

# SPARK 6000

High-frequency, high voltage spark tester  
for DC voltage and AC voltage



Wi-Fi ready



# SPARK 6000



High-frequency, high voltage spark tester for Direct Current and Alternating Current

During the extrusion of cables, the insulation is inspected by spark testers (high voltage spark testers) to detect and document possible insulation faults at an early stage. For testing, the dry cable runs through the sturdy bead chain electrode of the sparktester that is typically installed after the cooling section or in rewinding lines. Here, the cable insulation is exposed to the selected test voltage and faults in the insulation are reliably detected. This allows for quality control and ensures that only faultless cables are delivered.

For these applications, SIKORA offers High-Frequency (HF), Direct Current (DC), and Alternating Current (AC) sparktesters. The test voltage is continuously adjustable. The sparktesters conform to approved test standards (AS, BS, CS, CENELEC, EN, UL, VDE) and safety regulations (as demanded by DIN/VDE 0800, IEC 479-1)

## SPARK 6030 HF

The SPARK 6030 HF is a high-frequency high voltage spark tester, developed for the detection of faults in the insulation of cables, with a diameter from 0.5 to 30 mm.

## SPARK 6020 DC

The SPARK 6020 DC is a direct-current spark tester, designed for the detection of faults in the insulation of wires and cables from 1.0 to 20 mm.

## Function

The SPARK 6030 HF and the SPARK 6020 DC devices distinguish between punctual faults (pin holes) and bare patches. The sturdy electrode and electronic box of the sparktesters form one integral unit. Included in the devices is a display, visualizing the selected test voltage, the capacitive load and number of high voltage break downs. The display is combined with a control panel for entering the test voltage. For production lines without a line computer, SIKORA recommends the use of the SPARK 6030 HF/SPARK 6020 DC with the processor-controlled display/ control device REMOTE 2000.

The SIKORA SPARK 6000 models have an optional integrated 3-step self-test and calibration system.



SPARK 6030 HF

## Highlights SPARK 6030 HF

- Integrated function test for
  - High voltage
  - Short-circuit current
  - Function / Sensitivity
  - Capacitive load
  - Corona level
- Log file for detected breakdowns
- Log file for self-test
- Wi-Fi for Log file transfer
- Wi-Fi operation

### Innovation: Integrated self-test and calibration system (option)

According to European standards, openly operated measuring and testing equipment has to be checked regularly. Accordingly, spark testers are tested with regard to high voltage, short-circuit current and function (sensitivity). While in the past cable manufacturers had to use an external testing device, the SPARK 6030 HF integrates a completely 3-step self-test and calibration system. This test is documented in a log file and can be recalled at any time.

#### 1. Integrated high voltage test

The spark tester tests the displayed high voltage of the device for precision. The high voltage has to be within a tolerance of 5%. At the same time the corona level is measured and displayed.

#### 2. Integrated short-circuit current test

In addition to the high voltage test, the sparktester automatically checks the maximum short-circuit current in case of an accidental touch of the test electrode, which should not exceed 10 mA (according to EN61010-1:2010).

#### 3. Integrated function (sensitivity) test

The sparktester automatically performs a function test (sensitivity test). During this test, 20 artificial faults (breakdowns) are initiated that are detected and reported.

### Exchangeable self-test-modul

The functional and self-test-modul which, is integrated in the SPARK 6030 HF and SPARK 6020 DC, can be easily exchanged for calibration. A submission of the complete device to SIKORA as well as the assignment of a service engineer is not necessary.

### Wi-Fi interface (optional)

The SPARK 6000 devices have common interfaces, including a Wi-Fi interface as an option. Via Wi-Fi they can be directly connected with the SIKORA App on a smartphone or laptop.

### SIKORA App

SIKORA offers a free app for diagnosis and quality control on smartphones. The operator quickly logs in via the Wi-Fi interface and immediately receives the number of breakdowns or the high voltage. With the app, it is also possible to control the high voltage and to start the self-test. Upon completion of the self-test, a detailed test certificate is available in PDF format on the SIKORA app. This certificate can be transmitted via e-mail to the quality management department.



SIKORA App: main page, function test, safety test, test certificate



Exchangeable self-test-modul

### Typical features

- Reliable detection of pin holes and bare patches in the insulation of wires and cables
- Integrated display with keypad
- Processor controlled test-voltage
- Integrated 3-step self-test and calibration system/ exchangeable module (option)
- Wi-Fi interface and SIKORA app (option)
- Fulfills all important test and safety standards (BS, VDE, CENELEC, UL, AS, CS, etc.)
- Meets safety requirements according to DIN / VDE 0800, IEC 479-1

# SPARK 6000

High-frequency, high voltage spark tester for cable production lines



Certified according to  
DIN EN ISO 9001

## Technical data SPARK 6000

	SPARK 6030 HF	SPARK 6020 DC
Product diameter	0.5 to 30 mm	1.0 to 20 mm
Test voltage	0.5 to 15 kV (RMS), sine wave	1.0 to 20 kV
Test frequency	2 to 4 kHz	-
Integrated display	Yes	Yes
Integrated self-test	Yes (optional)	Yes (optional)
Wi-Fi	Yes (optional)	Yes (optional)
Power supply	100 - 240 V AC $\pm$ 10 %, 50/60 Hz	100 - 240 V AC $\pm$ 10 %, 50/60 Hz
Interfaces	RS485, RS232, Ethernet/UDP, Optional: analog input and output test voltage, industrial fieldbus (e.g. Profinet IO, EtherNet/IP, Profibus-DP, CANopen, DeviceNet), Wi-Fi	RS485, RS232, Ethernet/UDP, Optional: analog input and output test voltage, industrial fieldbus (e.g. Profinet IO, EtherNet/IP, Profibus-DP, CANopen, DeviceNet), Wi-Fi

Technical data is subject to change

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