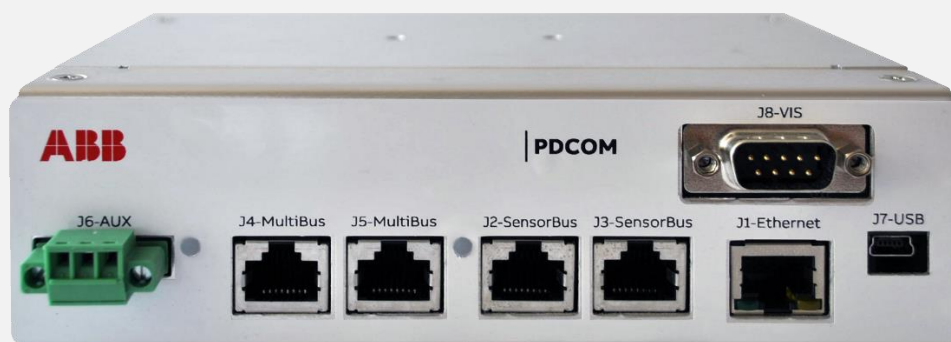


DATA SHEET

PDCOM - Partial discharge condition monitoring



Interface among capacitive couplers, voltage indicator system and PDCOM



PDCOM is a dedicated indicator, part of ABB Ability™ switchgear condition monitoring SWICOM system and used for partial discharge monitoring in medium voltage switchgear. It is based on capacitive coupling technology to detect partial discharges. It is optimized for interrogation inside metallic cavities like the switchgear cabinets. PDCOM follows IEC 60270 Standard approach.

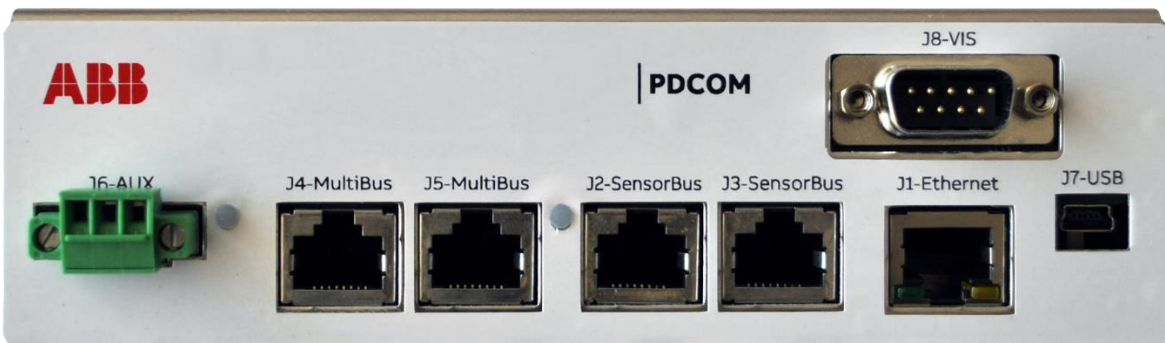
Key features

- Continuous and real-time monitoring of switchgear partial discharge diagnostics
- Phase Resolved PD (PRPD) diagram (actual and historical) displayed on SWICOM and exportable
- Direct measurement technique to achieve higher sensitivity
- Interface to existing capacitive couplers under use for voltage indicator systems (VIS)
- Long- range measurement across multiple cubicles (up to 10)
- Calibration to increase accuracy of measurements and KPIs
- Frequency band tuning to increase sensitivity
- Line voltage measurement to acquire phase information
- Three-phase acquisition and identification of problematic phase

- Tested according to standard procedures based on IEC 60270
- Easy to install in low voltage auxiliary compartment
- Very compact and DIN rail mounted

Connectivity

- CAN BUS connection to SWICOM for displaying KPIs and measured values
- MODBUS TCP/IP and IEC 61850 to communicate with upstream system via SWICOM
- Connectivity to ABB Ability™ Asset Manager cloud system via dedicated gateway



PD Measurement Parameters	Value
Measurement principle	Capacitive (it can be used with existing coupler)
PD Channels per PDCOM	three (one per phase)
Number of PDCOM connectable to SWICOM	up to 3
PDCOM Panel coverage	Up to 10 panels
Online monitoring	Yes
DAQ resolution	16bit
PD dynamic range	80dB
Typical sensitivity	100pC
Programmable preamplification	+20db
Measurement Frequency range	Center frequency 0-10MHz, bandwidth 200kHz
Noise suppression	Yes
Number of phase/magnitude windows for PRPD	256x256
Power frequency range	50Hz, 60Hz
Power line synchronization	Internal, three phases individually
Supply voltage	12VDC to 24VDC
Consumption	15W
Daisy chaining	RJ45
Operating temperature	-30°C +55°C
Storage temperature	-30°C +80°C
Dimension	161,4 mm x 115,22mmx 106,92mm
VIS installation requirement for cabling	Measured through same capacitive coupler
PD event recording	Strength, time, power line voltage and phase, up to 100.000 PD events
PD Instantaneous measurements	Partial discharge intensity (following IEC), pulse repetition rate (total and above three different thresholds), peak-to-noise, PD-indicator
Displayed measurements summary	Summary statistics of instantaneous measurements, PD presence indicator and trends indicators
Alert types	Traffic lights: green, yellow and red
Internal storage	Analysis history of at least 100.000 PD events (all channel, RAM)
Calibration	Procedure outlined during commissioning on site
Capacitive coupler requirements	15pF-250pF (above 50pF is preferable)
VIS installation requirement for cabling	Installation kit provided. Short cabling, shielded cable a plus, preferred length below 100cm connection installation kit-PDCOM kept short as well
Interfaces	Serial/USB, CANBUS, Ethernet
EMC	IEC 60255-27

More product information:

Your contact center:

More service information:

Data and illustration are not binding. We reserve the right to make changes in the course of technical development.

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