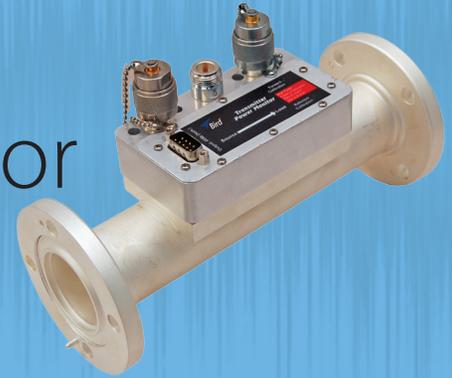




# Transmitter Power Monitor

## *TPM Series*



The **RF** Experts

- Low Cost in-situ power measurement solution designed for operation inside the transmitter or after the combiner.
- In-line calibration capability allows for greater accuracy in a single application (with an accurate power reference).
- Integrated non-directional coupler allows for spectral analysis of the signal in minimal space requirements.
- Accurately measures true average power for digitally modulated systems.
- +/- 5% of reading accuracy for both forward and reflected power (10:1 ratio for forward to reflected power).
- 7/8", 1 5/8", and 3 1/8", 50 ohm lines available for FM, VHF, and UHF broadcast frequencies.
- DB9 output provides a linear DC voltage output from 0 to 4 volts allowing for a wide variety of interface options.

### PROBLEMS/SOLUTIONS

Monitoring digital power

- Handles peak-to-average ratio of 10 dB.

Reliable power measurement

- Accuracy traceable to N.I.S.T

Convenient calibration

- In-Situ calibration with no down time

### TITLE

Radio and Television

Broadcasters requiring monitoring and power measurement of analog, digital and combined signals.

# Transmitter Power Monitor

## TPM Series

### CHARACTERISTICS, TPM OPERATING

<b>Frequency Range</b>	L = 54-88 MHz F = 88-108 MHz H = 174-216 MHz U = 470-806 MHz
<b>Forward Power Range</b>	See Chart A
<b>Reflected Power Range</b>	10% of Forward Power Range
<b>Measurement Type</b>	In-Line, True Average Power
<b>Peak/Average Ratio</b>	10 dB maximum
<b>Directivity, Rfl</b>	30 typical, 26 dB minimum
<b>Accuracy</b>	±5% of reading
<b>Dynamic Power Range</b>	16 dB
<b>Outputs</b>	DB 9 Voltage I/O
<b>Displays Offered</b>	3140-A4 (4 Channel) 3140-A8 (8 Channel)
<b>LINE SECTION</b>	
<b>Operating Temperature</b>	0° to +50° C (32° to 122° F)
<b>Storage Temperature</b>	-20° to +80° C (-4° to 176° F)
<b>Humidity</b>	up to 10,000 feet (3048 m)
<b>Weights</b>	TPM7 = 3.5 lbs TPM1 = 5.5 lbs TPM3 = 8.0 lbs 3140 = 2.5 lbs
<b>Calibration cycle</b>	Annual*

\* Standard calibration cycle of 1 year for reverification, but can be recalibrated by the customer with an accurate power reference. See the Application note on TPM calibration at [www.birdrf.com](http://www.birdrf.com)

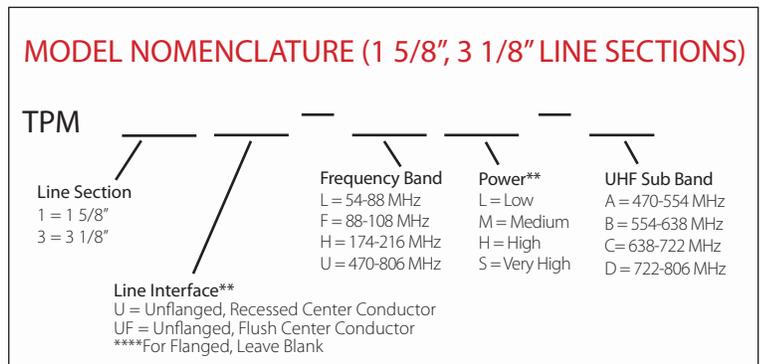
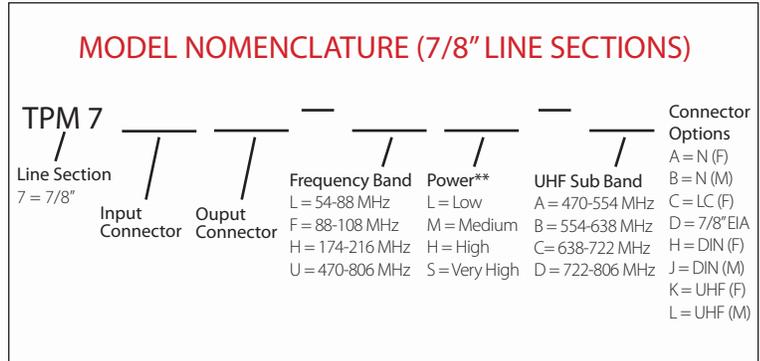
### IN-SITU CALIBRATION

World Class first in-situ power measurement standard

Calibrate during operation, while ON-AIR

Never any need to remove from service which equates to no downtime

Traceable to National Institute of Standards and Technology (NIST)



\*\* See Chart A for power ranges on backside.

\*\*\* Other sizes and power ranges available upon request.

CHART A	VHF (54-216 MHz)		UHF (470-806 MHz)	
	Power Designator	Forward Power Range	Power Designator	Forward Power Range
7/8"	Low Medium High Very High	15 W - 500 W 30 W - 1.0 kW 80 W - 2.5 kW 150 W - 5.0 kW	Low Medium High	15 W - 500 W 30 W - 1.0 kW 80 W - 2.5 kW
1 5/8"	Low Medium High Very High	30 W - 1.0 kW 80 W - 2.5 kW 150 W - 5.0 kW 300 W - 10 kW	Low Medium High	30 W - 1.0 kW 80 W - 2.5 kW 150 W - 5.0 kW
3 1/8"	Low Medium High Very High	150 W - 5.0 kW 300 W - 10 kW 800 W - 25 kW 1.5 kW - 50 kW	Low Medium High	150 W - 5.0 kW 300 W - 10 kW 800 W - 25 kW

Note: For best accuracy, pick the lowest power range that includes your maximum average operating power.

