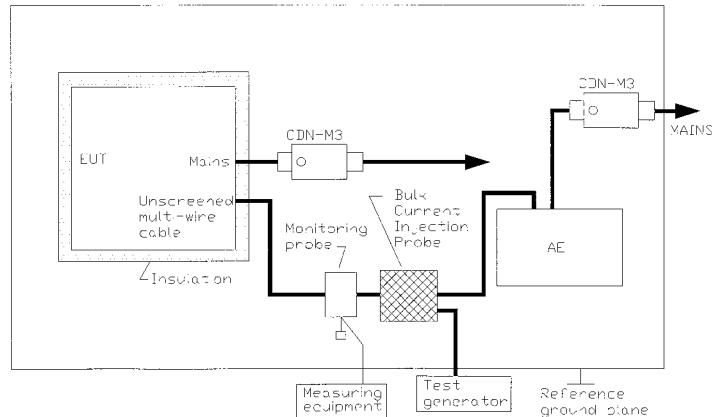




## Fischer Custom Communications, Inc.

RF electromagnetic fields frequently degrade electronic equipment by generating common mode currents on cables. The effect of these E and H fields on the equipment can be simulated by injecting common mode currents onto the cables of the equipment being tested for RF immunity. IEC 1000-4-6 defines the methods for testing the immunity of electronic equipment to conducted common mode currents between 150 kHz and 230 MHz.

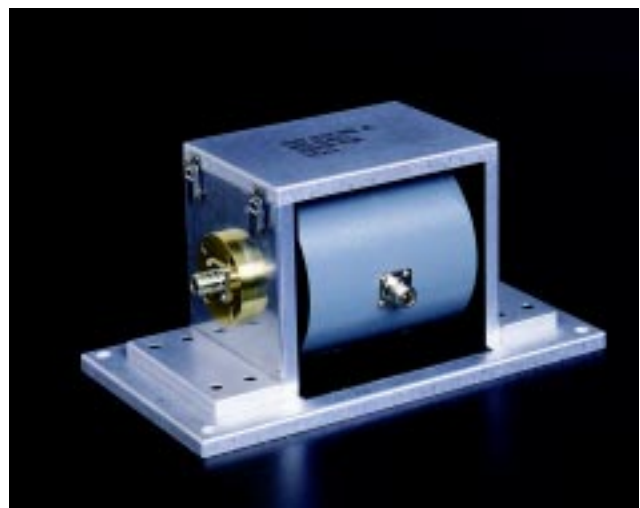
The F-120-9A clamp-on injection probe is a high efficiency broadband clamp-on injection transformer developed to test the immunity of electronic equipment when the standard IEC 1000-4-6 CDN using the direct capacitive coupling technique is not possible nor appropriate. The F-120-9A is most often used to test unshielded cables less than 0.5 meters in length. The figure shows a typical test setup using bulk current injection probe and monitor probe.



The F-120-9A offers distinct advantages and benefits.

- Broad bandwidth — < 7 dB attenuation between 100 kHz and 230 MHz when measured into a standard 50  $\Omega$  fixture.
- Perform IEC 1000-4-6 testing with 20 watts or less RF power.
- Usable up to 200 watts
- Accommodates EUT cables up to 40 mm in diameter.

For conducted immunity testing from 150 kHz to 230 MHz the increased efficiency can save anywhere from 400% to 1600% on required CW amplifier power. The F-120-9A requires less than 20 watts to develop a 10 volt signal when testing in accordance with IEC 1000-4-6, including modulation. While the F-120-9A has been specifically designed for IEC 1000-4-6 conducted immunity testing its high efficiency makes the F-120-9A ideal for any Mil-Std or commercial conducted immunity testing from 10 kHz to 230 MHz.

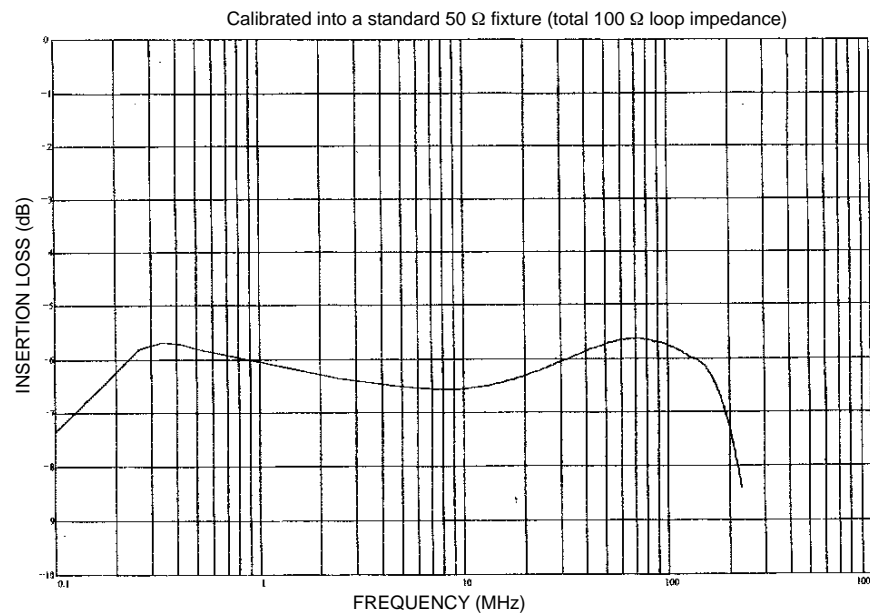


## F-120-9A Specifications

Frequency: 10 kHz to 250 MHz  
Internal Diameter: 40 mm  
External Diameter: 127 mm  
Thickness: 134 mm  
Input power rating: 100 watts for 30 minutes  
200 watts for 15 minutes

RF Disturbance Connector: Type N

### Typical Insertion Loss



### Accessories

FCC-BCICF-4: Injection probe calibration fixture — 10 kHz to 250 MHz

F-52: clamp-on monitor probe 10 kHz to 500 MHz, 40 mm ID

FCC-801-150-50-BCI: Set of 150 to 50  $\Omega$  adapters for the BCI

This adapter functions to modify the load impedance of the calibration fixture from 50  $\Omega$  to 150  $\Omega$ . This allows the user to set the immunity level into a 150  $\Omega$  load.

*Contact the applications engineers at Fischer Custom Communications, Inc. to discuss your requirements for commercial and military EMC testing.*

**FCC**

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