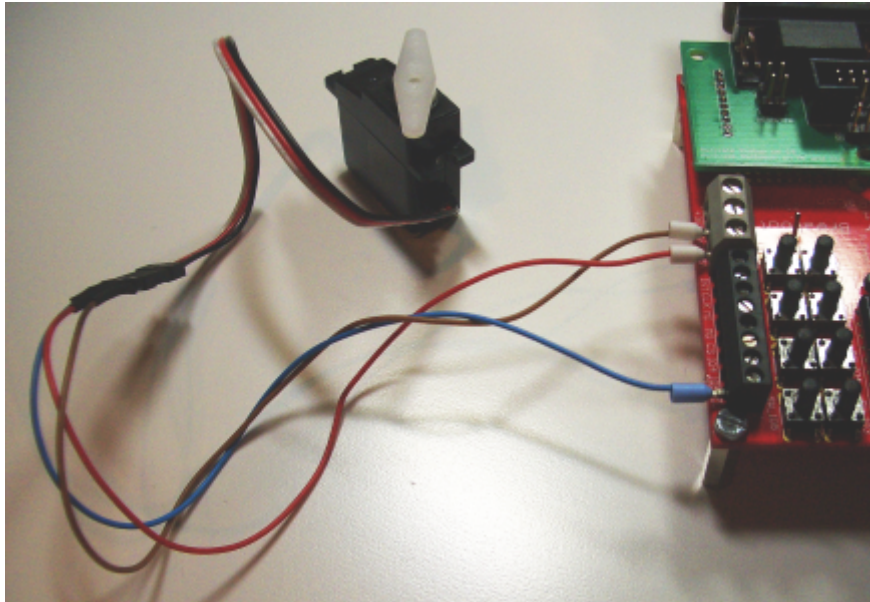


# Connection of a scale model servo



For this functionality the **IO project** (base or pro) must be **uploaded** to Netzer.



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)

Digital input  
 Alert events: Deactivated

Digital output  
 Startup value:  0  1

PWM output  
 Frequency \*: 40000 Hz  
 Logic:  0  1  
 Startup value: 0x0

Impulse output  
 Logic:  0  1  
 Startup value: 0xea6

Input capture  
 Capture:  On falling edges  
 On rising edges

Mode \*: Continuous

Unit \*: 400 ns

\* Parameter for IO3 and SPI\_INT

Save
Save & Back
Reset

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)

From:  
<http://mobacon.de/dokuwiki/> - MoBaCon

Permanent link:  
<http://mobacon.de/dokuwiki/doku.php?id=en:netzer:servo&rev=1412349066>

Last update: **2025/06/11 20:42**



