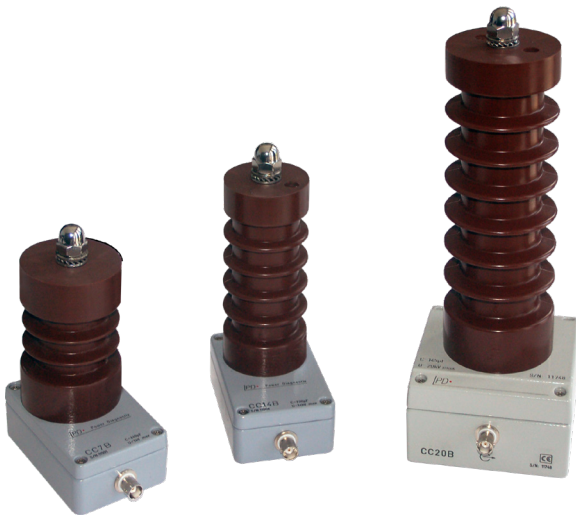


# COUPLING CAPACITORS for permanent installation



- PD testing and monitoring at any time without outage
- High sensitivity
- Full stator coverage
- Maintenance-free operation
- Superseeds the life cycle of the machine
- Easy installation

## DESCRIPTION

Power Diagnostix coupling capacitors (CC) for permanent installation are designed for decoupling of partial discharge (PD) signals produced by degradation of electrical insulation systems. They are suitable for PD testing and monitoring on high voltage applications up to 30 kV, such as generators and motors. Their specific design meets highest standards to provide high quality measurement results for reliable PD analysis. Power Diagnostix couplers meet or supersede the requirements of all relevant standards.

## APPLICATION RANGE

Power Diagnostix coupling capacitors are versatile in use and suitable for on-line and off-line measurements on:

- Medium voltage motors
- Turbine generators
- Hydro generators
- Distribution transformers

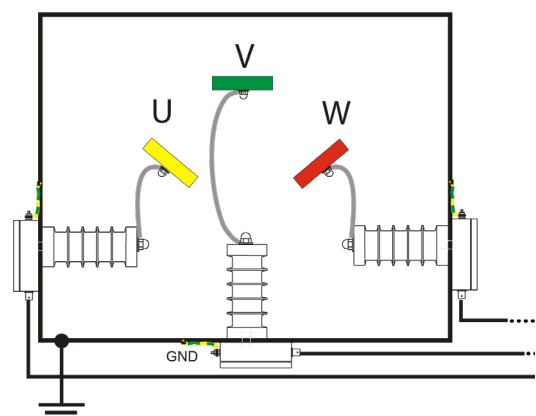
Our couplers fit perfectly to Power Diagnostix' partial discharge measurement instruments and monitoring systems, and can be used with the ICMmonitor and ICMsystem.

## FEATURES

- Vibration-resistant
- PD-free design
- IEC 60270 and IEC 60034 compliant
- Built-in quadrupole for PD and synchronisation voltage signal
- Internal overvoltage protection
- Sturdy cast aluminium enclosure
- Ready-to-use mounting kits

## FEED-THROUGH MODELS

Our special capacitor models CC7B/R and CC14B/R are designed for an installation that offers convenient access to the output connector by keeping it outside of the motor terminal box.



## ACCESSORIES

### Coupler termination boxes

Different models of coupler termination boxes provide protective ground for the coupler's signal cable.

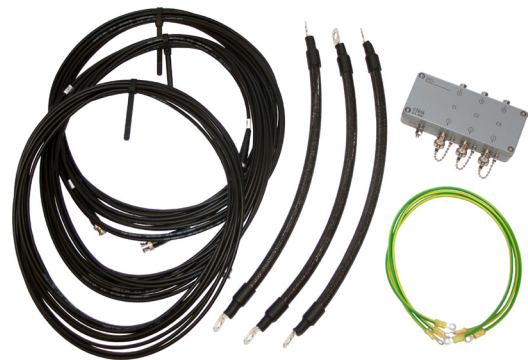
- Sturdy cast aluminium enclosure
- Output connectors protected by chained caps
- Built-in overvoltage protection



### Mounting kits

Save time during installation by using the pre-assembled cable sets that are precisely adapted to the use of the couplers and different mounting requirements.

- Minimal impact of external interferences by use of double-screened coaxial cables
- Coupler termination box included



### Coupler signal combiner SCS1

The CSC1 allows to combine the signals of up to four coupling capacitors and provides the combined signal at a BNC output. The input and output impedance is thereby kept to 50  $\Omega$ . A rotary switch allows you to select the combined signal or an individual coupler. Furthermore, the CSC1 provides:

- Protective ground of the coupling capacitors
- Overvoltage protection



## TYPICAL PACKAGES

- Coupling capacitor **CC7B/R** with mounting kit **MKA** (including coupler termination box **CTB1A**) for feed-through-mounting in motor termination boxes or direct mounting to busbar
- Coupling capacitor **CC14B** with mounting kit **MKB** (including coupler termination box **CTB1A**) for mounting in motor termination boxes (standard)
- Coupling capacitor **CC20B** with mounting kit **MKC** (including coupler termination box **CTB2A**) for use with current transformer for noise gating



## TECHNICAL DATA

### COUPLING CAPACITORS

	<b>CC7B</b>	<b>CC7B/R</b>	<b>CC14B</b>	<b>CC14B/R</b>	<b>CC20B</b>
Capacitance (± 10 %)	440 pF	440 pF	220 pF	220 pF	145 pF
Rated input voltage	7 kV AC	7 kV AC	14 kV AC	14 kV AC	20 kV AC
Withstand voltage (1 min)	23 kV AC	23 kV AC	35 kV AC	35 kV AC	50 kV AC
Creepage distance	135 mm	135 mm	160 mm	160 mm	300 mm
PD level	<2 pC (>14 kV)	<2 pC (>14 kV)	<2 pC (>20 kV)	<2 pC (>20 kV)	<2 pC (>30 kV)
Dimensions in mm (H x W x D)	152 x 64 x 127	(*) x 64 x 127	190 x 64 x 127	(*) x 64 x 127	300 x 100 x 130
Weight	~0.7 kg	~0.7 kg	~1 kg	~1 kg	~2 kg

(\*) height according to customer's specification

#### Additional specifications

Frequency range: 50/60 Hz

Output connectors: Isolated BNC

Max. voltage output: 32 V

Capacitor material: Epoxy-moulded ceramic

Operating temperature: -15 °C – +75 °C

Enclosure material: Cast aluminium and cast resin

Installation environment: Indoor

### COUPLER TERMINATION BOXES

	<b>CTB1A</b>	<b>CTB1C</b>	<b>CTB2A</b>	<b>CTB2C</b>
Inputs	3x BNC (50 Ω)	3x BNC (50 Ω)	4x BNC (50 Ω)	4x BNC (50 Ω)
Outputs (protected by chaincaps)	3x BNC (50 Ω)	3x TNC (50 Ω)	4x BNC (50 Ω)	4x TNC (50 Ω)
Dimensions (H x W x D)	34 x 150 x 97 mm <sup>3</sup>	34 x 150 x 97 mm <sup>3</sup>	34 x 167 x 97 mm <sup>3</sup>	34 x 167 x 97 mm <sup>3</sup>
Weight	~650 g	~650 g	~670 g	~670 g

#### Additional Specifications

Ground connector: M5 screw terminal

Operating temperature: -20 °C – +75 °C

Enclosure material: Cast aluminium

# COUPLING CAPACITORS for permanent installation

## MOUNTING KITS

	MKA	MKB	MKC	MKF
<b>Application</b>	Couplers directly bolted to busbar, BNC connectors	Couplers connected to busbar with HV cable, BNC connectors	Couplers connected to busbar with HV cable, BNC connectors, gating option	Couplers connected to busbar with HV cable, TNC connectors
13.8 kV cables, 0.4 m	–	3	4	3
RG58, 10 m	3	3	4	3 (*)
BNC connectors incl. shrink tubings	–	–	–	3
TNC connectors incl. shrink tubings	–	–	–	3
Ground leads, 0.5 m	3	3	4	3
<b>Coupler termination box</b>	CTB1A	CTB1A	CTB2A	CTB1C

(\*) not pre-assembled

## COUPLER SIGNAL COMBINER CSC1

Inputs:	4x BNC (50 Ω)
Outputs:	1x BNC (50 Ω)
Max. voltage:	90 V
Operating temperature:	-20 °C – +75 °C
Enclosure material:	Cast aluminium
Dimensions:	34 x 97 x 150 mm <sup>3</sup> (H x W x D)
Weight:	ca. 650 g

## ORDERING INFORMATION

Product	Order no.	Accessories	Order no.
Coupler CC7B	PX13187	Coupler termination box CTB2A	PX18001
Coupler CC7B/R	PX13188	Coupler termination box CTB2C	PX18006
Coupler CC14B	PX13019		
Coupler CC14B/R	PX13020	Mounting kit MKA	PX18002
Coupler CC20B	PX13016	Mounting kit MKB	PX18003
		Mounting kit MKC	PX18007
		Mounting kit MKF	PX18018
<b>Accessories</b>	<b>Order no.</b>		
Coupler termination box CTB1A	PX18000		
Coupler termination box CTB1C	PX18017	Coupler signal combiner CSC1	PX17020

## SALES OFFICE

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## CC7B\_CC20B DS E1.01

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Technical changes reserved  
 ISO 9001, ISO 14001  
 ISO 17025, ISO 45001

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