

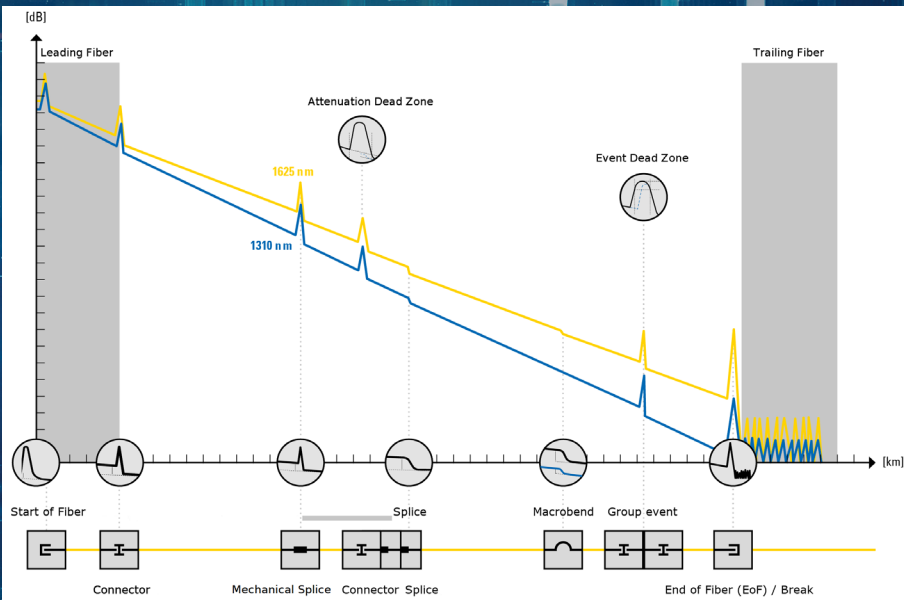
# OTDR

## Optical Time Domain Reflectometer

An OTDR (Optical Time Domain Reflectometer) is the most accurate instrument for detecting fiber defects. It measures line and event attenuation, and from this, together with the propagation time of the reflected pulse, can determine the line length, splices and connectors. When measuring with two wavelengths, a bending radius violation (macro bend) can be detected and localized. The OTDR in the ARGUS® 300 is available with 1310 + 1650 nm or with 1310 + 1550 nm.

Events are accurately characterized (connector, splice, bend, etc.) and localized to within a few centimeters using a line graph. A simplified graphical operation allows the selection of each individual event by touch. In addition, other important parameters are provided for the total and partial line, e.g. optical return loss (ORL) and insertion loss (IL). The first provides information on how well connectors attenuate the unwanted reflections - the value should be as high as possible. The second value indicates how well the useful signal can be inserted into the fiber - this value should be as low as possible.

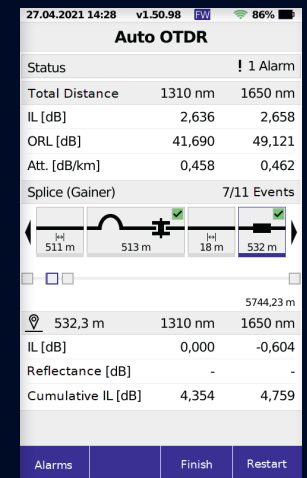
The low dead zone of 3.5 m (attenuation dead zone) also allows events to be determined at close range. By using a leading fiber, events within the dead zone can also be determined. Low (0.9 m) event dead zones (distance between two events) allow the detection of many events in short succession on cable lengths of up to 240 km\*.



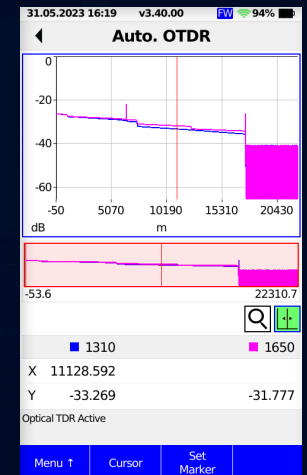
- Smart Auto, Expert or Real Time Mode (up to 4 Hz)
- Wavelengths: 1310 and 1650 nm (± 20nm) or 1310 and 1550 nm (± 20nm)
- Dynamic range: 20 dB at 100 ns; 37 dB at 1310 nm, 20 µs; 35 dB at 1650 nm, 20 µs
- Event dead zone: 0.9 m
- Attenuation dead zone: 3,5 m
- PON dead zone: ≤ 25 m; typical 20 m
- Pulse width: 3, 5, 10, 20, 30, 50, 100, 200, 300, 500 ns; 1, 2, 3, 5, 10, 20 µs
- Range settings: 250, 500 m; 1, 2, 5, 10, 15, 20, 40, 80, 160, 240 km\*
- Data points: up to 300,000 points
- Data point spacing: 5 cm to 32 m
- Distance accuracy: ± (1 m + 0.003 % \* distance + resolution)
- Linearity: ± 0.05 dB/dB

\* Max. range depends on fiber type (attenuation/km)

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testing the telecom network



Line analysis with events



Graphic Auto OTDR

Available for:



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Enhance your ARGUS® now with the **OTDR package** incl. opt. adapter, opt. measuring cable, portsaver + shutter: **1310 nm + 1650 nm**: Art. No.: 030040 / **1310 nm + 1550 nm**: Art. No.: 030043) as well as the **OTDR leading fiber** (Art. No.: 030042).

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