MODEL HF-15B

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 can be up to 200 feet away

➤ Customizable front panel password security

➤ Voltage Watchdog

➤ Percent load meter

➤ Automatic calibration with Clinton STCAL System

➤ Communications: Modbus RTU via RS-485
  Optional: Analog, EtherNet/IP, Modbus TCP, Profibus, PROFINET, DeviceNET

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

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

Using DSP based fault typing the HF-15B can differentiate between four types of fault conditions: pinhole, direct metal contact, multi-pinhole, and gross bare wire.

The new BD-12S split electrode design provides an easy way to string-up wire through the electrode, guaranteeing precise center 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.

The HF-15B can be quickly configured for respooling or extrusion operations through a simple menu on the alphanumeric display. During spark testing, critical data such as test voltage, percent load, and counts for particular fault types can easily be 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, or can be detached and installed up to 200 feet away.

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 also available.

Wiring and setup is 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 preset upper or lower voltage limit is exceeded).

The HF-15B features flexible front panel password security, locking out unauthorized 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 spark test standards for wire products and production line speeds. Specially 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 STCAL System.

**Patent Pending

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HF-15B
SPECIFICATIONS

Voltage Test Range...... Approximately 500V to 15kV RMS

Voltage Display.......... White 3-digit 20.32mm high LED display, accuracy 2% of reading

Test Frequency............ 1000 to 3500 Hz, 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 49-61 Hz. Power supply self-adjusting

Safety........................... Designed to IEC-1010

Communications........... Modbus RTU via RS-485

Optional: Analog   Ethernet IP   Modbus TCP
             Profibus   Profinet   DeviceNET

HF-15B
ELECTRODES

Bead Chain Assemblies:

BD-12S.........Bead Chain Assembly ¾" Product Diameter, 2" along the wire line.

BD-13S.........Bead Chain Assembly ¾" Product Diameter, 3" along the wire line.

BD-14S.........Bead Chain Assembly ¾" Product Diameter, 4" along the wire line.

BD-15...........Bead Chain Assembly ¾" Product Diameter, 5" along the wire line.

BD-22S.........Bead Chain Assembly 2" Product Diameter, 2" along the wire line.

Brush Assemblies:

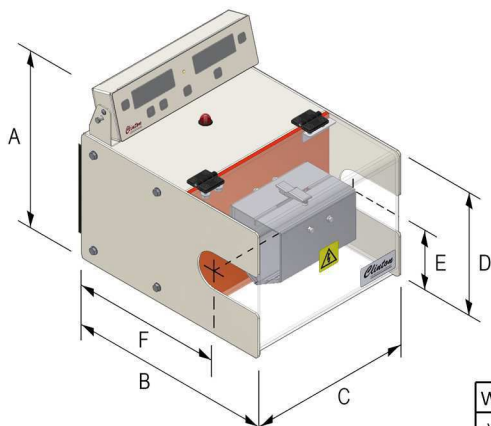BR-1A...........Brush Assembly Phosphor Bronze 1" Product Diameter.

BR-1ALZ.......Brush Assembly Phosphor Bronze 1" Product Diameter, 10kV max.

BR-3A...........Brush Assembly Phosphor Bronze 3" Product Diameter.

BR-3ALZ.......Brush Assembly Phosphor Bronze 3" Product Diameter, 10kV max.

BRTC-6LZ.....Brush Assembly Tape Cable 6", 10kV max.

BRTC-12LZ...Brush Assembly Tape Cable 12", 10kV max.

FB-12...........Fiberlite Brush Assembly.

Roller Assemblies:

R-46...........Roller Assembly .2" (6mm) max. Product Thickness, 6" (152mm) Product Width.

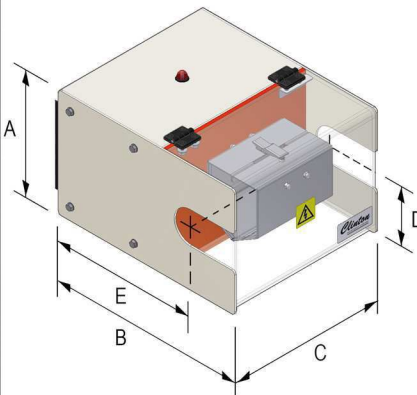Please consult factory for help in choosing equipment for specific applications.

Dimensions for HF-15B with RC Display

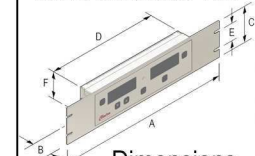|	A	B	C	D	Wireline Center Vertical (E)	Wireline Center Horizontal (F)
BD-12S, 13S, 14S, BR-1A, BR-1ALZ, FB-12	11.3" [287 mm]	13.9" [353 mm]	11.5" [293 mm]	7.5" [190 mm]	3.8" [95 mm]	10.0" [254 mm]
BD-22S	12.3" [312 mm]	15.4" [292 mm]	11.6" [294 mm]	8.5" [216 mm]	4.3" [109 mm]	11.0" [279 mm]
BD-15	13.2" [335 mm]	16.3" [414 mm]	12.5" [318 mm]	9.4" [240 mm]	4.8" [120 mm]	11.5" [290 mm]
BR-3A, BR-3ALZ	13.2" [335 mm]	17.8" [452 mm]	13.5" [343 mm]	9.4" [240 mm]	Call factory for details	
BRTC-6	13.2" [335 mm]	19.1" [292 mm]	12.5" [318 mm]	9.4" [240 mm]	Call factory for details	

Dimensions for HF-15B with No Display

	A	B	C	D	Wireline Center Vertical	Wireline Center Horizontal (E)
BD-12S, 13S, 14S, BR-1A, BR-1ALZ, FB-12	7.5" [190 mm]	13.9" [353 mm]	11.5" [293 mm]	3.8" [95 mm]	10.0" [254 mm]	
BD-22S	8.5" [216 mm]	15.4" [292 mm]	11.6" [294 mm]	4.3" [109 mm]	11.0" [279 mm]	
BD-15	9.4" [240 mm]	16.3" [414 mm]	12.5" [318 mm]	4.8" [120 mm]	11.5" [290 mm]	
BR-3A, BR-3ALZ	9.4" [240 mm]	17.8" [452 mm]	13.5" [344 mm]	Call factory for details		
BRTC-6	9.6" [244 mm]	19.1" [292 mm]	12.5" [318 mm]	Call factory for details		

Rack Mounted RC

Dimensions

A	19.0" [483 mm]
B	1.8" [46 mm]
C	3.5" [89 mm]
D	11.2" [285 mm]
E	1.8" [45 mm]
F	3.1" [79 mm]

Clinton
INSTRUMENT COMPANY

295 East Main St. • Clinton, CT 06413 USA • Tel: 860.669.7548 • Fax: 860.669.3825 • www.clintoninstrument.com

Specifications subject to change without notice. 7/22 EN