CITY SERIES

Megger
Power on

Compact, fully equipped cable fault location, test and diagnostic systems

- Tailored to fit to small vehicles
- Easy operation in restricted spaces
- Centrally controlled, fully automatic system with intuitive user interface
- Fully integrated PD coupler
- Cost effective modular system architecture
- Highest safety standard

CENTRIX CITY

COMPACT CITY

City Series –
pioneer, even in the smallest space

Centrix City & Compact City

The system structure of the City Series offers new and unique capabilities of cable fault location, VLF-testing and partial discharge diagnostics.

Due to the size of the component parts, an entire single-phased test system for cables rated up to 33 kV fits in the smallest vehicles. Parking bay and ceiling height problems in underground parking and train stations, and working in narrow alleys, these are a thing of the past with this test van. With the fully integrated measurement technology in the vehicle, the safety area around the test object can be as small as possible.

Furthermore, the integrated PD-coupler allows a solution independent of weather conditions. Difficult locations for partial discharge diagnosis, like tower or compact substations, no longer pose a problem.

Optimal operation and sophisticated interior design

The tried and tested Centrix operating concept is extended in to the City series. The software interface, supported by the easyGO® control concept, is intuitively familiar to every user. The Linux operating system offers stable and fail-proof control of the measuring system.

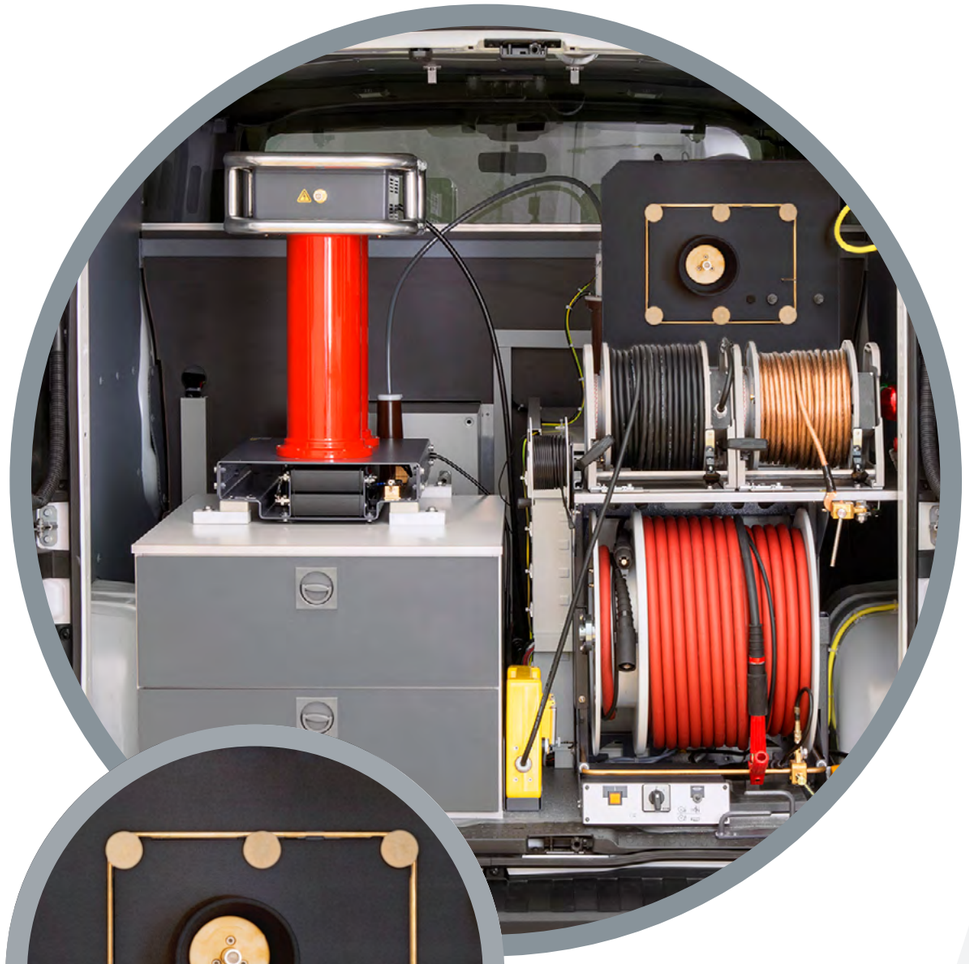
The options of touch-screen operation, the well accepted jog dial rotary knob, or mouse and keyboard control give the user a friendly interface for optimal work flows.

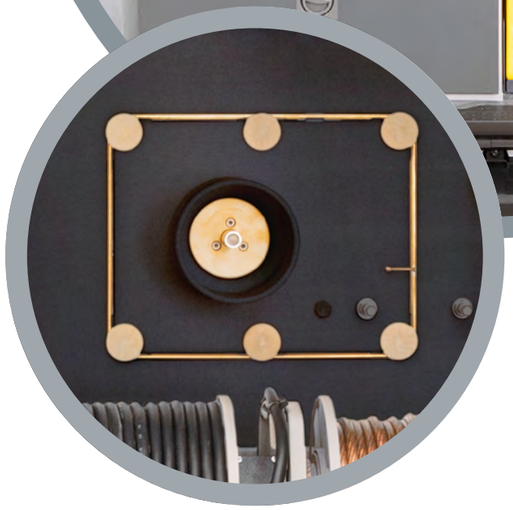
The ergonomic layout of the equipment in the City series van maximises the users' convenience.

Centrix City – for total convenience

Fully automated user guidance and support

- Automatic operating mode selection and HV-switchover
- Convenient, fully automatic system operation with the central control unit
- Safety status monitoring with direct message display
- Single-phase connection for all HV operating modes
- 3-phase connection for reflectometer measurements
- Remote control of the test system via Smartphone-App for faster reducing the stress on the cable
- MeggerBook Cable - fully integrated database software
(see at page 11)





Single-phase connection panel with automatic switching of operating modes

Compact City – for total flexibility

COMPACT CITY

Dual system operation with detachable control units

- Manual operating mode selection
- Detachable control units
- Safety circuit with direct status indication on the remote control panel
- Single-phase connection concept for all HV operation modes
- Dual channel TDR measurement with detached reflectometer

Dual operating concept
Detachable, battery operated TDR and laptop for the control of VLF testing and diagnostics

Plug-in HV- connection panel for all operation modes

Manual switching of operating modes with integrated safety circuit monitoring

Precise fault location

Prelocation

Low-impedance cable faults, breaks and cable length are identified using the integrated TDR.

Teleflex® – the world´s most powerful reflectometer

When using reflection methods, intelligent algorithms determine the necessary setting parameters and enable:

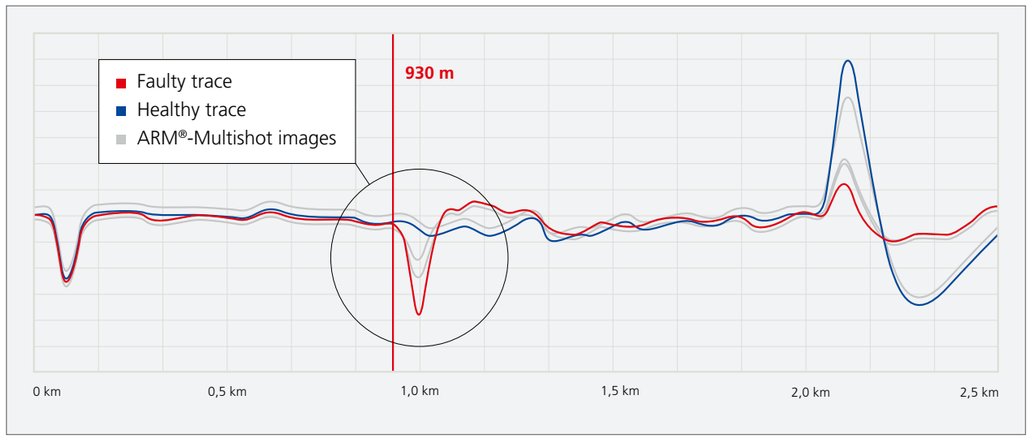
- automatic adjustment of the measuring range
- automatic gain control
- automatic determination of the cable end
- automatic measurement of the fault location

IFL
IFL mode is used for intermittent faults. By means of an envelope curve, even small changes in the impedance profile are clearly shown.

ICE / decay
Using the well accepted impulse current method (ICE) and the decay method, the system automatically locates the fault.

ARM®-Multishot
ARM®-Multishot technology makes it possible to display 15 fault traces per surge pulse. Automated analysis assists the user and immediately displays the best result – a very useful feature for wet and oil-filled joints.

ProRange
The ProRange function enables distance dependent gain to counteract signal attenuation in the cable, improving detection of distant failure points, far-off joints, and cable ends. This new feature is especially advantageous for cables with high attenuation, such as long, cross-bonded or very wet cables.



ARM®-Multishot

Pinpointing

Acoustic pinpointing
Acoustic pinpointing helps to precisely locate high-impedance and intermittent faults. All requirements for low and medium voltage networks are covered through the controllable voltage levels of 4, 8, 16 and 32 kV.

Intelligent background noise reduction (BNR) allows the cable fault to be measured quickly and efficiently with the worlds most precise surge wave receiverdigiPHONE⁺.

Sheath testing and pinpointing
Sheath fault tests can be performed at up to 20 kV on plastic-insulated medium voltage and high voltage cables.

The system offers four voltage levels, from 5 to 20 kV, to generate a safe step potential gradient at the fault position. This safe step potential gradient can be located with the help of earthing rods and the ESG NT earth fault locator. For precise prelocation of sheath faults we can offer the optional MFM 10 sheath fault locator.

Line tracing
With the Ferrolux audio frequency system, tracing cable routes is significantly easier. The powerful audio frequency generators, with up to 200 W ouput power, support the unique Signal-Select® feature, which helps to differentiate between parallel buried cables.

digiPHONE+

Ferrolux

ESG NT

Powerful cable testing and diagnostics

Cable testing and diagnostics

Insulation and DC test
Up to 5 kV for insulation resistance tests and up to 40 kV DC test with breakdown recognition provide the basis for further analysis of the cable.

VLF test according to DIN VDE 0276
Using the VLF test set with cosine rectangular VLF technology, testing of large cable capacities is possible. Up to 5.5µF at 36 kV_{rms} (@0.1Hz) allow the user to test all three phases in parallel, as well as on long cable lines, without reducing the test frequency. This reduces the testing time by two hours.

tanDelta diagnostics
The tanDelta diagnostics integrated in the TDM test set enable testing and dissipation factor measurement on aged medium-voltage cables.

Partial discharge diagnostics
The 50 Hz slope technology allows the user to perform a PD diagnosis during the commission testing of MV cables. The PD measurement is performed during polarity reversal (slope) of the test voltage. The rapid change in polarity represents the typical electrical stress at 50 Hz mains frequency. PD measurement parameters such as PD inception voltage, frequency, and level can thus be directly compared with the 50 Hz mains frequency.

Intelligent database software

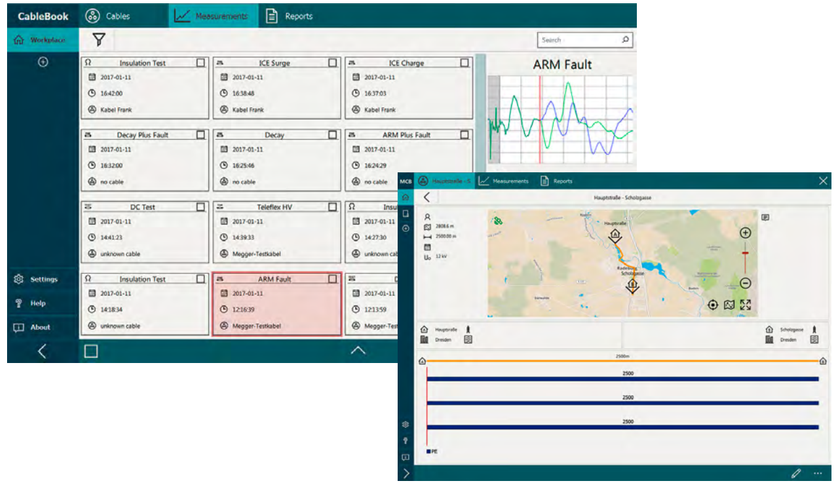
MeggerBook Cable

The intelligent database software MeggerBook Cable offers users new data opportunities. The structured cable manager helps to set up new cable data and to directly store measurements, as well as add existing data in a simple way.

The integrated archive has an easy-to-use search function, so finding existing stored measurement data is quick and simple. With the help of the mapping function, which is available both online and offline, cable and measuring results can be assigned object-oriented.

If the cable route is available, the prelocated fault position is recorded directly in the map and stored away. The protocol function with free-form templates allows a professional and clear representation of the measurement results.

These measurement data can be transmitted in electronic and printed versions, or it can be archived. The MeggerBook Cable database software is fully integrated in our Centrix City test van system. For the Compact City system, the software is available as Windows-PC version.



Safety concept

Full integrated system monitoring

The integrated safety circuit offers a clear representation of all operation and safety related parameters, and discharges the HV automatically in any emergency situation.

The visualisation of the actual system status is done by signal lights and permanent information on the display. For many years this proven safety concept has offered the highest degree of safety for the operator:

- Safety ground, auxiliary ground and backdoor monitoring
- Extensive safety elements for HV and LV connections
- Unique step-voltage protection system with voltage-time integral
- Norm compliant to DIN EN 50191, DIN EN 61010-1 and VDE 0104/BGI 891
- Internal and external emergency switches, key switch and signal lights

System comparison Centrix City and Compact City

	Centrix City	Compact City
	Your choice for convenient, fully automated user guidance and assistance	**Your choice for full flexibility with detachable control units**
Operating concept	Fully integrated Centrix control unit for all operation modes inclusive MeggerBook Cable	Dual system operation with detachable control units: Teleflex SX for fault location, laptop for VLF testing, diagnostics and MeggerBook Cable
HV switching	Automatically by control unit	Manually, by plug-in connectors
Display	17“ or 21,5“ multitouch display	10“ touch display
TDR measurement	3-phase (optional)	2-phase (with detachable Teleflex SX)

Megger
Power on

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