

Model 3701

Line Probe

User Manual



 **ETS·LINDGREN**[™]
An ESCO Technologies Company

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A	Initial Release	January, 1996
B	Edits/updates	January, 1999
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Notes, Cautions, and Warnings

	<p>Note: Denotes helpful information intended to provide tips for better use of the product.</p>
<p>CAUTION</p>	<p>Caution: Denotes a hazard. Failure to follow instructions could result in minor personal injury and/or property damage. Included text gives proper procedures.</p>
<p>WARNING</p>	<p>Warning: Denotes a hazard. Failure to follow instructions could result in SEVERE personal injury and/or property damage. Included text gives proper procedures.</p>



See the ETS-Lindgren *Product Information Bulletin* for safety, regulatory, and other product marking information.

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1.0 Introduction

The **ETS-Lindgren Model 3701 Line Probe** is a wire clamp-on device that attaches to the AC power mains providing primary power to the equipment under test. When it is not practical to use a Line Impedance Stabilization Network (LISN), the Model 3701 can measure conducted emissions, and may be used to block the power mains frequency while allowing the higher frequencies (9 kHz to 30 MHz) present on the line to be measured. The Model 3701 can also measure the presence of conducted signals on the power mains within a facility.

The Model 3701 presents a nominal resistance of 1500 ohms to all voltages on the line. It also attenuates noise voltage, so a correction factor must be added to the EMI receiver readings to obtain the proper emission levels on the line.

The Model 3701 is built in accordance with *FCC Rules and Regulations Volume II, Part 15, Paragraph 8.4, Appendix A*. The design and construction is also in accordance with various international regulatory compliance standards.

ETS-Lindgren Product Information Bulletin

See the ETS-Lindgren *Product Information Bulletin* included with your shipment for the following:

- Warranty information
- Safety, regulatory, and other product marking information
- Steps to receive your shipment
- Steps to return a component for service
- ETS-Lindgren calibration service
- ETS-Lindgren contact information

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2.0 Maintenance

CAUTION

Before performing any maintenance, follow the safety information in the ETS-Lindgren *Product Information Bulletin* included with your shipment.



Maintenance of the Model 3701 is limited to external components such as cables or connectors.

To prevent electrical shock, do not remove cover.

If you have any questions concerning maintenance, contact ETS-Lindgren Customer Service.



ONLY QUALIFIED PERSONNEL should operate or service this equipment.

Annual Calibration

See the *Product Information Bulletin* included with your shipment for information on ETS-Lindgren calibration services.

Service Procedures

For the steps to return a system or system component to ETS-Lindgren for service, see the *Product Information Bulletin* included with your shipment.

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3.0 Specifications

Electrical Specifications

Frequency Range:	9 kHz–30 MHz
Maximum AC Voltage:	250 VAC line-to-ground
Input Connector:	Conductive hook with spring-loaded plastic shroud
Output Connector:	Type BNC receptacle
Installation:	Indoor use only
Altitude:	4572 m maximum 15000 ft maximum

Physical Specifications

Length:	216 mm 8.5 in
Diameter:	38 mm 1.5 in
Weight:	164.4 g 5.8 oz

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4.0 Operation

CAUTION

Before connecting any components, follow the safety information in the ETS-Lindgren *Product Information Bulletin* included with your shipment.

WARNING

To avoid electrical shock, do not make contact with the power mains conductor when power is applied through the conductor. When attaching the Model 3701 Line Probe, always remove power.

To connect to the line under test:

1. Remove power from the line under test.
2. Pull the plastic safety shroud back to expose the conductive hook.
3. Place the hook around an exposed portion of the power mains conductor and release the plastic shroud. The spring-loaded shroud will clamp the contact point.
4. Connect a BNC cable to the coaxial connector on the end of the Model 3701 Line Probe.
5. Apply power to the power mains.
6. Connect the opposite end of the BNC cable to the input on the EMI receiver or spectrum analyzer.

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Appendix A: Warranty



See the *Product Information Bulletin* included with your shipment for the complete ETS-Lindgren warranty for your Model 3701.

DURATION OF WARRANTIES FOR MODEL 3701

All product warranties, except the warranty of title, and all remedies for warranty failures are limited to two years.

Product Warranted	Duration of Warranty Period
Model 3701 Line Probe	2 Years