

## Description

Dynamics 4000 Test Friendly Programmable Signal Conditioners are designed for professional test engineers and field technicians to reduce the number of steps needed to run tests. This innovative sensor interface system utilizes a low-noise design to collect accurate data and includes both calibration and monitor capability. The Dynamics 4000 system also incorporates the latest developments in surface mount components and a 3U system chassis size, resulting in a much smaller size, lower weight system for both field and laboratory use. The system is capable of accepting 16 two-channel Dynamics 4000 conditioners for a **32 channel programmable system**. It can also accept Dynamics 3000 single channel, manual modules for mix-and-match applications requiring specialized signal conditioners.

## Fast, Easy Interface

The Dynamics 4000 system can be configured with the **Manual** mode using a front panel display and keypad, or with the **Computer** mode through the serial communication port. A copy command is available in manual mode for fast setup of similar sensors for high channel count applications. A unique third setup mode, **Auto-Setup**, uses battery backup memory to store default settings for accurate, quick setup with one button operation.

Complete menu driven software comes with the R.C. Electronics DATAMAX II Instrumentation Recorder to program all amplifier modules. The program can read chassis configurations to determine if all settings are being transferred properly.

## Features

- Up to 32 Channels per Chassis
- Conditioning Modules:
  - Strain
  - Differential Inputs
  - Accelerometer/ICP®
  - AC Amplifier
  - Thermocouple
  - Frequency to Voltage
  - Dynamics 3000 Modules
- Portable or Rack Mount
- Program Control:
  - Keypad
  - DATAMAX II / RS-232
  - Auto-Setup
- AC or DC Powered
- BNC Output Monitor
- Automated Calibration Control



# 4000

## Programmable Signal Conditioners

### Output Monitor

A built-in BNC output monitor utilizing an internal switching matrix lets you view any conditioned channel during test or setup calibration to troubleshoot individual conditioning modules.

### Precision Calibration Control

The Dynamics 4000 Programmable Signal Conditioners continue the tradition of our manually programmable Dynamics 3000 signal conditioning line by incorporating calibration reference in the conditioning modules. The Dynamics 4000 embedded controller has built-in digital voltage measurement capability to activate the calibration reference for automated balance/zero and span calibration of individual conditioners. Auto-Span is a unique feature of our system that provides **fine span control to 0.1% accuracy** of the desired gain level without requiring manual trimpot adjustment. The calibration control can also be activated by remote terminals or dedicated push buttons to put all the signal conditioners in calibration mode. This lets you record pre- and post-test cal values to verify proper signal conditioner operation during tests.

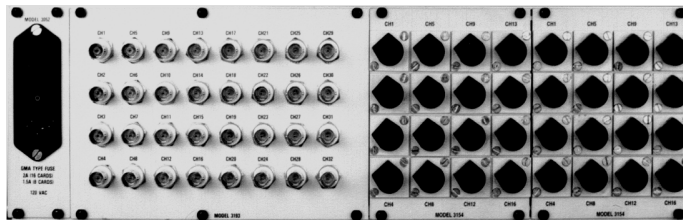
**Dynamics 4000 Modules**

4078 Automated Strain Conditioner  
 4110 Programmable AC Amplifier  
 4120 Automated Linearized Thermocouple Conditioner  
 4290 Accelerometer/Microphone & Differential Amplifier  
 4636 Frequency to Voltage Converter

**Compatible Dynamics 3000 Modules**

3025 Signal Shaper  
 3028 5B Adapter for Temp. and RTD  
 3040 Pulse Width Modulation  
 3046 LVDT, Carrier Amplifier  
 3047 High Frequency/Freq. to Voltage Converter  
 3087 Charge Amplifier  
 3108 DCDT

3131 Counter/Divider  
 3139 Strain Amplifier  
 3290 Accelerometer & Differential Amplifier  
 3636 Frequency to Voltage Converter  
 3647 Strain/Data Amplifier  
 3647/I Isolated Strain/Data Amplifier



*Back of Dynamics 4000 amplifier with Hypertronics inputs (32 channels) and BNC outputs (32 channels).*

## 4000 Chassis Specifications

	<u>Portable</u>	<u>Rack Mount</u>
Part Number:	<b>4036</b>	<b>4017</b>
No. of Module Slots:	16	16
Dimensions:	5.8" x 18.5" x 13.2"	5.25" x 19" x 13.6"
Weight:	23.7 lbs	18.7 lbs
Power: AC or DC:	30W	30W
Power Protection:	Fuse	Fuse
Power Switch:	Yes	Yes
Output Full Scale Range:	±10V	±10V
Temperature Range:	0 to 50°C	0 to 50°C
Output Connector Type:	BNC/DB25	BNC/DB25
Input Connector:	BNC/DB25/RJ-45/Hyp.	BNC/DB25/RJ-45/Hyp.
Meter:	LCD, 4 digit, ±10V	LCD, 4 digit, ±10V
Voltmeter:	DC type, ±10V	DC type, ±10V
Display Information: (on optional keypad)	Channel Number, DVM, and Channel Parameters	Channel Number, DVM, and Channel Parameters
Cal Control Switch:	Zero, Cal, and Auto-Setup	Zero, Cal, and Auto-Setup
Front Panel Signal Monitor:	BNC	BNC
System Controller:	16 Button Keypad (optional)	16 Button Keypad (optional)
Computer Interface:	RS232	RS232