CITY SERIES

Megger
Power on

Compact, fully equipped Cable Fault Location, Test and Diagnostic systems

- Individual fitting to small vehicles
- Comfortable operation in the smallest space
- Centrally controlled, fully automatic system with intuitive user interface
- Fully integrated PD coupler
- Cost effective system structure by modular design
- Highest safety standard

CENTRIX CITY

COMPACT CITY

City Series – pionieer, 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.

Thanks to the small dimension of the components, an entire 1-phased test system for cables rated up to 33 kV finds space in the smallest vehicles. From parking bay problems and ceiling heights in underground parking and train stations, to measuring objects in narrow alleys, these problems 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 places for partial discharge diagnosis, like tower or compact substations, no longer pose a problem.

Perfect handling and sophisticated interior design concept

The operating concept of the City Series is based on existing test systems. Every user finds the way on the user interface intuitively and will be supported by the proven easyGO® operation.

User friendly touchscreen operation, the proven rotary knob (JogDial) or a control by keyboard and mouse offer every possibility to optimise the work routine.

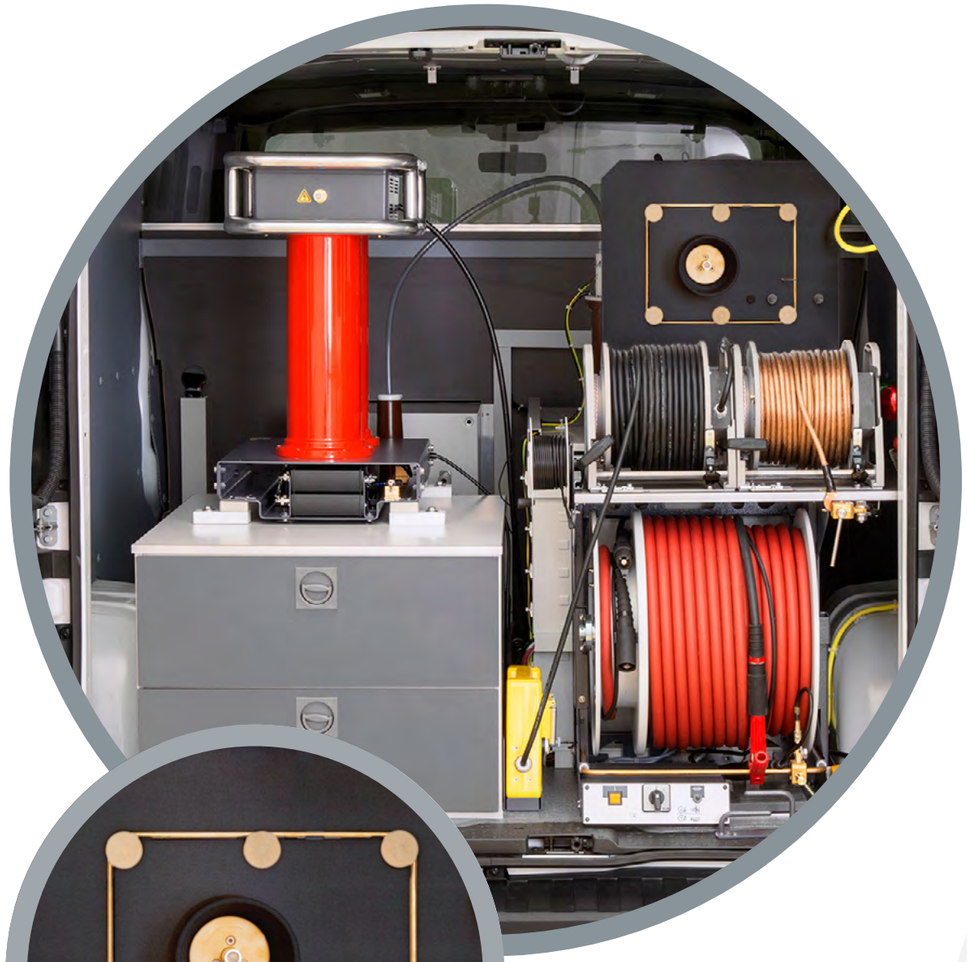
An ergonomic arrangement of the components in the van offer the greatest possible comfort.

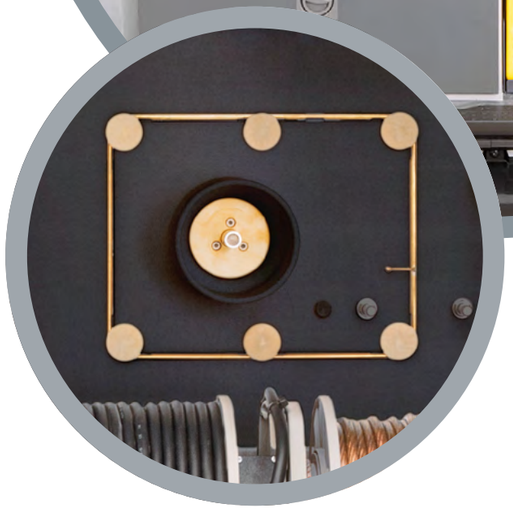
Fully automatic user guidance and support

- Automatic operating mode selection and HV-switchover
- Comfortable, fully automatic system operation with the central control unit
- Safety monitoring with immediate status messages on the display
- 1-phased connection concept for all HV operation modes
- 3-phased connection for reflectometer measurements
- Remote control of the test system via Smartphone-App for gentle pinpointing
- Full integrated database software
  (CableBook > read at page 11)

Central operation and monitoring of the test system

Remote control of the test system via Smartphone-App



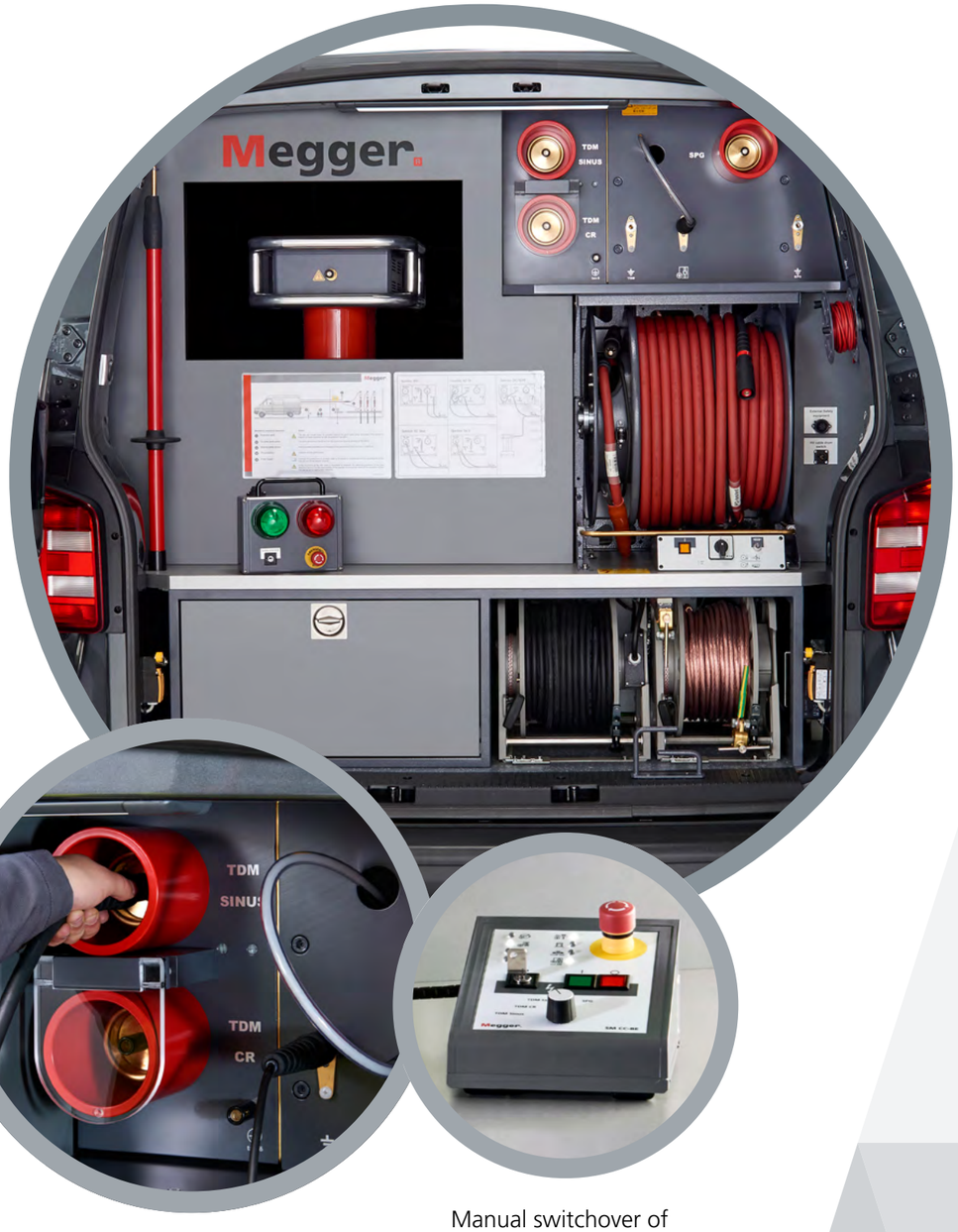


Single phase connection panel, automatic switch-over

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
- 1-phased connection concept for all HV operation modes
- 2-phased 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 switchover of operation modes with integrated safety circuit monitoring

Precise Fault Location

Prelocation

Low ohmic cable faults, breaks or the cable length can be determined by the integrated impulse reflectometer.

Teleflex® – the world´s most powerful reflectometer

When using reflection measurement, intelligent algorithms determine the necessary setting parameters to allow for:

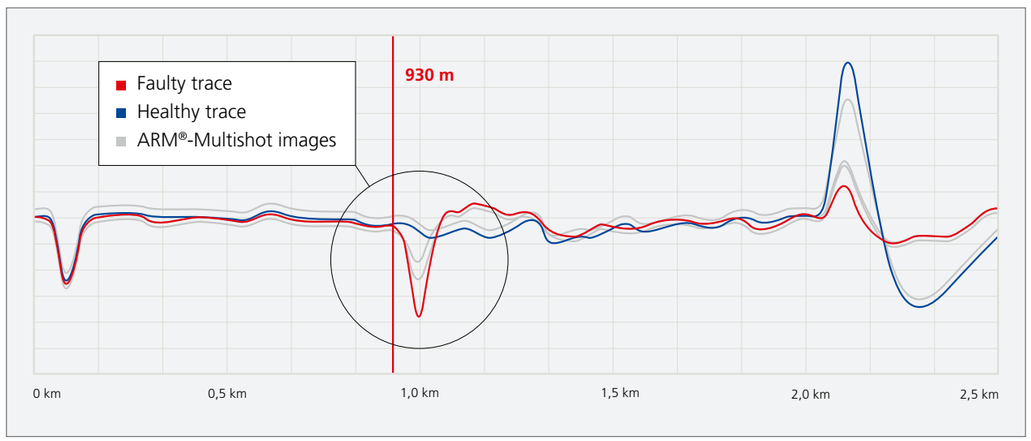
- automatic measurement range configuration
- automatic amplification control
- automatic cable end measurement
- automatic fault location measurement

IFL
IFL mode is used for intermittent faults. Using an envelope, even small changes in the impedance curve can be clearly shown.

ICE / decay
The system automatically evaluates the fault location using the current pulse method (ICE) and the decay travelling vibration method.

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

ProRange
The ProRange function allows a distance-adapted gain, which enables better 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.

Thanks to the intelligent background noise reduction (BNR), the cable fault can be measured quickly and efficiently with the worlds most precise surge wave receiver digiPHONE+.

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, the tracing of 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 parallel buried cables.

digiPHONE+

Ferrolux

ESG NT

Powerful Cable Testing and Diagnostics

Cable Testing and Diagnostics

Insulation and DC test
A maximum voltage of 5 kV for insulation 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 the 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
A integrated tanD diagnostics with the combination system „TDM“ is available for testing and dissipation factor measurement on age-related MV 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

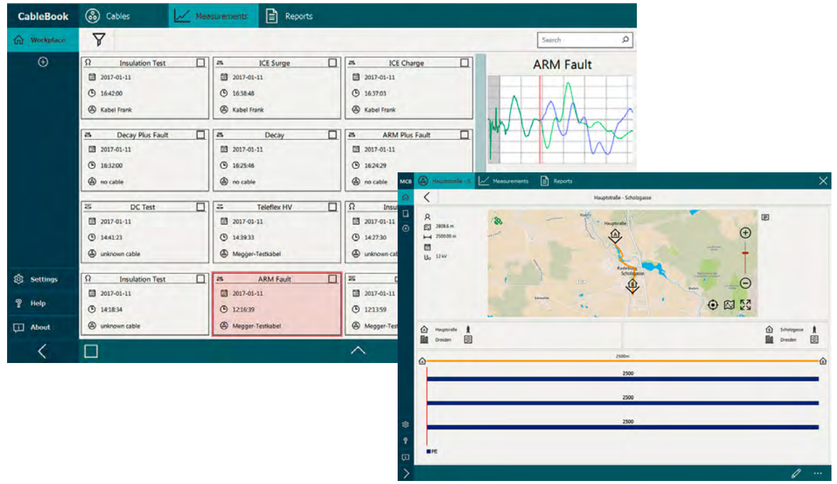
CableBook

The intelligent database software CableBook offers users new possibilities of data management. 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 CableBook 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 comfortable, fully automatic user guidance and support	**Your choice for full flexibility with detachable control units**
Operating concept	Fully integrated Centrix control unit for all operation modes inclusive CableBook	Dual system operation with detachable control units: Teleflex SX for fault location, laptop for VLF testing, Diagnostics and CableBook
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)

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