

A Coaxial Dynamics, Wattchman rack mounted Monitor/Alarm measures forward and reflected RF power simultaneously in 50 ohm transmission lines. It is compatible with our entire series of 7/8" thru 6-1/8" Line Sections and will accept plug in elements that range from 5 watts to 100,000 watts full scale from 0.45 MHz to 2.3 GHz.

Similar in appearance to our 81070/80 series these units provide improved functionality at a reduced cost. Both models feature forward and reflected trip adjustments, a built in DC amplifier, and 110/220 Input voltage switches. Model 81090's meters have our standard 5/10/25 scales and Model 81091 has 15/30/60 scales.

A station monitor/alarm system installation consists of a Wattchman, a dual socket line section and two elements for monitoring both forward and reflected power. The Wattchman is supplied with two 25' DC cable assemblies for connection to the line section, and a 6' AC power cord. Installation requires inserting the line section into the transmission line, and connecting the proper terminals of the transmitter interlock system(s) to the proper terminals on the Wattchman and providing AC power.

Abnormal load conditions quickly cause transmitter shut-down within less than 15 milliseconds (including control relay). An audible single tone alarm will indicate system/transmitter malfunction. Relay contacts are provided for remote alarm and reset switching. Fail-Safe or Non-Fail-Safe mode is selected by a switch located on the rear of the instrument.

Element selection: Suggest using a 10:1 ratio.  
Example: 10 kW forward and 1 kW reflected.

For additional information on our Wattchman Station Monitor/Alarm Systems and accessories consult factory.

## SPECIFICATIONS: 81090/81091

### METER SPECIFICATIONS

30 microamps full scale,  $\pm 1\%$ .  
1400 ohms terminal resistance.  
4 1/2" movement.

### ACCURACY

$\pm 5\%$  accuracy when used with proper Coaxial Dynamics line sections and elements.

### CONTROLS: FRONT PANEL

Push button reset.  
F & R Trip adjustments.

### REAR PANEL

Audible alarm switch.  
Fail-safe mode switches.  
110/220 VAC input switch.

### REAR PANEL CONNECTIONS

Meter inputs.	Remote reset.
NO/NC relay terminals.	AC Power Input.
Remote alarm contacts.	Amplified DC Outputs

### CONTACT RATINGS

5A at 120 VAC non-inductive.

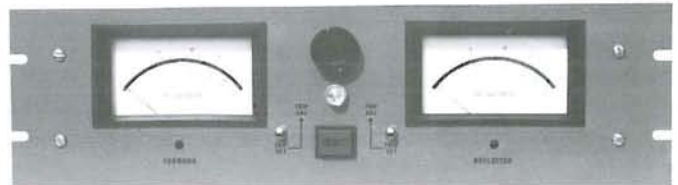
### RESPONSE TIME

Less than 15 milliseconds (including control relay function.)

# Coaxial Dynamics

## RF Station Monitor/Alarm

Models  
81090  
81091



### DIMENSION

19" L x 8" W x 5 1/4" H

### WEIGHT

7 1/2 Lbs.

### FINISH

Blue Textured Panel  
Anodized Aluminum

### POWER REQUIREMENTS

110/220 VAC, 50/60 CPS, 10 Watts Max.



## WATTCHMAN FEATURES:

- PROTECTS YOUR TRANSMITTER SYSTEM
- CONTINUOUS POWER DISPLAY FORWARD AND REFLECTED
- AUDIBLE AND VISUAL ALARMS
- FAST FAULT RESPONSE (15 MILLISECONDS)
- REMOTE RESET PROVISION
- AMPLIFIED DC OUTPUTS



## Coaxial Dynamics

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## SECTION A

### STANDARD ELEMENTS FOR 1-5/8" SYSTEM 82100 SERIES (30 $\mu$ A) PLUG-IN ELEMENTS

FOR USE IN ALL 1-5/8" LINE SECTIONS

Power Range	2-30 MHz	25-60 MHz	50-125 MHz	100-250 MHz	200-500 MHz	400-1000 MHz
250		82106	82113	82120	82127	82134
500		82107	82114	82121	82128	82135
1000	82101	82108	82115	82122	82129	82136
2500	82102	82109	82116	82123	82130	82137
5000	82103	82110	82117	82124	82131	82138
10 kW	82104	82111	82118			
25 kW	82105	82112	82119			

### SPECIAL 15/30/60 SCALE (30 $\mu$ A) ELEMENTS FOR 1-5/8" LINE SECTIONS

Power Range	2-30 MHz	25-60 MHz	50-125 MHz	100-250 MHz	200-500 MHz	400-750 MHz
300		82155	82162	82169	82174	82179
600		82156	82163	82170	82175	82180
1500	82150	82157	82164	82171	82176	82181
3000	82151	82158	82165	82172	82177	82182
6000	82152	82159	82166	82173	82178	82183
15 kW	82153	82160	82167			
30 kW	82154	82161	82168			

### STANDARD LINE SECTIONS

Model No.	Description
88514	1-5/8" 50 ohms, Dual Socket, Swivel Flanged E.I.A.
88515	1-5/8" 50 ohms, Dual Socket, Unflanged
88515-2	1-5/8" 50 ohms, Dual Socket, Unflanged Recessed

## SECTION B

### STANDARD ELEMENTS FOR 3-1/8" SYSTEM 82300 SERIES (30 $\mu$ A) PLUG-IN ELEMENTS

FOR USE IN ALL 3-1/8" LINE SECTIONS

Power Range	2-30 MHz	25-60 MHz	50-125 MHz	100-250 MHz	200-500 MHz	400-750 MHz
1000		82306	82311	82316	82321	82326
2500		82307	82312	82317	82322	82327
5000	82301	82308	82313	82318	82323	82328
10 kW	82302	82309	82314	82319	82324	82329
25 kW	82303	82310	82315	82320	82325	82330
50 kW	82304		82332	82333		

### SPECIAL 15/30/60 SCALE (30 $\mu$ A) ELEMENTS FOR 3-1/8" LINE SECTIONS

Power Range	2-30 MHz	25-60 MHz	50-125 MHz	100-250 MHz	200-500 MHz	400-750 MHz
1500		82354	82360	82366	82372	82378
3000		82355	82361	82367	82373	82379
6000	82350	82356	82362	82368	82374	82380
15 kW	82351	82357	82363	82369	82375	82381
30 kW	82352	82358	82364	82370	82376	82382
60 kW	82353	82359	82365	82371	82377	82383

### STANDARD LINE SECTIONS

Model No.	Description
88516	3-1/8" 50 ohms, Dual Socket, Swivel Flanged E.I.A.
88517	3-1/8" 50 ohms, Dual Socket, Unflanged
88517-2	3-1/8" 50 ohms, Dual Socket, Unflanged Recessed

## SECTION C

### STANDARD D.C. METER CABLE ASSEMBLIES

Model No.	Description
88912	33" with DC Connectors (Both Ends)
88913	10 Ft. with DC Connectors (Both Ends)
88914	25 Ft. with DC Connectors (Both Ends)
88915	50 Ft. with DC Connectors (Both Ends)
88916	100 Ft. with DC Connectors (Both Ends)
88917	200 Ft. with DC Connectors (Both Ends)

FOR MORE INFORMATION CALL TOLL FREE 1-800-COAXIAL (262-9425)

