Integrated Pump Protection and Monitoring
Smart Monitoring+Scalable Control = Intelligent Pump Control

Provides Single Solution for Monitoring:
- Current
- Voltage
- Temperature
- Vibration
- Energy

1734-IR2 Provides Motor Temperature Alerts:
- Supports up to 2 std RTDs's per module
- Most Platinum, Copper, and Nickel RTD's

Any Logix Processor

1734-IR2

Panelview Plus 7

PanelView Plus 7 Provides:
- Free Preconfigured PanelView Faceplates with RSLogix AOI's
- Extensive Diagnostics
- On-screen configuration and tuning
- On-screen O&M's and wiring diagrams
- Easily integrates into plant EtherNet/IP

1783-ETAP

Logix Family of Processors Provides:
- Scalable to a wide range of applications
- Common development environment for all control disciplines across entire family.

EtherNet/IP provides:
DLR-Device Level Ring Redundant Communications

RTD Field Wiring

E300

Dynamix 1444

E300 Provides Proactive Alerts for Motor:
- Voltage, Current, & Energy
- CIP Energy Enabled
- Trip/Warning Histories
- % Thermal Capacity Utilization
- Time to Trip
- Time to Reset
- Operational Hours
- Number of Starts
- Embedded Web Page

Dynamix 1444 Provides Proactive Alerts for Motor:
- Supports up to 4 accelerometers per module
- Detects most mechanical issues including Cavitation before significant mechanical damage occurs.
- Can be configured as alert only or initiate a controlled shutdown procedure.
- No annual vibration calibration required
- Detects and annunciates in plain English
- No special training

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Drive Motor

Pump

Rockwell Automation
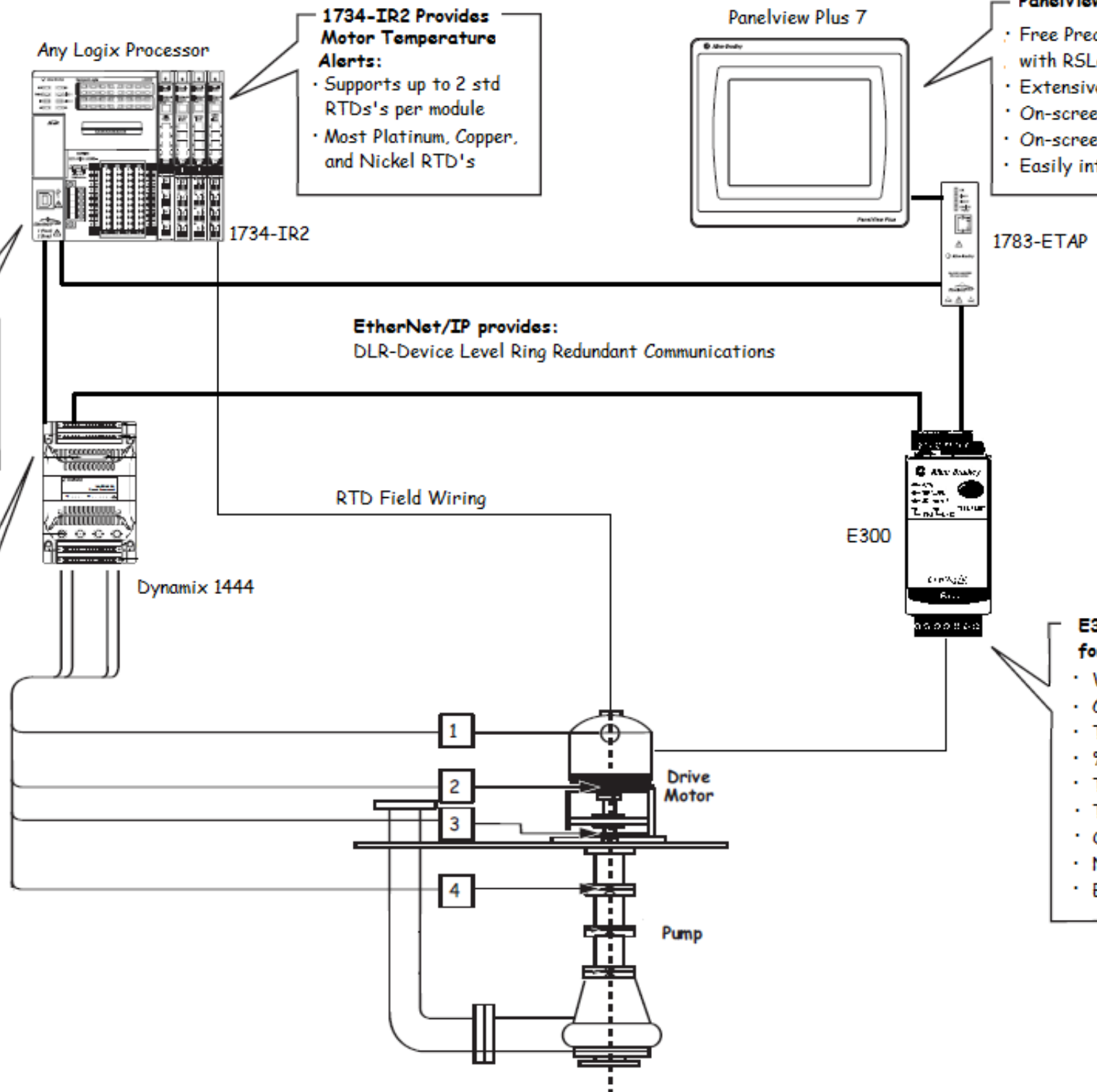
Integrated Motor Protection with E300

Bill of Material

Qty	Catalog #	Description
	System: Controller Hardware	
1	1769 L18ERM-BB1B	COMPACTLOGIX L18ERM PROCESSOR, 512 KB MEMORY
1	1734-IB4	24V DC 4 CHANNEL SINK INPUT MODULE
1	1734-OB4E	24V DC 4 CHANNEL SOURCE OUTPUT MODULE, ELECTRONICALLY PROTECTED
1	1734-IR2	2 CHANNEL RTD MODULE
3	1734-TBS	MODULE BASES W/ REMOVABLE IEC SPRING TERMINALS
	System: Communication Hardware	
1	1783-ETAP	ETHERNET/IP COPPER TAP
	HMI Hardware	
1	2711P-T10C21D8S	PANELVIEW PLUS 7 10" TFT COLOR, TOUCH TERMINAL
	E300 Electronic Overload Relay Hardware	
1	193-ESM-VIG-60A-T	VOLTAGE/CURRENT/GROUND FAULT SENSING MODULE, DIN RAIL/PANEL MOUNTED
1	193-ECM-ETR	ETHERNET/IP COMMUNICATION MODULE
1	193-EIO-43-120	4 IN/3 OUT I/O MODULE, 120V AC

Qty	Catalog #	Description
	Dynamix XM-1444 Monitoring System Hardware	
1	1444-DYN04-01RA	DYNAMIX MEASUREMENT MODULE
1	1444-TB-A	MODULE TERMINAL BASE
2	1444-DYN-RPC-SPR-01	MODULE CONNECTOR
2	1444-TBA-RPC-SPR-01	MODULE BASE CONNECTOR
1	1606-XLE80E	POWER SUPPLY, 24-28V DC, 80 W, 120/240V AC INPUT

Recommended Software

Qty	Catalog #	Description
1	9324-RLD200INTL	STUDIO 5000 LOGIX DESIGNER MINI INTERNATIONAL

Note: ControlLogix Controllers can also be programmed when using Studio 5000 Logix Designer Standard, Full, or Pro.

1	9701-VWSTMENE	RSVIEW STUDIO FOR MACHINE EDITION

About this Configuration

Unlike standalone pump monitoring systems, our Integrated Motor Protection solution is scalable to provide you with the core functionality your system demands - and flexible, so you can add functionality to meet specific requirements.

Based on the Rockwell Automation Integrated Architecture system and the EtherNet/IP network, the Integrated Motor Protection solution leverages the capabilities of Intelligent Motor Control, the Logix control platform, and intuitive HMI software to deliver the information you need to keep your pumping systems running optimally.

This CompactLogix 5370 L1 based low cost system demonstrates the power and scalability of the Integrated Architecture on an EtherNet/IP based network.

A key advantage of this architecture is the ability to use Studio 5000 Logix Designer common integrated programming, configuration, and commissioning tools.

About the Products

Logix Controllers

- A common set of controls, networks, and programming software available in multiple hardware platforms
- Multiple control disciplines in a single controller - sequential / motion / drives / process
- Multiple Program Languages available in all controllers - Ladder Diagram, Function Block, Structured Text, and Sequential Function Chart
- Tag-based architecture instead of addresses native in the controller

PanelView Plus 7

- Reuse tags from Logix controllers by choosing them from a list
- 4" - 10" screen sizes available
- PDF Viewer
- Integrated EtherNet/IP
- Faceplates and Add-on Instructions can save 50%-90% of complex screen development time.

E300 Electronic Overload Relay

- Modular design allows you to tailor the device for your application's exact needs, providing voltage, current, and energy diagnostic information.
- EtherNet/IP Option leverages the Integrated Architecture via connection to Logix and View platforms

Dynamix XM-1444 Monitoring System

- 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 the Integrated Architecture, rather than an isolated condition monitoring device, to assess current equipment health, predict potential issues, and help avoid damage to critical machinery

POINT I/O

- Available in IP-20 or IP-67 styles
- Densities from 2-8 points per module
- Removable screw or spring terminals without rewiring
- Mounts horizontally or vertically with no derating required
- Supports EtherNet/IP, ControlNet, DeviceNet and 3rd party networks

Stratix Switches and Network Infrastructure

- Stratix 5400, 5700 and 8300 Managed switches offer Loop Prevention, Security Services, Diagnostic Information, Segmentation Services(VLANs), Prioritization Services(QoS), and Multicast Management Services.
- Stratix 2000 Unmanaged Switches offer no layer 2 or layer 3 management functionality, but offer lower cost.
- Consider Network Address Translation (NAT), available with the 9300-ENA NAT device and the Stratix 5700 with NAT option, depending on your application requirements.

For More Information and Help

For more information contact your local distributor or Rockwell Automation sales representative.
- www.ab.com (Product Directory, Publication Library, Technical Support).

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DLR-Device Level Ring Redundant Communications

RTD Field Wiring

Dynamix 1444

PowerFlex 753

PF753 Provides Proactive Alerts for Motor:
- .5 to 350 HP
- Speed and Torque Control
- Voltage, Current, & Energy
- CIP Energy Enabled
- Trip/Warning Histories
- % Thermal Capacity Utilization
- Time to Trip
- Time to Reset
- Operational Hours
- Number of Starts
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Drive Motor

Pump

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Rockwell Automation

Integrated Motor Protection with PowerFlex 753

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3	1734-TBS	MODULE BASES W/ REMOVABLE IEC SPRING TERMINALS

Qty	Catalog #	Description
	System: Communication Hardware	
1	1783-ETAP	ETHERNET/IP COPPER TAP

Qty	Catalog #	Description
	HMI Hardware	
1	2711P-T10C21D8S	PANELVIEW PLUS 7 10" TFT COLOR, TOUCH TERMINAL

Qty	Catalog #	Description
	Drive Hardware	
1	20F1AND186ANON....	POWERFLEX 753 DRIVE, 150HP FRAME 6
1	20-750-ENETR	DUAL-PORT ETHERNET/IP OPTION MODULE (LINEAR/RING ONLY)

Note: PowerFlex drives come in many variations - before ordering, you will need to identify voltage rating, horsepower, enclosure type. Please refer to the PowerFlex Selection Guide for additional details on selecting the right drive for you application.

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1	1444-TB-A	MODULE TERMINAL BASE
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PowerFlex Drives

- Serves applications ranging from 0.2 kW (0.25 hp) to 6,770 kW (9,000 hp).
- Common set of networks, operator interface and programming for all PowerFlex drives
- Communication Options – Ethernet/IP, ControlNet, Devicenet, DH Plus, RIO, 3rd party networks
- Hundreds of pieces of status and diagnostic information are shared with Logix controllers directly

Dynamix XM-1444 Monitoring System

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