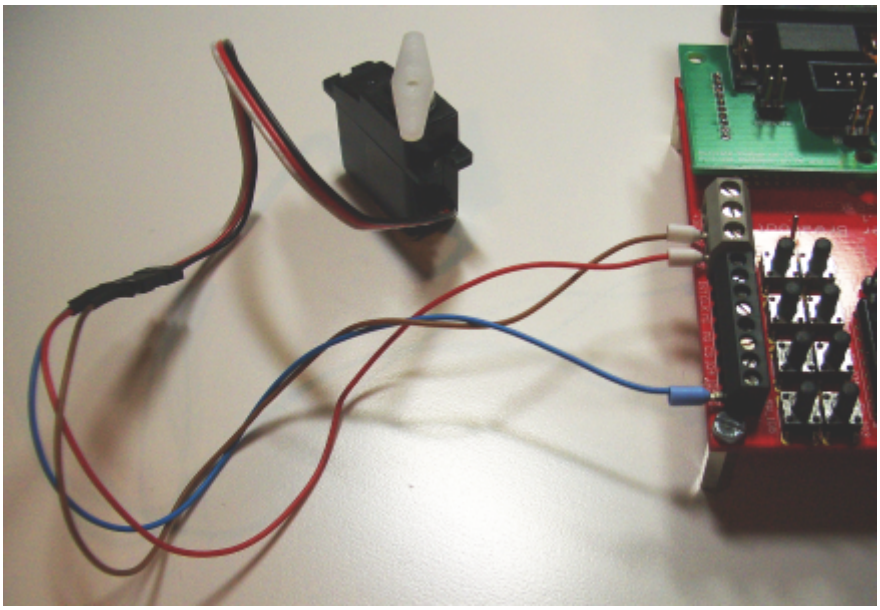
Connection of a scale model servo

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).

The periodic time results from the internal 16-bit counter for continuous pulse signals: 65536 * 400 ns = 26,21 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)