

AOCe Control System

ALKAR Oven Control-Ethernet Enhanced

- #1 - It's an industrial Control System
 - Industrial PLC, Computer, Components rated for the environment
- 15" Color Touch Screen
 - Operating system resides on compact flash card; no rotating media hard drive
 - Log data is stored on microdrive; small device withstand more shock and vibration than standard hard drive
 - USB support for upload; download with portable memory
- Allen-Bradley MicroLogix 1100 PLC
 - Built-in web server and display screen
 - Built-in Ethernet port
 - 10-year lifespan on all Allen-Bradley products – Means MicroLogix 1100 PLC will be supported until at least 2015
 - Display screen on PLC
- Communication HMI to PLC Ethernet
 - Remote mount HMI (Human Machine Interface) Panel up to 150' away from MCP
 - PLC mounted in MCP panel reduces number of field wiring terminations up to 40%
 - Does not apply to upgrade; PLC will mount in HMI panel. This approach saves installation time.
 - Connect to Plant network; looks like another PC on network
 - Print to network printer
- Software
 - Standard with web server
 - Screen flow designed for user convenience
 - Large buttons make easier for user to navigate
 - Several Levels of security for end-user flexibility
 - Trend data stored on Microdrive; expected capacity 2 years data
 - History & Event data stored on Microdrive
 - All alarms and major events are logged with data, time, user, and comments
 - Setup screen to allow one design to fit multiply types of ovens and chillers
 - Edit run steps, 50 recipes, 15 steps each
 - Color Trend printing, alarm printing, event printing, oven set-up printing
- Miscellaneous
 - New Control Panel with built-in color printer
 - Incorporated Sanitary Design Hinge and Gasket
 - Compact design will offer more mounting options

Web Server

The AOCe has a built-in webserver. This allows the user to view the oven data anywhere in the plant that has an internet browser (i.e., Internet Explorer or Netscape). This includes desktop PCs, PDAs, and advanced cell phones. The AOCe webserver allows the user to view either a duplicate of the actual oven control screens, or a screen that is designed for monitoring purposes only. The screen requires security to logon similar to the oven screen log-on. To use the webserver, the AOCe system has a built-in Ethernet port that would be connected to the plant Ethernet network. With this technology, up to 50 users across the plant can simultaneous monitor each ovens events, alarms, and performance.

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Current Recipe Name: BACON MPLWD

Step Number	Time Hours:Min	Dry-Bulb Temp Ramp	Wet-Bulb Temp Ramp	Internal Temp	Main Fan Speed	Exhaust Fan Speed
1	0:15	110	0	83	0	0
Actual	0:0	78	78	156	Speed 1	Speed 1.0

2006 05 18 01 01 BACON MPLWD 1627393293

Lot ID: 1627393293

Process Running

Start Stop

Idle Process Hold Process

Digital Outputs:

- Main Fan High Speed
- Main Fan Low Speed
- Rotating Damper Rev.
- Steam Humidity
- Water Humidity
- Cold Shower
- Door Dump
- Smoke Generator
- Smoke Damper
- Smoke Gen. Preheat
- Exhaust Fan
- FA & Exhaust Damper
- DB Control 1
- DB Control 2
- Steam Cook
- Humidity Control 1
- Humidity Control 2
- Alarm Horn

Dry-Bulb Output: 78%
Wet-Bulb Output: 1%

05/18/2006 13:22

Active Time: 05/18/2006 14:21:35
Message: IT #1 RTD Probe Input Open or Short Circuit Detected

Door Dump Alarm Silence

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Recipe File: TUESDAY

Load Demo Recipe Download Delete

Step Number	Step Type	Time Hours:Min	Dry-Bulb Temp Ramp	Wet-Bulb Temp Ramp	Internal Temp	Main Fan Speed	Exhaust Fan Speed
3	Select Step	0:0	0	0	0	0	0

Fresh Air and Exhaust Dampers Closed Step Hold Alarm Horn

Natural Smoke Generator PreHeat Damper Open Humidity Steam Water

Save Step Cancel Step Save Recipe Print

Step	Recipe Type	Hours	Mins	DB	WB	IT	Main Fan	Exhaust Fan	Gas Burner	Steam Cook	Damper Closed	Natural Smoke	Smoke Preheat	Smoke Damper	Humidity Shower	Hold	Liquid Smoke	Alarm	
1	Cook	1	5	150	110	0	10	10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Smoke Cook	0	30	150	0	0	10	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3		0	0	0	0	0	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		0	0	0	0	0	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		0	0	0	0	0	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		0	0	0	0	0	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		0	0	0	0	0	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Alarms

Active Time	No.	Event Time	Message	Comment	Ack Time	Username
05/18/2006 14:31:47		05/18/2006 14:31:47	Dry Bulb Low Deviation Exceeded Alarm			Controls Controls
05/18/2006 14:21:35		05/18/2006 14:21:35	IT #1 RTD Probe Input Open or Short Circuit Detected			Controls Controls

Filter View Items Print New All Ack All Ack Top Ack All

Mode: Alarm History Total Active: 0 Total Unack: 0

Alarm Silence

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Trends

File Name (Load): 2006 05 11 01 01 COLD SHOWER 1627393293 Refresh Delete Print Trend

05/11/2006 12:38 05/11/2006 12:39 05/11/2006 12:39 05/11/2006 12:40 05/11/2006 12:40

05/11/2006 12:38:46 Duration: 00:01:42.1 05/11/2006 12:40:28

Label	Current	Cursor	Units
Dry-Bulb Temp	78	128	°F
Wet-Bulb Temp	78	97	°F
Internal Temp 1	1562	117	°F
Internal Temp 2	0	0	°F

Alarm Silence