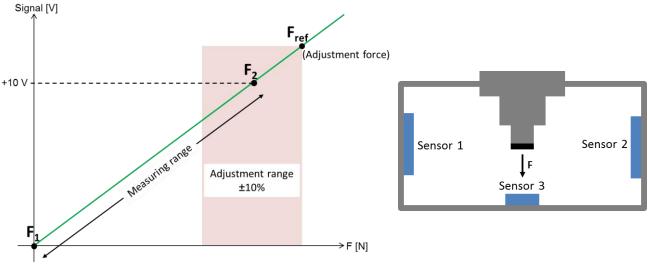


TECH NOTE :: PMX Adjustment Assistant

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Brief description

This is an instruction for adjusting a sensor with the PMX. The adjustment assistant is especially useful if a sensor is not calibrated, or assembled in a construction, for example in force bypass. There are two approaches available to adjust sensors using the PMX: A reference channel from the PMX can be used, or a reference value can be entered manually. The result in each case is a linear two-point scaling (see figure 1).





Start the Adjustment Assistant

Go to Settings -> Assistant -> Adjust Channel.

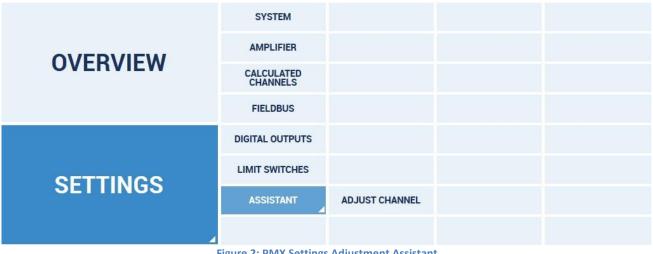


Figure 2: PMX Settings Adjustment Assistant

Adjust channel and get reference value manually

One of both possibilities to adjust a sensor is to provide a known reference force (e.g. by applying a calibration force). Enter its value in the dialogue window before (figure 3). Afterwards the channel that should be adjusted has to be selected. It is possible to adjust several channels at the same time.

	value from PMX channel
1. F1	<u> </u>
Zero bala	nce (optional)
0	N 201
	enter reference value loaded
-	baded
30	N
	el for adjustment 3 [PX401] Slot 4 [PX460] 1 1 2 2 3 3 3
3	4 4
	4 4
4	4 4

Figure 3: Adjust channel with reference force

Now the adjustment procedure containing three steps is starting:

First the sensor is to be unloaded completely. The second step is to load the sensor with the reference force that has been entered before. In the third step this process can be repeated several times to increase the accuracy if necessary. The Mean and standard deviation is displayed here. If the results are satisfying, the sensor can be adjusted by clicking *Apply*.







Adjust channels and get reference value from the PMX

In the second examples it is shown how to adjust two channels at once with a reference channel. The general procedure is the same (see figure 4), however instead of a calibration force a PMX-measurement-channel is used as reference value. The channels can be selected below in the same window.

ADJUST CHANNEL 🛞 🤅	?)
Use reference value from PMX channel 1. F1 Zero balance (optional) 0 N	
Manually enter reference value	
Select channel for adjustment Slot 2 [PX455] Slot 3 [PX401] Slot 4 [PX460]	I
Image: Apple of the second sec	
N Continue > Cancel	

Figure 5: Adjust two channels with a reference channel

Regardless of which approach has been applied, the two-point-scaling is automatically entered in the Amplifier menu.

HBM DEVICE NAME: PARAMETER SE			administrator 🗟 🌐	? PMX°
PX455	FI	F2	F3	ch2.4 INVALID
#817557505	30.06 N	14.18 N	15.66N TEDS	-0.00 ^{mV} / _V
SENSOR	Default SENS 🗾	Default SENS	Default SENS	Default SENS 🗾 🖌
SENSOR TYPE	Full-Bridge 4mV/V	Full-Bridge 4mV/V	Full-Bridge 4mV/V	Full-Bridge 4mV/V
PHYSICAL UNIT	N	N	N	mV/V
CHARACTERISTICS				
1. Point Electrical	0.011799 <u>mV</u>	0.032440V	0.005918 <u>mV</u>	0.000000 <u>mV</u>
1. Point Physical	0.000000 N	-0.047176 N	-0.047176 N	0.000000 <u>mV</u>
2. Point Electrical	0.070276 <u>mV</u>	0.063003	0.034532 <u>mV</u>	1.000000 <u>mV</u>
2. Point Physical	30.00000 N	15.10790 N	15.10790 N	1.000000 <u>mV</u>

Figure 6: Two-point-Scaling in Amplifier menu

Hint: Additionally all the values of the adjustment process are saved in the log-file.



Disclaimer

These examples are for illustrative purposes only. They cannot be used as the basis for any warranty or liability claims.