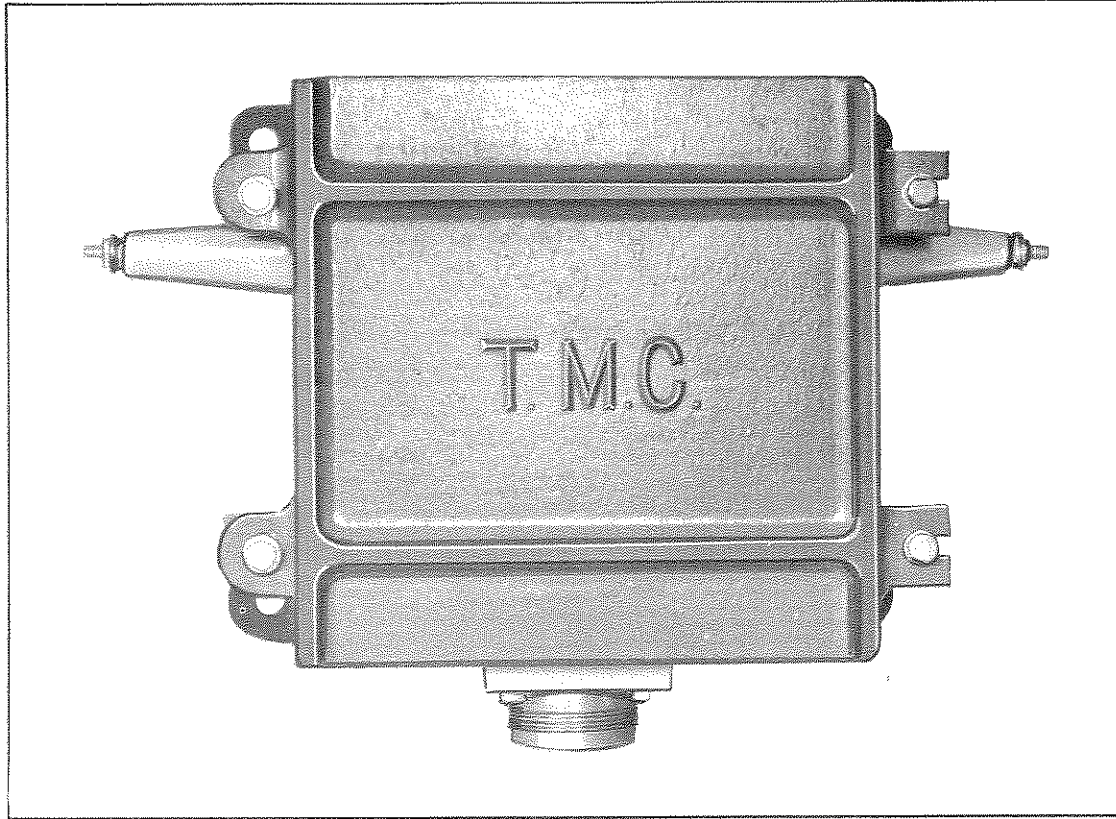


## SALES SERVICE BULLETIN NUMBER 218

Broadband Transmitting Couplers,  
Models TRC-100, 500, 3500

Supersedes Sales Service Bulletins  
Numbers 178 & 180



Model TRC-500

PH-102

The TMC Broadband Transmitting Couplers, Series TRC, are now available with transformers utilizing new materials and design techniques for greater ruggedness and linearity. All units in the series are passive devices requiring no power supplies and no tuning adjustments at any time. Their frequency range is from 2 to 30 megacycles.

Use of a TRC Series coupler will permit, for example, the impedance matching of an unbalanced 72 ohm coaxial cable to a balanced 600 ohm rhombic antenna. Units presently available will handle RF power levels of 100, 500 and 3500 watts. Complete specifications for each model appear on the following pages.

All models are contained in waterproof, stress relieved aluminum cases with removable covers. Transformers within are hermetically sealed, and potted in a special plastic compound. Input and output connections are made outside the case without need for removal of the cover.

In cases where a directional rhombic antenna is to be used, it is suggested that a TMC Model TER resistive dissipator be employed at the end of the major axis opposite the location of the model TRC. These dissipators represent a new engineering approach to the problem of providing a non-reactive load over the frequency range of DC to 30 mc. Request bulletin 188 for a complete description of the series.

## TECHNICAL SPECIFICATIONS:

### MODELS TRC-100 and TRC 500

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|                              |  |
|------------------------------|--|
| Input Impedance:             | 72 ohms unbalanced   |
| Output Impedance:            | 150, 300 and 700 ohms balanced or unbalanced   |
| Frequency Range:             | 2 to 32 megacycles   |
| Insertion Loss:              | Less than 1 db   |
| Power Rating:                | 100, 500 watts, with a VSWR of 2:1   |
| Input Terminal:              | Standard boss designed to accomodate an RG-85/U End Seal. Other fittings can be supplied upon request. |
| Output Terminals:            | "Mykroy" Insulator Bowls   |
| Insulation Breakdown Test:   | Primary and secondary to ground<br>TRC-100 1700 volts<br>TRC-500 3500 volts                            |
| Mounting:                    | See Mounting Diagram   |
| Dimensions:                  | TRC-100 9" high x 9" wide x 5" deep<br>TRC-500 9" high x 9" wide x 5" deep                             |
| Weight:                      | Less Connector: TRC-100 15 lbs.<br>TRC-500 15 lbs.   |
| Shipping Weight:             | TRC-100 25 lbs.<br>TRC-500 25 lbs.   |
| Components and Construction: | Manufactured in accordance with JAN/MIL specifications wherever practicable.                           |

### MODEL TRC-3500

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|                   |  |
|-------------------|--|
| Input Impedance:  | 72 ohms unbalanced   |
| Output Impedance: | 600 ohms balanced  |
| Frequency Range:  | 2 to 20 megacycles<br>20 to 32 megacycles with reduced efficiency                                      |
| Power Rating:     | 3500 watts, with a VSWR of 2:1   |
| Insertion Loss:   | Less than 1 db   |
| Input Terminal:   | Standard boss designed to accomodate an RG-85/U End Seal. Other fittings can be supplied upon request. |
| Output Terminals: | "Mykroy" Insulator Bowls   |

|                              |   |
|------------------------------|---|
| Insulation Breakdown Test:   | Primary and secondary to ground<br>12,000 volts                             |
| Mounting:                    | See Mounting Diagram  |
| Dimensions:                  | 14'' high x 9'' wide x 5'' deep   |
| Weight:                      | 32 lbs.   |
| Shipping Weight:             | 42 lbs.   |
| Components and Construction: | Manufactured in accordance with JAN/MIL specifications wherever practicable |

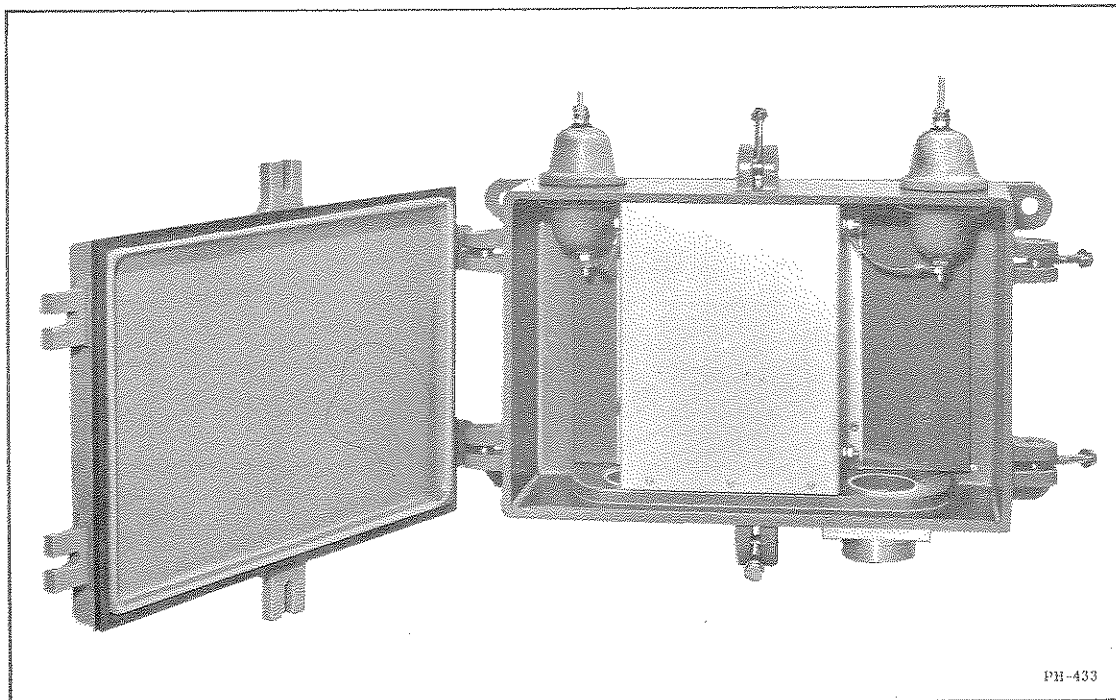
### ORDERING INFORMATION:

See Sales Service Bulletin No. 219, Mounting Plate/Connector Assemblies, for available kits for factory installation or field conversion to various cables. When ordering factory installed conversion, add Plate/Connector Assembly number to Coupler model number. For Example;

TRC-500 (A-777)

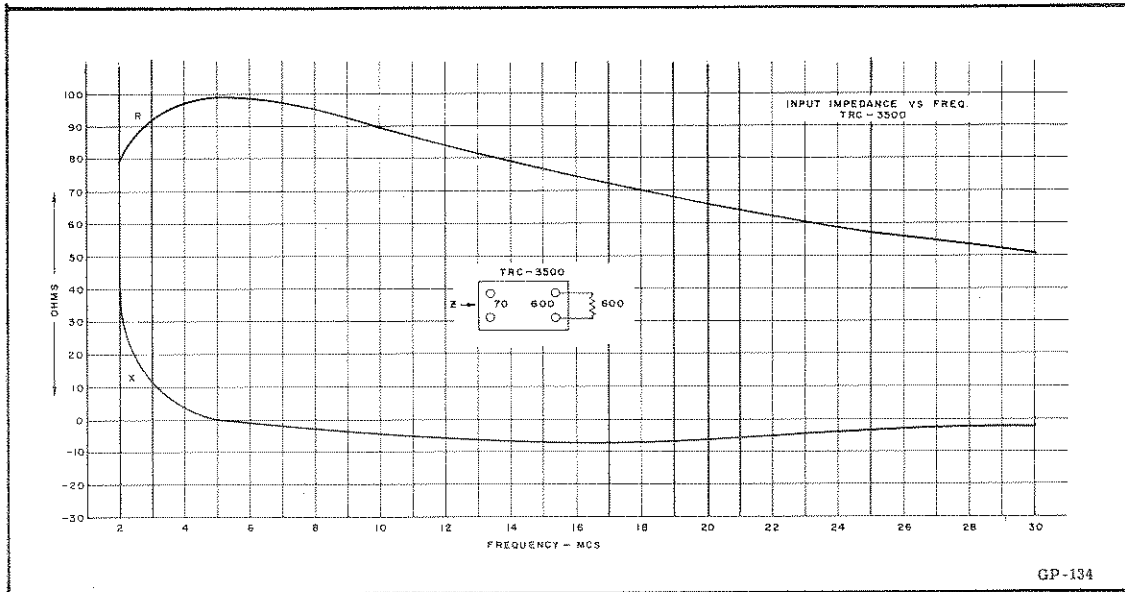
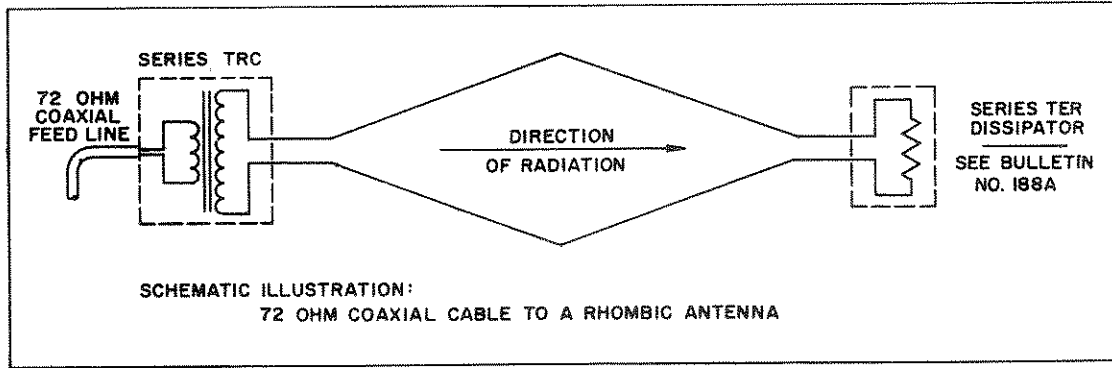
**NOTE:** The broadband transformers used in the TRC Couplers are available without the weather proof case. The TRC-100 transformer is ordered as TR047, the TRC500 transformer as TR-103 and the TRC3500 transformer as TR 149.

Experience in the laboratory has indicated that this transformer technique may be applied to other specific frequency ranges and impedances other than those in the standard Model TRC units. We invite your inquiries for special applications.

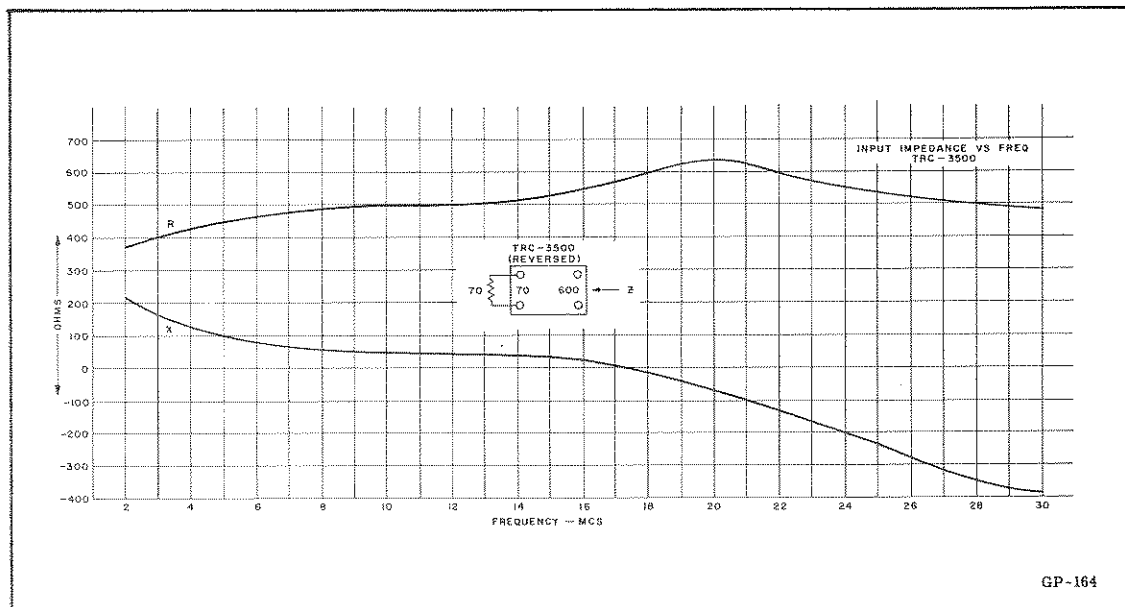


PH-433

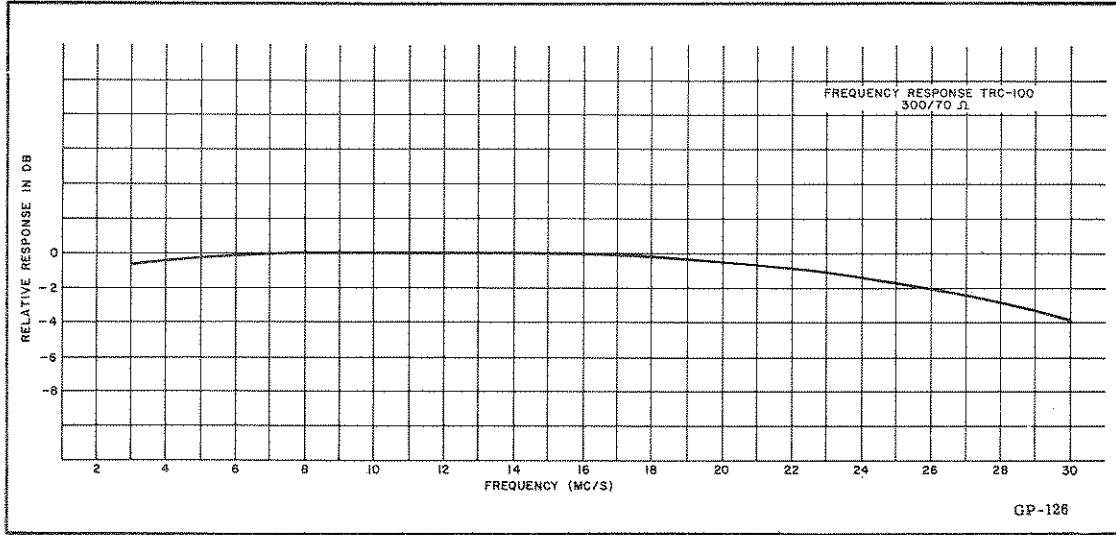
THE TMC BROADBAND TRANSMITTING COUPLER, MODEL TRC-3500



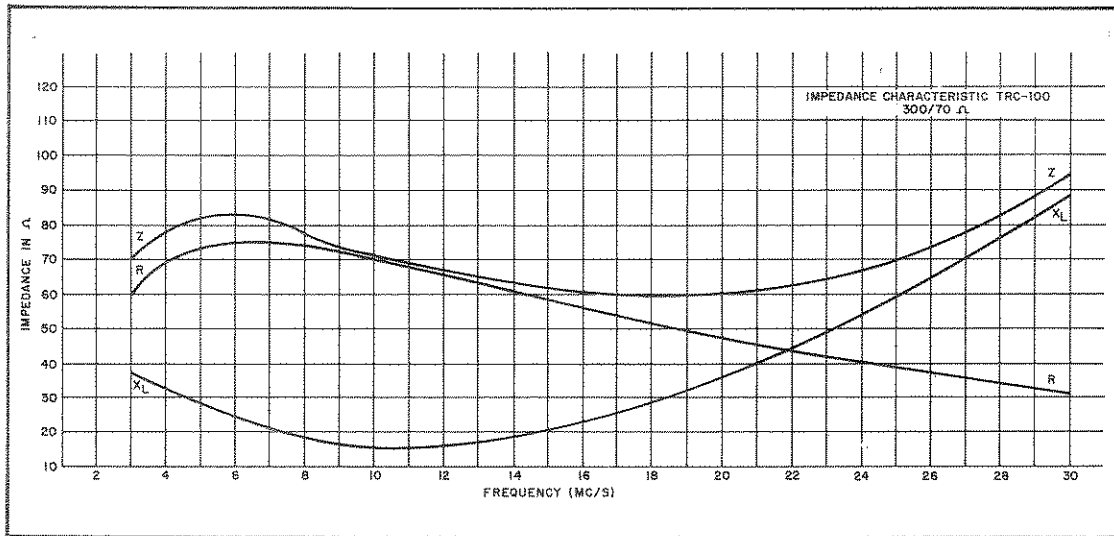
INPUT IMPEDANCE VS FREQUENCY CURVES, MODEL TRC-3500



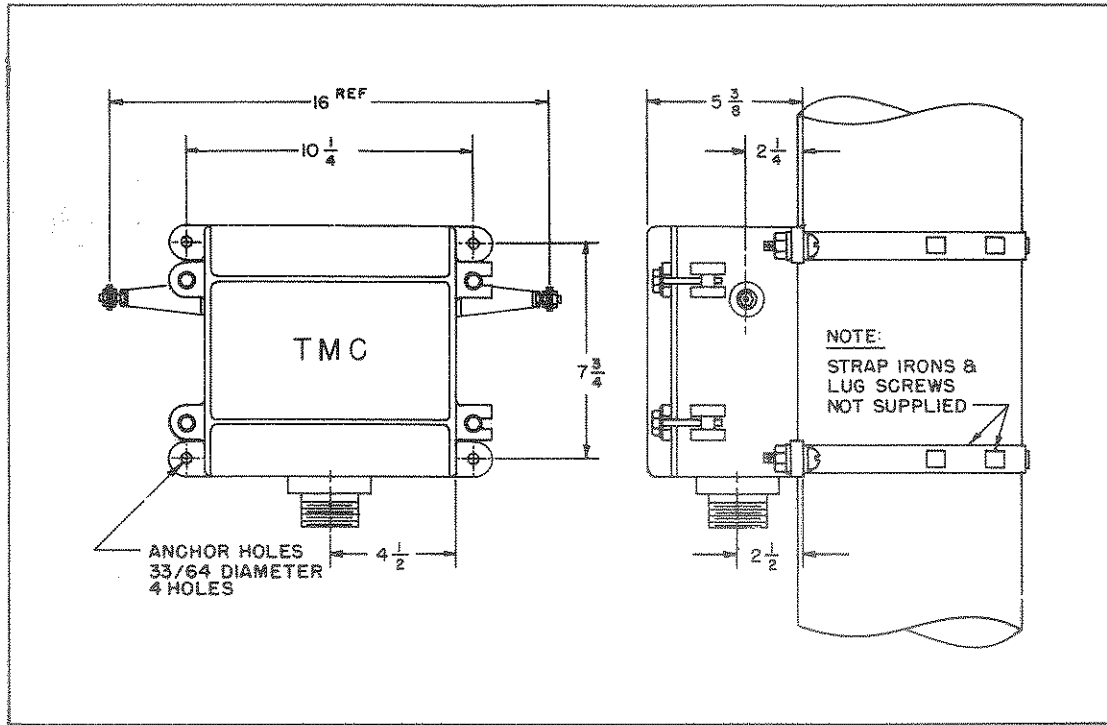
INPUT IMPEDANCE VS FREQUENCY CURVES, MODEL TRC-3500



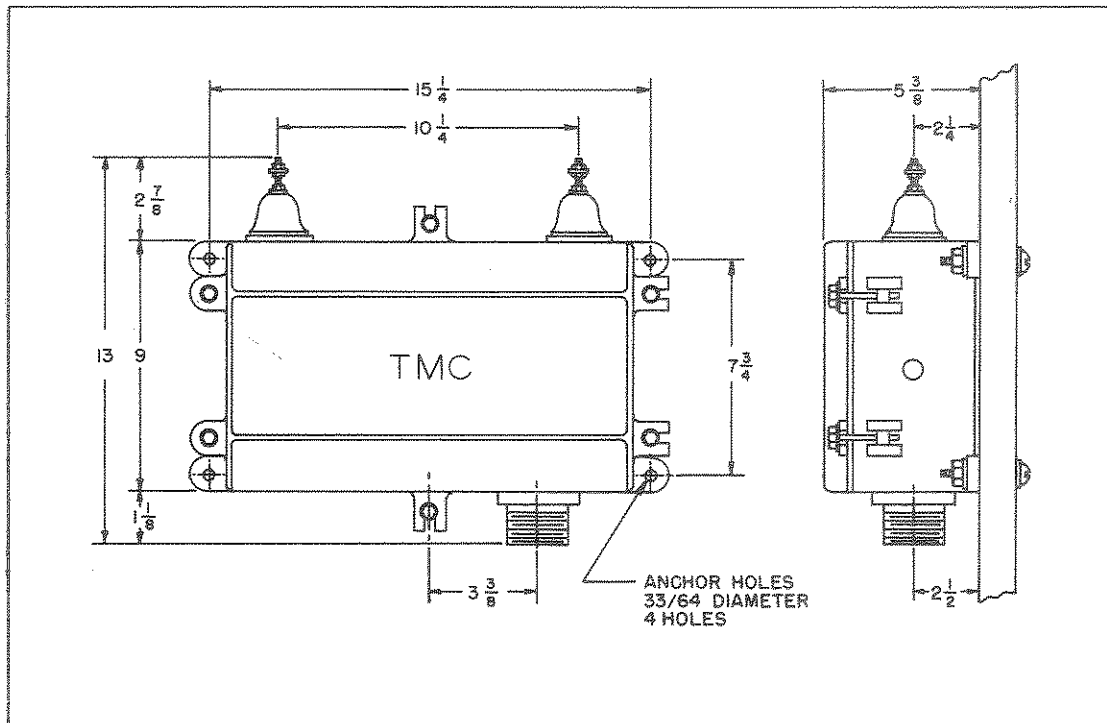
Frequency Response Model TRC 100



Typical input impedance characteristics when transformer is properly terminated, in a resistive load. Model TRC-100



Dimensional Outline and Mounting Models TRC-100, 500



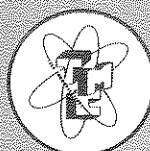
Dimensional Outline and Mounting Model TRC-3500

# THE TECHNICAL MATERIEL CORPORATION

700 FENIMORE ROAD

MAMARONECK, NEW YORK

CABLE  
TEPEI  
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