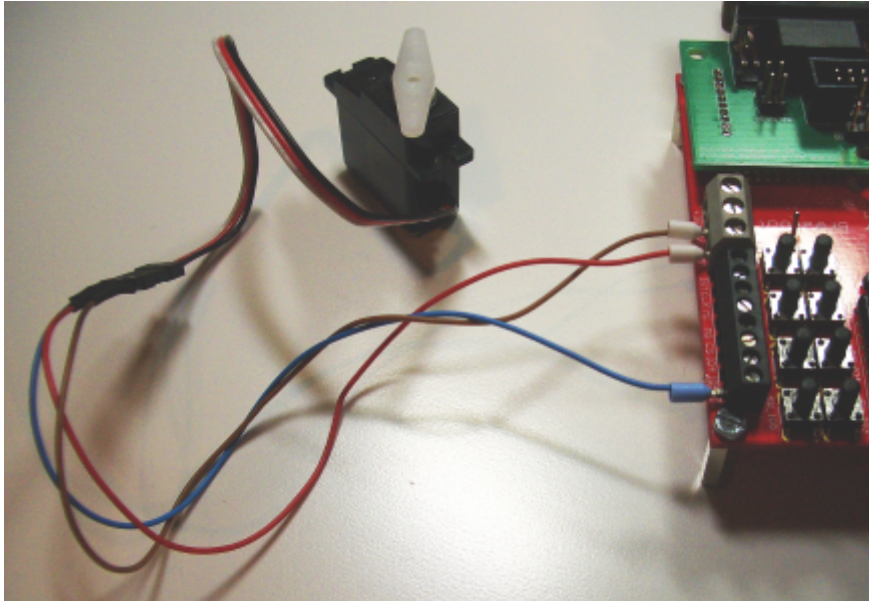


# Connection of a scale model servo



The pulse outputs IO3 and SPI\_INT can be directly connected to conventional [scale model servos](#).

The pulse input of the servos is directly connected to IO3 or SPI\_INT. Of course, mass is connected to mass. The voltage supply should be about 5 V.

Such a servo motor requires a periodic signal at the pulse input with the periodic time 20 ms. At the beginning of a period the servo awaits a positive pulse. The pulse length defines the position of the servo arm. For the three positions **left**, **center** and **right**, the values 1 ms, 1,5 ms and 2 ms have proved of value, some models may deviate.

At the Netzer, the settings should be carried out as shown in the figure (IO configuration page).

### IO3 (ID d)

Digitaler Eingang  
 Ereignisse auf GPIO Server:

Digitaler Ausgang  
 Startwert:  0  1

PWM Ausgang  
 Frequenz \*:  Hz  
 Logik:  0  1  
 Startwert: 0x

Impulsausgang  
 Modus \*:   
 Einheit \*:  ns  
 Logik:  0  1  
 Startwert: 0x

\* Allgemeine Parameter für alle PWM Kanäle

The periodic time results from the internal 16-bit counter for continuous pulse signals:  $65536 * 400 \text{ ns} = 26,21 \text{ ms}$ .

Some servos can definitely cope with 13.1 ms (unit=200 ns), you should just try it. The advantage of using the smaller unit is that the servo may be addressed in smaller steps.

In the following please find a table with some example values. Due to the deviations in the periodic times, the values probably require slight adjustments.

Unit	Leftmost = 1 ms	Central position = 1,5 ms	Rightmost = 2,0 ms
400 ns	2375 (0x947)	3750 (0xea6)	5125 (0x1405)
200 ns	4750 (0x128e)	7500 (0x1d4c)	10250 (0x280a)

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