

SMarT ADC Control System

WITH AMLOC® AUTOMATED MOISTURE LOAD CONTROL

IS YOUR COMPRESSED AIR DRYER “SMART”?

For decades, compressed air users have relied on Pneumatic Products to deliver technology that reduces the cost of operation and improves the reliability of air driven processes.

Introduced in 1991, the Advanced Dryer Controller (ADC) took dryer reliability to new levels. The ADC has continued to prove itself to be the most reliable dryer controller offered in thousands of installations.

Maintaining this level of excellence and staying true to our mission of innovation to benefit the customer, Pneumatic Products is pleased to announce our newest advancement in technology with our SMarT Advanced Dryer Controller.

When quality and service are demanded by the most critical applications, the world has turned to Pneumatic Products to deliver. Our precision engineered designs and components afford outstanding service life and operational longevity. Invest in our experience and gain annuities that will grow for years.

SMART ADC CONTROL SYSTEM

The SMarT ADC is an update to our time tested, user-friendly electronic synoptic controller for heatless dryer applications. The SMarT ADC builds upon the success of the legendary ADC control system adding new and innovative features.

The SMarT ADC Controller utilizes dual micro-processors to provide advanced communications and improved analog sensor support. The application processor provides the control functions and advanced communications options. The analog microprocessor performs the analog processing tasks including taking readings from various process sensors and communicating this data to the application processor. The application processor is a new microcontroller that has the built-in capability to communicate via Ethernet. This capability can be used to communicate over factory ethernet connections and the internet. This connection allows users to remotely monitor via the web interface their equipment's performance, diagnostics, and status indicators.



Additional communications compatibility is provided via the RS-485 connection allowing the controller to communicate with ModBus applications.

The board is equivalent in size and form factor to the older ADC Base board which makes it easy to swap the SMarT ADC board into existing ADC control systems.

AUTOMATED MOISTURE LOAD CONTROL (AMLOC®) SAVES ENERGY

It is rare for a dryer to need to operate continuously at full load. The SMarT ADC Control system, to save energy (and therefore money) communicates with an AMLOC Energy Management System to control the dryer regeneration potentially resulting in thousands of dollars of energy savings each year.

The PTFE coated, stainless steel capacitance probes sense the dielectric strength imparted upon the desiccant by the extracted water vapor. Capable of identifying an aging or fouled bed, the regeneration cycles are managed with precision – even at -100°F. AMLOC reduces regeneration cycles to extend component life and ensures consistent dew points – without the need for maintenance or calibration.

RETROFITS AND UPGRADES

So, what does this mean to you if you do not have a PPC dryer? Well, the ADC control system can run nearly any dryer design and has been applied effectively to improve reliability and provide valuable dryer performance data via the onboard advanced communications.



Standard Features Include:

- MODBUS RTU Over RS-485
- MODBUS TCP Over Ethernet
- New web based interface
- AMLOC® interface capability
- Compatible with current ADC boards
- E-mail notification of alarm conditions
- Real-time clock/calendar
- Service configurable timers / languages
- Extended drying cycles - long component life
- Operational history log stores 64 events
- Synoptic display with active flow path illumination LEDs

ADC Alarm Protection Parameters - Up to 16 individual alarms & warnings covering:

- Pressure
- Hardware
- Dew Point
- Service

ADC Information Center

- Back-lit LCD Visual Clarity In Diverse Lighting Conditions
- 5 Categories: Dryer Status, Service Screens, Alarm History, Dryer Configuration, Network Screens
- Network Alarm and Warning LED Indication
- Service Reminders: Valves, Desiccant, Filters

Compatibility - Plug-n-play replacement for:

- CHA, DHA, CDA & CAB
- Consult factory for non PPC dryer upgrades

Real-Time Clock/Calendar - Creates a timestamp for:

- Alarm conditions
- State change events
- Power failure events

E-mail Notifications - Dryer sends a message to all addresses in the e-mail mailing list indicating:

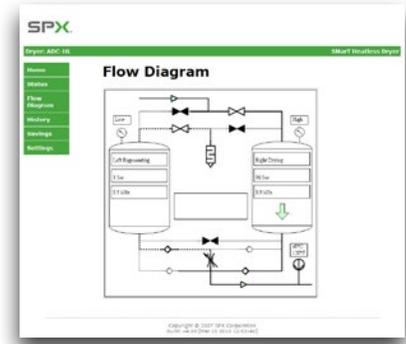
- Alarm/warning message
- Time/date of the alarm
- Dryer name

MODBUS

- Provides communication to DCS systems
- RS-485 2-Wire or 4-Wire
- MODBUS RTU @ 19,200 baud

Web Interface

- Flow diagram
- Tower state / time
- Tower pressure (high/low)
- AMLOC® frequencies
- Alarms/warnings
- Real-time display



Dryer Configuration

- Cycle timers
- Language
- Operating mode
- AMLOC® set point
- E-mail mailing list

History

- Operating time
- Service timers
- Cycle counters
- Alarm history (10)
- Event history (64)

Service Configurable

- State timers and languages are configurable
- No software change required to add new languages
- No software change required for a wide variety of configurations
- Reduces testing requirements for 'custom' jobs
- Eases software maintenance cost
- Dryer can be tuned for future customer needs
- Control board provides hardware support for 4-20mA current loop sensors

SPXFLOW

SPX FLOW Inc. | 4647 SW 40th Avenue | Ocala, Florida 34474-5788 U.S.A.

P: (352) 873-5793 F: (352) 873-5770 E: ppc.americas@spxf.com

www.spxf.com/pneumatic-products

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