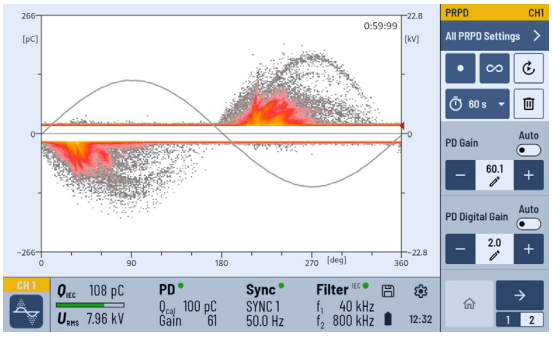
ICM*neo*
Digital PD test and measurement device

- **Stand-alone, modular partial discharge measurement device suitable for a range of high-voltage assets**
- **Factory acceptance tests (FAT) and measurements according to IEC 60270**
- **Four parallel measurement channels**
- **High modularity and robustness**
- **User-friendly interface**

DESCRIPTION

The ICM*neo* is a compact, stand-alone, digital partial discharge measuring device used to evaluate the condition of medium and high voltage insulation. It is typically used for quality assurance, including factory acceptance testing, end-of-line testing, and post-repair testing. It is also suitable for use in the field.



The ICM*neo* is primarily intended for use with the following assets:

- Factory acceptance tests for MV and HV assets
- Distribution transformers
- Instrument transformers (voltage transformers and current transformers)
- Rotating machines
- Electronic components (i.e., IGBTs)
- HV components such as bushings, insulators, and capacitors

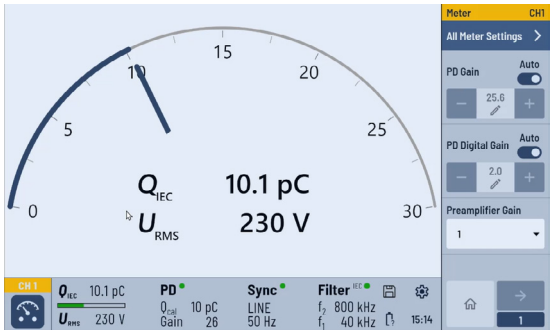
YOUR ADVANTAGES

- Prevention of asset breakdowns and system failures by early identification of insulation defects
- Ensure quality assurance
- Flexible configuration for all assets by changing the accessories
- Stand-alone, battery-operated device with touchscreen operation for up to five hours

STANDARD FEATURES

As a versatile PD measurement device, the ICM*neo* offers the following features and options:

- Battery operation for up to 5 hours
- 4-channel real-time parallel measurement
- PD spectrum analysis
- High voltage measurement
- Synchronisation frequency from 5 Hz to 510 Hz
- DAkkS calibrated voltage measurement
- Effective noise gating for blocking phase-stable or phase-independent noises
- High resolution phase-resolved PD patterns



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ACCESSORIES

The ICM*neo* can be combined with various accessories to perform an optimal measurement. The following accessories are recommended:

- Pre-amplifiers of the RPA series
- Frequency converter unit FCU2
- Coupling capacitors
- Quadrupoles
- Current transformers
- Disturbance antenna DA1
- DAkkS certified calibration impulse generators

For more details and ordering information on our accessories, please refer to our accessories catalogue.

SPECIFICATIONS

OPERATIONAL

Mains supply	100–240 V AC, 50/60 Hz
Line fuse	2 A slow-blow
Power requirements	Max. 100 W
Battery running time	Up to 5 hours
Battery charging time	2 hours (80 %) 3 hours (100 %)
Battery type	97.9 Wh Li-Ion
Display size	7"(152.40 x 91.44 mm)
Display resolution	800 x 480 pixels
Operation	Controlled via touchscreen and rotary knob
Operation temperature	-20–45 °C (non-condensing) 0–35 °C (while charging)
Number of measurement channels	4 (PD), 4 (Sync)
Input impedance	50 Ω or 1 kΩ (software selectable)
Input sensitivity	< 100 µV RMS/0.1 pC (without pre-amplifiers)
Lower analogue frequency limit, -6dB	30 kHz
Analogue lowpass filter, -6dB	1, 2 ,3, 4, 5, 10, 30 MHz (software selectable)
Gain range	1 to 1000 or 0.05 to 50 with internal attenuator
A/D converter	14 bits (bipolar), 200 MS/s
Gating modes	Analogue or digital window gating with up to three windows
Calibration modes	Normal and adaptive
Pre-processing compatibility	Megger pre-amplifiers and pre-processing units, i.e., RPA1 series, RPA2 series, RPA3 series, RPA4, and FCU2
Display modes	Scope, Projection, Spectrum, Reports, PRPD, HVM, DSO, Calibration, Meter, Trending

ENCLOSURE

Ingress protection class	IP65 (closed), IP20 (open)
Connectors	10x BNC, female: CH1–CH4 (PD input channels), SYNC1–SYNC4 (synchronisation channels), TTL GATE, TTL SYNC
Ground terminal	M5 bolt
Communication interfaces	USB (USB-A), TCP/IP (RJ45)
Size (W x D x H)	314 x 285 x 185 mm^3 (closed) 314 x 342 x 393 mm^3 (open)
Weight	4.6 kg

STANDARD PD MODE (IEC 60270)

Lower cut-off (-6 dB)	30 kHz to 990 kHz
Upper cut-off (-6 dB)	130 kHz to 1 MHz

FULL RANGE MODE

Centre frequency	30 kHz to 30 MHz
Bandwidth	9 kHz to 900 kHz

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SYNCHRONISATION/HVM

Synchronisation modes	External, line, internal, TTL
Synchronisation frequency	5 to 510 Hz
Maximum voltage	200 V_{peak} (140 V RMS), 100 V RMS nominal
A/D converter	12 bits (bipolar), up to 400 kS/s (variable)
Input impedance	10 MΩ

STANDARDS

Electromagnetic compatibility EMC	EN IEC 61326-1:2021
Health parameters	EN IEC 62311:2020
Ingress protection	EN 60529:1991
Environmental	EN 60068-2-1:2007, EN 60068-2-2:2007, DIN EN IEC 60068-2-78:2025
Transport and handling	DIN EN IEC 60721-3-2

PRE-AMPLIFIERS (OPTIONAL)

Input impedance

RPA1/RPA1D/RPA1G/RPA4	10 kΩ || 50 pF
RPA1L/RPA1H	1 kΩ || 50 pF
RPA2/RPA3	50 Ω || 50 pF
FCU2	50 Ω || 50 pF

Input sensitivity

RPA1/RPA1D/RPA1G/RPA4	< 50 µV RMS/0.03 pC
RPA1L	< 15 µV RMS/0.02 pC
RPA1H	< 40 µV RMS/0.05 pC
RPA2	< 800 µV RMS
RPA3	< 2 mV RMS
FCU2	< 200 µV RMS

Bandwidth

RPA1/RPA1D/RPA1G/RPA4	40 kHz to 1 MHz
RPA1L/RPA1H	40 kHz to 20 MHz
RPA2	2 to 20 MHz
RPA3	200 MHz to 1 GHz
FCU2	100 MHz to 1800 MHz

ORDERING INFORMATION

Description	Order no.
ICM*neo*	PX10700
Cable set for ICM*neo*	PX10702

Set of measuring cables is NOT included with the instrument and must be ordered separately.

SALES OFFICE
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ICMneo_DS_e1.03
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ISO 9001, ISO 14001,
ISO 17025, ISO 27001, ISO 4501

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