

# Watchman™ RF Station Monitor/Alarm Systems Models 81090 & 81091

## Features

- *Protects Your Transmitter From High Reflected or Low Forward Conditions*
- *Continuous Display Of Forward and Reflected Power*
- *Audible and Visual Alarms*
- *Fast Fault Response (15ms)*
- *Remote Reset Provision*
- *110/220 VAC Input Switch*
- *Amplified DC Outputs*
- *Two Year Limited Warranty*

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## Description

The Coaxial Dynamics Watchman Monitor/Alarm measures forward and reflected RF power simultaneously in 50-Ohm coaxial cables and transmission lines. It is compatible with our entire series of 7/8" through 6-1/8" Line Sections and will accept plug-in elements that range from 5 watts to 100 kW full scale from 0.45 MHz to 2300 MHz.

Similar in appearance to our [81070 & 81080](#) 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 VAC input switch. Model 81090 has our standard 5/10/25 scales and Model 81091 has 15/30/60 scales.

A Station Monitor/Alarm system installation consists of a Watchman, a dual socket Line Section and two plug-in elements for monitoring both forward and reflected power. The Watchman is supplied with two 25-foot DC cable assemblies for connection to the line section, and a 6 foot AC power cord. Installation requires inserting the line section into the transmission line, connecting the terminals of the transmitter interlock systems to the proper terminals on the Watchman and providing AC power.

Abnormal load conditions quickly cause transmitter shutdown 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.

Your confidence in the quality and dependability of the Models 81090 and 81091 Watchman is assured with the Coaxial Dynamics Two Year Limited Warranty.

**Specifications**

Power Range	5 W to 100 kW
Frequency Range	0.45 MHz to 2300 MHz
Meter Specifications	30 $\mu$ A full scale, $\pm$ 5% 1400 ohms terminal resistance 4-1/2 inch movement
Accuracy	$\pm$ 5% when used with proper Coaxial Dynamics line sections and elements
Response Time	Less than 15 milliseconds (including control relay function)
Front Panel Controls	Push button reset Trip set adjustments
Rear Panel Controls	Audible alarm switch Fail-Safe mode switches 110/220 VAC input switch
Connections	Meter inputs NO/NC control connections Remote alarm connections Remote reset connections AC power receptacle Amplified DC Outputs
Contact Ratings	5A at 110 VAC non-inductive
Power Requirements	110/220 VAC, 50/60 Hz, 10 Watts maximum
Dimensions (H x W x D)	5.25 in. (13.3 cm) x 19 in. (48.3 cm) x 8 in. (20.3 cm)
Weight	9.0 lbs. (4.08 kg)
Finish	Textured Blue Polyurethane Enamel Front Panel Alodine (Yellow Iridite) Chassis

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