

# BAY<sup>®</sup> Dryer Automation

## Features

Control any make or model of dryer using today's modern PLC hardware.

Network multiple dryers together to act as a single unit allowing for maximum flexibility and efficiency.

Auto start and stop of dryers maintains your dew point and air flow requirements.

Desiccant Dryer Control

Refrigerant Dryer Control

Machine Protection

User Friendly

Connectivity

## Benefits

**Energy Savings** - The Bay Dryer controller will properly stage and utilize your dryers based on your set points, allowing for maximum energy savings while delivering accurate performance.

**Comprehensive Dryer Protection** - All aspects are continuously checked and monitored against standards and alarm set points.

Air flow monitored to maximize each dryer's capacity without starting unnecessary additional dryers allowing you to save money.

Dew point is monitored and the drying cycle waits until the dew point tells it to switch.

Transition to pressure transmitters allows better reporting on the efficiency on the dryer.

### Control, Manage, Integrate

Today, the Bay Dryer Control package offers the most sophisticated and comprehensive level of control available to record, report, monitor and manage one or multiple Dryers. The Bay Dryer Control package provides energy cost savings and management benefits with its easy-to-use features and networking abilities that will improve the efficiency of an entire compressed air drying system. The Bay Dryer control package retrofits any OEM Dryer Control package.

### Performance & Reliability

Precise and responsive Bay Controllers maintain dew point to within 5°F or less of the set point, regardless of large shifts in air demand. Using dew point to determine when cycle switching takes place versus a timer reduces energy costs and saves money.

### Functional Highlights

The Bay Dryer Controller strategy offers individual dryer control or network dryer control working together to maintain proper dew point and flow to your system. This allows you to utilize each component independently and automatically when necessary.

A customized alarm system can be configured by the end user allowing for maximum safety and efficiency of personnel.

Manual override functions are built into the user interface allowing maintenance personnel to perform necessary work or diagnostics.

### User Friendly

Bay's Dryer Controller is easy to use with features like an intuitive color touch screen display with customized graphics and built-in web server. A Multilevel security function restricts access to critical command functions.

### Connectivity

The Bay Dryer Controller comes standard with an Ethernet communications port as well as a Modbus RTU communications port. Using these ports, the end user can integrate the Bay Controller into a wide variety of plant automation systems.



### Monitoring, Reliability & Protection

The Bay Dryer Controller provides the most comprehensive protection possible. Every relevant aspect of the Dryer is continuously monitored and compared to established operating ranges and alarm set points. Operation events, start-ups, shutdowns, set point changes, alarms and trips are recorded and retained for diagnostic reference should a dryer problem ever occur. At start-up or shutdown, the Bay Dryer Controller controls auxiliary systems and ensures all permissive conditions are met prior to execution.



# Bay Dryer Controller

## Who We Are . . .

Bay is an energy solutions company that provides products and services to a broad range of industrial, commercial, government, and now, home customers. We provide cost savings for our clients through increased energy efficiency, improved system management, better reliability, and reduced downtime. Bay was founded in 1983. As of December 1, 2008, our solutions - with over 5,000 installed units worldwide - are providing over 1.8 terawatt-hours (1,800 million kilowatt-hours) of annual energy savings for our customers in 70 countries. Our headquarters and network operations center is located in Maumee, Ohio.

## Other Products

### Bay Compressor Controller

Industry leading controls for all rotary screw, reciprocating, and centrifugal air compressors.

### BayWatch®

Web-based hosted monitoring and alerting system for single and multi-plant applications.

### BayView® Server

Full featured, HMI/SCADA system for air compressors controlled by the Bay Compressor Controller.

### BayNet®

Advanced scheduling system, automating compressor schedules and operating conditions.

### BayView® 20/20

Customizable HMI/SCADA system for integrating varying plant systems.

### WaveSync™

Innovative ride through control system for rotary screw and centrifugal compressors.

### PLC Custom Controls

Advanced customized control systems for cooling towers, dryers, and other industrial applications.

## Sample Bay Dryer Controls

The interface displays three individual dryer status screens, each showing a schematic diagram of the dryer system and its current status. Below the status screens is a central control panel with the following elements:

- North Flow:** A digital display showing the value 12345.
- Dryer Network Demand:** A section with two rows of controls. The first row is labeled "Dryer 1, 2, 3 Total Flow" and has a digital display showing 12345. The second row is labeled "2nd Dryer" and "3rd Dryer", each with a digital display showing 123451 and 1234512 respectively. There are "Enable" and "Disable" buttons for the total flow.
- South Flow:** A digital display showing the value 12345.

## Specifications & Requirements

Enclosure	NEMA 4 Rating
Power Requirements:	100—240 VAC 50/60 Hz 20 Amp
Display:	8" Color Touch Screen, 640 x 480 VGA Screen Resolution, Ethernet and USB connections with built in web server
Communications:	Ethernet and Modbus RTU
Monitoring Inputs:	4-20 mA Analog Inputs (24 VDC); RTD Temperature Inputs, 24 VDC Digital Inputs.
Control Outputs:	4-20 mA Analog Outputs (24 VDC), 100-240 VAC Digital Outputs (Solid state relay, 5 Amp)
Expansion Capability:	Additional expansion modules possible.



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