

## PD SCAN

### Handheld scanner for PD surveying in MV and HV plants



- For fast verification of partial discharge activity in MV and HV plants
- Universal application range, thanks to wide variety of sensors
- Integrated camera and QR code scanner
- Easy to use via keypad and touchscreen
- Reporting via MeggerBook RE software

#### DESCRIPTION

Defects in medium and high voltage systems not only require costly repairs, but can lead to failures of network sections with corresponding consequences. Therefore, it is in the interest of all network operators to recognize signs of impending defects as early as possible and to be able to take appropriate countermeasures on time.

With the PD Scan, Megger offers a lightweight, robust and portable PD scanner that can quickly inspect various types of equipment for partial discharge signals.

The PD Scan is used for the early detection of partial discharges emanating from defects in medium voltage switchgears and other electric equipment. For this purpose, the device has two internal sensors (TEV, airborne acoustic) and can also be operated with various types of external sensors (TEV, HFCT, airborne acoustic, contact probes).

The operation of the device is simple; it can be controlled via the three soft keys as well as via the intuitive touch display. Thanks to the auto-recognition of the connected external sensor, malfunction operation, as well as bothersome browsing through individual screens, can be eliminated.

Thanks to the large variety of sensors, the PD Scan can be used for multiple application ranges. PD within the cable insulation can be detected using the HFCT sensor. Partial discharges in encapsulated switchgears can be measured by using the contact-probe sensor and corona and surface discharges in MV and HV systems can be identified with the parabolic acoustic sensor.

Besides the partial discharge sensors, also a temperature and humidity sensor will be supplied. This is very important as the temperature and humidity can have a significant impact on the partial discharge readings. One of the advantages of the PD Scan is that the sensor is connected directly to the device, meaning data is stored within the test files, removing the need to manually add them later on during the reporting stage.



The variety of sensors have made this handheld scanner a unique measuring device. To support the end user, measurement data will be automatically evaluated and interpreted, and pictures of the identified defects can be made and directly integrated into the report by using the integrated camera. Furthermore, the QR code scanner can directly take over the switchgear/asset data; there is no need to inconveniently rename the folder for each different test object. Make life easier by reducing the number of loose cables in the workspace through using the optional (and comfortable) Bluetooth<sup>®</sup> headset, which can also be used with a helmet.

Establishing detailed and individual test reports can be performed quickly by using the supplied MeggerBook RE reporting software.

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#### TECHNICAL DATA\*

##### PD SCAN

###### TEV Measurement (capacitive)

Measurement range	-10 ... 80 dBmV
Bandwidth	2 ... 80 MHz
Resolution	1 dBmV
Accuracy	±1 dBmV

###### Acoustic sensor

Measurement range	-10 ... 70 dBµV
Resolution	1 dBµV
Accuracy	±1 dBµV
Transducer centre frequency	30, 40 und 80 kHz

###### HFCT sensor (inductive)

Measurement range	-10 ... 80 dB
Bandwidth	100 kHz ... 20 MHz
Resolution	1 dB
Accuracy	±1 dB/ < ±10%
Impedance	50 Ohm

###### Housing

Injection moulded  
3.5 inch touchscreen,  
320 x x240 pixel

###### Interfaces

Lemo (external sensors)  
USB type C (charging, headphone,  
PC) Bluetooth®  
via 3 soft keys and touchscreen  
IP 54

###### Control

###### IP rating

###### Temperature

Operation	-10 ... 55 °C
Storage	-20 ... 70 °C

###### Relative humidity

93 % at 30 °C  
(non-condensing)

###### Power supply

Charger	Input voltage 90 ... 264 V, 50/60 Hz Output voltage 5 V DC
Internal battery	Li-Ion 3.6 V / 3.35 Ah
Operating time	> 8 Stunden
Charging time	± 2 hours

###### Dimensions (W x H x D)

PD Scan	220 x 80 x 30 mm
Case STD	422 x 366 x 107 mm
Case PRO	512 x 445 x 313 mm

###### Weight

PD Scan	420 g
Case STD	940 g
Case PRO	3400 g

#### FEATURES

- Three PD measurement methods in one device
- Plug and Play; PD Scan automatically recognizes which external sensor has been connected
- Easy to use via soft keys and touchscreen
- Universal operating range due to large variety of sensor
- Automatic evaluation and interpretation of the results
- Optional comfortable Bluetooth® headphones
- Integrated camera
- QR code scanner for asset recognition
- Different views and PRPD display for defect type recognition
- Temperature and humidity measurement using supplied sensor with storage on PD Scan itself
- MeggerBook RE reporting software
- Use your own mobile device for wireless data transfer by USB OTG

PD Scan is available  
in four different  
application-based sets.



##### Set 1: Switchgear basic

The basic set is ideally suited for users who only want to concentrate on MV plant

##### Set 2: Switchgear basic + cable

The basic set + cable is ideally suited for users who want to concentrate on MV plant and cable

##### Set 3: Switchgear pro + cable

In addition to the HFCT and standard sensors, the pro set additionally contains external acoustic sensors for a more detailed analysis of MV plant

##### Set 4: Switchgear pro + cable + outdoor

The complete set for those who want to use all the functionalities of the device

\*We reserve the right to make technical changes

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ORDERING INFORMATION	
Product	Order no.
<b>PD Scan Set 1 Switchgear Basis</b> PD Scan main device, external TEV sensor, temperature and humidity sensor, function tester, charger + USB cable, headphone standard, transport case STD, USB Stick with operating manual and reporting software	1011 121
<b>PD Scan Set 2 Switchgear Basic + Cable</b> PD Scan main device, HFCT SC40 sensor, external TEV sensor, temperature and humidity sensor, function tester, charger + USB cable, headphone standard, transport case STD, USB Stick with operating manual and reporting software	1011 122
<b>PD Scan Set 3 Switchgear Pro + Cable</b> PD Scan main device, flexible acoustic sensor, acoustic-contact probe, HFCT SC40 sensor, external TEV sensor, temperature and humidity sensor, function tester, charger + USB cable, Bluetooth® headphone, transport case UNI, USB Stick with operating manual and reporting software	1011 123
<b>PD Scan Set 4 Switchgear Pro + Cable + Outdoor</b> PD Scan main device, Parabolic receiver, flexible acoustic sensor, acoustic-contact probe, HFCT SC40 sensor, external TEV sensor, temperature and humidity sensor, function tester, charger + USB cable, Bluetooth® headphone, transport case UNI, USB Stick with operating manual and reporting software	1011 124
<b>Options:</b>	
<b>Upgrade kit Set 1 to Set 4</b> Parabolic receiver, flexible acoustic sensor, acoustic-contact probe, HFCT sensor, Bluetooth® headphone and transport case UNI	1011 550
<b>Upgrade kit Set 2 to Set 4</b> Parabolic receiver, flexible acoustic sensor, acoustic-contact probe, Bluetooth® headphone and transport case UN	1011 551
<b>PD Scan demonstrator box</b> PD Scan demonstrator, transport case and batteries	1011 423
<b>Optional accessories:</b>	
HFCT 20, permanent HFCT sensor for cable screen, inner-diameter 20mm	1006 296
HFCT SC40, HFCT Sensor for cable screen, inner-diameter 40mm	1009 667
HFCT SC60, HFCT Sensor for cable screen, inner-diameter 60mm	1012 681
VK 132, connection cable HFCT for PD Scan	9 0026 538
TEV C900-PD Scan, external TEV sensor for TEV measurement or PD localisation	1010 524
AA FR130, flexible receiver	1009 757
ACP 30-1, Piezo acoustic sensor	1012 924
Acoustic coupling paste for ACP 30	1007 238
AA PR400-1, detachable parabolic receiver	1012 287
THS 55; temperature humidity sensor PD Scan	1010 217
Protective cap THS 55, temperature- and humiditysensor	2012 509
FC 1; function tester PD Scan	1010 219
Bluetooth® headphone	9 0028 677
PD Scan-WMSD, wireless mass storage device for PD Scan	1012 538
PDK-STD, transport case for PD Scan set 1 and 2	9 0026 227
PDK-UNI, universal transport case for PD Scan set 3 and 4	9 0031 295

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TEV Loc sensor  
TEV C900



Flexible acoustic  
sensor  
AA FR130



detachable  
Parabolic  
receiver  
AA PR400-1



Acoustic-contact  
probe ACP30-1



Connection cable  
VK 132

HFCT sensor  
HFCT SC40

Temperature and  
humidity sensor  
THS 55



PD Scan-WMSD



HFCT SC60

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**PD-Scan\_DS\_EN\_V04a**

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