

**FEATURES**

The EFL 10P is a small-size instrument intended for fast and very precise localization of faults in power cables with large conductor diameters. Loop resistance range: from 0.1 to 1000 ohms

The processor-controlled automatic measuring bridge of EFL10P provides useful tools.

Fault location:

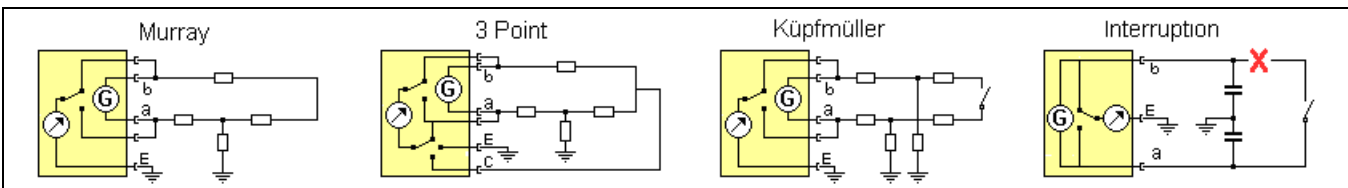
- Murray Method
- 3 Point Method
- Küpfmüller Method
- Interruption

Measurement of cable parameters:

- Loop resistance
- Resistance difference
- Insulation resistance
- Capacitance
- Capacitive balance
- Voltage

Quick repeated DMM measurements  
USB port and WIFI for data transfer

**FAULT LOCATION METHODS**



**SPECIFICATIONS OF FAULT LOCATION AND CABLE PARAMETER MEASUREMENTS**

<p><b>Insulation Fault Location</b></p> <p>Measuring methods. ....Murray, 3 Point, Küpfmüller</p> <p>Loop resistance range ..... 0.1 Ω to 1000 Ω</p> <p>Fault resistance range ..... up to 50 MΩ</p> <p>Measuring voltage..... 1 V DC or AC</p> <p>Accuracy of Lx/L value (R l = 2 Ω, Lx/L=0.1 to 1)</p> <p>Fault resistance &lt; 1 MΩ ..... ±0.2%</p> <p>Fault resistance 1 MΩ to 5 MΩ ..... ±0.3%</p> <p>Fault resistance 5 MΩ to 25 MΩ..... ±0.5%</p> <p>Fault resistance 25 MΩ to 50 MΩ..... ±2%</p> <p><b>Interruption Location</b></p> <p>Measuring range. .... up to 20 km</p> <p>Measuring voltage</p> <p>For Lx/L measurement..... 1 V AC</p> <p>For capacitance measurement ..... 100 V AC</p> <p>Accuracy ..... ±2% ±0.2 nF</p> <p>Test results ..... Lx/L, Ca-E, Cb-E</p> <p><b>Disturbing Voltages</b></p> <p>Measuring range</p> <p>DC voltage..... up to 400 V</p> <p>AC voltage..... up to 250 V rms</p> <p>Frequency range ..... 15 to 300 Hz</p> <p>Input resistance ..... 1 MΩ</p> <p>Accuracy ..... ±3% ±1 V</p>	<p><b>Capacitance</b></p> <p>Measuring range ..... 1 nF to 10 μF</p> <p>Measuring voltage ..... 11 Hz, 100 V</p> <p>Accuracy (10 nF to 10 μF) ..... ±2% ±0.2 nF</p> <p><b>Loop Resistance</b></p> <p>Measuring range. .... 0.1 Ω to 1000 Ω</p> <p>Measuring voltage ..... 1 V</p> <p>Accuracy (0.3 to 300 Ω)..... ±0.3% ±0.03 Ω</p> <p><b>Resistance Difference</b></p> <p>Loop resistance range..... 0.1 Ω to 1000 Ω</p> <p>Resolution..... 1/1000</p> <p>Accuracy..... ±0.2% of loop resistance ±0.02 Ω</p> <p><b>Capacitive Balance</b></p> <p>Measuring range. .... 1 nF to 2 μF</p> <p>Measuring voltage ..... 11 Hz, 100 V</p> <p>Accuracy..... ±2 % ± 0.2 nF</p> <p><b>Insulation Resistance</b></p> <p>Quick measurement ..... 10 kΩ to 300 MΩ</p> <p>Quality measurement ..... up to 10 GΩ</p> <p>Measuring voltage ..... 100 / 250 V</p> <p>Accuracy</p> <p>10 kΩ to 50 MΩ ..... 5 % ± 1 kΩ</p> <p>50 MΩ to 100 MΩ ..... 10 %</p> <p>100 MΩ to 5 GΩ ..... 20 %</p> <p>5 GΩ to 10 GΩ ..... 30 %</p>
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**SPECIFICATIONS OF DMM MEASUREMENTS**

<p><b>Disturbing Voltages</b>                  Measuring range                  DC voltage ..... up to 400 V                  AC voltage ..... up to 250 V eff                  Measuring mode ..... Repeated measurements                  Frequency range ..... 15 to 300 Hz                  Input resistance ..... 1 MΩ                  Accuracy ..... ±3% ±.1 V                  Test results .... AC, DC voltage between wire a and b</p> <p><b>Capacitance</b>                  Measuring range ..... 10 nF to 2 μF                  Measuring mode ..... Repeated measurements                  Measuring voltage ..... 11 Hz, 100 V                  Accuracy ..... ±3% ±0.3 nF                  Test result ...Capacitance between wire a and wire b</p>	<p><b>Insulation Resistance</b>                  Measuring range ..... 10 kΩ to 1000 MΩ                  Measuring mode ..... Repeated measurements                  Measuring voltage ..... 100 V                  DC disturbing voltage compensation ..... Disabled                  Measuring time ..... ~ 3 sec                  Accuracy (without disturbing voltages)                  10 kΩ to 300 MΩ ..... 20 %                  Test result ..... Resistance between wire a and wire b</p> <p><b>Loop Resistance</b>                  Measuring range ..... 1Ω to 10 kΩ                  Measuring mode ..... Repeated measurements                  DC disturbing voltage compensation ..... Disabled                  Accuracy (without disturbing voltages) ±0.5 % ±0.2 Ω                  Test result ..... Resistance between wire a and wire b</p>
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**DATA TRANSFER**

<p><b>Data transfer via USB port:</b></p> <ul style="list-style-type: none"> <li>• transfer of results and setups to USB stick</li> <li>• bidirectional transfer of setups</li> <li>• transfer of print screen images to USB stick</li> <li>• transfer of upgrade files to EFL 10P</li> </ul>	<p><b>Data transfer via WiFi</b>                  EFL 10P acts as a HTTP server when transfers test results to Local Area Network.</p>
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**GENERAL SPECIFICATIONS**

<p><b>Power supply</b>                  Internal rechargeable lithium-ion battery pack                  Operation time ..... ca. 8 hours                  Charging                  From 230 V mains ..... with mains adapter                  From 12 V car battery ..... with car adapter (option)                  Charging time ..... approx. 3 hours</p> <p><b>Display</b> .....320x240 dot color TFT LCD</p> <p><b>Connectors</b>                  For mains or 12V car adapter .....2.1/5.5 mm socket                  For measuring cables ..... 6 pcs of 4 mm safety banana sockets                  Micro-USB ..... to connect PC or memory stick</p>	<p><b>Ambient temperature ranges</b>                  Reference ..... +23°C ± 5°C,                  RH 45% to 75% *                  Normal operation ..... 0°C to +40°C,                  RH 30% to 75% *( &lt; 25 g/m<sup>3</sup> )                  Limits of operation ..... -5°C to +45°C,                  RH 5% to 95% *( &lt; 29g/m<sup>3</sup> )                  Storage and transport ..... -20°C to +70°C,                  RH 95% at +45°C *( &lt; 35 g/m<sup>3</sup> )</p> <p><b>Protection</b> ..... IP 54                  Shockproof ..... EN 60068-2-27 Shock</p> <p><b>Dimensions</b> ..... 200 x 100 x 40 mm  <b>Weight</b> ..... 0.8 kg                  * without condensation</p>
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**ORDERING INFORMATION**

<p><b>FAULT LOCATOR BRIDGE</b>  <b>EFL 10P</b> ..... 471-000-000  <b>Including:</b>                  Operating Manual                  Application guide                  Calibration Certificate                  Ground cable (green)                  Test lead (yellow)                  2 wire test lead with crocodile clamp (red)                  2 wire test lead with crocodile clamp (black)                  USB stick                  OTG cable                  USB cable for PC connection                  Mains adapter                  Battery pack (built-in)                  Carrying case</p> <p><b>HW Option:</b>                  Car Lighter power adapter EAA 20 ..... 462-000-000</p>
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ELEKTRONIKA reserves the right to change specifications without prior notice !

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