Centrifugal Pump Optimizer

Minimize Energy Consumption and Improve System Performance

Features

- Controls up to six identical centrifugal pumps run by Variable Frequency Drives (VFDs)
- Remote maintenance and comprehensive system diagnostics
- Optimal dispatch and lead/lag operation modes

Benefits

- Helps increase energy savings by up to 26% vs. typical lead/lag control systems
- Fully configurable through color touchscreen - no PLC programming required
- Balanced loading and runtime across all pumps
- Improved system visibility across entire plant

According to the Energy Information Agency, pumps and motors consume 65% of total industrial electricity*. Energy is one of the most difficult costs to manage, but can result in significant savings. How are you managing the operating costs of your pump systems?

Let Rockwell Automation help you save on your energy.

The Rockwell Automation Centrifugal Pump Optimizer can significantly cut energy usage by employing real-time pump dispatch. Designed to control a bank of up to six identical centrifugal pumps, it feeds a common header more efficiently and intelligently than traditional across-the-line or common feedback reference methods. The pump optimizer solution operates within closed loop systems that are fed by parallel centrifugal pumps in to a common header. Typical applications include primary and secondary chilled water loops, hot water loops, condenser water loops and other closed loop fluid pumping processes that have pressure and flow control.

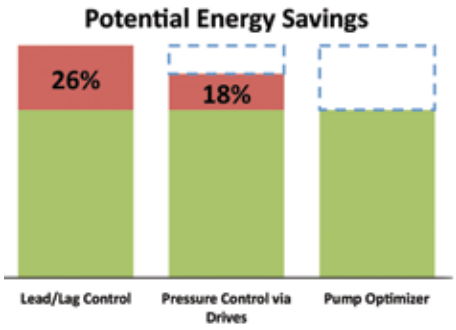
System configuration can be done completely from the full-color Allen-Bradley PanelView™ Plus Human-Machine Interface (HMI), without the need for tedious and complex Programmable Logic Controller (PLC) programming. Active system monitoring displays extensive diagnostics and provides alarms and interlocking all from the simple operator interface. Plant-wide control and monitoring is possible through the built-in Ethernet and Serial communication capabilities (other non-standard communication platforms are also available).

*Energy Efficiency in the Power Grid, *https://www.nema.org/Products/Documents/TDEnergyEff.pdf, 2007*

LISTEN. THINK. SOLVE.®

Energy Savings

Based on energy use calculations from a typical system, the Centrifugal Pump Optimizer can help reduce energy usage by 26% over a Lead/Lag control system, and 18% over a system using pressure control with VFDs (actual energy use reductions will vary based on numerous factors).



Improved System Reliability

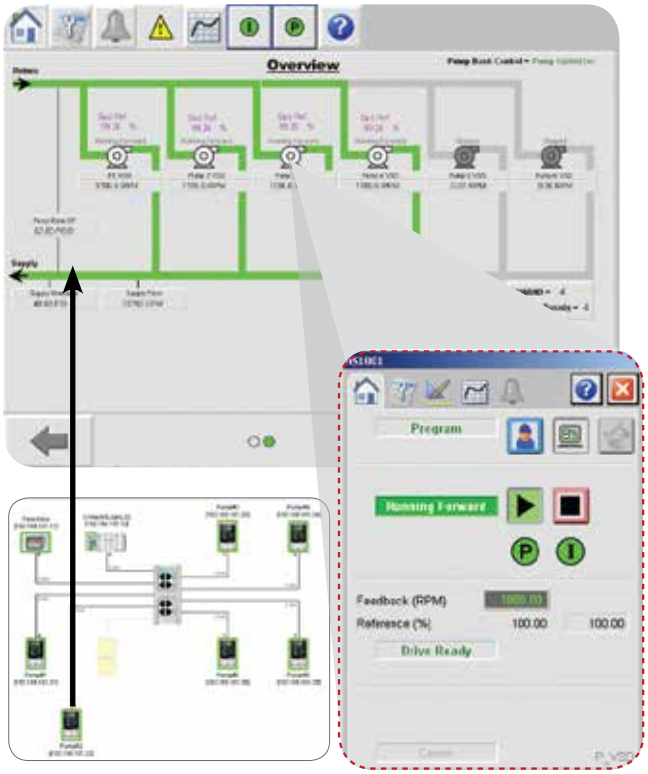
Asset management is simplified with the Centrifugal Pump Optimizer. The flexible and modular control system allows for balanced commissioning of pumps and can help reduce the effects of negative physical phenomenon like excessive pressure and water hammer, thus reducing the risk of costly maintenance and downtime.

Easy to Operate and Troubleshoot

The Centrifugal Pump Optimizer's local HMI simplifies initial setup and configuration changes and allows you to perform alarm management, view system statuses and quickly diagnose asset health issues. When integrated into your plant-wide system using Rockwell Automation PlantPAx®, the Centrifugal Pump Optimizer provides insight to help easily diagnose issues and perform system recovery remotely.

Better Visibility

The Centrifugal Pump Optimizer takes visualization to the next level with a local PanelView HMI and standard Ethernet or serial communications to integrate pump control into your plant-wide SCADA.



Product Specifications

INPUTS
Analog (16), 4-20Ma
Discrete (32), 24VDC
OUTPUTS
Analog (8), 4-20mA
Discrete (8), 24VDC
COMMUNICATIONS
Ethernet and serial (1)
PANEL
Dimensions: 48 (H) x 36 (W) x 12 (D) in / 121.92 (H) x 91.44 (W) x 30.48 (D) Approximate Weight: 290 lb / 131.5 kg
NEMA 12 Enclosure

POWER CONSUMPTION
5.2A FLA @ 120V
ENVIRONMENTAL
Operating temp 0-60°C (32 to 140°F)
Relative humidity 5°-95°% non-condensing
REQUIRED INPUTS
Pump bank differential pressure
System pressure
System flow

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