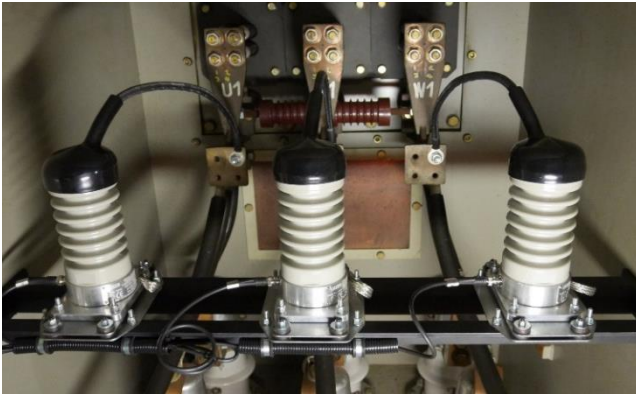


HIGH VOLTAGE COUPLING CAPACITOR (HVCC) SENSOR RANGE



The HVCC sensor range is designed for on-line partial discharge (OLPD) testing and monitoring of transformers and the stator windings of high voltage (HV: 6.6–30 kV) motors and generators in the 10 MVA+ power class.

OLPD testing and monitoring using HVCC sensors is now considered by Oil & Gas operators around the world to be the best method of assessing the insulation condition of large plant including rotating HV machine stator windings.

Features

- Suitable for permanent installation inside the cable/bus compartment.
- Designed for direct galvanic connection to the outputs/bus-bars.
- Available in five different versions, in the voltage range from 15 to 30 kV (500–1000 pF).
- Ex/ATEX versions, certified for installation in hazardous explosive gas environments.








Benefits

- Allow for PD measurements to be made at any time, without the need for outage.
- Provide highest possible sensitivity to PD due to the good low frequency response and the direct galvanic connection.
- Detect lower frequency PD signals from sources deep into machine windings within larger rotating machines due to high sensor capacitance.
- Help achieve best asset-management results when combined with HVPD's continuous OLPD monitoring and diagnostic spot-test systems.



Note: A pre-installation, engineering and baseline test survey is strongly recommended due to several different configurations and designs of rotating HV machine cable terminal boxes.

HVCC SENSOR RANGE & SCOPE OF SUPPLY

	15 kV, 500 pF	15 kV, 500 pF	16 kV, 80 pF	25 kV, 1000 pF	30kV, 1000 pF
					
Dimensions (W x D x H)	186 x 135 x 197.7			230 x 150 x 230	
Weight	2 kg			3.7 kg	3.7 kg
Line-Voltage Rating	15 kV	15 kV	16 kV	25 kV	30 kV
Surface Creepage	280 mm			404 mm	
Max Withstand Voltage	36 kV (1 minute)			50 kV (1 minute)	
Impulse Withstand Voltage	150 kV			170 kV	
Capacitance	500 pF (±15%)	500 pF (±10%)	80 pF (±15%)	1000 pF (±15%)	1000 pF (±15%)
PD Level	<5 pC at 15 kV		<5 pC at 16 kV	<5 pC at 25 kV	<5 pC at 25 kV
Temperature Range	-50°C to +80°C				
Lower -3 dB Point	5 MHz		20 MHz	4 MHz	4 MHz
Output Signal Connector	BNC				
HV Connection	M10				
Ground Connector	M8 Stud				
Mounting Holes	4x M6				

The sensors are tested in accordance with IEC 62271-1:2007 and IEEE Std C37.20.2-1999.

Standard scope of supply



A standard HVCC sensor installation kit comprises the following components:

- 3x HVCC sensors
- Earth bonding cables
- Termination box
- RG223 coaxial cables
- Cable conduit
- HVCC capacitor boots
- HVCC jumper cables

Note: Exact fixings are supplied in each kit after they are specified during the on-site survey and/or technical review of customers drawings and photos.

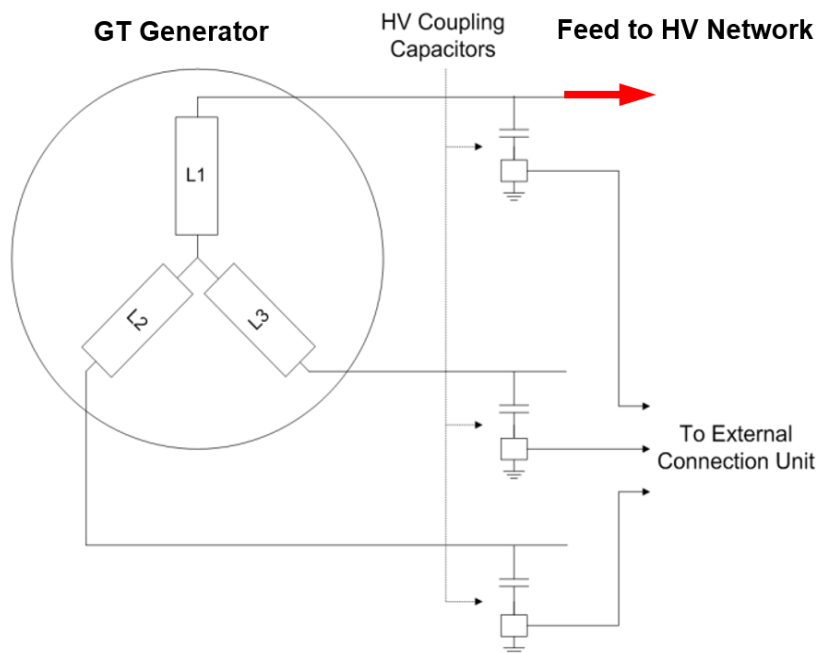
HVCC SENSOR INSTALLATION TYPES

Depending on the application and customer requirements, the following installation types can be made:

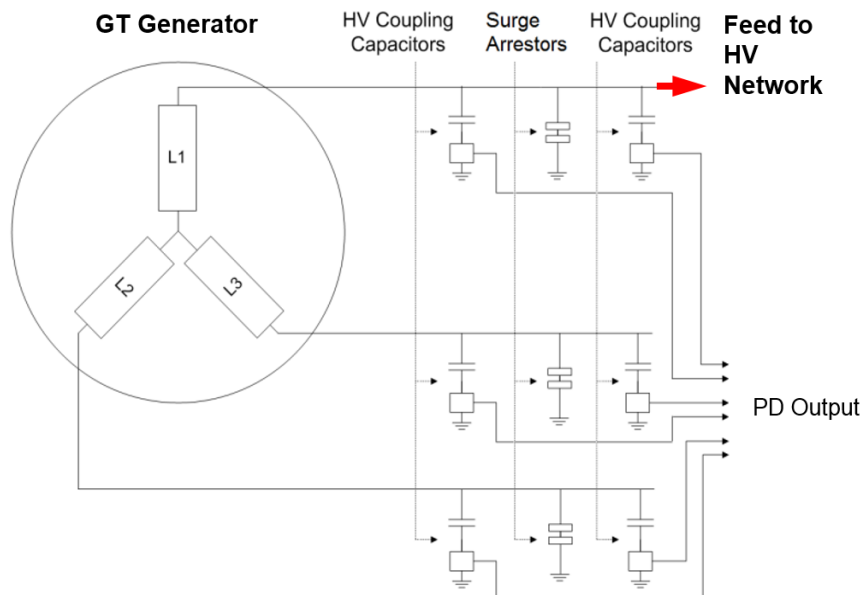
- One HVCC sensor per phase – a single-coupler installation
- Two HVCC sensors per phase – a twin-coupler installation

Coaxial signal connection cables are brought out to an external sensor connection box on the side of the machine allowing PD measurements to be made at any time, without the need for outage.

Single-coupler installation



Twin-coupler installation



HVPD-ACCREDITED 5-DAY INSTALLATION TRAINING

Schedule

- 2 days in the HVPD training centre in Salford, UK
- 3 days of training and supervised installation at the customer's site

Features

- Suitable for those who are required to perform safe and appropriate OLPD sensor installations
- Comprises interactive modules on sensor positioning, installation and commissioning
- Includes a comprehensive overview of the installation principles and hands-on field exercises
- Installation competency certification is awarded after completing the course

For details of the 5-day HVPD-Accredited Installation Training course contact HVPD at:

Tel: +44 (0)161 877 6142

E-mail: training@hvpd.co.uk

