

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 viewable up to 200 feet away
- Customizable front panel password security
- Voltage Watchdog
- Percent load meter
- Automatic calibration with Clinton STCAL
- 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 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 fault conditions: pinhole, direct metal contact, multi-pinhole and gross bare wire.

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 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 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, or can be installed up to 200 feet 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.

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 preset upper or lower voltage is exceeded).

The HF-15B features a 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 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 1/2 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 3/4" Product Diameter, 2" along the wire line. |
| BD-13S | Bead Chain Assembly 3/4" Product Diameter, 3" along the wire line. |
| BD-14S | Bead Chain Assembly 3/4" Product Diameter, 4" along the wire line. |
| BD-15 | Bead Chain Assembly 3/4" Product Diameter, 5" along the wire line. |
| BD-22S | Bead Chain Assembly 2" Product Diameter, 2" along the wire line. |

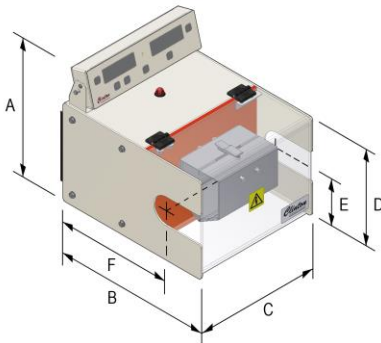
Brush Assemblies

| | |
|-----------|---|
| 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. |
|------|---|

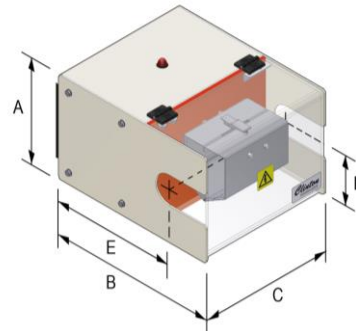
Dimensions for HF-15B with RC Display Mounted



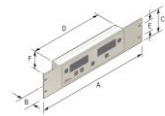
Wireline Center

| | A | B | C | D | Vertical | Horizontal |
|---|-------------------|-------------------|-------------------|------------------|--------------------------|-------------------|
| BD-12S, 13S, 14S, BR-1A, BR-1ALZ, FB-12 | 11.3" [287 mm] | 15.3" [389 mm] | 11.5" [293 mm] | 7.5" [190 mm] | 3.8" [95 mm] | 10.0" [254 mm] |
| BD-22S | 12.3" [312 mm] | 16.8" [427 mm] | 11.6" [294 mm] | 8.5" [216 mm] | 4.3" [109 mm] | 11.0" [279 mm] |
| BD-15 | 13.2" [335 mm] | 17.8" [452 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] | 18.9" [480 mm] | 13.5" [343 mm] | 9.4" [240 mm] | Call factory for details | |
| BRTC-6 | 13.2" [335 mm] | 21.5" [546 mm] | 12.5" [318 mm] | 9.4" [240 mm] | Call factory for details | |

Dimensions for HF-15B with no Display



Rack Mounted RC



| | |
|---|----------------|
| 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] |

Wireline Center

| | A | B | C | Vertical | Horizontal |
|---|-------------------|-------------------|-------------------|--------------------------|-------------------|
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