Cable Fault Location –
Typical cable faults in a *Medium Voltage Network (up to 36 kV)*
Faults are the “natural enemy” of reliability, but Megger’s innovative products make it possible to quickly localise cable faults without causing damage to fault-free parts of the cable. On the following pages we introduce you solutions for prelocation and/or pinpointing.
### Prelocation & Pinpointing

<table>
<thead>
<tr>
<th>Faults</th>
<th>Product</th>
<th>Prelocation</th>
<th>Pinpointing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low resistance faults</strong></td>
<td>TDR2050</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Teleflex LX / SX</td>
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<tr>
<td></td>
<td>Teleflex VX</td>
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<tr>
<td></td>
<td>Teleflex VX &amp; LDE 800</td>
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<tr>
<td><strong>High resistance faults</strong></td>
<td>SWG series</td>
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<tr>
<td></td>
<td>SFX series</td>
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<tr>
<td></td>
<td>EZ Thump series</td>
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<td></td>
<td>Smart Thump</td>
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<td></td>
<td>SG32-1500M</td>
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<td></td>
<td>digiPHONE+</td>
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<tr>
<td><strong>Sheath faults</strong></td>
<td>MFM10</td>
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<tr>
<td></td>
<td>HVB10</td>
<td></td>
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<tr>
<td></td>
<td>ESG NT</td>
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</tbody>
</table>

- **Low resistance faults**
  - TDR2050
  - Teleflex LX / SX
  - Teleflex VX
  - Teleflex VX & LDE 800

- **High resistance faults**
  - SWG series
  - SFX series
  - EZ Thump series
  - Smart Thump
  - SG32-1500M
  - digiPHONE+

- **Sheath faults**
  - MFM10
  - HVB10
  - ESG NT

In combination with:
- digiPHONE+
- ESG NT
Low resistance faults

Low resistance faults are between two conductors or conductor to shield with a test result mostly lower than 100 Ohm.
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### Low resistance faults

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TDR2050</strong></td>
<td>Advanced dual channel reflectometer</td>
</tr>
<tr>
<td><strong>Teleflex LV</strong></td>
<td>Against illegal taps, electricity theft and for short range fault location</td>
</tr>
<tr>
<td><strong>Teleflex LX / SX</strong></td>
<td>Portable reflectometer for fault location systems</td>
</tr>
<tr>
<td><strong>Teleflex VX</strong></td>
<td>High-end reflectometer for fault location systems</td>
</tr>
<tr>
<td><strong>Teleflex VX &amp; LDE 800</strong></td>
<td>Reflectometer system for long distances</td>
</tr>
</tbody>
</table>

**Prelocation**

**datasheet**

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**Low resistance faults**

**Fault location products**

**High resistance faults**

**Sheath faults**

**Wet faults**
High resistance faults

High resistance faults occur in many different forms. The resistance of these faults is mostly higher than 100 Ohm.
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High resistance faults

<table>
<thead>
<tr>
<th>Pinpointing</th>
<th>Prelocation</th>
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<th>Pinpointing</th>
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<tbody>
<tr>
<td><strong>SWG series</strong></td>
<td><strong>SFX 5</strong></td>
<td><strong>SFX 8 / 12 / 16 / 32</strong></td>
<td><strong>SFX 25</strong></td>
<td><strong>SFX 40</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surge wave generator with surge energy up to 3500 J, 2 ... 32 kV</td>
<td>Small cable fault location system</td>
<td>3-step cable fault location systems with detachable reflectometer</td>
<td>Mobile, battery operated cable fault location system</td>
<td>Full-automatic cable fault location system</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All SFX systems can do fault pinpointing in combination with digiPHONE⁺
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High resistance faults

**EZ Thump series**
Compact and portable fault location system for immediate on-site fault location

**Smart Thump**
Portable cable fault location system

**SG32-1500M**
From 11 to 32 kV cable fault location system

**digiPHONE+**
Surge wave receiver

2-step cable fault location systems with fully integrated reflectometers

Low resistance faults

High resistance faults

Sheath faults

Wet faults

Fault location products
Sheath faults

Sheath faults occur when the cable sheath is damaged allowing direct contact between the cable shield and ground.
### Sheath faults

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<tr>
<td><strong>MFM10</strong></td>
<td>Mobile, battery operated sheath fault prelocation system up to ± 10 kV DC</td>
</tr>
<tr>
<td><strong>HVB10</strong></td>
<td>High-voltage bridge for prelocation</td>
</tr>
<tr>
<td><strong>ESG NT</strong></td>
<td>Digital earth fault pointer</td>
</tr>
<tr>
<td><strong>MFM10 &amp; ESG NT</strong></td>
<td>Digital earth fault pointer</td>
</tr>
<tr>
<td><strong>HVB10 &amp; ESG NT</strong></td>
<td>Digital earth fault pointer</td>
</tr>
</tbody>
</table>

**Datasheets:**
- MFM10
- HVB10
- ESG NT

**Other:**
- Low resistance faults
- High resistance faults
- Wet faults
- Fault location products
Wet faults

Water or faults from moisture ingress are the most difficult faults to locate. They often have an effect on all conductors and the cable impedance changes very often. To get a good test result these faults need to be “dried out” with a burner.
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Wet faults

**BPS 5000-c**
Burning and proof test system for medium voltage cables

**T22/13 B**
15 kV burn-down unit
Looking for a van build solution?

Cable test van **Centrix 2.0**
World's most modern and powerful cable test van system for fast, easy and complete fault location up to 33 kV

Cable test van **Variant**
Cable fault location, testing and diagnostics in one modular system

Cable test van **City series**
When things get tight, size matters: cable fault location, testing & diagnostics in compact test vans

- Low resistance faults
- High resistance faults
- Sheath faults
- Wet faults
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- Powerful Tools

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