

ARM 3-E

Arc stabilizing unit



- **Active ARM fault location with built-in impulse generation**
- **Conduct prelocation with either the surge generator or directly for LV fault location**
- **Compatible with all surge generators and reflectometers**

DESCRIPTION

The arc stabilizing unit ARM 3-E provides short-term stabilization of an arc at a high resistance fault in a cable. This allows high resistance faults to be prelocated with a conventional reflectometer, such as a Teleflex M, in a standing arc. The arc is ignited by means of a shock discharge generator (SWG), whereby surge voltages of up to 32 kV are permissible.

One of the main advantages of the patented method incorporated in the ARM 3-E is the elimination of high impedance in the current circuit (resistance or inductance), meaning that the SWG's excellent ignition characteristics can be used to full effect. This is essential in the case of long cables, those with poor transmission characteristics, or cables with faults in extremely wet conditions.

Even extremely long ignition delay times (up to 500 ms!) do not pose a problem for the ARM 3-E: the Teleflex M activates at the correct point thanks to the trigger pulse from the ARM 3-E, ensuring an accurate measurement.

Ignition voltages of up to 2 kV can be generated from the ARM 3-E itself by using the "ARM-SURGE" key. Hence, when using the arc reflection method in low voltage systems, you do not need a separate shock discharge generator. This also precludes that a voltage of more than 2 kV is put on the cable.

After prelocation has been completed, the ARM 3-E must be switched off before acoustic pinpoint location can begin. No other switching operations are necessary and no additional components like switches are required when executing the arc reflection method. This goes for both test van and mobile applications.

At first, a flashover is generated at the fault by means of the shock discharge generator or with the ARM 3-E itself (ignition voltage 2 kV). Before the arc is extinguished, it is supplied with energy and stabilized by the ARM 3-E for a short time. Now, the impedance at the fault is very low due to the physical characteristics of the arc. Correspondingly, the reflection coefficient at the fault during the pulse reflection is very high. The fault is now "visible". By comparing the cable trace with the measurements from the extinguished arc, fault location can now be conducted.

Along with the ARM 3-E, one typically requires a controllable shock discharge generator (SWG) and a Teleflex M reflectometer to conduct the arc reflection method. This configuration of equipment is suitable for both installation in a cable test van as well as for mobile use.

TECHNICAL DATA*

ARM 3-E

Application	Location of high resistance faults in high and low voltage cables
Test method	Arc reflection method
Max. voltage of the external surge generator	32 kV
Voltage of the internal surge generator	2 kV
Energy of the internal surge generator	640 Ws / 2 kV
Stabilization time	approx. 20 ms
Interval	20 s
Mains supply	110 kV / 220 V / 230 V / 240 V 50 Hz / 60 Hz
Power consumption	350 VA / 2 sec. 100 VA / "ready for switching on" (red lamp lights)
Dimensions (L x W x H)	560 x 520 x 430 mm
Weight	47 kg

ORDERING INFORMATION

Product	Order no.
Arc stabilizing unit 32 kV (without cable set)	810199
Options:	
Leads for test van/portable use with SWG	810001888
Leads for test van + external operating panel	810001886
Leads for portable use without SWG	810001887

* We reserve the right to make technical changes.

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