

UHF-PS1 / UHF-PS1-V4A

Window-Type Ultra-High Frequency (UHF) Partial Discharge (PD) Sensor



UHF-PS1

- Window-type PD sensor
- For oil-filled transformers
- Design according to Cigré TB 662
- Bandwidth: 200 MHz ... 3000 MHz
- High sensitivity
- Flat spectrum
- Integrated high-pass filter
- Designed to be mounted in transformer tank wall with our **Welding Ring** and **Dielectric Window**

Technical Data

	UHF-PS1 (BSSA000406)	UHF-PS1-V4A (BSSA001506)
Bandwidth	200 MHz - 3000 MHz	
Oil pressure*	5 bar (max.)	
Oil temperature*	120°C (max.)	
Vacuum tightness*	< 0,15 mbar, leakage rate < 0,001 mbar/sec	
Connection	Type N connector female	
Insertion depth of UHF antenna	40 mm	
Dimensions (L x W x H) of sensor	161 mm x 148 mm x 110 mm	
Sensor housing material	Aluminium (3.2315)	V4A (1.4404)
Mounting screws material	DIN912, A2-70	DIN912, A4-70
Weight	1.35 kg	2.75 kg
IP protection class	IP 67	
Operation temperature	-40°C ... +120°C	
Storage temperature	-40°C ... +120°C	
Maximum operating height	3000 m above sea level	

*When installed at a transformer using BSS welding ring set and BSS dielectric window set.

DATASHEET

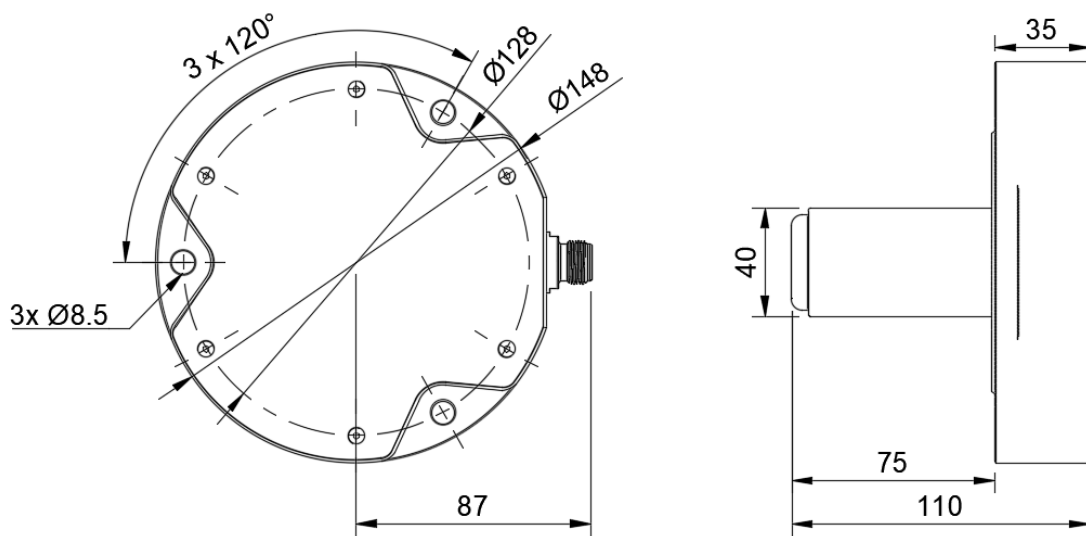
UHF-PS1 (BSSA000406)
UHF-PS1-V4A (BSSA001506)



Type Tests

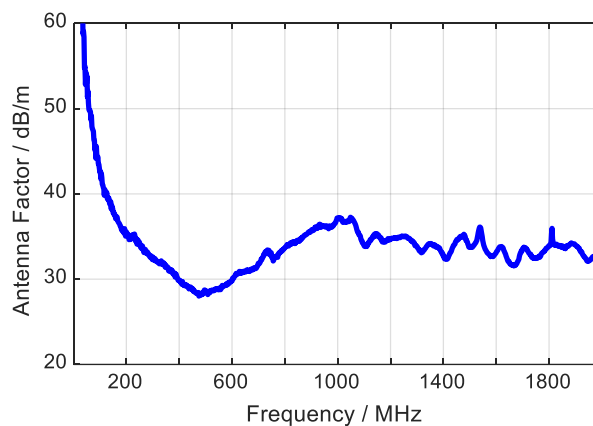
CE conformity	EMC, RoHS
EMC	EN IEC 61326-1 Immunity: EN IEC 61000-4-2 / EN IEC 61000-4-3 / EN IEC 61000-4-4 / EN IEC 61000-4-5 / EN IEC 61000-4-6
Environmental	Temperature ratings: EN IEC 60068-2-1 / EN IEC 60068-2-2 Mechanical ratings: EN IEC 60068-2-6 / EN IEC 60721-3-2 / EN IEC 60255-21-3 / IEC EN 6006-2-31 IP-Class Certification: ISO 20653

Dimensions (mm)



All dimensions in mm

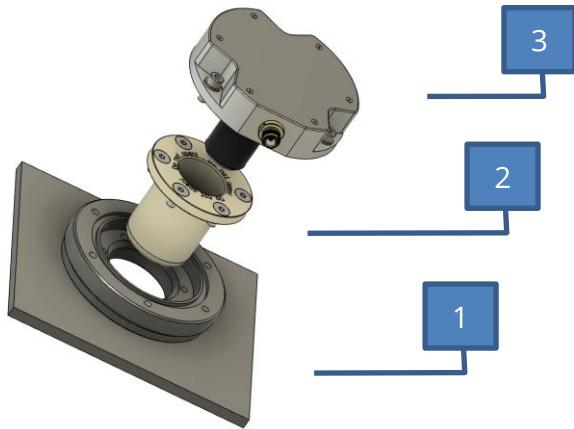
Sensitivity



Reference Sensitivity¹

¹ Sensor specific Sensitivity can be found in the routine test protocol of the sensor

Materials and Application Scenario



Sensor installation:

- 1) Stainless-steel ring is welded onto a hole in the transformer tank wall
- 2) Dielectric window acts as oil-barrier
- 3) UHF sensor is mounted on the ring with antenna inside the dielectric window and therefore inside the transformer

Scope of Delivery

UHF-PS1 Product No: BSSA000406

- UHF-PS1 (standard aluminium version)
- Routine test protocol including factory calibration certificate
- Quick reference guide

UHF-PS1-V4A Product No: BSSA001506

- UHF-PS1-V4A
- Routine test protocol including factory calibration certificate
- Quick reference guide

Available Accessories

Description	Order No.
Dielectric Window	BSSA000403
Welding Ring standard V2A version	BSSA000527
Welding Ring V4A version	BSSA001505

Important Installation Notes

For safety reasons, the dielectric window of UHF-PS1 needs to be placed in regions with low electrical field strength. In areas with high electrical field strength the air inside the pocket of the dielectric window could lead to PD. See installation manual for details of positioning the sensors.

Cigré technical brochure TB 343 recommends installing DN50 valves or dielectric windows for later fitting of UHF probes. (TB 343: Recommendations for condition monitoring and condition assessment facilities for transformers).

The dielectric window of the sensor is designed according to Cigré technical brochure TB 662 (Guidelines for partial discharge detection using conventional and unconventional methods).

DATASHEET

UHF-PS1 (BSSA000406)
UHF-PS1-V4A (BSSA001506)



Legal Information

A copy of the Declaration of Conformity, manual and other relevant documents are available by request from BSS Hochspannungstechnik GmbH: support@bss-hs.de

All information can be subject to error and change without notice.