

DIRECT AIR COOLING (DAC): COMBINED TEMPERATURE CONTROLLER



PART # AF000400 & AF000400-HC

Revision: 1.3 | March 2023

REGULATE DAC & HVAC IN SHELTERS FOR MAXIMUM EFFICIENCY



COMBINED CONTROLLER FEATURES

- Cooling controller system provides total environmental control for equipment shelters
- Controls up to 3 DAC fans & 2 HVAC units (cool & heat) with lead/lag
- HC model controls up to 6 DAC fans & 4 HVAC units
- Reduces HVAC compressor cycling to extend product life and reduce maintenance costs
- Provides site alarms for high & low temp, DAC, HVAC or Controller failure
- Backlit LCD provides system status and operating parameters; display buttons scroll through menus, status and test modes
- Ethernet connectivity for additional monitoring & alarming:
 - SNMP protocol and traps,
 - Built-in mobile friendly web interface for system status, parameter updates, firmware upload and troubleshooting. Cable and WiFi access.

WEB INTERFACE EXAMPLE VIEWS:

Status

System Configuration

Current Mode: **Direct Air**

Switch To Test Mode...

Site ID: 18928734989
User Parameter File: 189989
Hardware Param File: 1989
Board/FW Version: 214151
Product Part Number: 215621
Serial Number: 215621
DC Voltage: 53.00V
Wifi Enabled: Yes **Turn Off**

Temperatures

Intake: **19.01°C**
Sensing: **19.01°C**

HVACs

System Parameters

Parameter Files Upload

User Parameters: CEMS-DT-01 **New File**

*To edit parameters in this file, use the Change Configuration section below.

Hardware Parameters: CEMS-DT-01 **New File**

Change Configuration

HVAC 1 Config: Heating & Cooling **Change**

HVAC 1 Config: Heating & Cooling **Change**

HVAC 1 Config: Heating & Cooling **Change**

DAC Fans ☐ Enabled

Apply Changes

*Applying these changes will also update the User Parameters file.

DIRECT AIR COOLING (DAC): COMBINED CONTROLLER UNITS



PART # AF000400 & AF000400-HC

Revision: 1.3 | March 2023

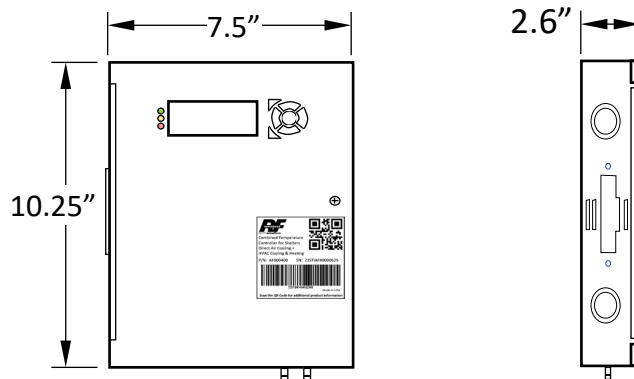
SPECIFICATIONS

Temperature Range	-20F to 140F operating -40F to 158F storage	Configurable for Fahrenheit and Centigrade (°F / °C)
Input Voltage	36VDC to 60VDC	Transients up to 72VDC
Power Consumption	10W max – Controller only 250W max – for each DAC fan output	5A breaker for Controller only, 20A breaker for 2 fans, 30A for 3 fans (x2 for HC model)
DAC fan Interface	48 VDC power + Tach + Speed drive	Up to 3 fans (up to 6 fans for HC model)
HVAC Interface	24 VAC isolated, RGWYC std wiring ¹	Up to 2 HVACs (up to 4 HVACs for HC model)
Alarm Interface	Qty 10 dry contact Form C outputs	NC – Open on alarm std, NO configurable
System Inputs	Qty 3 Open/Closed inputs (must be isolated)	Smoke, hydrogen and generator inputs. Must be closed for normal operation.
Sensors Inputs	Qty 2 temperature sensors Qty 1 Blocked Filter sensor Optional: Up to 3 temp/humidity sensors	Site temperature control sensor included in controller, blocked filter and second temperature sensor part of DAC system.
WiFi Access Point	• IEEE 802.11 b/g/n (2.4 GHz) • Security protocol: WPA/WPA2 Mixed • Access point only	Protocols: HTTP – Web Interface (HTTPS pending). WiFi enabled / disabled via web interface/display button. Expires after 1 hour.
Ethernet Port	RJ45 Ethernet connector 10/100Mbps	Protocols: HTTP – Web Interface (HTTPS pending) Telnet for Debugging Hardware ready for SNMPv3 (Firmware ready for SNMP v1 and v2c)
System Display	2 lines x 16 characters + 7 buttons	Backlit display/buttons with 3 reporting LEDs
Wiring Interface	½" & ¾" conduit	Standard conduit fitting knockouts
Flight Recorder	Up to 10 Months temp & data logging	Real time event log, run time, cycles & alarms log

¹ Optional interfaces available for other control types (e.g. high voltage, mini-split etc.)

DIMENSIONS

- Overall dimensions: 10.25" x 7.5" x 2.6"
- Weight: 4lbs
- Color: Black (other colors upon request)
- HC model uses an extension control box
(same dimensions–no display or buttons)
- Standard factory terminated 66 Block included
for alarm punch down connections



US Patents: 8,313,038; 8,770,493; 10,670,315; 10,788,233;
11,079,161; 11,140,798; 11,324,145 and patents pending

ABOUT RF INDUSTRIES

RF Industries (RFI) designs and manufactures a broad range of interconnect products across diversified, growing markets including wireless/wireline telecom, data communications and industrial. Our products include RF connectors, coaxial cables, data cables, wire harnesses, fiber optic cables, custom cabling, energy-efficient cooling systems and integrated small cell enclosures.

RF INDUSTRIES
rfindustries.com | 800.233.1728
16868 Via Del Campo Court, Suite 200
San Diego, CA 92127

