

# FailSafe LF Coupler



TOGETHER WE POWER THE WORLD®

**Full Stator Coil  
Sensing Without  
Compromising  
Reliability**

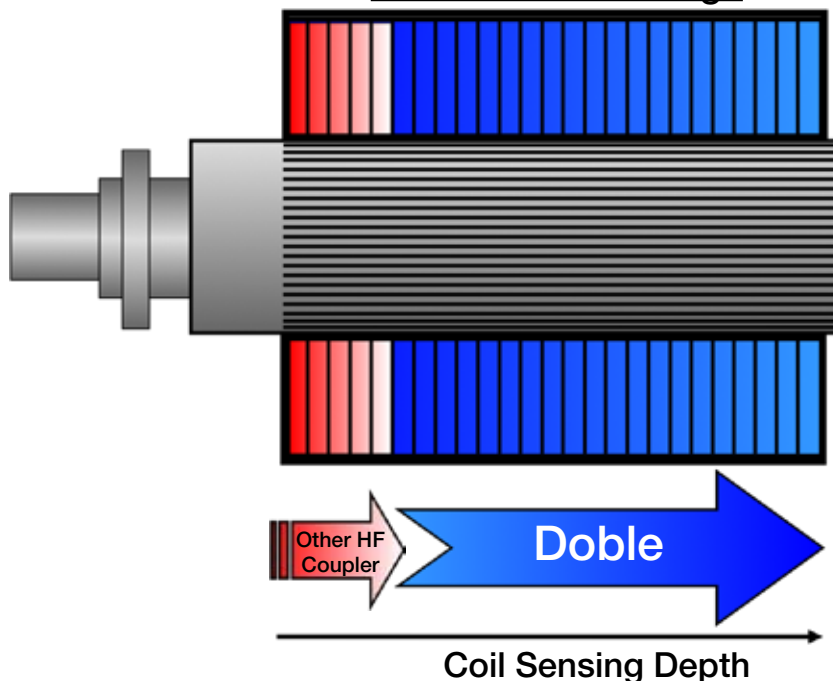
## PD COUPLING CAPACITOR

Doble now offers two models of the Doble FailSafe LF Coupler: the PDDC-12 and PDDC-24 for 12kV and 24kV applications.

The couplers combine the reliability of a fused capacitor with the deep sensing ability of a low frequency (LF) capacitor. Designed for 3 phase and neutral rotating machine monitoring up to 24kV, the coupler allows PD monitoring equipment to be safely attached to buswork



## Generator Stator Sensing The Doble Advantage



## Features

### Deep LF Sensing Technology

Using a 2 nF capacitor, much lower frequency sources of PD noise can be recognized. It's well known that larger capacitive couplers have the ability to sense the entire winding, not just the first few coils as other smaller coupling capacitors. Has a broad frequency bandwidth of 20 MHz.

### Won't Compromise the Monitored System

By using an integrated fuse, the unit will be safely removed from the system by becoming high impedance. Doble's coupler is the only coupler on the market with this built in protection.

# Detailed Specifications

## PDDC-24 Coupler

- PD decoupling unit with integrated PD measuring impedance for decoupling of PD pulses from the measuring circuit in accordance with to IEC 60270
- For generator, switchgear or busbar system voltages up to 24 kV
- especially developed for permanent / long-time installation
- with integrated HV fuse, decoupling unit will be high-resistive in case of a failure
- PD and voltage signal are superimposed, only one single cable needed for installation
- Voltage signal for phase resolved measurement
- Rated voltage: 24 kV (P/N)
- PD level < 10 pC at 26.4 kV (P/N) according to IEC 60358
- Test voltage 32 kV (P/O during 60 sec)
- BIL 90 kV L.I.
- Rated capacitance: 2 nF
- Low limiting frequency approx.: 50 kHz
- Bandwidth: 20 MHz
- Signal output: TNC-socket
- Dimensions (approx.):
  - top diameter 120 mm
  - base diameter 180 mm
  - height 350 mm
- Weight (approx.) 7.5 kg

## PDDC-12 Coupler

- PD decoupling unit with integrated PD measuring impedance for decoupling of PD pulses from the measuring circuit in accordance with to IEC 60270
- For generator, switchgear or busbar system voltages up to 12 kV
- especially developed for permanent / long-time installation
- with integrated HV fuse, decoupling unit will be high-resistive in case of a failure
- PD and voltage signal are superimposed, only one single cable needed for installation
- Voltage signal for phase resolved measurement
- Rated voltage: 12 kV (P/N)
- PD level < 510 pC at 13.2 kV (P/N) according to IEC 60358
- Test voltage 16 kV (P/O during 60 sec)
- BIL 90 kV L.I.
- Rated capacitance: 2 nF
- Low limiting frequency approx.: 50 kHz
- Bandwidth: 20 MHz
- Signal output: TNC-socket
- Dimensions (approx.):
  - top diameter 105 mm
  - base diameter 130-160 mm
  - height 140 mm
- Weight (approx.) 1.5 kg

## Installation Kit

- screws, nuts, washers and conduits for installation of
  - PD Sensors Type PDDC-24 or PDDC-12
  - Connection Box Type PDDC-24 or PDDC-12
- coaxial cables for connection between PD Sensors Type PDDC-24 or PDDC-12, length 15 m each
- TNC connector for coaxial cables

## Part of a Complete MachineGuard Monitoring System

The couplers are used when monitoring the three phases of a rotating machine and the neutral. When coupled with the PD-Guard, a complete rotating machine monitoring system can be realized. Only a single coaxial cable is required as both system voltage and PD signals are transmitted on the same cable. The PD-Guard includes advanced electronics for exciter noise gating and external noise rejection. Installation kits are available.

