

pSens2 : accuracy

Harmonics are measured upto the 13th, for most applications higher harmonics are low, so the pSens2 gives a good indication of these harmonics.

Some frequency invertors produce significant higher harmonics, which leads to errors in the power measurement and of course in the distortion.

Depending on the harmonic distortion, pSens measures more or less 'noise'.

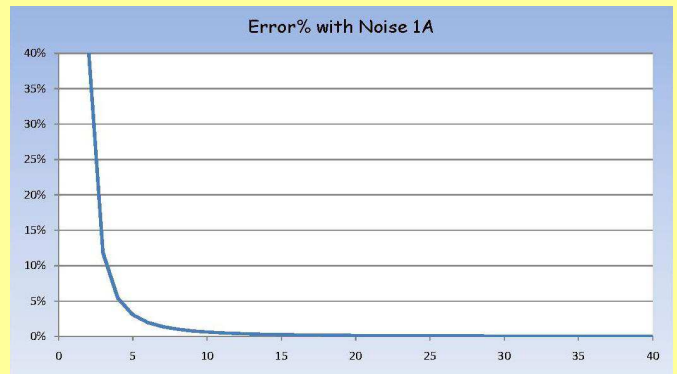
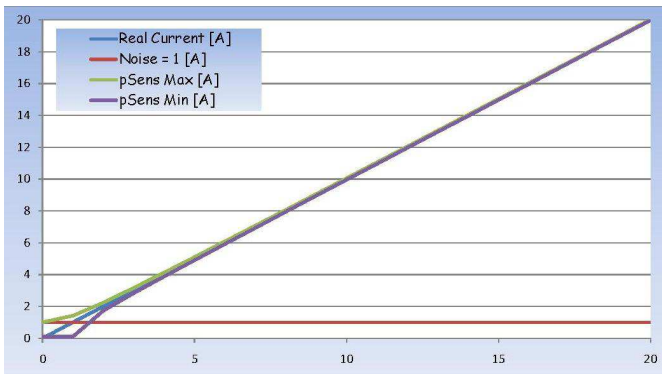


Typically, the flexible coils have a noise from 1 to 3 amps, but you should add this noise to the real current and power in a quadratic way.

$$\sqrt{(I_{\text{real}})^2 + (I_{\text{noise}})^2}$$

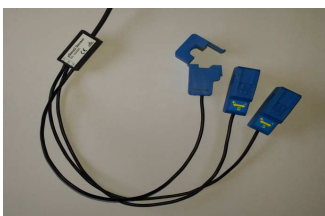
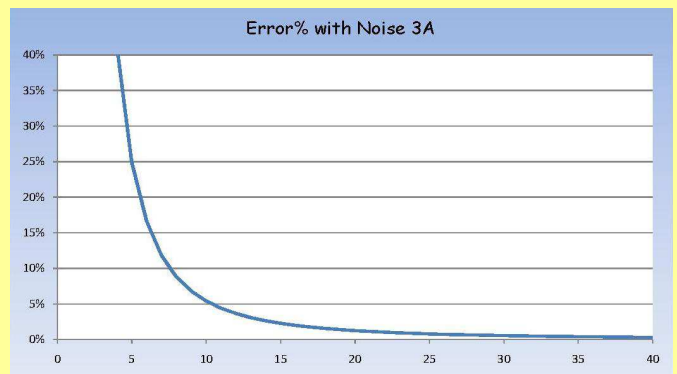
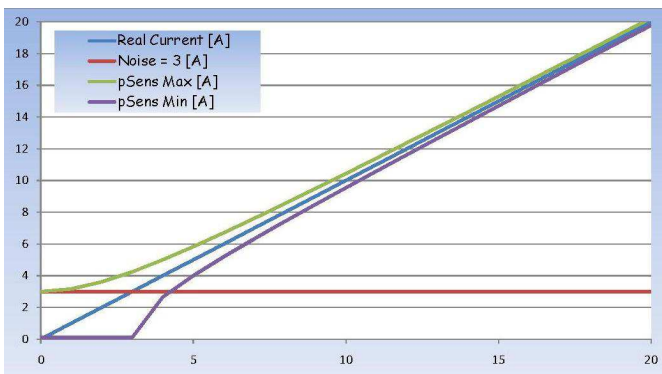
With 1 amp noise and

- 3 amps real current, this leads to an error of 0,16 amp. (5,41% error)
- 10 amps real current, this leads to an error of 0,05 amp. (0,5% error)
- 20 amps real current, this leads to an error of 0,024 amp. (0,12% error)



With 3 amp noise and

- 3 amps real current, this leads to an error of 1,24 amp. (41% error)
- 10 amps real current, this leads to an error of 0,44 amp. (4,4% error)
- 20 amps real current, this leads to an error of 0,22 amp. (1,1% error)



For lower currents upto 100A, we can offer another solution with open clamps. These have a much lower error on low currents.