CENTRIX 2.0

NEW

The new Centrix 2.0 sets the standard for testing, diagnosis and fault location of power cables.

- Intuitive easyGO® operation using a touch display
- Cable diagnosis with 50 Hz slope technology
- Highest standard of safety with SafeDischarge technology
- Remote control of important system functions
- Breakdown phase detection for three-phase cable testing
- System powered by Li-Ion batterie

Megger

Centrix 2.0 – the most innovative product from Megger

Centrix 2.0 is the world's most modern and powerful cable test van system for fast, easy and non-destructive fault location up to 33 kV class cable.

Equipped with the latest generation of cable diagnostics in conjunction with powerful VLF testing technology, Centrix 2.0 makes it possible to perform standard-compliant cable testing with simultaneous partial discharge diagnosis.

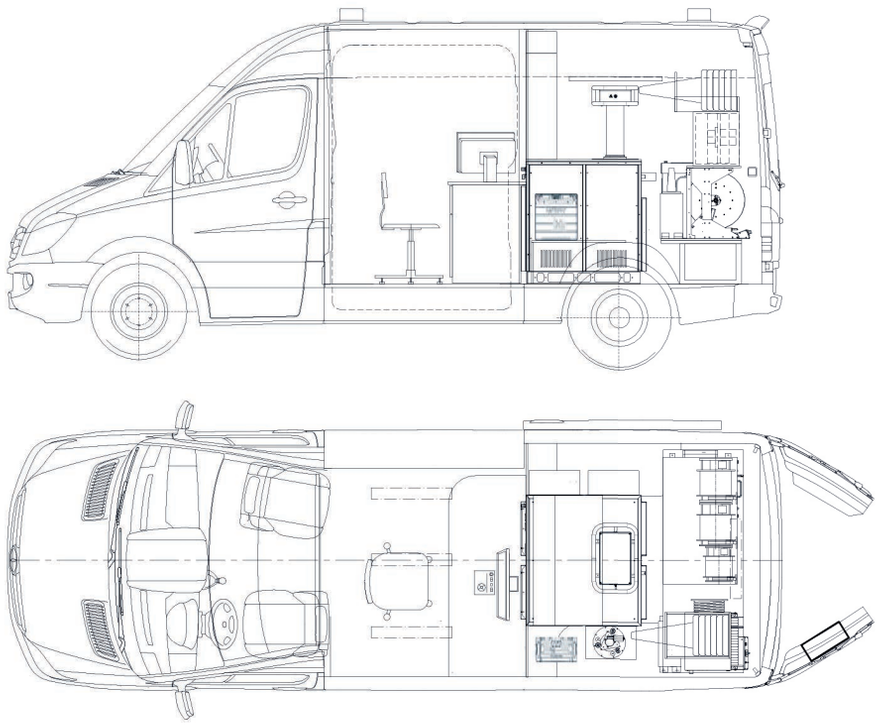
The van's unique operating concept uses automatic measurement sequences, a touch display, and JogDial to simplify operation. Faults can be located quickly, even by inexperienced users.

Centrix 2.0 is available in 1-phase or 3-phase versions.

10 good reasons for Centrix 2.0

Centrix 2.0 sets new standards regarding user friendliness and performance:

1. Linux®-based control system – for maximum system stability and security
2. Intuitive easyGO® operation using the 21.5" touch display and JogDial
3. Step-by-step operator guide for inexperienced users
4. Data automatically recorded and stored in the history database
5. Decay plus double impulse procedure up to 80 kV
6. ARM® burning
7. Highest standard of safety with SafeDischarge technology
8. Simultaneous testing and diagnosis with new 50 Hz slope technology
9. System powered by Li-ion batteries
10. Remote control of important system functions – for non-destructive cable fault location



Test van concepts from Megger – tailored to customer's specifications

System control made simple

Centrix 2.0 is operated either by touch display or JogDial.

The powerful computer has a 21.5“ touch display, a hard drive scalable to your needs, and an integrated recovery system. This ensures the security and stability of the system over its entire service life.

The Linux® operating system is completely maintenance-free: No viruses, no defragmenting, no expensive antivirus programs.

The system controls are kept separate from the office application and graphic information systems (GIS) to ensure optimal stability and security. Office applications, Geomap and database software can be displayed on an optional additional monitor.

Centrix 2.0 thinks ahead

The system continuously determines the optimal measurement parameters for the corresponding operating mode. The next logical operating step is automatically preselected by the system and the user only needs to confirm it.

If necessary, fine adjustments can be made manually at any time.

By minimising the number of operating elements, we maximise the user-friendliness of the system, allowing even inexperienced users to locate faults with a high degree of accuracy.

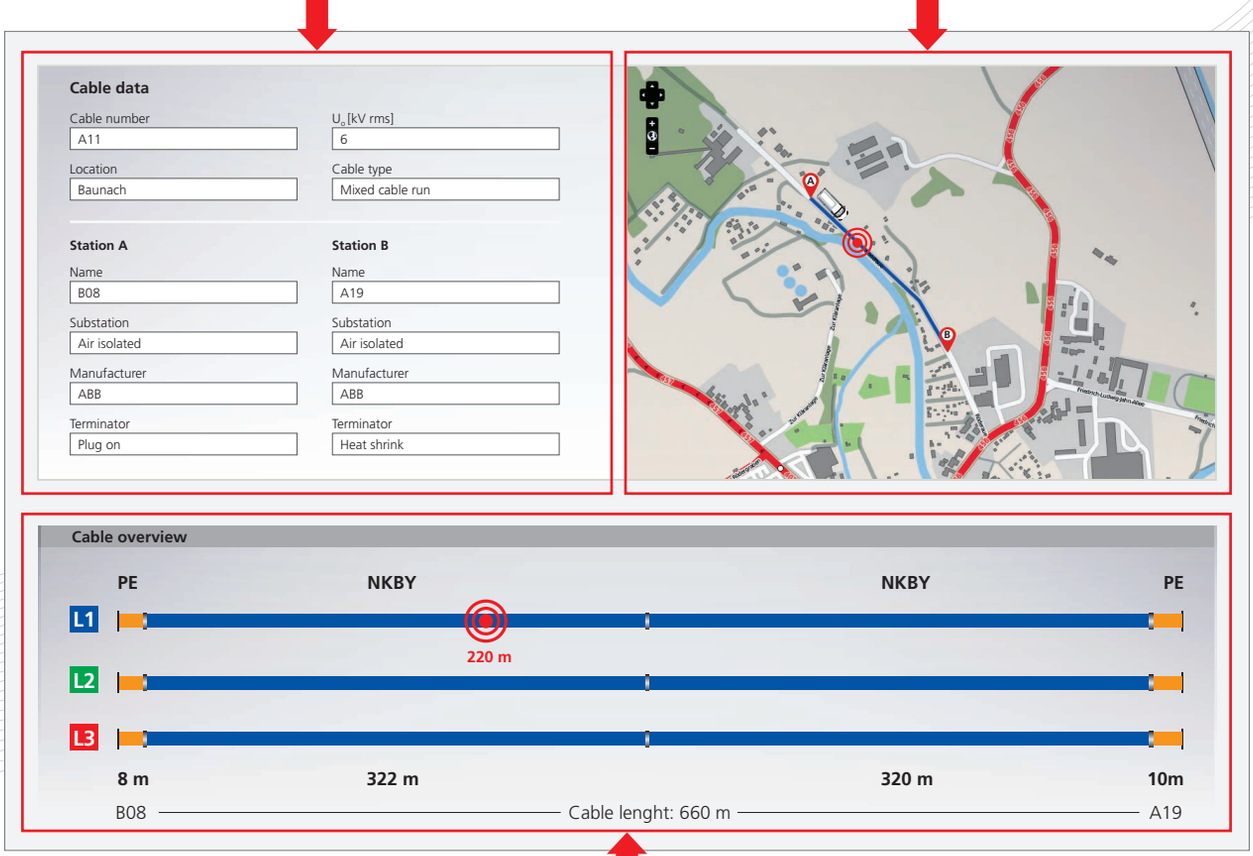
Automatic data recording

All measurements are automatically saved in the database, preventing the loss of any information. Comments can be added to the measurements using an on-screen keyboard.

A freely definable input mask makes it possible to adapt to the internal documentation system of each cable operator. Results can be printed immediately or saved as a PDF file to a memory stick using the USB port. Printers can also be connected using the USB port.

Core specifications for cable identification

Map with cable routing and fault position



Graphic overview of all relevant information and results

Unique technologies that inspire

Pre-location

Teleflex® VX – the world's most powerful reflectometer and prelocation device

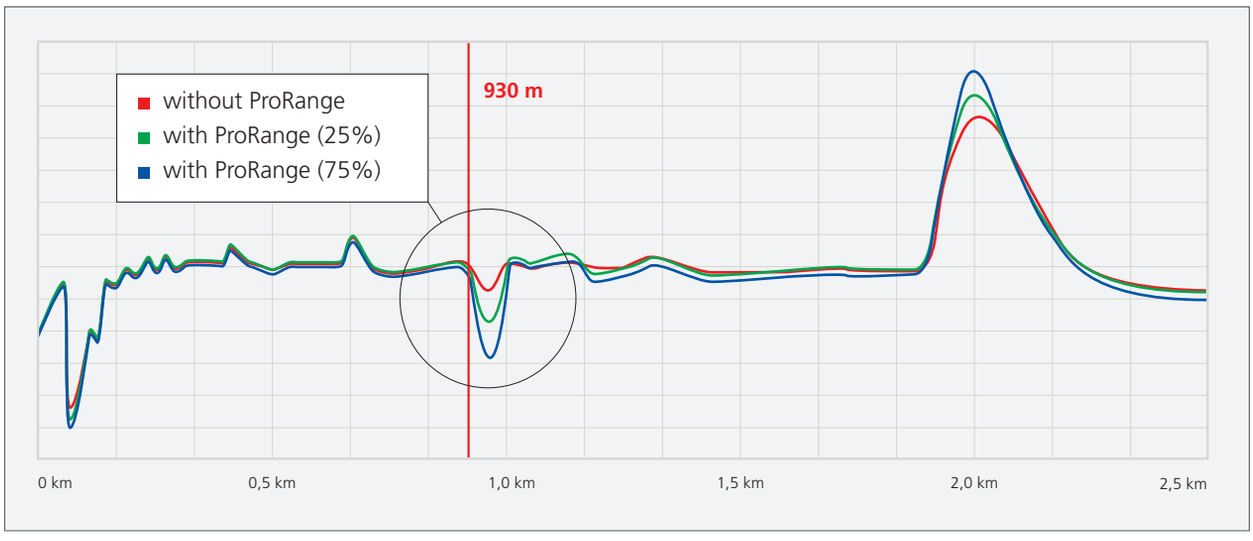
When using reflection measurement, intelligent algorithms determine the necessary setting parameters to allow for

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

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.

Direct TDR
Low-resistance cable faults, opens, and cable length can be directly located using the TDR measurement.

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



ProRange

ARM®-Multishot
ARM® multi-shot 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.

ARM® burning
The ARM® burn method allows the user to observe the arc burning process at the fault location using the reflection measurement. This method is particularly useful for difficult faults in oil-filled joints.

ARM® -Plus / Decay-Plus
Double impulse procedure
The double impulse procedure was specifically developed for long, high-voltage cables.

First, a high-voltage arc is discharged at the fault location. The duration of the arc is extended by a second discharge from a 4 kV pulse module.

The arc is thus optimally stabilised and pre-location can be performed successfully even in difficult conditions, including oil-filled joints, wet faults, and long cables.

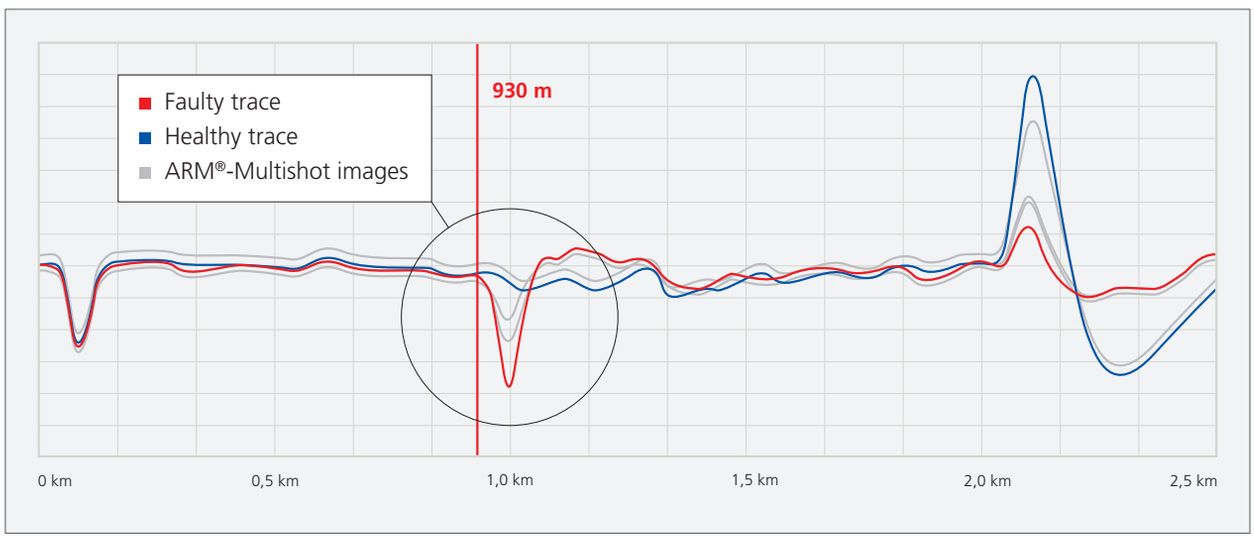
For ARM® -Plus:

- Healthy trace pulse at 350 V or 1.5 kV
- Faulty trace pulse up to 32 kV, additional 4 kV

For Decay-Plus:

- Healthy trace pulse at 1.5 kV
- Faulty trace pulse at up to 80 kV, additional 4 k

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



ARM®-Multishot

A wide range of functionality for precise fault location

Sheath testing and sheath fault location

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

Sheath Fault Prelocation
Up to 10 kV output voltage, highly sensitive equipment, and fully automatic measurement procedure make the detection of high-impedance sheath faults in long cables much simpler. This technology is also suitable for the location of insulation faults in long on- and offshore cables.

Special features:

- Bi-polar pre-location technology eliminates thermoelectric offset voltages and galvanic effects (wet joints)
- Works independently of any resistance in the shield, conductor, auxiliary lines or connection clamps
- Audio frequency output for simultaneous line tracing during pinpointing 8.44 kHz, 15 W (optional)

Sheath Fault Pinpointing
Centrix 2.0 offers four voltage levels from 5 to 20 kV to generate a safe step potential gradient at the fault location. This safe step potential gradient can be located with the help of earthing rods and the ESG NT earth fault locator.

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. A low-noise and maintenance-free 2 kV thyristor surge unit is also available.

Line tracing

The audio frequency system is used to locate cable routes and pinpoint cable faults. The powerful audio frequency generators with up to 200 W output power support the unique SignalSelect® feature and the capacitive step voltage method.

Cable testing and diagnostics

Insulation test
Insulation resistance and test object capacitance are automatically measured with up to 1000 V test voltage.

DC testing
DC testing is possible with a voltage of up to 40 kV (optional 80 kV).

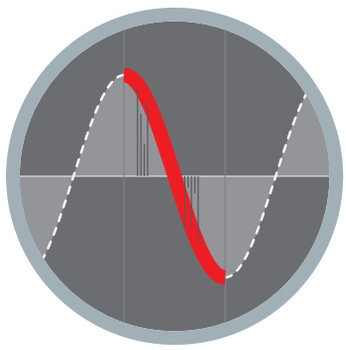
VLF test according to DIN VDE 0276
Using the VLF test adaptor with the cosine rectangular VLF technology, testing of large cable capacities is possible. This method allows the user to test all three phases in parallel also on long cable lines, without reducing the test frequency. This reduces the testing time by two hours.

Alternatively, a VLF sinusoidal test attachment is available for testing age-related conditions of MV cables with the optional TanDelta diagnostic system.

Breakdown phase detection for three-phase testing
In case all three phases are tested simultaneously, it is possible to immediately display the phase on which a breakdown occurred, which saves time and protects the cable.

Partial discharge diagnosis
The new 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.



50 Hz Slope Technology Inside

Unique testing and diagnostics system: TDM 45

Three voltage shapes in one device

■ VLF sin wave	TanDelta diagnosis and Monitored Withstand Test, PD diagnosis on short cables
■ VLF CR (50 Hz Slope)	Commissioning testing with simultaneous PD diagnosis at high test power
■ DAC (Damped AC)	Non-destructive PD diagnosis on aged cables

Other additional equipment

Self-contained power supply

- Synchronous generator 7 kVA
  Suitable vehicle with auxiliary drive necessary.
- Travel power
  Electronic generator 5 KVA.
- Battery power
  Battery-operated self-contained power supply of the measurement system with lithium-ion batteries, charge electronics and display unit.

Safety

An essential part of Centrix 2.0 is the safety system, which monitors all safety-relevant parameters in accordance with current standards.

The following criteria are monitored:

- Loop resistance: System earth to substation earth, auxiliary earth to substation earth
- Step voltage: Earth to the vehicle chassis
- Fast touch potential transients
- Rear door switch
- Safety key switch
- Internal/external emergency switch (EN 50191)

Separation of operation and protective earth in connection with an isolating transformer ensures safe earthing conditions.

SafeDischarge technology

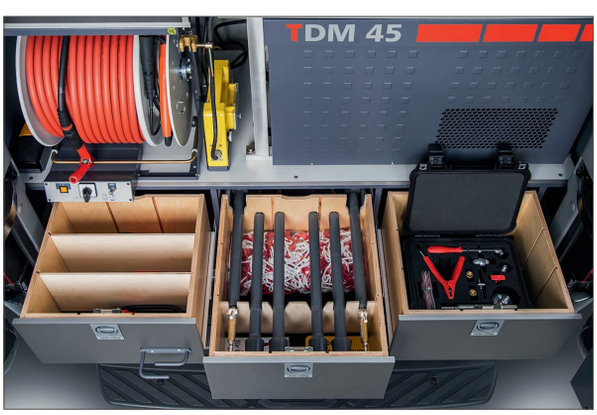
A unique feature is the high level of safety provided by a controlled forced discharge of all system components when an emergency stop is performed or a mains failure occurs. The energy stored in the system is thus no longer discharged into the cable.

Remote control

Important functions can be controlled remotely. This makes it possible to trigger an emergency system shutdown in case of danger. To reduce the stress of the cable under stress due to surge pulses, they can be triggered remotely.

CENTRIX 2.0

Cleverly stowed …



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