

HORN ANTENNA



Description

Horn antenna is a partial discharge sensor designed to receive electromagnetic (EM) emissions from a PD occurring in electric assets like GIS and GIL or MV and HV power transformers. It is a broadband antenna with a flat response which makes Horn antenna suitable in a number of different applications. It has been optimized to operate in a frequency range suitable for PD activity monitoring and it was designed to provide maximum sensitivity and high gain.

Features

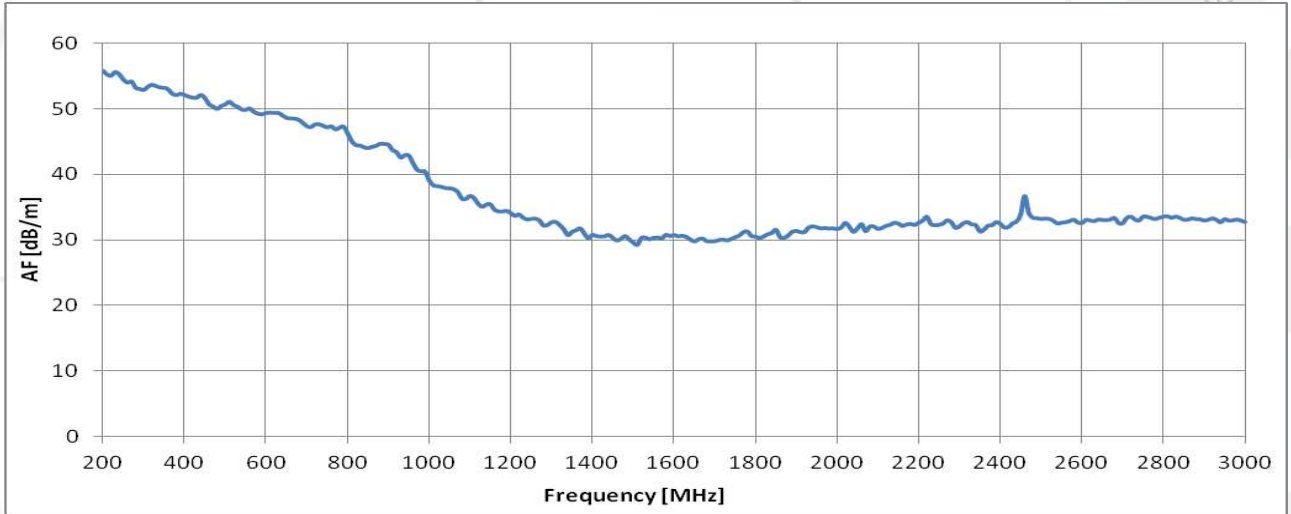
Its compact and robust design (passive sensor) makes Horn the optimal sensor for direct installation on high and medium voltage GIS/GIL and Transformers. It can be however virtually applied in any electrical equipment provided that it has apertures or EM transparent surfaces.

Horn antenna can be used in conjunction with Techimp Frequency Shifters product range, specifically designed and optimized to get the best performance with Techimp PDCheck.

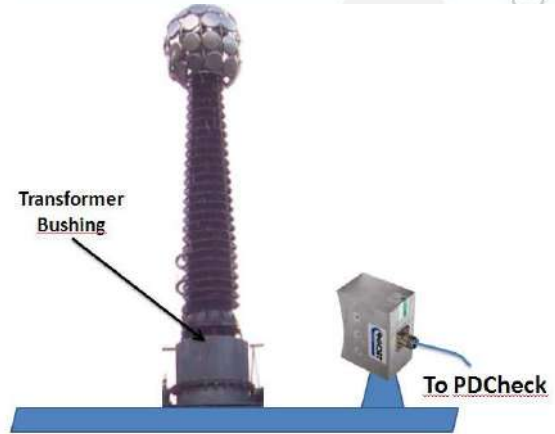
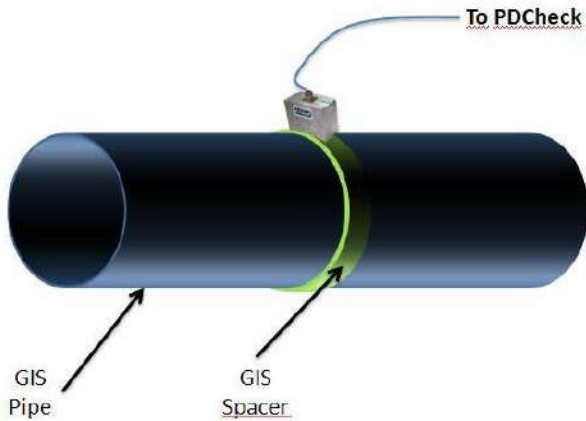
SPECIFICATIONS

Bandwidth	500MHz – 3GHz
AF (Antenna Factor)	50 – 30 dB/m
Typical VSWR	5:1
3dB Beam width	60° - 140°
Polarization	Linear
Impedance	50 Ohm
Overall Dimensions	70mm x 100mm x 50mm
Weight	260 g
Connector	Type N
Installation	In proximity of NON-SHIELDING apertures
Operational limits	Temp: -20-65°C; rh: 0-100%

Typical Antenna Factor profile



HORN Installations Specifications



GIS/GIL:

Horn Antenna is preferably positioned above the EM transparent spacer of the GIS/GIL and connected to Techimp PDCheck through Techimp Frequency Shifter. Antenna must be installed as shown in the picture for optimal performance.

TRANSFORMERS:

Horn antenna can be positioned in close proximity to the bushing of a power transformer, and connected to Techimp PDCheck by Techimp Frequency Shifter. Antenna must be installed as shown in the picture for optimal performance.