

Programma

VIDAR Vacuum Interrupter Tester



- Tests the integrity of vacuum interrupters quickly, safely and easily
- User defined voltage selection
- Extensive voltage range
- Easy to operate. Follows ANSI/IEEE standardized DC test methods
- Lightweight and portable

DESCRIPTION

When a vacuum circuit breaker is commissioned or undergoes routine tests, it is very important to be able to ascertain whether or not the Vacuum Interrupter (VI) is intact before putting it back into operation.

VIDAR enables you to check the integrity of the vacuum interrupter quickly and conveniently by means of the known relationship between the flashover voltage and the vacuum interrupter. A suitable test voltage (DC) is applied to the breaker, and the result is known immediately.

VIDAR permits you to select among test voltages from 10 to 60 kV DC. One of these voltages is customized and specified by the customer when ordering. A green lamp indicates approval of the VI. A red lamp indicates that it is defective. Two-hand control and a high-voltage warning lamp enhances safety.

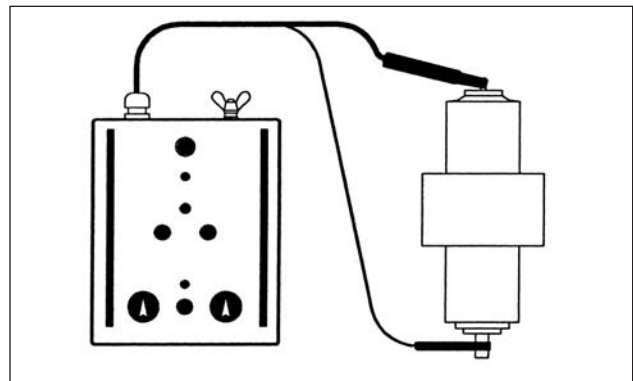
VIDAR has been developed in close collaboration with leading manufacturers of vacuum circuit breakers. It weighs only about 6 kg (15 lbs), and it is easy to use since interrupters do not have to be dismantled for testing. VIDAR is therefore ideal for use in the field or shop floor applications.

APPLICATIONS

The VIDAR vacuum tester is used to test the ability of the VI in a vacuum circuit to inhibit flashover. The rugged, lightweight, compact and portable VIDAR is ideal for field work and shop floor applications.

The VI in vacuum breakers do not last forever. Leakage starts after years or decades and the interrupters fill with

air making the breaker unreliable. In most cases, the leakage process is rapid once it has started. In addition to leakage, dirt on the poles and on the exterior surface of the interrupter can make it unsafe during operation. The mechanics of the breaker can become misaligned so that the distance between the poles no longer is adequate. Vidar, introduced in 1985, uses high voltage DC to test the integrity of vacuum breakers.



Connection diagram for the VIDAR

Flashover Threshold Voltage

The curve shown in Fig. 1 illustrates the relationship between the VI's internal pressure and its ability to inhibit flashover. This relationship permits the vacuum to be checked indirectly by measuring the voltage threshold. One special advantage of this method is that you do not need to disassemble the circuit breaker in order to test it.

The voltage shall be selected so that test point A (see Fig. 1) is sufficiently far from point B (when the chamber is filled with air). However, the electric stress in the chamber must not be too high. In normal situations, the pressure is less than 10^{-2} mbar.

For guidance on test voltage refer to IEC 694 and ANSI C37-06 standards.

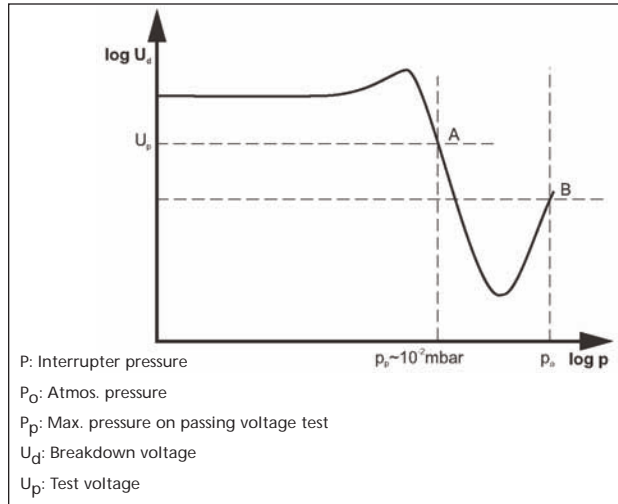


Fig. 1: Flashover threshold voltage plotted against pressure in vacuum interrupter.

FEATURES AND BENEFITS

- Easy to use — operation of the VIDAR involves just one cable connection and an immediate pass/fail indication using a green/red lamp
- User defined voltage selection — provides an extensive range of voltages with a selection value determined by the user
- Designed in collaboration with manufacturers of vacuum circuit breakers — suitable for testing any vacuum interrupter; follows ANSI/IEEE standardized DC test methods
- Light and portable — its small size and portability make VIDAR ideal for field use and shop floor applications
- Large test clip connectors — provides for quicker connection and more efficient testing process



Permanently mounted cable set and ground cable

SPECIFICATIONS

Specifications are valid at nominal input voltage and an ambient temperature of +25°C, (77°F). Specifications are subject to change without notice.

Environment

Application field

The instrument is intended for use in high-voltage substations and industrial environments.

Personal safety

Maximum permissible transient current through the external load is 12 mA. Maximum discharge time for internal high-voltage circuit is 0.3 s.

Temperature

Operating

0°C to +50°C (32°F to +122°F)

Storage & transport

-40°C to +70°C (-40°F to +158°F)

Humidity

5% - 95% RH, non-condensing

CE-marking

LVD

Low Voltage Directive 73/3/EEC am. by 93/68/EEC

EMC

EMC Directive 89/336/EEC am. by 91/263/EEC, 92/31/EEC and 93/68/EEC

General

Power supply voltage

115/230 V AC (switchable), 50/60 Hz

Power consumption

69 VA (max)

Protection

Overload cutout

Dimensions

Instrument

250 x 210 x 125 mm (9.8" x 8.3" x 4.9")

Transport case

460 x 430 x 210 mm (18.0" x 17" x 8.3")

Weight

6.9 kg (15.5 lbs)
 10.7 kg (23.6 lbs) with accessories and transport case

Measurement Section

Indicators

Green lamp

Indicates an approved breaking chamber.

Yellow lamp

Indicates that the test was interrupted.

Red lamp

Indicates a defect braking interrupter; lights up if the current exceeds 0.3 mA.

Output

Standard voltages

10, 14, 25, 40, 60 kV DC switchable

Customized voltages

Between 10 and 60 kV DC. Determined at the factory. Default voltage is 50 kV.

ORDERING INFORMATION

Item	Cat. No.
VIDAR complete with permanently mounted cable set 5 m (16 ft), ground cable and transport case	BR-29090
Transport case	GD-00030

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