

# Dynamix™ 1444 Series Integrated Machinery Monitoring System



Delivers Unprecedented Power, Performance and Flexibility for Machinery Protection and Condition Monitoring

## Features & Benefits

The Dynamix™ 1444 Series system is designed to serve the protection and condition monitoring requirements of rotating and reciprocating industrial machinery.

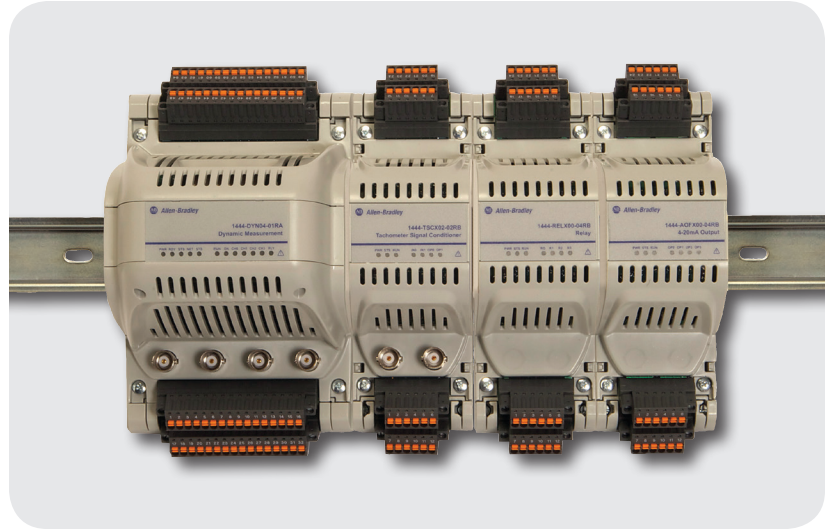
Dynamix 1444 allows you to leverage Integrated Architecture, rather than an isolated condition monitoring device, to assess current equipment health, predict potential issues and help avoid damage to critical machinery. Integration of machinery health into control architectures using Ethernet brings unprecedented flexibility to machine instrumentation design and operational efficiency in the plant.

The innovative design of Dynamix 1444 provides integration which simplifies your solution for equipment monitoring applications, and includes:

- EtherNet/IP communications, dual port or Device Level Ring
- Compact, distributed and fully integrated into Rockwell Automation Integrated Architecture
- High performance dual processors
- Conformally coated, rated to +70°C, and to Marine certification standards for shock and vibration
- Electrical Safety and Hazardous area approved
- Configuration in any Allen-Bradley® ControlLogix® controller
- Standard assemblies for configuration, input, and output

The Dynamix 1444 Series system:

- simplifies your application design
- reduces cost for spares, training and support
- lowers your engineering, manufacturing and inventory costs



To protect equipment, Dynamix 1444 measures and monitors a machine's critical dynamic and position parameters and assures appropriate actions are performed, with the precision, reliability, and performance required by industry and regulatory standards.

For general condition monitoring, the Dynamix 1444 monitors offer unprecedented signal processing and measurement capabilities allowing you the tools necessary to detect and identify the faults and status across all classes of industrial machinery. You can send information to plant-wide and enterprise-wide databases for storage and trending. With this information, you can take appropriate maintenance action, such as replacing worn-out components before they fail, protecting both production and equipment while reducing maintenance costs.

The tight coordination between condition monitoring and the control system allows you to leverage existing investments in visualization and information solutions to improve machine builder and end user productivity and lower total cost of ownership. With Studio 5000™, you can deploy and maintain condition monitoring programming in the same design environment used for automation control.

LISTEN.  
THINK.  
SOLVE.™

## Dynamix 1444 Series Modules

Type	Module*	Cat. No.
Measurement	Dynamic Measurement Module	1444-DYN04-01RA
Speed	Tachometer Signal Conditioner Expansion Module	1444-TSCX02-02RB
Relay	Relay Expansion Module	1444-RELX00-04RB
Analog Output	4-20mA Expansion Module	1444-AOFX00-04RB
Terminal Bases	Dynamic Measurement Module Terminal Base	1444-TB-A
	Expansion Module Terminal Base	1444-TB-B

\* All modules and bases require Removable Plug Connectors available in spring or screw style and purchased separately.

### Dynamic Measurement Module

The Dynamix 1444 Series dynamic measurement module is a four-channel, general purpose monitor that provides measurements of dynamic inputs such as vibration and pressure as well as static inputs such as thrust, eccentricity and rod drop. The module also measures speed from two TTL signal inputs, or can read machine RPM from I/O. The module is designed for monitoring shaft, casing, and pedestal vibration, shaft and rod position, casing expansion and other critical dynamic and position measurements on rotating and reciprocating machinery.

### Tachometer Signal Conditioner Expansion Module

The Dynamix 1444 Series tachometer signal conditioner expansion module is a two-channel monitor that converts the signal from common speed sensing transducers into a once-per-rev TTL class signal suitable for use by up to six dynamic measurement modules. The tachometer signal conditioner expansion module is designed for use with the dynamic measurement module which provides power and manages the module configuration through the backplane.

### Relay Expansion Module

The Dynamix 1444 Series relay expansion module is a four-relay module that serves to add relays to the dynamic measurement module. Up to three relay expansion modules may be used with each dynamic measurement module.

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### Analog Output Expansion Module

The Dynamix 1444 Series analog output expansion module is a four-channel module that outputs 4-20mA analog signals that are proportional to measured values provided by the dynamic measurement module. The analog output expansion module is designed for use with the dynamic measurement module.

### Terminal Bases

Each Dynamix module must be installed in a terminal base, when linked together with ribbon cable, serves as the backplane of the 1444 Series system. There are two types of terminal bases – one for the dynamic measurement module and one for the expansion modules.

### Removable Plug Connectors

All modules and terminal bases accept either spring or screw style removable plug connectors. RPC's simplify installation and maintenance, and allow selection of the connection method independent of the module and base.

