

Application to Commit Energy Efficiency/Peak Demand Reduction Programs (Mercantile Customers Only)

Case No.: <u>20-1217-E</u>L-EEC

Mercantile Customer: **GE Aviation** 

Electric Utility: **Duke Energy** 

Program Title or High Efficiency CRAC unit in GE Aviation Data Center

Description:

Rule 4901:1-39-05(F), Ohio Administrative Code (O.A.C.), permits a mercantile customer to file, either individually or jointly with an electric utility, an application to commit the customer's existing demand reduction, demand response, and energy efficiency programs for integration with the electric utility's programs. The following application form is to be used by mercantile customers, either individually or jointly with their electric utility, to apply for commitment of such programs in accordance with the Commission's pilot program established in Case No. 10-834-EL-POR

Completed applications requesting the cash rebate reasonable arrangement option (Option 1) in lieu of an exemption from the electric utility's energy efficiency and demand reduction (EEDR) rider will be automatically approved on the sixty-first calendar day after filing, unless the Commission, or an attorney examiner, suspends or denies the application prior to that time. Completed applications requesting the exemption from the EEDR rider (Option 2) will also qualify for the 60-day automatic approval so long as the exemption period does not exceed 24 months. Rider exemptions for periods of more than 24 months will be reviewed by the Commission Staff and are only approved up the issuance of a Commission order.

Complete a separate application for each customer program. Projects undertaken by a customer as a single program at a single location or at various locations within the same service territory should be submitted together as a single program filing, when possible. Check all boxes that are applicable to your program. For each box checked, be sure to complete all subparts of the question, and provide all requested additional information. Submittal of incomplete applications may result in a suspension of the automatic approval process or denial of the application.

Any confidential or trade secret information may be submitted to Staff on disc or via email at <u>ee-pdr@puc.state.oh.us</u>.

## **Section 1: Mercantile Customer Information**

Name: **GE Aviation** 

Principal address: 1 Neumann Way

Cincinnati, OH 45215

Address of facility for which this energy efficiency program applies:

1 Neumann Way Cincinnati, OH 45215

Name and telephone number for responses to questions:

Megan Fox, (980) 373-1198

Electricity use by the customer (check the box(es) that apply):

- ✓ The customer uses more than seven hundred thousand kilowatt hours per year at the above facility. (**Refer to Appendix A for documentation**.)
- ☐ The customer is part of a national account involving multiple facilities in one or more states. (Please attach documentation.)

# **Section 2: Application Information**

- A) The customer is filing this application (choose which applies):
  - □ Individually, without electric utility participation.
  - ✓ Jointly with the electric utility.
- B) The electric utility is: Duke Energy
- C) The customer is offering to commit (check any that apply):
  - □ Energy savings from the customer's energy efficiency program. (Complete Sections 3, 5, 6, and 7.)
  - □ Capacity savings from the customer's demand response/demand reduction program. (Complete Sections 4, 5, 6, and 7.)
  - ✓ Both the energy savings and the capacity savings from the customer's energy efficiency program. (Complete all sections of the Application.)

# **Section 3: Energy Efficiency Programs**

- A) The customer's energy efficiency program involves (check those that apply):
  - ✓ Early replacement of fully functioning equipment with new equipment. (Provide the date on which the customer replaced fully functioning equipment, and the date on which the customer would have replaced such equipment if it had not been replaced early. Please include a brief explanation for how the customer determined this future replacement date (or, if not known, please explain why this is not known)).

## Installation of CRACs operating with 2.79 SCOP in March 2018.

- Installation of new equipment to replace equipment that needed to be replaced The customer installed new equipment on the following date(s):
- Installation of new equipment for new construction or facility expansion.
   The customer installed new equipment on the following date(s):
- □ Behavioral or operational improvement.
- B) Energy savings achieved/to be achieved by the energy efficiency program:
  - 1) If you checked the box indicating that the project involves the early replacement of fully functioning equipment replaced with new equipment, then calculate the annual savings [(kWh used by the original equipment) (kWh used by new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: \_\_\_\_kWh

2) If you checked the box indicating that the customer installed new equipment to replace equipment that needed to be replaced, then calculate the annual savings [(kWh used by less efficient new equipment) – (kWh used by the higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

# Annual savings: 765,957 kWh Refer to Appendix B for calculations and supporting document

Please describe any less efficient new equipment that was rejected in favor of the more efficient new equipment.

3)	If you checked the box indicating that the project involves equipment for new construction or facility expansion, then calculate the annual savings [(kWh used by less efficient new equipment) – (kWh used by higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:
	Annual savings:kWh
	Please describe the less efficient new equipment that was rejected in favor of the more efficient new equipment.
4)	If you checked the box indicating that the project involves behavioral or operational improvements, provide a description of how the annual savings were determined.  Annual savings:kWh

# **Section 4: Demand Reduction/Demand Response Programs**

- A) The customer's program involves (check the one that applies):
  - ✓ Coincident peak-demand savings from the customer's energy efficiency program.
  - Actual peak-demand reduction. (Attach a description and documentation of the peak-demand reduction.)
  - □ Potential peak-demand reduction (check the one that applies):
    - □ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a tariff of a regional transmission organization (RTO) approved by the Federal Energy Regulatory Commission.
    - □ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a program that is equivalent to an RTO program, which has been approved by the Public Utilities Commission of Ohio.
- B) On what date did the customer initiate its demand reduction program?

The new equipment was installed in March 2018.

C) What is the peak demand reduction achieved or capable of being achieved (show calculations through which this was determined):

105 kW

Refer to Appendix B for calculations and supporting documentation.

# Section 5: Request for Cash Rebate Reasonable Arrangement (Option 1) or Exemption from Rider (Option 2)

Under this section, check the box that applies and fill in all blanks relating to that choice.

app		. All	2 is selected, the application will not qualify for the 60-day automatic applications, however, will be considered on a timely basis by the					
A)	The	custon	ner is applying for:					
	✓	Optio	n 1: A cash rebate reasonable arrangement.					
	OR							
		_	n 2: An exemption from the energy efficiency cost recovery anism implemented by the electric utility.					
	OR							
		Comm	nitment payment					
B)	The	value o	of the option that the customer is seeking is:					
	Opt	ion 1:	A cash rebate reasonable arrangement, which is the lesser of (show both amounts):					
			✓ A cash rebate of \$32,789. Refer to Appendix C for documentation. (Rebate shall not exceed 50% project cost.					
	Opt	ion 2:	An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider.					
			An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider for months (not to exceed 24 months). (Attach calculations showing how this time period was determined.)					
			OR					
			A commitment payment valued at no more than     (Attach, documentation, and					

calculations showing how this payment amount was determined.)

OR

Ongoing exemption from payment of the electric utility's energy efficiency/peak demand reduction rider for an initial period of 24 months because this program is part of the customer's ongoing efficiency program. (Attach documentation that establishes the ongoing nature of the program.) In order to continue the exemption beyond the initial 24 month period, the customer will need to provide a future application establishing additional energy savings and the continuance of the organization's energy efficiency program.)

## **Section 6: Cost Effectiveness**

The program is cost effective because it has a benefit/cost ratio greater than 1 using the (choose which applies):

Total Resource Cost (TRC) Test.	The calculated TRC value is:	
(Continue to Subsection 1, then ski	ip Subsection 2)	

$\checkmark$	Utility Cost Test (UCT).	The calculated UCT value is 3.16 (Skip to
	Subsection 2.) Refer to App	pendix D for calculations and supporting documents.

# Subsection 1: TRC Test Used (please fill in all blanks).

The TRC value of the program is calculated by dividing the value of our avoided supply costs (generation capacity, energy, and any transmission or distribution) by the sum of our program overhead and installation costs and any incremental measure costs paid by either the customer or the electric utility.

The electric utility's avoided supply costs were	<u> </u>
Our program costs were	
The incremental measure costs were	

# Subsection 2: UCT Used (please fill in all blanks).

We calculated the UCT value of our program by dividing the value of our avoided supply costs (capacity and energy) by the costs to our electric utility (including administrative costs and incentives paid or rider exemption costs) to obtain our commitment.

Our avoided supply costs were \$596,777

The utility's program costs were \$30,263.

The utility's incentive costs/rebate costs were \$32,789.

Refer to Appendix D for calculations and supporting documents.

## Section 7: Additional Information

Please attach the following supporting documentation to this application:

Narrative description of the program including, but not limited to, make, model, and year of any installed and replaced equipment.

A copy of the formal declaration or agreement that commits the program or measure to the electric utility, including:

- 1) any confidentiality requirements associated with the agreement;
- 2) a description of any consequences of noncompliance with the terms of the commitment;
- 3) a description of coordination requirements between the customer and the electric utility with regard to peak demand reduction;
- 4) permission by the customer to the electric utility and Commission staff and consultants to measure and verify energy savings and/or peak-demand reductions resulting from your program; and,
- 5) a commitment by the customer to provide an annual report on your energy savings and electric utility peak-demand reductions achieved.

# Refer to Offer Letter following this application

A description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results. Additionally, identify and explain all deviations from any program measurement and verification guidelines that may be published by the Commission.

Account number		84500860
Company Name		GE AIRCRAFT ENGINES
Address 1		1 Neumann Way
Address 2		Cincinnati, OH 45215
Date	Days	Actual KWH
10/01/2019	30	13,466,800
09/03/2019	29	13,390,355
08/01/2019	32	14,858,397
06/06/2019	30	12,415,811
05/03/2019	32	11,835,672
04/02/2019	29	11,930,591
03/04/2019	29	12,206,580
02/01/2019	30	11,653,991
01/03/2019	33	12,710,309
12/03/2018	33	12,184,321
10/30/2018	29	11,501,982
10/01/2018	30	13,392,126
Total		151,546,935

Appendix	Appendix B - GE Aviation Energy Savings Achieved	s Achieved			-				
									11-
	Baseline Used	Used		Post Project Actual				Sav	Savings
			Summer Coincident			Summer Coincident	Hours of Annual		Summer
	Description	Annual kWh	kW	Description	Annual kWh	kW	Operation		κw
ECM - 1	AHRAE 90.1 minimum SCOP of 2.29.	4,248,862	584	Installation of CRACs operating with a 2.79 SCOP.	3,482,905	479	8,760	765,957	105.3
Notes:	Energy consumption baseline,	demand baseli	ne and post	Energy consumption baseline, demand baseline and post project energy consumption basis are outlined in the following pages.					
	After consideration of line losses, total energy savings are 821	es, total energy	savings are	821,106 kWh and 110.8 summer coincident kW. These values may also reflect minor DSMore modeling software rounding error.	ay also reflect r	minor DSMore	modeling so	ftware roun	ing error.

Appendix C -Cash Rebate Calculation

GE Aviation CRAC units

Measure	Quantity	Cash Rebate Rate	Cash Rebate
High Efficiency CRAC unit in GE Aviation Data Center	1	50% of incentive that would be offered by the Smart \$aver Custom program	\$32,789
			\$32,789

# Appendix D -UCT Value

GE Aviation CRAC units						
Measure	Total Avoided Cost   Program Cost   Incentive   Quantity	Program Cost	Incentive	Quantity	Measure UCT	_
High Efficiency CRAC unit in GE						_
Aviation Data Center	\$596,777	\$30,263	\$32,789	1	9.46	
Totals	\$596,777	\$30,263	\$32,789	1		_

\$596,777 \$30,263 \$32,789 Total Avoided Supply Costs Total Program Costs Total Incentive

9.46

Aggregate Application UCT

Month	1	2	3	4	5	9	7	80	6	10	11	12	2 Grand Total
Max of Baseline kW	534.0	508.0	520.1	474.6	686.4	543.8	583.9	561.5	570.2	574.2	482.4	504.7	686.4
Max of Measure kW	437.8	416.4	426.3	389.0	562.7	445.8	478.6	460.3	467.4	470.7	395.5	413.7	562.7
Sum of Baseline kWh	359,574	328,720	256,721	156,772	356,539	368,187	384,854	378,315	385,760	369,781	301,136	340,709	3,987,068
Sum of Measure kWh	294,753	269,460	210,441	128,510	292,265	301,813	315,475	310,115	316,217	303,120	246,849	279,288	3,268,306
													and the same of th
Average of Baseline kW	483.3	472.3	486.2	435.5	479.2	511.4	517.3	508.5	535.8	497.0	418.2	457.9	485.8
Average of Measure kW	396.2	387.2	398.6	357.0	392.8	419.2	424.0	416.8	439.2	407.4	342.8	375.4	398.2

# Liebert CW ENGINEERING SPECIFICATION SHEET FLOORMOUNT CHILLED WATER SYSTEMS

Date: 1/8/2018

Model Number: CW084UCVA2 Qty: 1

#### **UNIT PERFORMANCE DATA**

80°F DB, 62.8°F WB, 38% RH
Total: 351,700 BTUH net capacity
Sensible: 316,700 BTUH net capacity

Flow Rate: 75.9 GPM

Entering Water Temperature: 45°F, 10°F rise

Pressure Drop: 25.1 ft of water

#### **ELECTRICAL INFORMATION**

460/3/60 Voltage with 65kAIC Short Circuit Current Rating

Locking Disconnect Switch

Electrical Data: 71.7 FLA, 89.6 WSA, 90 OCPD

#### CABINET SECTION

• Upflow Orientation with Front Return with Grille or Rear Return with Duct Connection

Standard Color: Black Gray Matte (Z-7021)

#### **CHILLED WATER COIL SECTION**

- 6 Row Aluminum Coil with Copper Tubes
- Face Area or Coil: 25.0 ft<sup>2</sup>
- 2-Way Valve Standard Pressure (150 psi)
- Insulated chilled water piping

#### CONTROL

- Integrated Controls and User Interface
- Color Touch Screen Display

### **FAN AND MOTOR SECTION**

Fan: Forward curved centrifugal with VSD

Motor: 15.0 HP Premium Efficiency

Airflow: 12,100 CFM

ESP: 1.5"

#### **FILTER SECTION**

Efficiency based on ASHRAE Standard 52.2

Rating: MERV 8

#### **HUMIDIFIER SECTION**

Infrared with Auto-Flush Humidification

Capacity: 22 lbs/hr

#### **REHEAT SECTION**

Electric Reheat – Three Stage

Capacity: 30 kW

#### **OPTIONAL ITEMS**

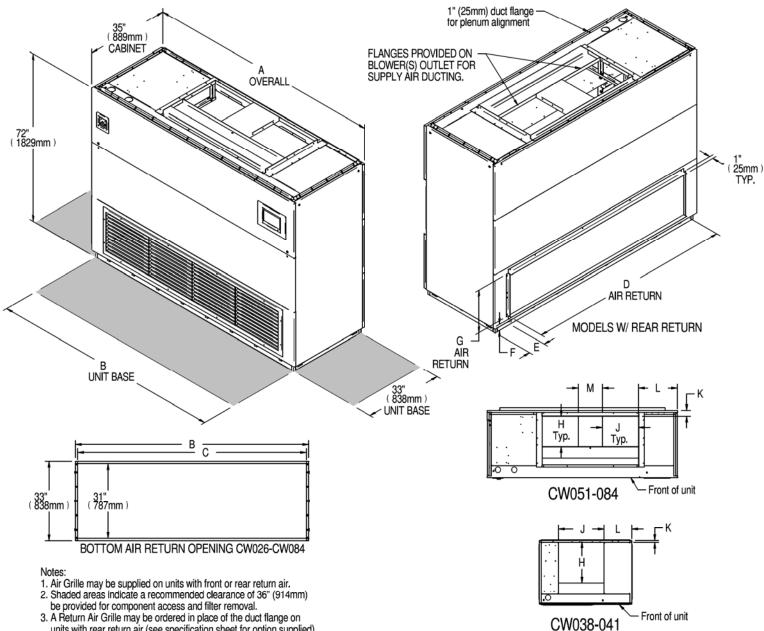
Dual Float Condensate Pump

 IntelliSlot Unity Card (IS-UNITY-DP) for web/BMS interface for remote monitoring and control via ground fault isolated RS-485 Modbus, BACnet IP/MSTP, Modbus IP and Web/SNMP.

PG1 Rev 10/10



# CABINET DIMENSIONAL DATA UPFLOW MODELS CW038 THRU CW084 W/ FORWARD CURVED BLOWERS



	3. A Return A units with	Air Grille may rear return a		
CHILLED	NUMBER			[
WATED	OE			

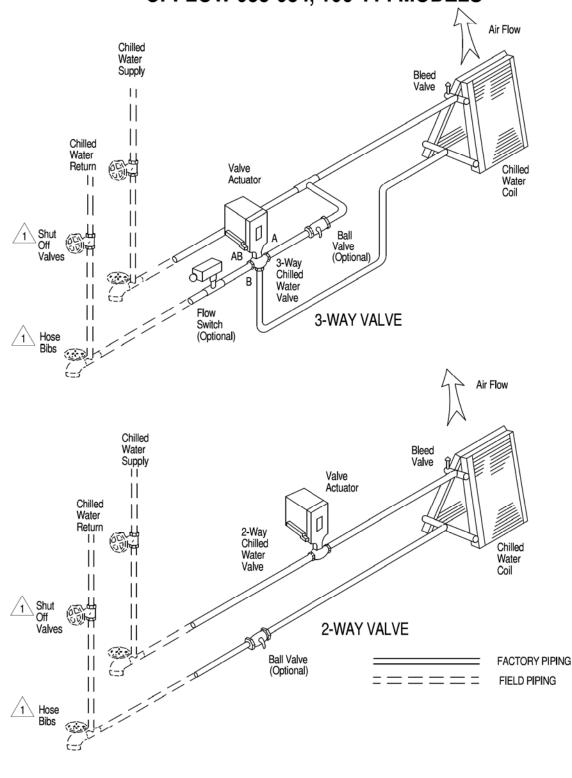
CHILLED	NUMBER					DI	MENSIO	NAL DATA	A inches (mm)					NET WEIGHT
WATER	OF		В	_	D	_	_	G	Н		K	_	М	lb. (kg)
MODEL	BLOWERS	A	, B			_	'	١	п	J	, r	٠ ا	IVI	ib. (kg)
CW038	1	50 (1270)	48 (1219)	46 (1168)	44 (1118)		5 (127)	18 (457)		18-5/8 (473)			N/A	795 (361)
CW041		30 (1270)	40 (1213)	40 (1100)	44 (1110)	3 (76)	0 (127)	10 (457)		10-5/0 (4/0)	1 (25)		N/A	855 (388)
CW051		74 (1880)	72 (1289)	70 (1778)	68 (1727)	, , ,	4 (102)	20 (508)	15-7/8 (403)	14-3/4 (375)	, ,	19-1/2 (495)	11 (279)	1090 (494)
CW060	(2)	74 (1000)	72 (1203)	70 (1770)	00 (1727)		14 (102)	20 (300)	15-770 (400)	14-0/4 (0/0)		13-1/2 (433)	11 (273)	1155 (524)
CW076	_	99 (2515)	97 (2464)	95 (2413)	86 (2184)	6.50 (165)	5 (127)	18 (457)		18-5/8 (473)	2 (51)		12-5/8 (321)	1320 (599)
CW084		33 (2313)	37 (2404)	33 (2410)	00 (2104)	0.50 (105)	0 (127)	10 (437)		10-5/0 (4/5)	2 (31)		12-5/0 (521)	1420 (644)

DPN003194 Page :1 /1

REV: 4 REV DATE: 6/17



# GENERAL ARRANGEMENT DIAGRAM UPFLOW 038-084, 106-114 MODELS



Notes:

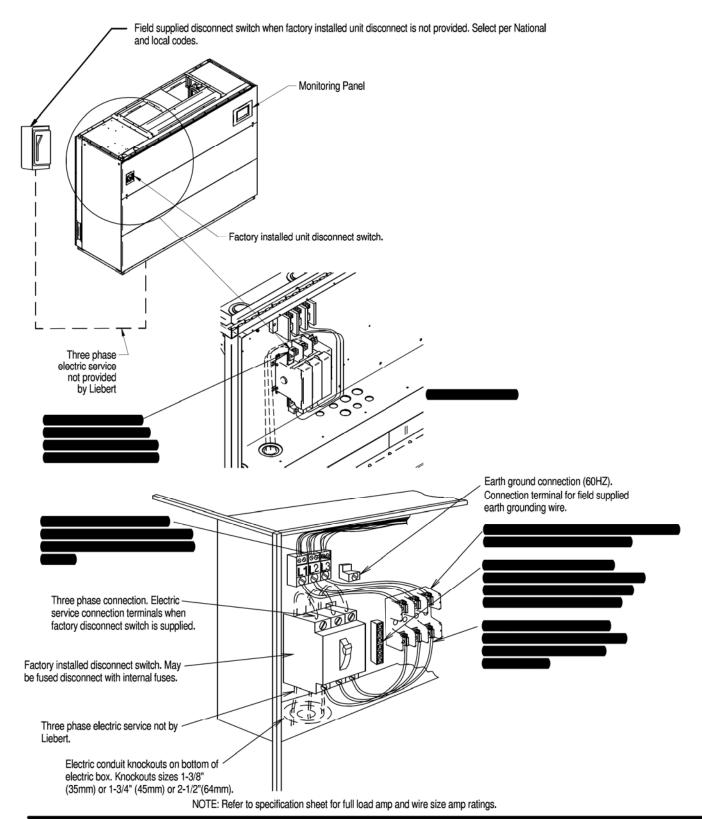
1. Components are not supplied by Liebert, but are required for proper circuit operation and maintenance.

Form No.: DPN001040\_REV4

REV: 3 REV DATE: 6/17



# ELECTRICAL FIELD CONNECTIONS UPFLOW MODELS CW038 - CW084 HIGH VOLTAGE

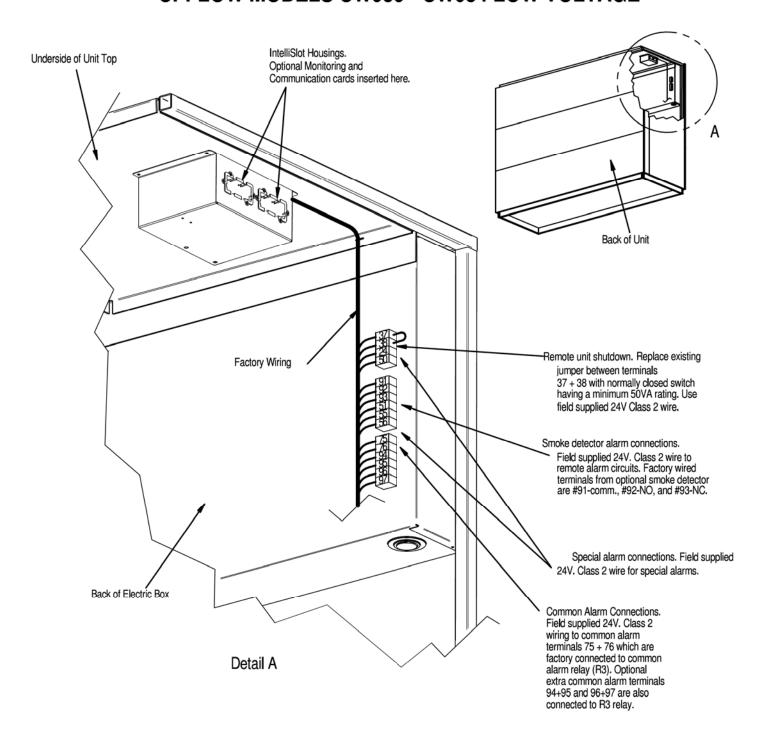


Form No.: DPN001040\_REV4

REV: 3 REV DATE: 6/17



# ELECTRICAL FIELD CONNECTIONS UPFLOW MODELS CW038 - CW084 LOW VOLTAGE



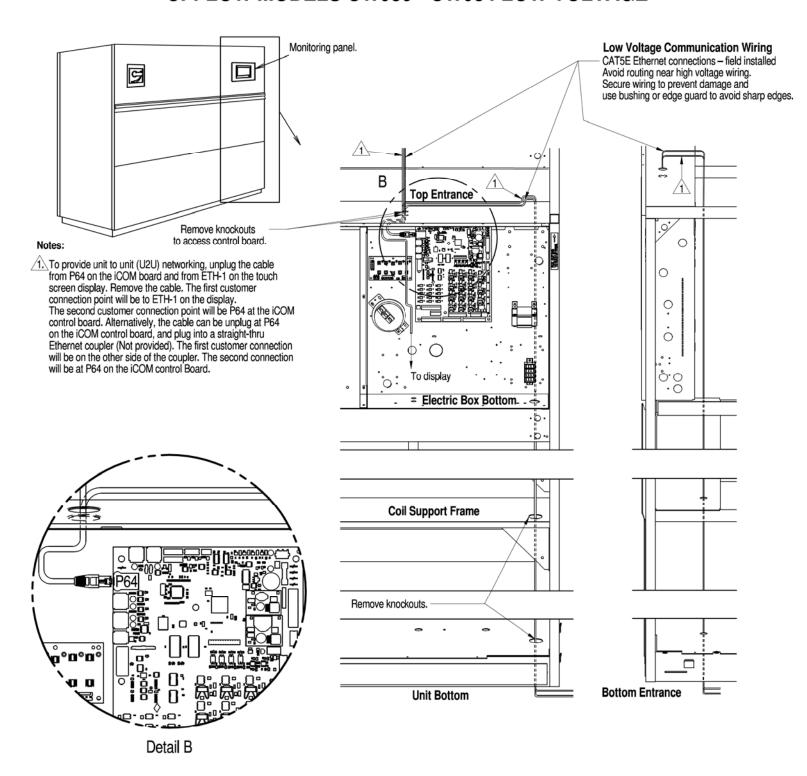
NOTE: REFER TO SPECIFICATION SHEET FOR FULL LOAD AMP. AND WIRE SIZE AMP. RATINGS

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Page :1 /2



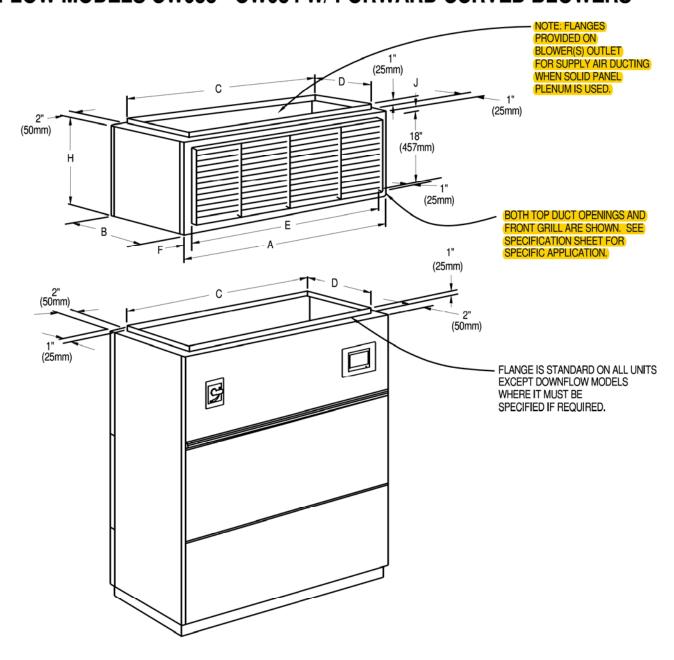
# ELECTRICAL FIELD CONNECTIONS UPFLOW MODELS CW038 - CW084 LOW VOLTAGE



NOTE: REFER TO SPECIFICATION SHEET FOR FULL LOAD AMP. AND WIRE SIZE AMP. RATINGS



# PLENUM DIMENSIONAL DATA UPFLOW MODELS CW038 - CW084 W/ FORWARD CURVED BLOWERS



Plenum Dimensional Data in. (mm)					Grill Free		
Fienum Dimensional Data III. (IIIII)					Area Sq. Ft		
Model	Α	В	С	D	Е	F	(Sq. Meters)
CW038, CW041	50 (1270)		46 (1168)		44 (1118)	3 (76)	4.29 (.40)
CW051, CW060	74 (1880)	34 (864)	70 (1778)	32 (813)	60 (1524)	7 (178)	5.85 (.54)
CW076, CW084	99 (2515)		95 (2413)		70 (1778)	14-1/2 (368)	6.83 (.63)

Plenum Height in. (mm)		
Н	J	
20 (508)	1 (25)	
22-3/4 (578)	2-3/8 (60)	
34-3/4 (883)	2-3/0 (00)	

DPN003204 REV: 3
Page:1/1 REV DATE: 6/17



# LIEBERT iCOM™

# PRODUCT INFORMATION UNIT MOUNTED DISPLAY



The Liebert iCOM™ display is a microprocessor 9 inch color touch screen in an ergonomic, aesthetically pleasing housing. The display and housing will be viewable while the unit accent panels are open or closed. The display can be easily detached to view while the panel is open.

**Menu Layout-** The menus will be broken out into two main menu screens: User screen and Service screen. The User screen contains the menus to access parameters required for basic unit control and setup. The Service screen is designed for service personal and provides access to advanced control setup features and diagnostic information.

**Password Protection-** The display will contain two unique passwords to protect against unauthorized changes. An auto hide/show feature allows the user to see applicable information based on the login used.

**Unit Backup and Restore-** The user shall have the ability to create safety copies of important control parameters. The display has the ability for the user to automatically backup unit configuration settings to internal memory or USB storage drive. Configuration settings may be transferred to another unit for a more streamlined unit startup.

**Parameter Download-** The display has the ability for the user to download a report that lists parameter names, factory default settings and user programmed settings in .csv format for remote reference.

Parameter Search- The display has search fields for efficient navigation and parameter lookup.

Setup Wizards- The display will contain step by step tutorials or wizards to provide easy setup of the control.

Form No.: DPN001040\_REV4

DPN003245 Page :1 /2 REV: 5 REV DATE: 7/17



# LIEBERT iCOM™

# PRODUCT INFORMATION UNIT MOUNTED DISPLAY

**Context Sensitive Help-** The display will have an onboard help database. The database will provide context sensitive help to assist with setup and navigation of the menus.

**Display Setup-** The user has the ability to configure the display information based on the specific user's preference. Language, units of measure, screen contrast, home screen layout, back light timer and the hide/show of certain readouts will be configurable through the display.

**Additional Readouts-** The display has the ability for the user to configure custom widgets on the main screen. Widget options will include items such as fan speed, call for cooling, call for free cooling, maintenance status, call for hot water reheat, call for electric reheat, call for dehumidification, call for humidification, airflow, static pressure, fluid flow rate and cooling capacity.

**Status LEDs-** The display will provide the user with the unit's operating status using an integrated LED. The LED will indicate if the unit has an active alarm; if the unit has an active alarm that has been acknowledged; or if the unit is on, off, or in a standby status.

**Unit Alarms** – All unit alarms are annunciated through both audio and visual cues, clearly displayed on the screen, automatically recorded in the event log, and communicated to optional IntelliSlot monitoring cards.

Event Log – The display will automatically store the last 400 unit-only events (messages, warnings, and alarms).

**Service Contact Information** – The display has the ability to store the local service or sales contact information.

**Upgradeable** – Display upgrades are performed through a USB connection.

**Unit-to-Unit (U2U) Communication** – Communication via private Ethernet network allows for advanced control functionality (Teamwork modes, sharing sensor data, Standby Rotation, Lead-Lag, and Cascade operation).

Form No.: DPN001040\_REV4

DPN003245 REV: 5
Page:2/2 REV DATE: 7/17



# LIEBERT® INTELLISLOT™ UNITY PLATFORM CARDS

Product Specification/Installation Guide



The Liebert IntelliSlot Unity Platform brings SNMP, BACnet IP, BACnet MSTP, Modbus TCP, Modbus RTU, YDN23 and Web management capability to many models of Vertiv's power and cooling equipment. The cards employ Ethernet and RS-485 networks to monitor and manage a wide range of operating parameters, alarms and notifications. The card also supports communication for LIFE™ Services by VERTIV.

#### **ADDITIONAL FEATURES**

- SNMPv1, SNMPv2c and SNMPv3 with MIB-II support
- HTTP/HTTPS 1.1
- BootP
- DHCP per RFC2131/2132
- Remote firmware updates via a Web browser
- IPv6 support for HTTP/HTTPS, DHCPv6, e-mail, SMS, SNMP v1/v2c/ v3 and Modbus TCP
- Liebert SN Environmental Sensor Support (Web, SNMP, SMS and SMTP): Temperature, Humidity, Door Closure, Contact Closure and Leak Detection: Liebert SN-2D, Liebert SN-3C, Liebert SN-L, Liebert SN-T, Liebert SN-TH, Liebert SN-Z01, Liebert SN-Z02 and Liebert SN-Z03

IntelliSlot Unity cards are a form, fit, and function replacement for several Liebert IntelliSlot Web and 485 cards.

## **COMPATABILITY** with Liebert Equipment

IntellSlot Card	Compatible with			
IS-UNITY-DP	Alber BDSU-50™	Liebert Deluxe System/3™	Liebert CXT3™	Liebert PeX™*
IS-UNITY-SNMP	Liebert APM™	Liebert DS™	Liebert GXT4™	Liebert PPC™
IS-UNITY-LIFE	Liebert APS™	Liebert DSE™	Liebert HPC™	Liebert RDC™
	Liebert Challenger	Liebert EPM™	Liebert HPC-S/M/R/W/Generic™	Liebert RX™
	3000™	Liebert EXC™	Liebert HPM™	Liebert XDC™
	Liebert CRV™	Liebert eXL™	Liebert NX™ 225-600 kVA	Liebert XDP™
	Liebert CW™	Liebert EXL™ S1	Liebert NXC™	Liebert XDP-Cray™
	Liebert DCL™	Liebert eXM™	Liebert NXL™ *	
	Liebert DCP™	Liebert FDC™	Liebert NXR™	
		Liebert FPC™	Liebert PCW™/PDX™	

<sup>\*</sup> YDN23 supported only for Liebert PeX and Liebert NXL.

#### LIEBERT® INTELLISLOT™ UNITY PLATFORM CARDS

Product Specification/Installation Guide

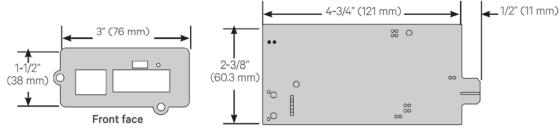


## **COMPATABILITY** with Communication Protocols

Liebert	Life	Communication Protocol							
IntelliSlot Card	Services Support	HTTP HTTPS	Velocity Protocol	Email	SMS	SNMP v1, v2c, v3	BACnet IP BACnet MSTP	Modbus TCP Modbus RTU	YDN23*
IS-UNITY-DP	1	1	1	1	1	1	✓	✓	1
IS-UNITY-SNMP	✓	✓	✓	1	1	1	_	_	_
IS-UNITY-LIFE	1	1	1	1	1	_	_	_	_

<sup>\*</sup> YDN23 supported only for Liebert PeX and Liebert NXL.





### **SPECIFICATIONS**

Power Requirements	DC Inputs	7 to 12 VDC
	Power Consumptions:	3.6 W maximum
Dimensions, W x D x H	2.97 x 5.2 x 1.45 in. (75.5 x 15 x 37 mm)	
Weight (assembled)	Net:	7 oz (0.2 kg)
	Shipping:	1.3 lb (0.6 kg)
Ambient Operating Environment	32 to 104°F (0 to 40°C); 10% to 90% RH	(non-condensing)
Ambient Storage Temperature	-4 to 140°F (-20 to 60°C)	
Communication Ports	Ethernet Communication	RJ-45 (LIFE™ Services requires a network connection to the Internet)
	RJ-45 (RJ-45 to 2-position terminal-blo	ock adapter)

## **WIRING**

10/100 Mb/s Ethernet connector	Standard Category 5E Cable	328 ft. (100m)
RJ-45 - One-Wire Connector	Liebert® Integrated One-Wire Sensor Cable or 2m Cat 5E to Modular 1-Wire	65.6 ft. (20m)

## VertivCo.com | Vertiv Headquarters, 1050 Dearborn Drive, Columbus, OH, 43085, USA

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(Mercantile Customers Only)

# **Application to Commit**

Energy Efficiency/Peak Demand Reduction Programs

Case No.:EL-EEC	
State of Ghi():	20-1217-EL-EEC
Andrew Long, Affiant, that:	being duly sworn according to law, deposes and says
1. I am the duly authorized representation	entative of:
GE Aircraft Engin	MYS ME AND ANY APPLICABLE NAME(S) DOING BUSINESS AS]
including any exhibits and attach	Il the information contained in the foregoing application, aments. Based upon my examination and inquiry of those for obtaining the information contained in the application, I e, accurate and complete.
	s which may be imposed under Ohio Revised Code 02, 4903.03, and 4903.99 for submitting false information.
SIGNATURE OF AFFIANT & TITLE	
Sworn and subscribed before me to	this ghat day of June, 2020  MONTH  John Rump F - A Hoiney  PRINT NAME AND TITLE
SIGNATURE OF OFFICIAL ADMINISTERING OF	ARIAL
My commission expires on	NOTARY PUBLIC • STATE OF OHIO  My commission has no expiration date  Section 147 03 O P. O.

Section 147.03 O.R.C.





phone: 866.380.9580 fax: 980.373.9755

customprocessing@duke-energy-energyefficiency.com

6/8/2020

Andy Long
GE AIRCRAFT ENGINES - 8450086001
1 NEUMANN WAY
CINCINNATI OH 45215-1915

Subject: Your Application for a Duke Energy Mercantile Self-Direct Rebate CMO19-0000166731

Dear Andy Long,

Thank you for your Duke Energy Mercantile Self Direct rebate application. As noted in the Energy Conservation Measure (ECM) chart on page 2, a total rebate of \$32,789.00 has been proposed for your project completed in the 2018 calendar years. All Self Direct Rebates are contingent upon approval by the Public Utilities Commission of Ohio (PUCO).

At your earliest convenience, please indicate if you accept this rebate by:

- providing your signature on Page 2
- completing the PUCO-required affidavit on Page 3

Please return the documents to my attention via fax at 513.629.5572 or email to customprocessing@duke-energy-energyefficiency.com. Upon receipt, Duke Energy will submit the necessary documentation to PUCO. Following PUCO's approval, Duke Energy will remit payment.

We value your business and look forward to working with you on this and future energy efficiency projects. We hope you will consider our Smart \$aver® incentives, when applicable. Please contact me if you have any questions.

Sincerely,

Andrew Taylor Program Manager Custom Incentives

CC:

Teri Morris Kelly Rogers



GE AIRCRAFT ENGINES - 8450086001 - CMO19-0000166731 Custom Incentive Offer Letter 6/8/2020 Page 2

# Please indicate your response to this rebate offer within 30 days of receipt.

integrate the energy efficiency projects listed on the following pages into Duke Energy's peak demand reduction, demand response and/or energy efficiency programs.  Additionally, GE AIRCRAFT ENGINES - 8450086001 also agrees to serve as joint applicant in any future fillings necessary to secure approval of this arrangement as required by PUCO and to comply with any information and reporting requirements imposed by rule or as part of that approval.  Finally, GE AIRCRAFT ENGINES - 8450086001 affirms that all application information submitted to Duke Energy pursuant to this rebate offer is true and accurate. Information in question would include, but not be limited to, project scope, equipment specifications, equipment operational details, project costs, project completion dates, and the quantity of energy conservation measures installed.  If rebate is accepted, will you use the monies to fund future energy efficiency and/or demand reduction projects? Yes \( \subseteq \text{No} \)			
By accepting this rebate, GE AIRCRAFT ENGINES - 8450086001 affirms its intention to commit and integrate the energy efficiency projects listed on the following pages into Duke Energy's peak demand reduction, demand response and/or energy efficiency programs.  Additionally, GE AIRCRAFT ENGINES - 8450086001 also agrees to serve as joint applicant in any future fillings necessary to secure approval of this arrangement as required by PUCO and to comply with any information and reporting requirements imposed by rule or as part of that approval.  Finally, GE AIRCRAFT ENGINES - 8450086001 affirms that all application information submitted to Duke Energy pursuant to this rebate offer is true and accurate. Information in question would include, but not be limited to, project scope, equipment specifications, equipment operational details, project costs, project completion dates, and the quantity of energy conservation measures installed.  If rebate is accepted, will you use the monies to fund future energy efficiency and/or demand reduction projects? Yes \( \sum \) No	⊠Rebate is accepted.	Rebate is declined.	
filings necessary to secure approval of this arrangement as required by PUCO and to comply with any information and reporting requirements imposed by rule or as part of that approval.  Finally, GE AIRCRAFT ENGINES - 8450086001 affirms that all application information submitted to Duke Energy pursuant to this rebate offer is true and accurate. Information in question would include, but not be limited to, project scope, equipment specifications, equipment operational details, project costs, project completion dates, and the quantity of energy conservation measures installed.  If rebate is accepted, will you use the monies to fund future energy efficiency and/or demand reduction projects?   Yes  No	integrate the energy efficiency projects I	listed on the following pages into Duk	
Energy pursuant to this rebate offer is true and accurate. Information in question would include, but not be limited to, project scope, equipment specifications, equipment operational details, project costs, project completion dates, and the quantity of energy conservation measures installed.  If rebate is accepted, will you use the monies to fund future energy efficiency and/or demand reduction projects?   Yes  No	filings necessary to secure approval of t	this arrangement as required by PUCC	and to comply with any
projects? ☒ Yes ☐ No	Energy pursuant to this rebate offer is true limited to, project scope, equipment spe	e and accurate. Information in question ecifications, equipment operational det	would include, but not be
Indu Long Andrew Long 6/9/20 Customer Signature Printed Name Date		nonies to fund future energy efficiency	and/or demand reduction
	Indu Lony Customer Signature	Andrew Long Printed Name	6/9/20 Date



GE AIRCRAFT ENGINES - 8450086001 - CMO19-0000166731 Custom Incentive Offer Letter 6/8/2020 Page 3

# **Proposed Rebate Amounts**

Energy Conservation Measure	Proposed Rebate Amount
High Efficiency CRAC unit in GE Aviation Data Center	\$32,789.00 per project X 1
Total	\$32,789.00
	High Efficiency CRAC unit in GE Aviation Data Center