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COUNTRY : Germany	PREF. SUBJECT : PS3
REGISTRATION NUMBER : 6775	QUESTION N° : Q18

Frequency response of typical LPIT sensors

Attenuation of induced voltage vs. frequency

Attenuation of displacement current vs. frequency
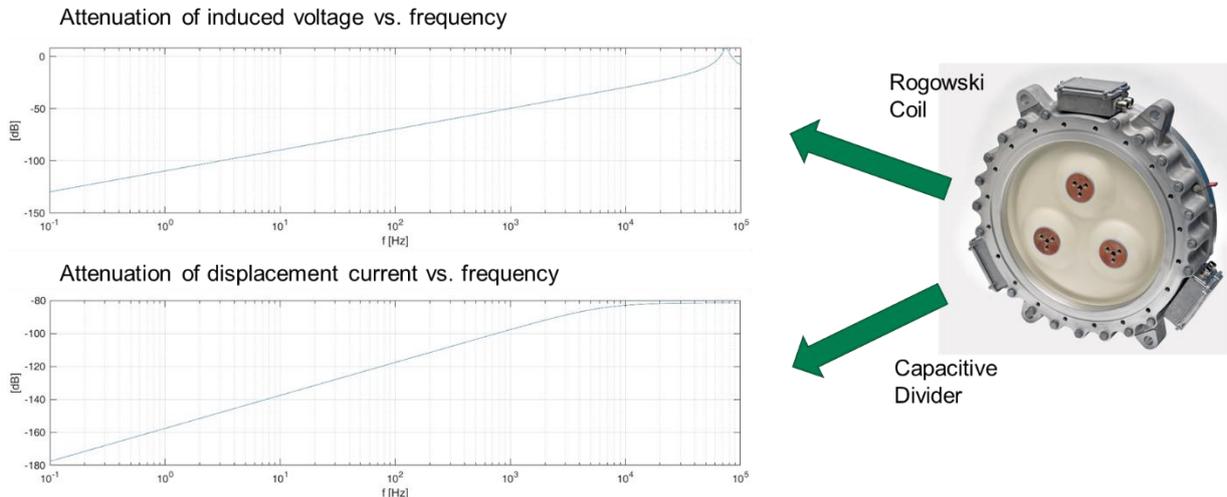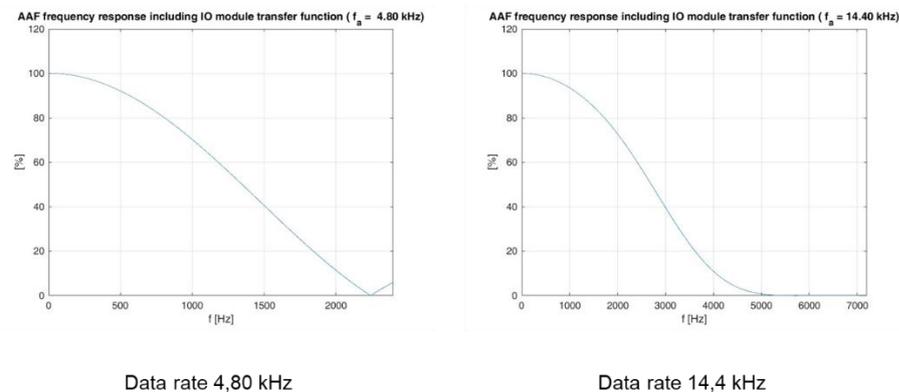
Frequency response of a complete GIS LPIT system with digital output according to IEC 61869-5 / IEC 61850-9-2

AAF frequency response including IO module transfer function (f_a = 4.80 kHz)

AAF frequency response including IO module transfer function (f_a = 14.40 kHz)

Data rate 4,80 kHz

Data rate 14,4 kHz

Requirements defined by IEC and overall accuracy

1. IEC 61879-6 defines accuracy requirements at harmonic frequencies for measuring applications up to the 13th harmonics and for PQ applications up to 3kHz.
2. IEC 61850-7-4:2020 Ed 2.1 describes a mechanism which allows the LPIT frequency response to be corrected by using the frequency correction setting "CorCrv" contained within the logical nodes for current and voltage transformers (TCTR and TVTR).
   This can be used to compensate the effect of the anti-aliasing filter.
3. An overall accuracy including LPIT and PQ-meter of < 5% up to the 50th harmonic frequency is achievable.
4. See CIGRE TB814, 2020, Chapter 2.4 for bandwidth considerations on different LPIT technologies.