

SECTION I. INTRODUCTION AND DESCRIPTION

1-1. SCOPE

1-2. This is an instruction manual for the THRULINE Wattmeter, Model 4314. See Figure 1-1. Information for the operation, service, troubleshooting, calibration, and repair of the unit has been incorporated in its contents.

This manual is prepared for use by the technicians to whom this equipment is issued and who are responsible for its operation and maintenance.

TABLE 1. LEADING PARTICULARS

Measuring Medium	RF transmission in 50-ohm lines
RF power ranges:	
Average (CW) mode	1 watt to 10 kilowatts (± 0.05 of full scale)
Peak-pulse or envelope-power mode	1 watt to 10 kilowatts (± 0.08 of full scale)
Frequency Range	0.45 to 2300 megahertz (either mode)
Pulse Parameters:	
Square pulses:	
Minimum duty factor	1.0×10^{-4}
Minimum repetition rate	30 pps
Minimum pulse width	0.4 microseconds at 100-2300 megahertz 1.5 microseconds at 26-99 megahertz 15 microseconds at 2-25 megahertz
Gaussian Pulses:	
Minimum duty factor	3.5×10^{-4}
Minimum repetition rate	30 pps
Minimum pulse base width (at 10% of height)	3 microseconds at 26-2300 megahertz 15 microseconds at 2-25 megahertz
Line Connectors:	
Standard	Quick Change, Female N type
Optional	Any common RF type
Weights:	
Set	4 lbs. (1.8 kg)
Plug-In Elements	3 oz. (85 g)
Basic Overall Dimensions:	
Height	7 inches (177.8 mm)
Width	4 inches (101.6 mm)
Depth	3-5/8 inches (92.1 mm)
Input Power Requirements:	
Voltage	104-126 volts/208-252 volts
Frequency	50-60 Hz
Power	1.5 watts
Batteries	12V/50B, Gould-NiCad 6V/50B, Gould-NiCad