



LSG 300

Arc stabilisation filter for cable fault prelocation with the ARM-Method

Benefits

- ▶ **Reliable arc stabilising**
- ▶ **Easy operation**
- ▶ **For portable use or test van installation**

Description

High resistive faults and intermittent faults can easily be located with the ARM Method. Typically the fault resistance is too high for direct measurement with a TDR. Therefore a surge generator in combination with the LSG 300 creates a stable low resistance arc at the fault, which is then clearly located by a TDR Teleflex like a low resistance fault. The LSG 300 is an accessory to surge generator and TDR and also couples the Teleflex measurement pulses onto the faulty cable. The Teleflex shows a comparison of the traces with and without the arc.

It is an easy, clear and precise method and therefore the most commonly used fault locating procedure today.

This compact and easy to use Arc Stabilisation Filter is suitable for use in a modular system or installed in a cable test van. The LSG 300 is an effective aid to prelocate the majority of cable faults, quickly and accurately and is suitable for use by operators of all experience levels.

ARM prelocation method

In a first step, a TDR Teleflex does a low voltage reflection measurement of the cable, not „seeing“ the high resistive fault. This picture is stored as reference. In a second step the energy of a surge generator is released into the faulty cable, passing through the arc stabilising filter LSG 300. This surge causes a flashover at the weak spot in the cable. Simultaneously, the LSG 300 triggers the TDR Teleflex and automatically couples a standard TDR reflection measurement onto the HV surge. The TDR can now „see“ the low resistive arc at the weak spot as a short-circuit. This picture is stored as fault-picture and compared with the previously measured reference picture. The point of separation of the two traces is the fault location and the TDR Teleflex will indicate the distance to the fault. A typical configuration is shown in figure 1.

The LSG 300 features a switch to bypass the ARM filter after prelocating and the surge generator is ready for acoustic fault pinpointing without the need to disconnect the LSG 300.

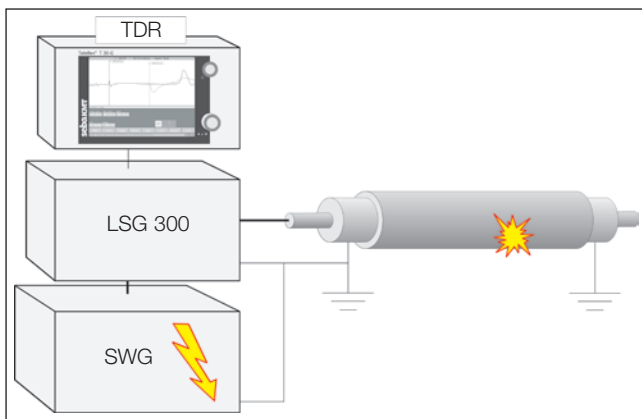


Fig. 1: Instrument configuration for the Arc Reflection Method (ARM)



Technical Data

Recommended surge generators	SWG 1750-C SWG 1000-CD-1 SWG 1750-C-4
Recommended pulse echometers	T 30-E T 3030 T 3050 Teleflex M
Arc duration	≥ 5.0 ms at 8 kV ≥ 1.0 ms at 32 kV
Dimensions (W x H x D)	520 x 270 x 455 mm
Weight	18.5 kg

Features

- ▶ Compact design
- ▶ Easy operation
- ▶ Precise triggering for best TDR results

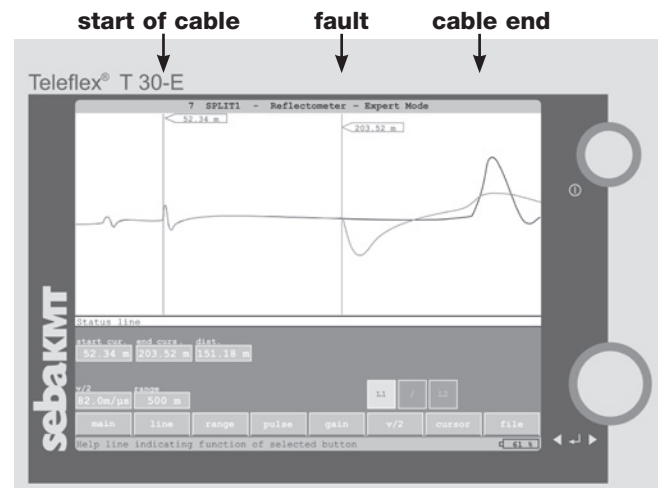


Fig. 2: Typical trace using the Arc Reflection Method (ARM)