

The Clinton Instrument model HF-15B High Frequency Sine Wave Spark Tester combines the latest in technology and innovative features for 3kHz spark testing of wire and cable.

Digital High Frequency Sine Wave Spark Tester

- ◆ Split electrode design for easy string-up
- ◆ DSP based voltage regulation and differentiation of four fault-types
- ◆ LED display viewable up to 60 metres away
- ◆ Customisable front panel password security
- ◆ Voltage Watchdog

- ◆ Percent load meter
- ◆ Automatic calibration with Clinton STCAL
- ◆ Communications: Modbus RTU via RS-485.
Optional: Analogue, Ethernet/IP, Modbus TCP, Profibus, PROFINET, DeviceNET

Using DSP based fault typing the HF-15B can differentiate between four fault conditions:

- Pinhole
- Direct metal contact
- Multi-pinhole
- Gross bare wire



HF-15B/BD-12S with RC Control

Precise Centre Alignment

The new BD-12S, BD-13S and BD-14S split electrode designs provide an easy way to string-up wire through the electrode, guaranteeing precise centre alignment for the most effective and reliable testing. The bead chain assemblies are positioned to eliminate gaps between bead rows, providing the best coverage around the product at all times.

Quick Configuration & Easy Connection

The HF-15B can be quickly configured for extrusion or re-spooling or operations through a simple configuration menu on the alphanumeric display. During spark testing, critical data such as test voltage, percent load, and counts for particular fault types can be easily accessed. Additionally, descriptive codes inform the operator when there is an error. For example, when the protective electrode cover is open.

The display module can be mounted to the unit as shown overleaf, or can be installed up to 60 metres away, with an optional longer interconnecting cable.

The HF-15B can connect easily to a PLC with Modbus RTU via RS-485 full duplex. Optional Analog, DeviceNET, Ethernet/IP, PROFINET, Profibus, and Modbus TCP communications are available.

Set Up

Wiring and setup are done externally; there is no need to open the unit. One form C and three form A relay contacts are located on the rear panel for easy connection to external alarms, lights, or machinery controlled by the spark tester.

Relay function may be selected from options including: high voltage ON indication, fault alarm, bare wire alarm, and voltage watchdog (when enabled, the equipment will alert when a pre-set upper or lower voltage is exceeded).

The HF-15B features a flexible front panel password security, locking out unauthorised changes to test voltage and other settings. The unit also monitors output voltage at the electrode and notifies the operator if voltage at the electrode should become disconnected.

The HF-15B spark tester series offers standard electrodes that meet UL, CSA, and all known international standards for wire products and production line speeds. Specifically designed electrodes are available to accommodate a wide range of product sizes and shapes. The HF-15B can be automatically calibrated for voltage to IEC/CEI 62230, EN 50356, UL, and NEMA standards with the Clinton Instrument Company's STCAL system.

HF-15B Specifications

Voltage Test Range	Approximately 500V to 15kV RMS
Voltage Accuracy	+/- 2% of reading
Test Frequency	1000 to 3500Hz, depending on load capacitance
Output Power	4mA Resistive, 40mA capacitive
Fault Indication	White 3-digit 20.32mm high LED display, amber fault indicating LED
Fault Resolution	Variable with electrode length or directly configurable from 1 millisecond to 2 seconds
Detection Sensitivity	Conforms to IEC 62230
Operating Modes	Continuous HV/remove voltage on fault, momentary process control/latch until reset
Relay Outputs	1 Form C, 3 Form A / Configurable Functionality Relay contacts rated 1A max @ 240VAC or 2A max @120VAC for both NO and NC circuits. Front panel or external reset. In non-latch modes, closure time is adjustable in 10 millisecond increments from 50 milliseconds to 2 ½ seconds
Power Requirements	100 to 240VAC 47-63 Hz. Power supply self-adjusting
Safety	Designed to IEC-1010
Communications	Modbus RTU via RS-485
Optional Communications	Analog, Ethernet IP, Modbus TCP, Profibus, Profinet, DeviceNET

HF-15B Electrodes

Bead Chain Assemblies

BD-12S	Bead Chain Assembly 19 mm Product Diameter, 51 mm along the wire line.
BD-13S	Bead Chain Assembly 19 mm Product Diameter, 76 mm along the wire line.
BD-14S	Bead Chain Assembly 19 mm Product Diameter, 102 mm along the wire line.
BD-15	Bead Chain Assembly 19 mm Product Diameter, 127 mm along the wire line.
BD-22S	Bead Chain Assembly 51 mm Product Diameter, 51 mm along the wire line.

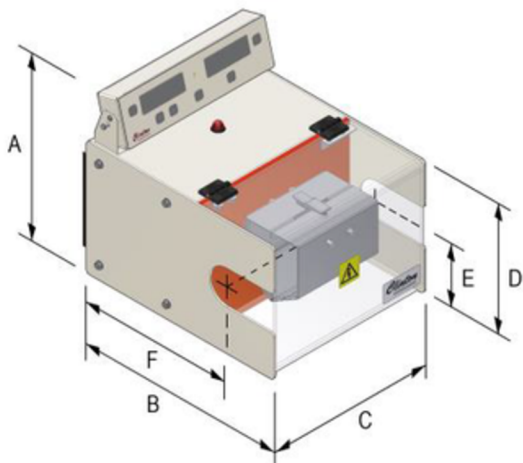
Brush Assemblies

BR-1A	Brush Assembly Phosphor Bronze 25 mm Product Diameter.
BR-1ALZ	Brush Assembly Phosphor Bronze 25 mm Product Diameter, 10kV max.
BR-3A	Brush Assembly Phosphor Bronze 76 mm Product Diameter.
BR-3ALZ	Brush Assembly Phosphor Bronze 76 mm Product Diameter, 10kV max.
BRTC-6LZ	Brush Assembly Tape Cable 152 mm, 10kV max.
BRTC-12LZ	Brush Assembly Tape Cable 305 mm, 10kV max.
FB-12	Fiberlite Brush Assembly.

Roller Assemblies

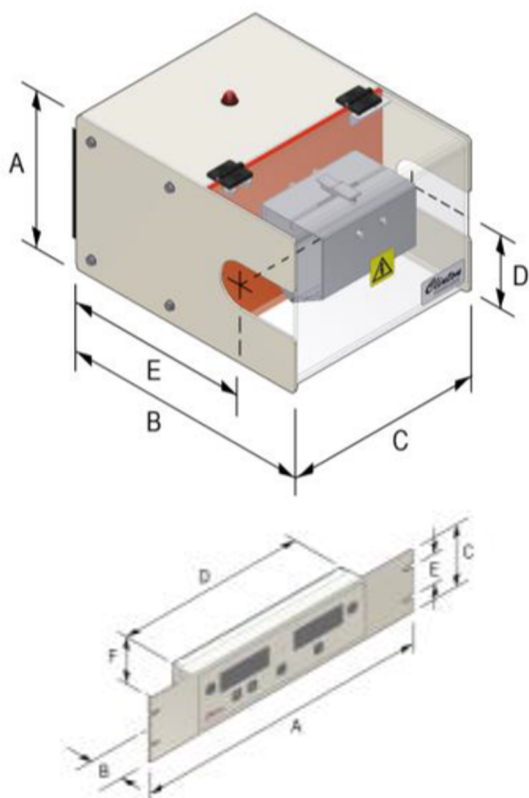
R-46	Roller Assembly 6 mm max. Product Thickness, 152 mm Product Width.
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Dimensions for HF-15B with RC Display Mounted



MODEL	A	B	C	D	Wireline Center	
					Vertical	Horizontal
BD-12S, 13S, 14S, BR-1A, BR-1ALZ, FB-12	287 mm	389 mm	293 mm	190 mm	95 mm	254 mm
BD-22S	312 mm	427 mm	294 mm	216 mm	109 mm	279 mm
BD-15	335 mm	452 mm	318 mm	240 mm	120 mm	290 mm
BR-3A, BR-3ALZ	335 mm	480 mm	343 mm	240 mm	Call us for more details	
BRTC-6	335 mm	546 mm	318 mm	240 mm	Call us for more details	

Dimensions for HF-15B with No Display



MODEL	A	B	C	D	Wireline Center	
					Vertical	Horizontal
BD-12S, 13S, 14S, BR-1A, BR-1ALZ, FB-12	190 mm	389 mm	293 mm	95 mm	254 mm	
BD-22S	312 mm	427 mm	294 mm	109 mm	279 mm	
BD-15	287 mm	452 mm	318 mm	120 mm	290 mm	
BR-3A, BR-3ALZ	287 mm	480 mm	343 mm	Call us for more details		
BRTC-6	287 mm	546 mm	318 mm	Call us for more details		

Rack Mounted RC

A	B	C	D	E	F
483 mm	46 mm	89 mm	285 mm	45 mm	79 mm

Specifications subject to change without notice.