

# FailSafe & LF Coupler



TOGETHER WE POWER THE WORLD®

**Full Stator Coil Sensing without Compromising Reliability**

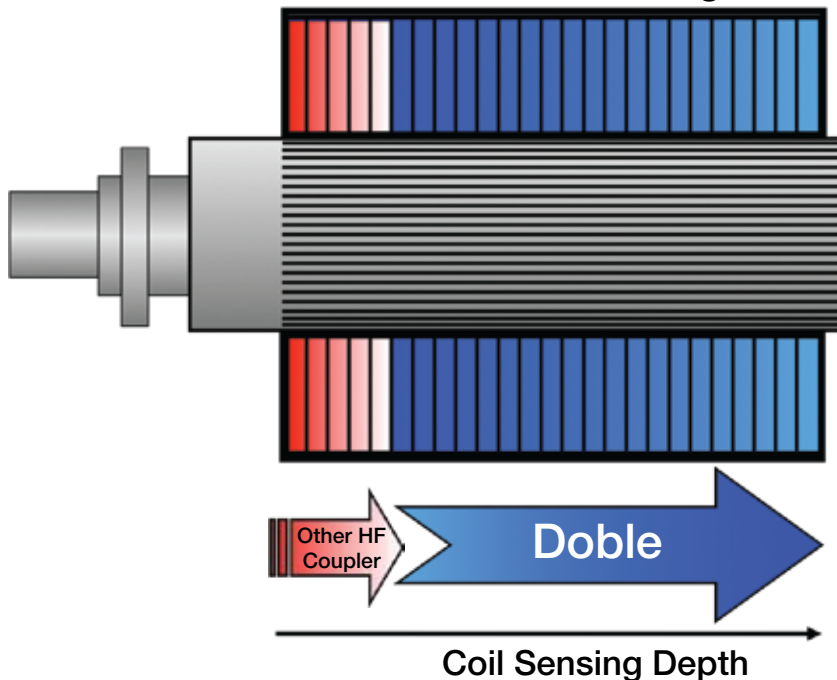
## PD COUPLING CAPACITOR

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

Both style couplers provide the deep sensing ability of a low frequency (LF) capacitor and are designed for three phase and neutral rotating machines. The Doble FailSafe LF Coupler (PDDC-24), has the additional feature of a fused element. Given the higher voltage applications possible with this coupler, this added safety feature allows PD monitoring equipment to be attached to buswork with a greater reliability and safety.



## Generator Stator Sensing The Doble Advantage



## Features

For higher voltage applications, the FailSafe LF Coupler (PDDC-24) provides greater system reliability.

### Deep LF Sensing Technology

Using a 2 nF capacitor, much lower frequencies can be sensed. It's well known that larger LF capacitors have the ability to sense the entire windings unlike smaller high frequency (HF) capacitors.

### Won't Compromise the Monitored System

In the event of a coupler failure, the unit is safely removed from the system by an integrated HV fuse. Doble's coupler is the only coupler on the market with this built in protection.

# Detailed Specifications

## Doble FailSafe LF Coupler (PDDC-24)

- PD decoupling unit with integrated measuring impedance for decoupling of pulses from the measuring circuit in accordance with IEC 60270
- For generator, switchgear or busbar system voltages up to 24 kV
- Especially developed for permanent installation
- Integrated HV fuse -- becomes a high resistance in the event of coupler failure.
- PD and voltage signal are superimposed, only one 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

## Doble LF Coupler (PDDC-12)

- PD decoupling unit for decoupling of pulses from the measuring circuit in accordance with IEC 60270
- For generator, switchgear or busbar system voltages up to 12 kV
- Especially developed for permanent installation
- Integrated HV fuse -- becomes a high resistance in the event of coupler failure.
- PD and voltage signal are superimposed, only one 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

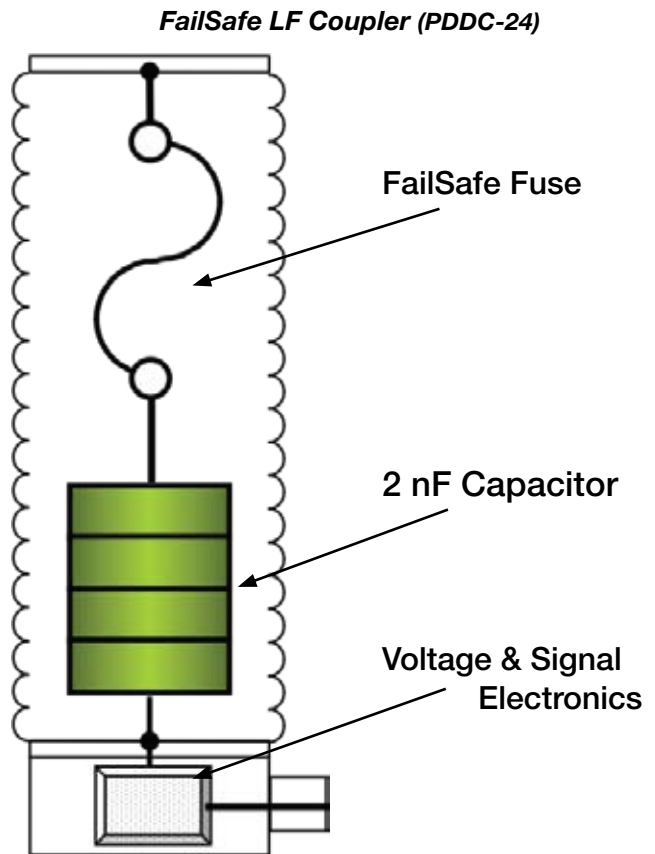
## Installation Kit

- 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
- TNC connector for coaxial cables

*Specifications are subject to change without notice.*

## 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 machine is required as both system voltage and PD signals and are transmitted on the same cable. The PD-Guard includes advanced electronics for exciter noise gating and external noise rejection. Installation kits are available.



For more information, contact

[PDinfo@doble.com](mailto:PDinfo@doble.com)

or visit

[www.doble.com](http://www.doble.com)

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**Doble is certified ISO 9001:2000**  
**Doble is an ESCO Technologies Company**

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