

## Reliable Current Detection

### Applications

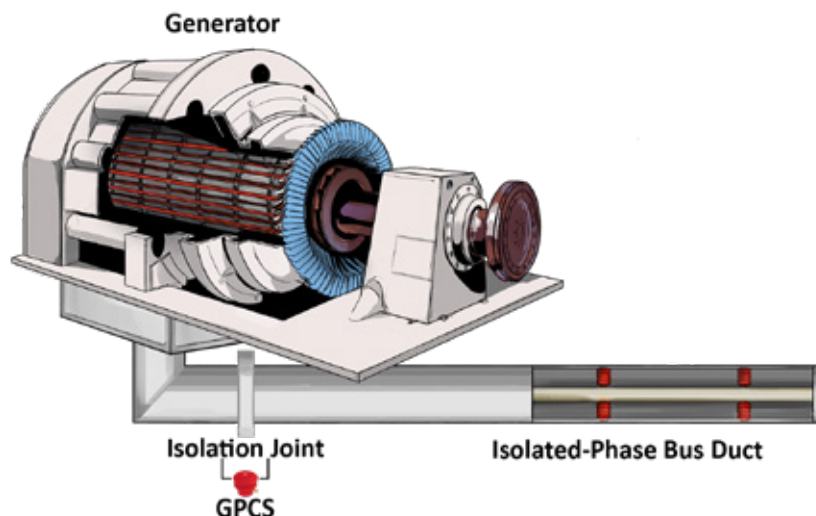
The Ground Path Current Sensor (GPCS) provides non-invasive, directionally sensitive Partial Discharge (PD) detection in electrical equipment. It is designed to detect high frequency currents induced on the grounded surfaces of HV components like isolated phase bus duct enclosures, feeder cable shields of switchgear, HV cable terminations, and more. Common Applications of the GPCS include Isolate-Phase Bus, Switchgear, and Power Transformer.

High voltage conductors are usually installed with a shield/sheath - the shield/sheath on cables and the duct on busbar installations. This shield equalizes the electrical stress around the conductor and diverts any leakage current to ground through a ground connection. The shield is connected to ground at only one point to prevent circulating currents. The other end of the shield will be insulated from the ground.



### Operation

The PD activity in electrical equipment produces high frequency signals that are transmitted through the primary conductor where this signal induces a current in the shield. The high frequency pulses are detected and transmitted to a monitoring instrument via a coaxial cable connection. To achieve this, a GPCS is installed across the insulated joint between the conductor shield and ground. The GPCS is designed to transmit only the high frequency pulses caused by a partial discharge. The GPCS acts as a band pass device providing an alternative ground path for the induced high frequency signal in the shield while still maintaining the integrity of the insulation at the power frequency.



## Product Specifications

Power Requirements	None (this is a passive device).
Temp Range	-40° to 85°C / -40°F to 185°F
Frequency Range	500 kHz to 75 MHz

## How to Order

Part Number	Description
GPCS-K	One (1) Ground Path Current Sensor and Installation Kit including: <ul style="list-style-type: none"><li>• BNC Connection to PD monitor</li><li>• Termination and mounting screws</li><li>• Installation conductors including 460 m / 18 in. of tinned copper braid and a 102 mm / 4 in. copper/brass strip to facilitate various installation alternatives</li><li>• Heat-shrink tubing for installation over the BNC Connector</li></ul>

Contact your local sales office to request a quote.



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