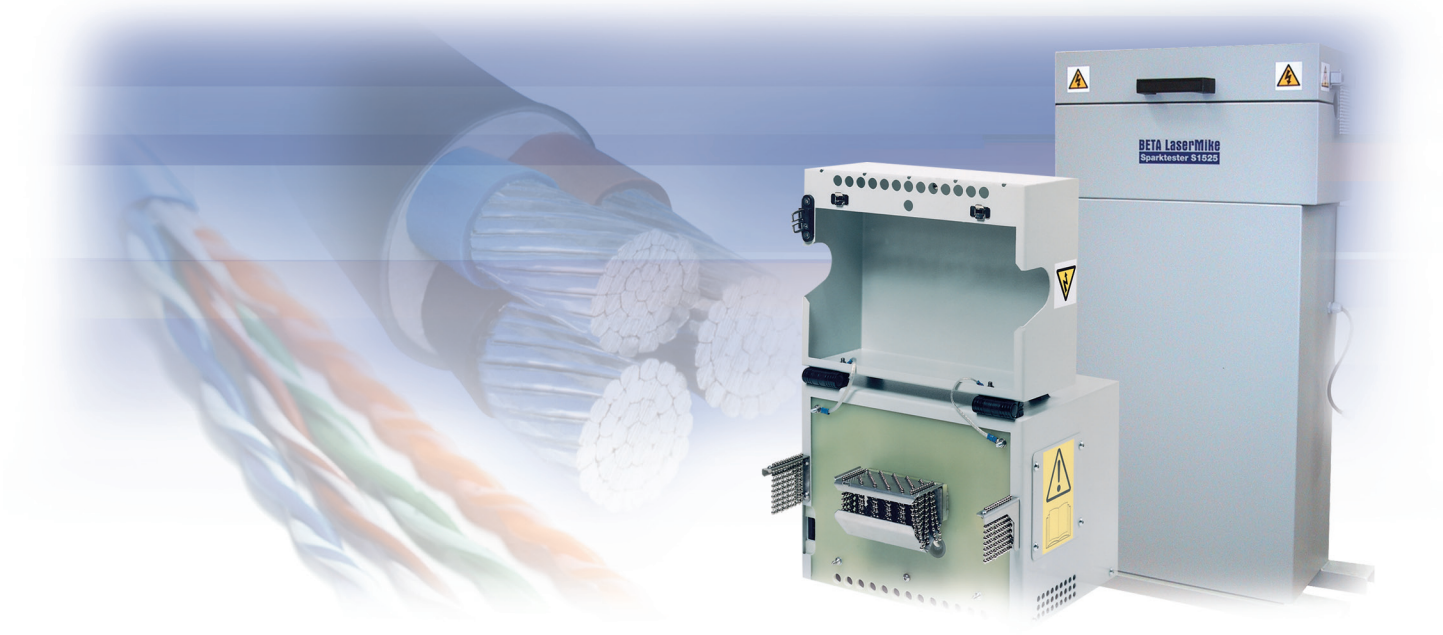


Standard and High-Frequency

Spark Testers

for Continuous Detection of Insulation Faults

The Spark Tester Advantage:

- Get quality assurance to produce quality products—continuously and quickly detect insulation faults, such as bare patches and pin holes
- Quickly setup for testing—hinged lid design allows you to lift bead chain away from the product for easy threading at startup
- Minimize maintenance costs—unique bead chain design lets you replace individual strands instead of an entire assembly
- Protect personnel and equipment—multiple safety features include EHT warning lamps, interlock safety switches, ozone extraction ports, and current limiting circuits
- Meet tough industry standards—Beta LaserMike Spark Testers ensure you meet virtually every international spark testing standard

Cost-Effective, Quality Testing of Wire and Cable Insulation

Catching wire and cable insulation defects early and at critical points in your production process can help you avoid costly downtime and production losses. Beta LaserMike Spark Testers continuously monitor the integrity of your insulation and accurately detect faults such as bare patches, pin holes, cuts, and other defects. This enables you to quickly catch insulation faults before your product makes its way into expensive cable assemblies or is discovered by your customer. This high level of flaw detection enables you to produce higher-quality products and realize significant production savings. Beta LaserMike offers a range of standard models for a variety of applications and also offers high-frequency models for higher line speeds.

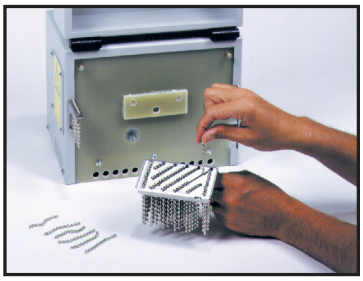
BETA LaserMike

Measured by Commitment

High-Frequency Spark Testers: High-Speed Insulation Fault Detection

For all types of high-speed lines, Beta LaserMike's **HFS Series** High Frequency Spark Testers let you check wire and cable insulation quickly and accurately, without slowing down your process. The HFS Series is engineered with powerful electronics to ensure that you can check the insulation of cables, including high-capacitance thin wall types, under the heaviest of load conditions. These Spark Testers can be used prior to the capstan or at any other process point. The HFS Series tests at a fixed frequency of 2.5 kHz up to 12 kV and at line speeds up to 3000 m/min (9840 ft/min). Whether you make Datacom, Telecom, Building, or Automotive wire, the HFS Series ensures that you can meet every international standard including: Cenelec TC20, BS5099, UTE C32-022, VDE 0472, and UL 1581.

Easy-to-Use, Built to Last



The HFS Series Spark Testers are designed with a hinged lid, allowing you to lift bead chain away from the product for easy threading at startup. These units are height-adjustable and height stand mounted, so you can place them anywhere in your process line. Grounding chains on the cable ports remove excess electrical charge, and a unique bead chain design lets you replace individual strands instead of the entire assembly. The rugged Extra High Tension (EHT) enclosure is corrosion resistant and carefully designed for optimum water drainage. And, the case is sealed to IP54/NEMA 13 standards. All these advantages add up to a low cost of ownership.

Designed with Safety in Mind

All Beta Lasermike Spark Testers are designed to encompass the highest levels of safety for the operators. Features include:

- Current limiting circuit to reduce current to a non-fatal limit during discharge
- Electric shock hazard: within "let go" limits stipulated in IEC 479-1
- Fail-safe, lid interlock switches that instantly collapse the EHT when opened
- Remote EHT inhibit for connection to external emergency stop circuit
- Ozone extraction ports
- EHT warning lamps

HFS1220 fitted with SI900 Indicator

Different Units to Meet Different Applications

The HFS Series is designed to cover all of the common high-speed wire and cable line applications:

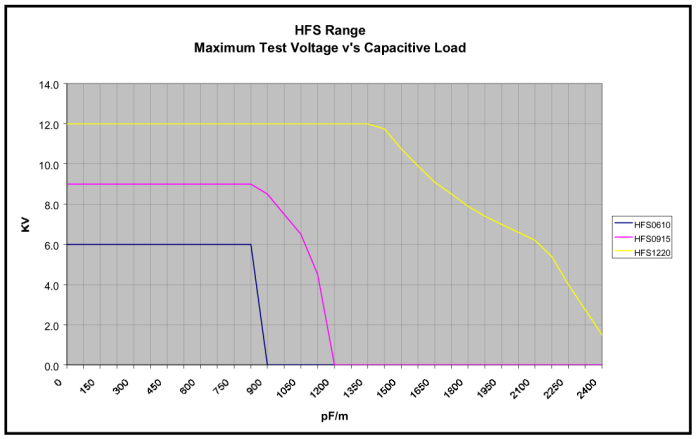
- **HFS0610:** Ideal for testing on Datacom and Telecom wire lines, meets all specifications up to 3000 m/min (9,840 ft/min).
- **HFS0915:** Ideal for testing on fast Building and Automotive wire lines, meets all specifications up to 2250 m/min (7,380 ft/min).
- **HFS1220:** Ideal for testing on larger Building and Automotive wire lines, meets all specifications up to 1500 m/min (4,921 ft/min).

Measurement Data & Process Control

The HFS Series comes in two output versions so that you can connect to a SI900 Spark Tester indicator or direct to a process control system:

1. **HFS0610, HFS0915, HFS1220:** Standard spark tester for connection to an SI900/SI900-RC indicator.
2. **HFS0610–I, HFS0915-I, HFS1220-I:** Intelligent Spark Tester for direct connection to a Beta LaserMike DataPro 5000, PLC, or PIB1001 Profibus module.

Both options enable you to retrieve and visualize all the Spark Tester data and set the test voltage.



High-Frequency Models

	HFS0610	HFS0915	HFS1220
OD range	0.1 – 10 mm (0.004 – 0.4 in.)	0.1 – 15 mm (0.004 – 0.6 in.)	0.1 – 20 mm (0.004 – 0.8 in.)
Test voltage	1 – 6 kV	1 – 9 kV	1 – 12 kV
Electrode length	180 mm (7.1 in.)	135 mm (5.3 in.)	90 mm (3.5 in.)
Max line speed	3000 m/min. (9840 ft/min.)	2250 m/min. (7380 ft/min.)	1000 m/min. (3300 ft/min.)
Max electrode current*	6/25 mA		
Test frequency	2.5 kHz		
Spark tester standards	Cenelec TC20, BS5099, UTE C32-022, VDE 0472, and UL 1581		
International standards	**EMC:** Meets the requirements of the EMC directive. **LVD:** EN61010-1		
Safety features	Lid open cut-out switch, grounding chains, current foldback and limiting circuitry, ozone port, and remote EHT inhibit		
Power supply	100-230 VAC		
Temperature range	5-45°C (41-113°F)		
Max. gauge head to indicator distance	100 m (330 ft.)		

*Resistive/Capacitive

Standard Spark Testers: Full-Range Insulation Fault Detection

Beta LaserMike's Standard Series of Spark Testers deliver exceptional in-line insulation fault testing during wire and cable production. This product line also meets the major international spark-testing standards. Like the HFS Series, the Standard Series can be connected to the SI900 or SI900-RC indicator and offers the same mounting options and communications flexibility via Profibus and analog I/O. Plus, the Standard Series can measure wire and cable diameters as small as 1 mm (0.04 in.) or as large as 150 mm (6.0 in.) with electrode potentials to 25 kV.

S1525 fitted with SI900 Indicator

Full-Range Models

	S1525	S2550	S25100	S25150
OD range	1 – 25 mm (0.04 – 1.0 in.)	1 – 50 mm (0.04 – 2.0 in.)	1 – 100 mm (0.04 – 4.0 in.)	1 – 150 mm (0.04 – 6.0 in.)
Test voltage	1 – 15 kV	1 – 25 kV	1 – 25 kV	1 – 25 kV
Electrode length	330 mm (13 in.)	330 mm (13 in.)	200 mm (7.87 in.)	200 mm (7.87 in.)
Max line speed	400 m/min. (1300 ft/min.)	400 m/min. (1300 ft/min.)	240 m/min. (790 ft/min.)	240 m/min. (790 ft/min.)
Max electrode current*	10/4.5 mA			
Test frequency	50-60 Hz			
Spark tester standards	Cenelec, TC20, BS5099, UTE C32-022, VDE0472, JS, and CSA			
Safety features	Lid open cut-out micro-switches, grounding chains, current limiting circuitry, ozone port, and remote EHT inhibit			
Power supply	100-230 VAC, 50-60 Hz (no voltage selection necessary)			
Max. gauge head to indicator distance	100 m (330 ft.)			

*After 250 msec (mA)

Connectivity and Indicators

SI900 Spark Tester Indicator

Beta LaserMike Spark Testers can be connected to the SI900 or SI900-RC indicator which provides a 5-digit LED fault counter and a 3-digit EHT voltmeter for easy operator monitoring and precise settings of actual test voltage. Both indicators may be mounted on the Spark Tester or located up to 100 m (330 ft.) away. The SI900-RC has an RS232-C port for data output to your PC or printer, and the indicator may also be linked to a Beta LaserMike DataPro 5000 for integrated process control. Alternatively, the spark testers can be supplied ready to connect to the line control system via Analog I/O.

Spark Tester SI900 (-RC) Indicator Units

Features	SI900	SI900-RC
5-digit LED fault counter	x	x
3-digit LED EHT voltmeter	x	x
Set EHT	x	x
Set max. number spark faults	x	x
Warning and status LED's for spark fault, lid open, EHT=0 and max. spark faults exceeded	x	x
Analog output EHT (0-10 VDC)	x	x
Analog input EHT (0-10 VDC)	x	x
Fault contact	x	x
Excess fault contact	x	x
Bare patch fault contact	x	x
Counter reset input	x	x
EHT inhibit input	x	x
RS-232 host/printer port[1]		x
Fault distance printout		x
Speed input		x
Configuration Variables		
Set passcode		x
Set contact closure time		x
Set LED on time		x
Select baud rate		x
Select printout language		x
Select line number		x
Select run number		x

x Standard

[1]**RS232 port:** Full duplex RS-232C with handshaking. Baud rates: 110 through 19200. Data format: 1 start, 7 data, 2 stop bits. Parity: no parity check. Port can be configured for host communications or printer output.

Profibus Connectivity

All Spark Tester models can be connected to a Profibus network when used in conjunction with a Beta LaserMike Profibox. For Standard Series models using the SI900-RC indicator, specify the Beta LaserMike PIB1000 Profibus interface module. All Intelligent Spark Testers can be connected using a Beta LaserMike PIB1001 Profibus interface module. Both modules use the Beta LaserMike Profibus-DP slave protocol for quick and simple access to all the Spark Tester parameters.

Printouts (SI900-RC Indicator only)

- **Fault printout:**
  Fault Number: XXXXX
  Fault Distance: XXXXX
- **Summary printout**
  Line Number: XXX
  Run Number: XXXXX
  Number of faults: XXXXX

Accessories	
GA 1530-8554-1/A	IP54 sealed indicator case
DET 1933-0138	Indicator bracket for direct mounting on the gaugehead
DET 1930-9220	Ozone adapter plate
GA 0042-0046-1/A	Adjustable height stand
CA 5100-0310.*M0	Gauge head to indicator cable (maximum 100 m)

* = length

About Beta LaserMike

Beta LaserMike provides integrated process control solutions using a wide range of non-contact measurement technologies designed to improve product quality and reduce manufacturing costs. These solutions provide in-process dimensional monitoring, control, and sample/part inspection of products such as wire and cable, fiber optics, metals, rubber and plastic, flat rolled goods, tube and pipe, and other manufactured goods. Every system is backed by Beta LaserMike's world-class service and support organization.With offices around the globe, we're committed to serving your unique measurement application needs.

BETA LaserMike

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