Legal Department

American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373
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June 28, 2013

Chairman Todd Snitchler
Ohio Power Siting Board
Public Utilities Commission of Ohio
180 East Broad Street
Columbus, OH 43215-3793

Yazen Alami
Regulatory Services
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yalami@aep.com

Re: **In the Matter of Mako Rick and Ohio Power Company for Approval of a Special Arrangement Agreement with a Mercantile Customer**) **Case No. 13-1389-EL-EEC**

Dear Chairman Snitchler,

Attached please find the Joint Application of Ohio Power Company (OPCo) and mercantile customer Mako Rick for approval of a Special Arrangement of the commitment of energy efficiency/peak demand reduction (EE/PDR) resources toward compliance with the statutory benchmarks for 2013.

Amended Substitute Senate Bill 221 sets forth in R.C. 4928.66 EE/PDR benchmarks that electric distribution utilities shall be required to meet or exceed. The statute allows utilities to include EE/PDR resources committed by mercantile customers for integration into the utilities programs to be counted toward compliance with a utility's EE/PDR benchmarks. The statute also enables the Commission to approve special arrangements for mercantile customers that commit EE/PDR resources to be counted toward compliance with EE/PDR benchmarks.

The Commission's Order in Case No. 10-834-EL-EEC, established a streamlined process to expedite review of these special arrangements by developing a sample application process for parties to follow for consideration of such programs implemented during the prior three calendar years. Attached is OPCo's version of that application and accompanying affidavit. Any confidential information referenced in the Joint Application has been provided to the Commission Staff for filing in Commission Docket 10-1799-EL-EEC, under a request for protective treatment. OPCo respectfully requests that the Commission treat the two cases as associated dockets.

Cordially,

/s/ Yazen Alami
Yazen Alami

Attachments

Ohio | Public Utilities Commission

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

Case No.: 13-1389-**EL-EEC**

Mercantile Customer: MAKO RICK

Electric Utility: Ohio Power

Program Title or Description: AEP Ohio Business Incentives for Energy Efficiency: Self Direct Program

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 ee-pdr@puc.state.oh.us.

Section 1: Company Information

Name: MAKO RICK

Principal address: 240 E. 3rd St., Uhrichsville, OH 44683

Address of facility for which this energy efficiency program applies: 240 E 3rd St, Uhrichsville, Oh 44683-1821

Name and telephone number for responses to questions:

Jo Mako, Mako Rick, (740) 922-1662

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

☒ The customer uses more than seven hundred thousand kilowatt hours per year at our facility. (Please attach documentation.)

See Confidential and Proprietary Attachment 4 – Calculation of Rider Exemption and UCT which provides the facility consumption for the last three years, benchmark kWh, and the last 12 months usage.

☐ The customer is part of a national account involving multiple facilities in one or more states. (Please attach documentation.) When checked, see Attachment 6 – Supporting Documentation for a listing of the customer's name and service addresses of other accounts in the AEP Ohio service territory.

Section 2: Application Information

A) The customer is filing this application (choose which applies):

☐ Individually, on our own.

☒ Jointly with our electric utility.

B) Our electric utility is: Ohio Power Company

The application to participate in the electric utility energy efficiency program is "Confidential and Proprietary Attachment 3 – Self Direct Program Project Completed Application."

C) The customer is offering to commit (choose which applies):

☐ Energy savings from our 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 demand reduction 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 (choose whichever applies):

☐ 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 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): 12/2/2010

☐ Behavioral or operational improvement.

B) Energy savings achieved/to be achieved by your energy efficiency program:

1) If you checked the box indicating that your 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 you 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: kWh

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

3) If you checked the box indicating that your 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:

Unit Quantity (watts) = Existing (watts x units) – Installed (watts x units)

kWh Reduction (Annual Savings) = Unit Quantity x (Deemed kWh/Unit)

Annual savings: 127,411 kWh

See Confidential and Proprietary Attachment 5 – Self Direct Program Project Calculation for annual energy savings calculations and 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed.

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

The less efficient new equipment is the minimum required by Ohio State code or Federal Standard whichever is more stringent. For those measures where no code applies the baseline equipment is assumed to be the least efficient equipment available in the marketplace or standard practice, whichever results in the most conservative annual savings. Any information available describing the less efficient new equipment option is provided in 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures.

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.

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 (choose which applies):

- Choose one or more of the following 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 coincident peak-demand savings are permanent installations that reduce demand through energy efficiency and were installed on the date specified in Section 3 A above.

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

Unit Quantity (watts) = Existing (watts x units) – Installed (watts x units)

KW Demand Reduction = Unit Quantity (watts) x (Deemed KW/Unit (watts))

22.8 kW

See Confidential and Proprietary Attachment 5 – Self Direct Program Project Calculation for peak demand reduction calculation, and 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed.

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.

Note: If Option 2 is selected, the application will not qualify for the 60-day automatic approval. All applications, however, will be considered on a timely basis by the Commission.

A) The customer is applying for:

☒ Option 1: A cash rebate reasonable arrangement.

OR

☐ Option 2: An exemption from the cost recovery mechanism implemented by the electric utility.

OR

☐ Commitment payment

B) The value of the option that the customer is seeking is:

Option 1: A cash rebate reasonable arrangement, which is the lesser of (show both amounts):

☒ A cash rebate of $ 6,096.44. (Rebate shall not exceed 50% project cost. Attach documentation showing the methodology used to determine the cash rebate value and calculations showing how this payment amount was determined.)

See Confidential and Proprietary Attachment 5 – Self Direct Program Project Calculation for incentive calculations for this mercantile program.

Option 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 an ongoing efficiency program that is practiced by our organization. (Attach documentation that establishes your organization's ongoing efficiency program. In order to continue the exemption beyond the initial 24 month period your organization 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 skip Subsection 2)

☒ Utility Cost Test (UCT) . The calculated UCT value is: 6.8 (Skip to Subsection 2.)

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 _____.

Our program costs were _____.

The utility's 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 $ 46,522.28

The utility's program costs were $ 764.47

The utility's incentive costs/rebate costs were $ 6,096.44.

Section 7: Additional Information

Please attach the following supporting documentation to this application:

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

  See Attachment 1 - Self Direct Project Overview and Commitment for a description of the project. See Attachment 6 – Supporting Documentation, for the specifications of the replacement equipment 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed. Due to the length of time since the equipment replacement, the make, model and year of the replaced equipment is not available.

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

  1) any confidentiality requirements associated with the agreement;

     See Attachment 2 – Self Direct Program Project Blank Application including Rules and Requirements. All confidentially requirements are pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 – Self Direct Program Project Completed Application.)

  2) a description of any consequences of noncompliance with the terms of the commitment;

     See Attachment 2 – Self Direct Program Project Blank Application including Rules and Requirements. All consequences of noncompliance are pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 – Self Direct Program Project Completed Application.

  3) a description of coordination requirements between the customer and the electric utility with regard to peak demand reduction;

     None required because the resources committed are permanent installations that reduce demand through increased efficiency during the Company's peak summer demand period generally defined as May through September and do not require specific coordination and communication to provide demand reduction capabilities to the Company.

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,

   See Attachment 2 – Self Direct Program Blank Application including Rules and Requirements granting such permission pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 – Self Direct Program Project Completed Application.

5) a commitment by you to provide an annual report on your energy savings and electric utility peak-demand reductions achieved.

   See Attachment 1 - Self Direct Project Overview and Commitment for the commitment to comply with any information and compliance reporting requirements imposed by rule or as part of the approval of this arrangement by the Public Utilities Commission of Ohio.

- 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.

  The Company applies the same methodologies, protocols, and practices to Self Direct Program retrospective projects that are screened and submitted for approval as it does to prospective projects submitted through its Prescriptive and Custom Programs. The Commission has not published a technical reference manual for use by the Company so deviations can not be identified. The project submitted is a prescriptive project and energy savings are determined as described in Confidential and Proprietary Attachment 5 - Self Direct Program Project Calculation, and 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed.

Ohio | Public Utilities Commission

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

Case No.: 13-1389-EL-EEC

State of Ohio :

Brian Larcey, Affiant, being duly sworn according to law, deposes and says that:

1. I am the duly authorized representative of:

   KEMA Services, Inc agent of Ohio Power

2. I have personally examined all the information contained in the foregoing application, including any exhibits and attachments. Based upon my examination and inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete.

Signature of Affiant & Title — Energy Efficiency Engineer

Sworn and subscribed before me this 16th day of June, 2013 Month/Year

Signature of official administering oath

Angie Doan, Outreach Manager
Print Name and Title

My commission expires on 1-13-2016

NOTARIAL SEAL STATE OF OHIO

Angie Doan
Notary Public, State of Ohio
My Commission Expires 01-13-2016

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Self Direct Project Overview & Commitment

The Public Utility Commission of Ohio (PUCO) will soon review your application for participation in AEP Ohio's Energy Efficiency/Peak Demand Response program. Based on your submitted project, please select by initialing one of the two options below, sign and fax to 877-607-0740.

Customer Name	**MAKO RICK**	
Project Number	**AEP-12-08796**	
Customer Premise Address	**240 E 3RD ST, UHRICHSVILLE, OH 44683-1821**	
Customer Mailing Address	**240 E. 3rd St., Uhrichsville, OH 44683**	
Date Received	**11/16/2012**	
Project Installation Date	**12/2/2010**	
Annual kWh Reduction	**127,411**	
Total Project Cost	**$22,457.94**	
Unadjusted Energy Efficiency Credit (EEC) Calculation	**$8,128.59**	
Simple Payback (yrs)	**2.7**	
Utility Cost Test (UCT)	**6.8**	
		Please Choose One Option Below and Initial
Option 1 - Self Direct EEC: 75%	**$6,096.44**	☑ **Initial:** KM
Option 2 - EE/PDR Rider Exemption	**N/A Months (After PUCO Approval)**	☐ **Initial: N/A**

Note: *This is a one time selection. By selecting Option 1, the customer will receive payment in the amount stated above. Selection of Option 2: EE/PDR rider exemption, will result in the customer not being eligible to participate in any other energy efficiency programs offered by AEP Ohio during the period of exemption. In addition, the term of Option 2: EE/PDR rider exemption is subject to ongoing review for compliance and could be changed by the PUCO.*

If Option 1 has been selected, will the Energy Efficiency Funds selected help you move forward with other energy efficiency projects?

____YES ____NO

Project Overview:

The Self Direct (Prescriptive) project that the above has completed and applied is as follows.

Lighting Power Density 37% below ASHRAE 90.1 2007
Day light sensors controlling 8,073 watts
1-7.7 ton RTU 12.5 EER
1-6 ton RTU 12 EER

The documentation that was included with the application proved that the energy measures applied for were purchased and installed.

By signing this document, the Mercantile customer affirms its intention to commit and integrate the above listed energy efficiency resources into the utility's peak demand reduction, demand response, and energy efficiency programs. By signing, the Mercantile customer also agrees to serve as a joint applicant in any filings necessary to secure approval of this arrangement by the Public Utilities Commission of Ohio, and comply with any information and compliance reporting requirements imposed by rule or as part of that approval.

Ohio Power Company

By: Jon F. Williams

Title: Manager

Date: 6/14/2013

MAKO RICK

By: Rick Mako

Title: Vice Pres

Date: 6-11-13

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Self-Direct Program Project Application

RETROFIT AND NEW CONSTRUCTION

Step 1: Check Project, Equipment, and Customer Eligibility

- ✓ Project must be a facility improvement that results in a permanent reduction in electrical energy usage (kWh).
- ✓ Measures applying for credits must have a minimum operating hours of 2,245 hours per year. Projects with annual energy (kWh) savings greater than the facility's annual energy (kWh) consumption will not be eligible.
- ✓ All installed equipment must meet or exceed the specifications given in the application and be installed in facilities served by AEP Ohio: Customer must have a valid AEP Ohio account number on an eligible AEP Ohio non-residential rate (see terms and conditions for list of eligible rates eligibility requirements).

Step 2: Submit Application

- ✓ Fill out the Customer Information form and the Worksheet for the measures that you installed. You may submit the application via mail, fax, or e-mail.

Submit your application to:
Email: gridsmartohio@kema.com

AEP Ohio Business Incentives for Energy Efficiency
2740 Airport Drive Suite 160
Columbus, OH 43219
Call: (877) 607-0739
Fax: (877) 607-0740

Visit our web site at gridsmartohio.com

- ✓ Submit a completed application prior to November 16, 2012 for any projects completed on or after January 1, 2009. Any applications received after the dealines may not be submitted to the PUCO by December 31st, 2012 and could jeopardize approval of any credit. Complete the checklist page and attach the documentation listed: customer information page, a signed Final Payment Agreement page, measure worksheet, scope of work (type, quantity, and wattage of old and new equipment), dated and itemized invoices for the purchase and installation of all equipment installed and specification sheets for all equipment installed showing that it meets the program specifications.

Step 3: Project Review

- ✓ The program team will review your Application. For some projects, an inspection will be part of the review, and you will be contacted to schedule it.
- ✓ After approval by AEP Ohio, the customer will be sent an Overview and Commitment form to sign for all self-direct projects. After the Overview and Commitment form is returned the project will be submitted to the Public Utilities Commission of Ohio (PUCO) for consideration. The PUCO will assign case number and review the project details that were prepared by AEP Ohio. The PUCO may request additional information, approve or reject the energy efficiency credits.

Step 4: Receive Energy Efficiency Credits

- ✓ The program team will issue the energy efficiency credits, within four to six weeks after PUCO project approval.
- ✓ In lieu of a one-time energy efficiency credit, you may elect to seek an exemption from the Energy Efficiency/Peak Demand Reduction (EE/PDR) Rider for the associated electric account(s) for a defined period of time as stated on this Application. For this exemption the Energy Efficiency Efficiency Credit amount (Option 1) is compared to the estimated value of the estimated EE/PDR obligation (Option 2), as calculated by AEP Ohio. The value of Option 2 will be approximately equal to the value of Option 1. If exemption is elected, the affective account is not eligible for other programs offered by AEP Ohio during the exemption period. Unless additional resources are committed, you will, after the specified number of months exempted, be again subject to the EE/PDR Rider. New Construction projects are not eligible to elect Option 2. Major Renovation projects that do not have a representative billing history for three years prior to the project installation are also not eligible to elect Option 2.
- ✓ If the energy efficiency credit is elected, you remain in the EE/PDR rider for the period of time that an exemption would have been in effect and may also participate in the AEP Ohio programs. However, during that period of time, you will not be allowed to elect the Option 2 exemption for any additional self-direct projects for the same account number.
- ✓ You are allowed and encouraged to consider using all or a portion of the energy credits, as received from AEP Ohio under this program, to help fund other energy efficiency and demand reduction projects you choose to initiate in the future. Future projects can also qualify for credits under the Prescriptive or Custom programs.

If you are viewing this document in Microsoft Excel, please note that each section of the application is accessible through the tabs at the bottom of the Excel window. Highlighted cells are for inputting information.

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Self-Direct Program
Project Application

APPLICATION CHECKLIST

APPLICATION

Required Attachments

- ☐ Customer/Contractor Information (Completed and Signed)
- ☐ Completed Forms for Energy Efficiency Credits Requested AND Signed Final Payment Agreement Page
- ☐ Itemized Invoices
- ☐ Equipment Specifications
- ☐ Scope of Work
- ☐ W-9 (LLC, Individual, Partnership, Property Management Companies)

Worksheets

- ☐ Lighting
- ☐ HVAC
- ☐ Refrigeration
- ☐ Motors and VFD
- ☐ Custom

Application Date: _____

Completion Date: _____

Project Cost: _____

**Incomplete applications will delay processing and energy efficiency credits.*

Please complete and submit forms for above checked boxes.

Please fill out if this is a revised submittal

ORIGINAL SUBMITTAL DATE: _____

APPLICATION NUMBER (IF KNOWN): _____

AEP Ohio Business Incentives Program for Energy Efficiency
2740 Airport Drive Suite 160
Columbus, OH 43219

Phone: (877) 607-0739
Fax: (877) 607-0740
gridsmartohio@kema.com
www.gridsmartohio.com

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Self-Direct Program Project Application

TERMS AND CONDITIONS

AEP Ohio is offering prescriptive and custom incentives under the AEP Ohio Business Incentives for Energy Efficiency program to offer the implementation of past cost-effective energy efficiency improvements for non-residential (commercial and industrial) customers. AEP Ohio provides energy efficiency credits (EEC) for the purchase and installation of qualifying cost effective equipment in the customer's facility under the Terms and Conditions provided in this application and subject to regulatory approvals. Energy Efficiency credits will only be provided in the form of a check or an Energy Efficiency/Peak Demand Reduction (EE/PDR) Rider exemption under this program.

Please note that funds are limited and subject to availability.

All applications are subject to review and approval by AEP Ohio, its contractor(s)/agent(s), and the Public Utility Commission of Ohio (PUCO) prior to any EEC payments or exemptions from the EE/PDR rider in this program. Funds are limited and subject to availability.

Program Effective Dates
AEP Ohio Business Incentives for Energy Efficiency program EEC are offered until approved funds are exhausted or November 16th of each program year, whichever comes first. The effective dates of the current program year and application submittal requirements are as follows:

- Self-direct projects are projects completed since 1/1/2009. Self direct projects are eligible to apply for EEC with this application. Future projects that are not yet completed should apply on the Prescriptive/Custom application.
- All 2012 AEP Ohio Business Incentives for Energy Efficiency program Applications should be received no later than November 16, 2012. Any applications received after the deadlines may not be submitted to the PUCO by December 31st, 2012 and could jeopardize approval of any incentive. AEP Ohio reserves the right to extend or shorten this timeline.
- Subsequent program year budgets and plans will be made available towards the end of the existing program year. AEP Ohio currently has filed with the PUCO to offer this program through the 2014 program year.

Program and Project Eligibility
The Self-Direct Program applies to customer facilities served by AEP Ohio's retail electric rates who meet the minimum energy usage requirements of 700,000 kWh per year or who are part of a national account involving multiple facilities in one or more states.
The AEP Ohio Business Incentives for Energy Efficiency program offers both prescriptive credits for some of the more common energy efficiency measures and custom credits for those eligible improvements not included on the list of prescriptive measures. Program credits are available under the AEP Ohio Business Incentives for Energy Efficiency program to include non-residential accounts served on AEP Ohio's regulated retail rates. Qualifying projects must be installed in a facility in AEP Ohio's electric service territory in Ohio. These credits are available to all non-residential customers who pay into the Energy Efficiency and Peak Demand Response (EE/PDR) rider and receive their electricity over AEP Ohio wires, regardless which retail electric supplier the customer has chosen to purchase power. A customer may neither apply for nor receive incentives for the same product, equipment or service from more than one utility.

Custom projects must involve measures, which result in a reduction in electric energy usage due to an improvement in system efficiency. Projects that result in reduced energy consumption without an improvement in system efficiency are not eligible for a custom credit. The project simple payback prior to the incentive payment generally should fall between 1 to 7 years, or pass cost effectiveness test(s) determined by AEP Ohio to qualify for an incentive. Incentives are calculated based on first-year energy savings and peak demand reduction. Peak demand reduction is defined as the reduction in average load over the Performance Hours by the replacement of existing electrical equipment with more efficient electrical equipment. Peak Performance Hours is defined as the time between June 1st and August 31st on weekday, non-holidays, between the hours 3:00 PM and 6:00 PM Eastern Time.

Projects involving measures covered by the prescriptive credit portion of the program are not eligible for a custom credit. However, the applicant has the option to apply for a custom incentive for whole building integrated projects or systems, even if they include prescriptive measures. The prescriptive elements may be capped at the deemed savings and/or incentive level.

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Self-Direct Program Project Application

TERMS AND CONDITIONS

Project requirements under the AEP Ohio Business Incentives for Energy Efficiency program include the following:

- Projects must involve a new facility improvement that results in a permanent reduction in electrical energy usage (kWh).
- Projects that are NOT eligible for a credit include the following:
  - Fuel switching (e.g. electric to gas or gas to electric)
  - Changes in operational and/or maintenance practices or simple control modifications not involving capital costs
  - Removal or termination of existing processes, facilities, and/or operations.
  - On-site electricity generation
  - Projects involving gas-driven equipment in place of or to replace electric equipment (such as a chiller)
  - Projects focused primarily on power factor improvement
  - Projects that involve peak-shifting (and not kWh savings)
  - Renewables (Please visit www.gridsmartohio.com for Renewables Program)
  - Are required by state or federal law, building or other codes, or are standard industry practice
  - Are easily reverted/removed or are installed entirely for reasons other than improving energy efficiency
  - Include other conditions to be determined by AEP Ohio
  - Renewables (Please visit www.gridsmartohio.com for Renewables Program)
- Any measures installed at a facility must produce verifiable and persistent energy reduction and must be sustainable and provide 100% of the energy benefits as stated in the Application for a period of at least five (5) years or for the life of the product, whichever is less. If the Customer ceases to be a delivery service customer of AEP Ohio or removes the equipment or systems at any time during the 5-year period or the life of the product, the Customer may be required to return a prorated amount of incentive funds to AEP Ohio.
- Customer cannot apply for incentives for future projects and elect after the fact to apply for credits under this program.
- Confidential information contained in any documents associated with this application will be protected from public filings. However, this information may be disclosed to the Public Utilities Commission of Ohio for further review and approval.
- Used or rebuilt equipment is generally NOT eligible for an incentive.
- All installed equipment must meet state, federal, and local codes and requirements.
- Costs associated with internal labor are not eligible.
- Projects must be installed on the AEP Ohio electric account in Ohio served by an eligible electric rate type listed on the application.
- Equipment must be purchased, installed, and operating (or capable of operating in the case of seasonal uses) prior to submitting a final application for an incentive.
- AEP Ohio will issue incentive payments in the form of checks, not utility bill credits.
- The incentive is paid as a one-time, one-program offer and cannot be combined with incentive payments from other AEP Ohio programs. The customer may be eligible to participate in other programs offered by AEP Ohio, as long as no project receives more than one incentive.

PROGRAM ENERGY EFFICIENCY CREDITS	
Energy efficiency cerdit levels for one-year energy savings	See tables for prescriptive credits. Custom credits $0.08/kWh X 75%
Minimum/Maximum simple payback before energy efficiency credit applied	Must pass cost effectiveness test(s) (determined by AEP Ohio). Generally between 1-7 years.
Maximum payout	75% of 50% of the total cost (additional measure caps may apply)
Energy efficiency credit levels for projects completed since 1/1/2009	calculated amount on the Prescriptive or Custom worksheets attached and subject to funding limits
Credit Limit	See Incentive Limits and Tiering section
Credit Calculation Order	Measure credit caps are applied first. Project cost credit limits are applied second. Credit tiering is applied third. And 75% factor applied to credit last.

AEP OHIO
A unit of American Electric Power

Self-Direct Program
Project Application

TERMS AND CONDITIONS

Energy Efficiency Credit Limits

For both the Prescriptive and Custom measures in this application, the total energy efficiency credits shall be 75% the lesser of: 1) The calculated credit as approved by AEP Ohio, or 2) 50% of Total Project Cost (not including internal labor cost). In calculating the savings and energy efficiency credits for Custom measures, please contact AEP Ohio Business Incentives for Energy Efficiency Program office to determine appropriate baseline for savings.

Incentive Limits and Tiering

- The limit for each self-direct project is $225,000.
- The limit for each business entity (corporation, LLC, partnership, etc) is based on their tariff, indicated below.

TARIFF	LIMIT PER BUSINESS ENTITY
General Service Tariffs 1, 2, 3 & 4	$900,000 per year

- A business entity with facilities in both categories can qualify for both limits. All facilities served in one category for a business entity are combined to determine the limit.
- The total credit paid for any self direct application cannot exceed 50% of the total project cost (not including internal labor). In addition to the above project cost limit, credit payment rates vary when a customer's calculated credit exceeds the tiers listed below:
- **Tier 1** $0 - $100,000 = 100% of eligible calculated credit value
- **Tier 2** $100,001 - $300,000 = 50% of eligible calculated credit value
- **Tier 3** $300,001 - $500,000 = 25% of eligible calculated credit value
- **Tier 4** $500,001 - Beyond = 10% of eligible calculated credit value

Application

Application should be submitted by November 16, 2012 for any projects completed or or after Jan 1, 2009 or later. Any applications received after the deadlines may not be submitted to the PUCO by November 16, 2012 and could jeopardize approval of any incentive. Project documentation, such as copies of dated invoices for the purchase and installation of the measure and/or product specification sheets, is required. AEP Ohio reserves the right to request additional backup information, supporting detail, calculations, manufacturer specification sheets or any other information to any credit payment.

The location or business name on the invoice must be consistent with the application information. Applications shall all required documentation should be received by November 16, 2012 to be applicable for the 2012 program year.

A signed application with documentation verifying installation of the project including, but not limited to, equipment, invoices, approvals, and other related information must be submitted to AEP Ohio prior to application approval.

The project invoice should provide sufficient detail to separate the project cost from the cost of other services such as repairs and building code compliance. AEP Ohio reserves the right to request additional supporting documentation as deemed necessary to ensure measure eligibility and verify that the expected energy savings will occur. Confidential information contained in any documents associated with this application will be protected from public filings. However, this information could include: equipment purchase dates, installation dates, proof that the equipment is operational, manufacturer specifications, warranty information, and proof of customer co-payment.

The customer understands and agrees that all other terms and conditions, as specified in the application, including all attachments and exhibits attached to this application, serves as a contract for the customer's commitment of energy resources to AEP Ohio, shall apply.

AEP OHIO
A unit of American Electric Power

Self-Direct Program
Project Application

TERMS AND CONDITIONS

Application Review Process

AEP Ohio will review Applications for eligibility and completeness. Completed applications will be reviewed in the order received. Funds are reserved for the project when AEP Ohio receives a complete application and determines that the project meets the program eligibility requirements. Applicants who submit incomplete applications will be notified of deficiencies upon review of the application, and may lose their place in line in the review process until all requested information is received. Applications must be completed and all information received by the deadlines defined above to begin processing. Applicants are encouraged to call the program hotline if they have any questions about documentation requirements.

Inspections

AEP Ohio reserves the right to inspect all projects to verify compliance with the program rules and verify the accuracy of project documentation. This may include installation inspections, verification of detailed lighting layout descriptions, metering, data collection, interviews, and utility bill or monitoring data analyses. The customers are required to allow access to project documents and the facility where the measures were installed for a period of five years after receipt of incentive payment by AEP Ohio. Customer understands and agrees that Program installations may also be subject to inspections by the PUCO or their designee, and photographs of installation may be required.

Tax Liability

Credits are taxable and, if more than $600, will be reported to the IRS unless the customer is exempt. AEP Ohio is not responsible for any taxes that may be imposed on your business as a result of your receipt of payment. W-9 (for LLC, Individual, Partnership, Property Management Companies) must be provided along with all applications.

Requirements for Custom Project Electricity Savings Calculation

The annual electricity savings must be calculated for custom projects using industry-accepted engineering algorithms or simulation models. The applicant may estimate the annual electricity usage of both the existing and proposed equipment based on the current operation of the facility. A listing of the pre-existing information requirements is provided at the end of the custom application section. If the previous equipment was at the end of its useful life, the applicant must use, as the baseline, the equipment that would meet the applicable federal and local energy codes unless an "as found" baseline is being used by the applicant. If the applicant is using an "as found" baseline, additional specific information on the pre-existing information must be provided.

The applicant must be able to clearly describe the method used to calculate the savings. The applicant must provide all assumptions used in the calculations and document the sources for these assumptions. If no savings analysis is provided by the customer/contractors, AEP Ohio reserves the right to utilize their approved methodology and analysis to determine energy savings.

The method and assumptions used by the applicant to calculate the annual savings will be reviewed by AEP Ohio. AEP Ohio is solely responsible for the final determination of the annual energy savings and peak demand reduction to be used in calculating the credit amount. AEP Ohio also reserves the right to require specific measurement and verification activities including monitoring the retrofit to determining the credit. Verification of the preexisting consumption may also be required.

AEP Ohio may need to conduct inspections of projects to verify equipment and operating conditions. For custom and "as found" projects, the applicant is required to provide information in order to allow AEP Ohio ti verify the baseline usage of the pre-existing equipment. Customers are encouraged to submit projects that warrant special treatnebt (i.e., non-typical projects) to be considered on a case-by-case basis by AEP Ohio.

Disclaimer

AEP Ohio does not guarantee the energy savings and does not make any warranties associated with the measures eligible for credits under this program. AEP Ohio has no obligations regarding and does not endorse or guarantee any claims, promises, work, or equipment made, performed, or furnished by any contractors or equipment vendors that sell or install any energy efficiency measures. AEP Ohio is not responsible for the proper disposal/recycling of any waste generated as a result of this project. AEP Ohio is not liable for any damage caused by the operation or malfunction of the installed equipment.

AEP OHIO
A unit of American Electric Power

Self-Direct Program Project Application

Important: Please read the terms and conditions before signing and submitting this application.
You must complete all information and provide required additional documentation to avoid processing delays.

CUSTOMER INFORMATION

Business Type *(select one)*

- LARGE OFFICE ☐
- SMALL OFFICE ☐
- SCHOOL ☐
- SMALL RETAIL/SERVICE ☐
- LARGE RETAIL/SERVICE ☐
- HOTEL/MOTEL ☐
- MEDICAL - Hospital ☐
- MEDICAL - Nursing Home ☐
- ASSEMBLY/MEETING PLACE ☐
- RESTAURANT ☐
- GROCERY ☐
- CONDITIONED WAREHOUSE ☐
- UNCONDITIONED WAREHOUSE ☐
- INDUSTRIAL/MANUFACTURING ☐
- COLLEGE/UNIVERSITY ☐
- GOVERNMENT/MUNICIPAL ☐
- OTHER/MISCELLANEOUS ☐ _____

Tax Status *(from W9)*

- CORPORATION (Inc., PC, Etc.) ☐
- Government Agency ☐
- Individual ☐
- Partnership ☐
- Exempt ☐
- OTHER (may receive 1099) _____

Operating Hours

- Low Hours (<8h /day) ☐
- One shift (8h /day) ☐
- Two shifts (16h/day) ☐
- Three shifts (24h/day) ☐
- Building Operating Hours _____
- Equipment Operating Hours _____

How Did You Hear?

- AEP Account Representative ☐ _____
- Contractor ☐ _____
- Distributor ☐ _____
- Website ☐
- Other ☐ _____

Operating Days

- Seven days/week ☐ _____
- Five days/week ☐ _____

Square Footage

- Affected Area S.F. _____

NAME OF APPLICANT'S BUSINESS		PROJECT NAME (IF APPLICABLE)		
NAME AS IT APPEARS ON UTILITY BILL	AEP OHIO ACCT #*	APPLICANT TAXPAYER ID # (SSN/FEDERAL ID)		
MAILING ADDRESS		CITY	STATE	ZIP
INSTALLATION ADDRESS		CITY	STATE	ZIP

CUSTOMER CONTACT

Please provide all contacts we may need to process for this project. The business contact should be the project decision maker, the technical contact, etc

NAME OF CONTACT PERSON - *Preferred Contact for Documentation*			TITLE OF CONTACT
CONTACT PHONE #	EXT.	CONTACT FAX #	CONTACT EMAIL ADDRESS

SOLUTION PROVIDER/CONTRACTOR INFORMATION**

NAME OF CONTRACTING COMPANY				
NAME OF CONTACT PERSON			TITLE OF CONTACT PERSON	
CONTACT PHONE #	EXT.	CONTACT FAX #	CONTACT EMAIL ADDRESS	
MAILING ADDRESS			CITY	STATE / ZIP

If there are questions about the application who should we contact? **Customer** ☐ **Contractor** ☐

As an eligible customer, I verify the information is correct and request consideration for participation under this program.

CUSTOMER SIGNATURE (AEP OHIO CUSTOMER)	PRINT NAME
TOTAL INCENTIVE REQUESTED***	DATE
ESTIMATED COMPLETION DATE	ESTIMATED PROJECT COST

* AEP Ohio Account Number where measure is installed

** Solution Provider/Contractor - Party involved in the application submittal (i.e. specs, scope of work, etc.)

*** Credit cannot exceed 50 percent of the total project cost or other caps described in the Terms and Conditions.

AEP OHIO
A unit of American Electric Power

Self-Direct Program
Project Application

SELF-DIRECT APPLICATION AGREEMENT

I understand that the location or business name on the invoice must be consistent with the application information. Final Applications and all required supporting documentation should be received by **November 16, 2012 for projects completed on or after January 1, 2009. Any applications received after the deadlines may not be submitted to the PUCO by December 31st, 2012 and could jeoparidize approval of any incentive by the PUCO.**

I agree to verification by the utility or their representatives of both sales transactions and equipment installation.

I understand that these credits are available to all non-residential customers who pay into the Energy Efficiency and Demand Response (EE/PDR) rider and receive their electricity over AEP Ohio wires regardless from which retail electric supplier the customer has chosen to purchase power.

I certify that the information on this application is true and correct, and that the Taxpayer ID Number, tax status, and W-9 are the applicant's.

I agree that if: I remove the related product(s) identified in my application before a period of 5 years or the end of the product life, whichever is less, I shall refund a prorated amount of energy efficiency credits to AEP Ohio based on the actual period of time in which the related product(s) were installed and operating. This is necessary to assure that the project's related energy benefits will be achieved.

I understand that the program may be modified or terminated without prior notice.

AEP Ohio reserves the right to refuse payment and participation if the customer or contractor violates Program rules and requirements. AEP Ohio is not liable for energy efficiency credits promised to customers as a result of misrepresentation of the Program.

Customer and customer's contractor shall be responsible to comply with any applicable codes or ordinances.

All submissions become the property of AEP Ohio. It is recommended for you to keep to a copy for your records.

I understand that this project must involve a facility improvement that results in improved energy efficiency. I also understand that all materials removed, including lamps and PCB ballasts, must be permanently taken out of service and disposed of in accordance with local codes and ordinances. I understand it is my responsibility to be aware of any applicable codes or ordinances. Information about hazardous waste disposal can be found at: http://www.epa.gov/epawaste/hazard/index.htm

I understand that the Application and all required documentation should be received by the AEP Ohio Business Incentives for Energy Efficiency program by November 16, 2012 for any projects completed on or after January 1, 2009. Any applications received after the deadlines may not be submitted to the PUCO by December 31, 2012 and could jeopardize approval of any credit by the PUCO. All equipment must be fully operational.

AEP Ohio will pay 75% of the lesser of: 1) The calculated credit as approved by AEP Ohio subject to funding limits or 2) 50% of the project cost (subject to application caps). I understand that AEP Ohio or their representatives have the right to ask for additional information at any time AEP Ohio's Business Incentives Program for Energy Efficiency will make the final determination of energy efficiency credit levels for this project.

The program has a limited budget. Applications will be processed within the budget limits. Applications and all supporting documentation required should be received by November 16, 2012 to be eligible for funding under the current program period.

AEP OHIO
A unit of American Electric Power

Self-Direct Program
Project Application

SELF-DIRECT APPLICATION AGREEMENT

Customer understands and agrees that all other terms and conditions, as specified in the application, including all attachments and exhibits attached to this application which will serve as a contract for the Customer's Commitment of energy and demand resources to AEP Ohio shall apply.

I understand that AEP Ohio does not guarantee the energy savings and does not make any warranties associated with the measure eligible for energy efficiency credits under this program, and, further, that AEP Ohio has no obligations regarding any claims, promises, work, or equipment made, performed, or furnished by any contractors or equipment vendors that sell or install any energy efficiency measures and does not endorse or guarantee same.

Energy efficiency credits will be based upon the final application and program terms and conditions, as well as the availability of funds.

Any and all energy savings generated by the project described in this application are hereby committed to AEP Ohio in oder to count against its respective companies' benchmark requirements in S.B.221.

ENERGY EFFICIENCY CREDITS REQUESTED

I have read and understand the program requirements and measure specifications, and Terms and Conditions set forth in this application and agree to abide by those requirements. Furthermore, I concur that I must meet all eligibility criteria in order to be paid under this program.

ALL EQUIPMENT MUST BE INSTALLED AND OPERATIONAL. A CUSTOMER SIGNATURE IS REQUIRED FOR PAYMENT. SIGNED APPLICATIONS RECEIVED BY FAX OR EMAIL WILL BE TREATED THE SAME AS ORIGINAL APPLICATIONS RECEIVED BY MAIL. All submissions become the property of AEP Ohio. Keep a copy for your records.

TOTAL PROJECT COST	TOTAL ENERGY EFFICIENCY CREDITS REQUESTED*

CUSTOMER SIGNATURE (AEP OHIO CUSTOMER)		
PRINT NAME	DATE	ACTUAL COMPLETION DATE

**AEP Ohio will pay the lesser of 1) The calculated credit as approved by AEP Ohio 2) 50% of the total project cost of the project.*

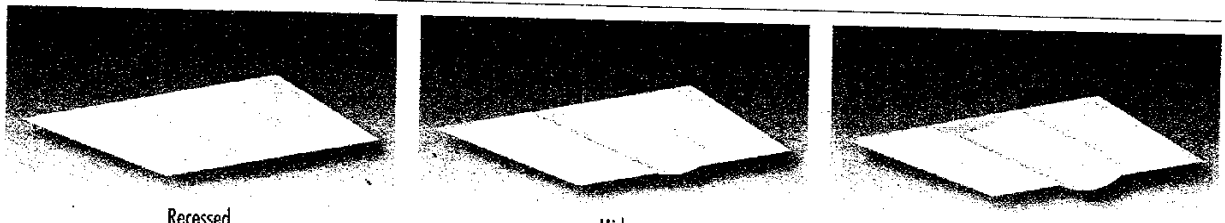
NEW

ALTUS

Simkar's Altus™ is one of the shallowest and most extensive families of T5 recessed luminaires on the market today. Altus is available in Center, Dual, and Side microperf basket configurations.

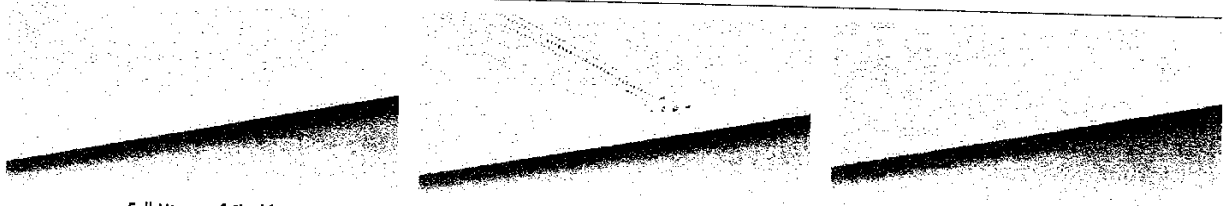
For Center basket models, Simkar has an exclusive, adjustable basket system that allows you to lower the basket and lamps two additional positions to change the light distribution pattern, output, and look of the fixture. You can now have versatility within your lighting environments with a simple, positive lock adjustment. Our modular basket system provides the additional flexibility of creating numerous configurations to fulfill your lighting needs.

Three Height Settings



Recessed | Mid | Extended

Three Basket Styles For Center Configurations



Full Microperf Shield | Split Microperf Shield | Louvered Microperf Shield

Features & Benefits

- 3.25" Low profile housing for shallow plenums.
- Low profile housings are lighter; easier to handle and install.
- Exclusive adjustable basket/lamp system for customized performance, distribution, versatility, and aesthetics.
- Innovative adjustable basket/lamp system can be set in three positions: above the ceiling, partially below the ceiling, and 1-1/8" below the ceiling (ALC only).
- Rigid unibody construction for strength and ease of installation.
- Architectural low-profile design projects a clean, modern look.
- All microperf shields come with a diffuse, white translucent inlay for visual comfort.
- Shields are securely held in place and hinge from either side for easy lamp replacement.
- Precise optical design ensures optimal performance and distributes high quality direct/indirect light to achieve uniformity and comfort throughout your work area.
- Housing, reflectors and shields are post painted with a 5-stage, non-glare, high reflectance powder coat finish for performance, durability, and aesthetics.
- Built-in earthquake brackets.
- Built-in four-corner tether hanging provisions.
- Variety of center basket styles to meet individual needs and tastes.
- Ballast access from below.
- T5 rotor-lock sockets for positive lamp retention.
- TT5 Twin Tube lamp sockets with double contact construction and lamp support clips.
- Access plate for easy and convenient supply wiring.
- Completely wired electronic ballasts: Class P, Thermally Protected with auto resetting, HPF, sound rated A is standard.

Currently Viewing

Number:	Address:	Owner:	Legal:
41-00607-000	240 E 3RD ST	MAKO PROPERTIES LTD AND OHIO LIMITED LIABILITY CO	WHOLE 124-ALLEY E-E 123-ALLEY PR 123 W END 123

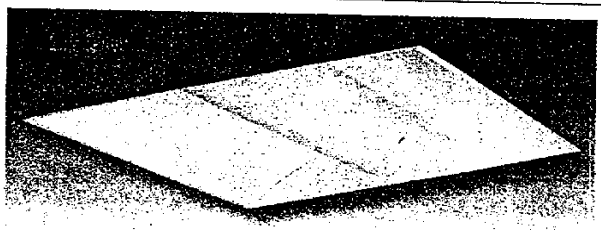
Summary | Tax | Transfer History | Payment History | Land | AuxBuild | Sketch

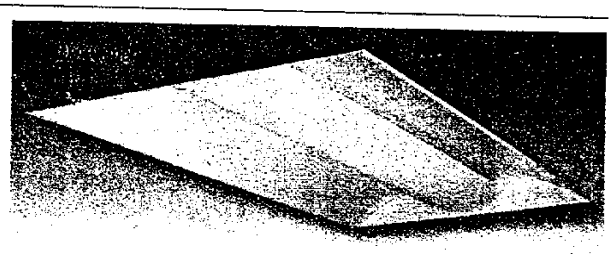
Card	Type	Condition	Year Built	Year Remod	Size
1	PAVING17-ASPHALT PAVING	F	1956	1995	45,000
1	SUPER-SUPERMARKET	G	1956	2009	31,008
1	C CNPY-COMMERCIAL CANOPY	G	1995		756
1	C CNPY-COMMERCIAL CANOPY	G	1995		336
1	ENTRANCE-ENTRANCE-VESTIBULE	G	2009		348
1	C CNPY-COMMERCIAL CANOPY	G	2009		200
1	C CNPY-COMMERCIAL CANOPY	G	2009		200
1	SUPER-SUPERMARKET	G	2009		24

SIMKAR CORPORATION

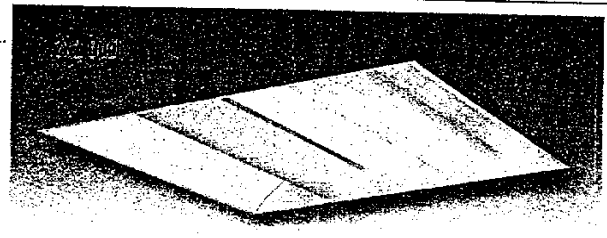
Altus Adjustable Recessed Direct/Indirect Lighting

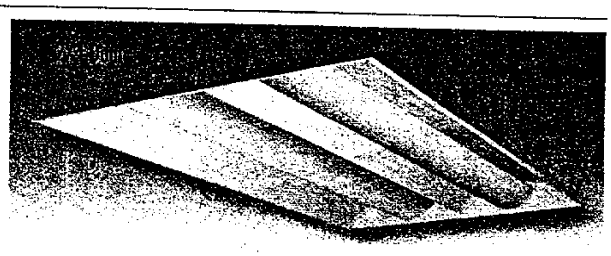
2x2 And 2x4 Configurations (Adjustable)

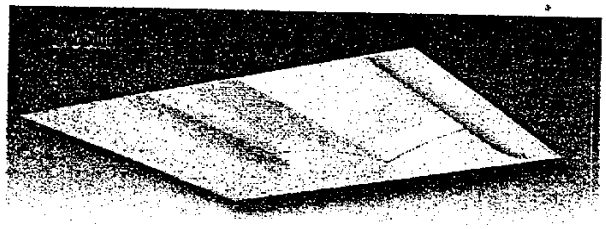


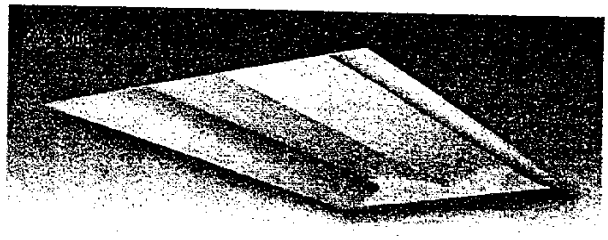


Also Available (Non-adjustable)









Altus Ordering Information

ALC 24 P 2 54T5H E U1

Series	Size	Diffuser	# Lamps	Lamp Type	Ballast	Voltage
ALC = Adjustable Center Perf Shield ALD = Dual Perf Shield ALS = Side Perf Shield	22 = 2' X 2' 24 = 2' X 4'	ALC, ALD, ALS P = Perf Shield ALC Only SP = Split Perf Shield LP = Louvered Perf Shield	2 4 (2' x 4' only, with T5 lamps; not adjustable in AEC)	22 Size: 2' x 2' 14T5 = 14W T5, 22" 24T5H = 24W T5HO, 22" 40TT5 = 40W TT5, 22" 50TT5 = 50W TT5, 22" 24 Size: 2' x 4' 28T5 = 28W T5, 46" 54T5H = 54W T5HO, 46" 40TT5 = 40W TT5, 22"* 50TT5 = 50W TT5, 22"*	E = Electronic D = Dimming	U1 = 120-277V 347 = 347V 480 = 480V

* ALC and ALD models only

Options	Accessories Order Separately
BP = Bulk Pack, Polletized ELS1 = Emergency Lighting (low lumens; for 28W T5 only) ELS2 = Emergency Lighting (medium lumens) ELS3 = Emergency Lighting (high lumens) FL4 = 3/8", 6' flex with two #18, one ground and two connectors FL5 = 3/8", 6' flex with three #18, one ground and two connectors M = Master; includes 9' intertie and snap-in connector S = Satellite; includes snap-in connector L = Lamps Installed (Specify Lamps)	GCK22 = Sheetrock/Plaster Grid Kit for 2'x2' units GCK24 = Sheetrock/Plaster Grid Kit for 2'x4' units

BALLAST!
ADVANCE CENTIUM
ICN-2S54-90C

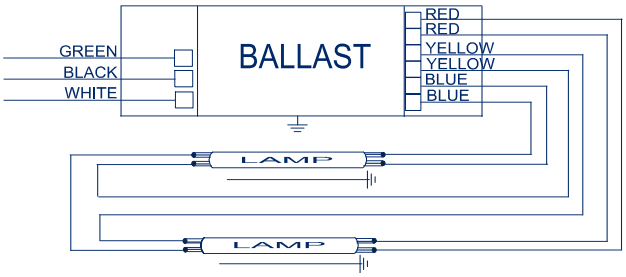
ADVANCE TRANSFORMER CO.

Electrical Specifications

ICN-2S54@277V	
Brand Name	**CENTIUM T5**
Ballast Type	**Electronic**
Starting Method	**Programmed Start**
Lamp Connection	**Series/Parallel**
Input Voltage	**120-277**
Input Frequency	**50/60 HZ**
Status	**Active**

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
F54T5/HO	1	54	-20/-29	0.23	62	1.02	15	0.96	1.7	1.65
* F54T5/HO	2	54	-20/-29	0.43	117	1.00	10	0.98	1.7	0.85
F54T5/HO/ES (49W)	1	49	-20/-29	0.23	58	1.02	10	0.98	1.7	1.76
F54T5/HO/ES (49W)	2	49	-20/-29	0.43	108	1.00	10	0.98	1.7	0.93
F58T8	1	58	-20/-29	0.22	59	1.00	10	0.97	1.7	1.69
F58T8	2	58	-20/-29	0.42	114	1.00	10	0.99	1.7	0.88
FC12T5/HO	1	55	-20/-29	0.21	55	0.87	15	0.96	1.7	1.58
FC12T5/HO	2	55	-20/-29	0.38	103	0.85	10	0.98	1.7	0.83
FT36W/2G11	1	36	-20/-29	0.18	46	1.22	20	0.96	1.7	2.65
FT36W/2G11	2	36	-20/-29	0.32	86	1.20	10	0.98	1.7	1.40
FT50W/2G11	1	50	-20/-29	0.23	61	1.12	15	0.96	1.7	1.84
FT50W/2G11	2	50	-20/-29	0.43	115	1.10	10	0.98	1.7	0.96
FT55W/2G11	1	55	-20/-29	0.22	58	0.92	15	0.96	1.7	1.59
FT55W/2G11	2	55	-20/-29	0.41	109	0.90	10	0.98	1.7	0.83

Wiring Diagram



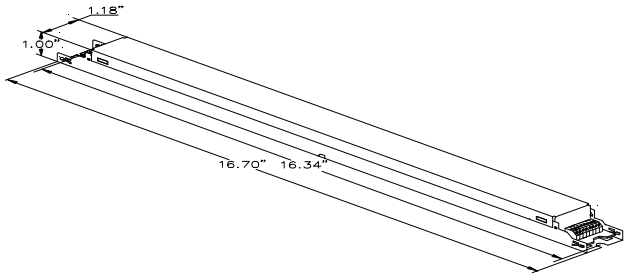
The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.
Black	31	78.7
White	31	78.7
Blue	28	71.1
Red	28	71.1
Yellow	48	121.9
Gray		0
Violet		0

	in.	cm.
Yellow/Blue		0
Blue/White		0
Brown		0
Orange		0
Orange/Black		0
Black/White		0
Red/White		0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
16.70 "	1.18 "	1.00 "	16.34 "
16 7/10	1 9/50	1	16 17/50
42.4 cm	3 cm	2.5 cm	41.5 cm

Revised 03/11/09

Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

ADVANCE TRANSFORMER CO.
O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 847-768-7768
Corporate Offices: Phone: 800-322-2086

Attn: Earl

COMPACT FLUORESCENT | **ECONOMY** | **6" QUAD/TRIPLE BIAX VERTICAL**

Nora Lighting's family of 6" Economy VerticalCompact Fluorescent housings offers affordable solutions for energy savings. Light sources are available in warm to cool colors with optional dimming capability featured. Housings accept a wide variety of attractive finishing trims suitable for any interior.

Ballast: 13W 120V Magnetic (M) or13W-42W Electronic (EL) with Universal Input (120V-277V).

Dimming Options: Variety of Electronic Dimming ballast options are available in 13W-42W (see page 108). Please match appropriate fixture with compatible compact fluorescent dimming control.

Lamp Types:
13 Watt Magnetic 2-Pin Quad
13 – 26 Watt Electronic 4-Pin Quad
13 – 42 Watt Electronic 4-Pin Triple

Emergency Option: Emergency back-up operates one or two lamp(s) for a minimum of 90 minutes. Unit includes battery, charger, and test plate with indicator light. For one or two lamp operation (see page 108).

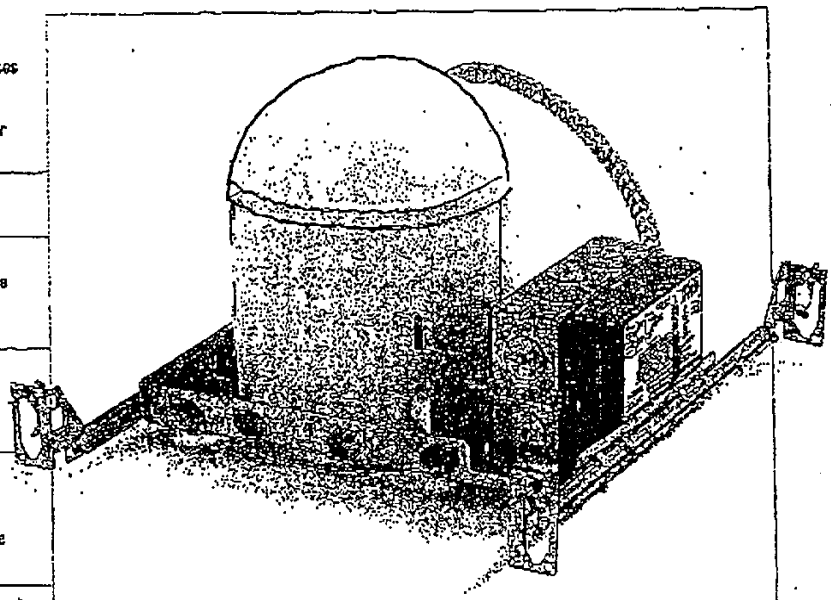
Fuse Option: 2A Fuse may be added to any compact fluorescent frame-in – Add: suffix FS.

Minimum Clearances: Non-IC housings require minimum clearances of 3" from thermal insulation and 1/2" from adjacent building components

Bar Hangers: Bar hangers are adjustable from 13-5/8" to 24" and can be repositioned 90 degrees

Listing: UL Damp Location w/ Feed Through UL Wet Location (Applies only when trims with lenses are installed)

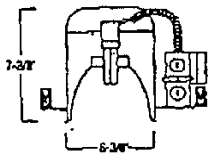
c UL us LISTED

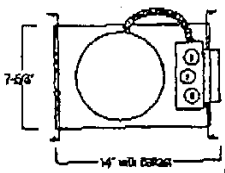


NHP SERIES Compact Fluorescent 6" Quad/Triple Biax Vertical Housing

Applies only to electronic ballast

HALCO LAMP
PL 260/E/35





PRODUCT MATRIX

Ordering Example: NHP-26M / NTA-99

Housing			Ballast			
	# of	Lamp	Magnetic	Electronic		
Cat. No.	Lamps	Wattage	120V	Electronic	Dimming*	Emergency*
NHP-13	1	13	M	EL ≡	D10	EM, EMI
NHP-16	1	16	-	EL ≡	D10, MX1, MX2, M7, L51, L52	EM, EMI
NHP-26	1	26	-	EL ≡	D10, MX1, MX2, M7, L51, L52	EM, EMI
NHP-2642	1	26-42	-	EL ≡	D10, MX1, MX2, M7, L51, L52	EM, EMI

Please refer to page 108 for specifications ≡ *Energy Star qualified*

ProLume Reflectors

Halco LIGHTING TECHNOLOGIES

COMPACTS

	Bulb Type	Watts	Base	Product #	Product Code	Description	Pkg/ Qty	Color Temp	CRI	Initial Lumens	Incandescent Equivalent	Avg Rated Life	MOL (Inches)
	PAR20 & R20												
	PAR20	11	Med.	46005	CFL11/27/PAR20	Warm White Flood	6/24	2700	82	380	50	10000	4.70"
	PAR20	11	Med.	46006	CFL11/35/PAR20	White Flood	6/24	3500	82	380	50	10000	4.70"
	PAR20	11	Med.	46007	CFL11/41/PAR20	Cool White Flood	6/24	4100	82	380	50	10000	4.70"
	PAR20	11	Med.	46008	CFL11/50/PAR20	Natural White Flood	6/24	5000	82	380	50	10000	4.70"
O	R20	11	GU24	46542	CFL11/27/R20/GU24	Warm White Flood	6/24	2700	82	340	50	10000	3.80"
	R20	14	Med.	46011	CFL14/30/R20	Soft White Flood	6/24	3000	82	500	50	8000	4.94"
	R20	14	Med.	46014	CFL14/50/R20	Natural White Flood	6/24	5000	82	500	50	8000	4.94"
	PAR30 & R30												
	PAR30	15	Med.	46001*	CFL15/27/PAR30	Warm White Flood	6/24	2700	82	750	65	10000	4.60"
O	PAR30	15	Med.	46550	CFL15/27/PAR30/DIM	Warm White Dimmable Flood	6/24	2700	82	750	65	10000	4.60"
O	PAR30	15	Med.	90201	CFL15/27/PAR30/CS	Warm White Flood, CoverShield™	6/24	2700	82	750	65	10000	4.60"
	PAR30	15	Med.	46002	CFL15/35/PAR30	White Flood	6/24	3500	82	750	75	10000	4.60"
	PAR30	15	Med.	46003*	CFL15/41/PAR30	Cool White Flood	6/24	4100	82	750	75	10000	4.60"
	PAR30	15	Med.	46004	CFL15/50/PAR30	Natural White Flood	6/24	5000	82	750	75	10000	4.60"
→	R30	15	GU24	46538*	CFL15/27/R30/GU24	Warm White	6/24	2700	82	750	65	10000	4.75"
	R30	15	Med.	46328	CFL15/27/R30/DIM	Warm White Dimmable Flood	6/24	2700	82	680	65	8000	6.01"
	R30	15	Med.	109056	CFL15/BLU/R30	Blue Flood	6/24	-	82	720	65	8000	5.10"
	R30	15	Med.	109058	CFL15/GRN/R30	Green Flood	6/24	-	82	720	65	8000	5.10"
	R30	15	Med.	109054	CFL15/PNK/R30	Pink Flood	6/24	-	82	720	65	8000	5.10"
	R30	15	Med.	109062	CFL15/YEL/R30	Yellow Flood	6/24	-	82	720	65	8000	5.10"
O	R30	16	Med.	46101*	CFL16/30/R30/ES	Soft White Flood	6/24	3000	82	750	65	8000	5.60"
	R30	16	Med.	46104	CFL16/41/R30	Cool White Flood	6/24	4100	82	750	65	8000	5.60"
	R30	16	Med.	46105	CFL16/50/R30	Natural White Flood	6/24	5000	82	750	65	8000	5.60"
	R30	16	Med.	46106	CFL16/50/R30/CS	Natural White Flood, CoverShield™	6/24	5000	82	750	65	8000	5.60"
	BR38 & PAR38												
	BR38	23	Med.	109216	CFL23/30/BR38	Soft White Flood	6/24	3000	82	1200	100	8000	6.40"
	PAR38	23	Med.	46201*	CFL23/27/PAR38	Warm White Flood	6/24	2700	82	1100	90	10000	5.06"
	PAR38	23	Med.	46202	CFL23/35/PAR38	White Flood	6/24	3500	82	1100	90	10000	5.06"
	PAR38	23	Med.	46203*	CFL23/41/PAR38	Cool White Flood	6/24	4100	82	1100	90	10000	5.06"
	PAR38	23	Med.	46204	CFL23/50/PAR38	Natural White Flood	6/24	5000	82	1100	90	10000	5.06"
	R40												
	R40	23	Med.	46329	CFL23/27/R40/DIM	Warm White Dimmable Flood	6/24	2700	82	1090	100	10000	6.97"
	R40	23	Med.	109286	CFL23/30/R40	Soft White Flood	6/24	3000	82	1300	100	8000	6.40"
	R40	23	Med.	46206	CFL23/50/R40	Natural White Flood	6/24	5000	82	1300	82	8000	6.40"
O	R40	23	Med.	46208	CFL23/PB/R40	Pool Bright Flood	6/24	6450	82	1300	-	6000	4.80"

O NEW ITEM!

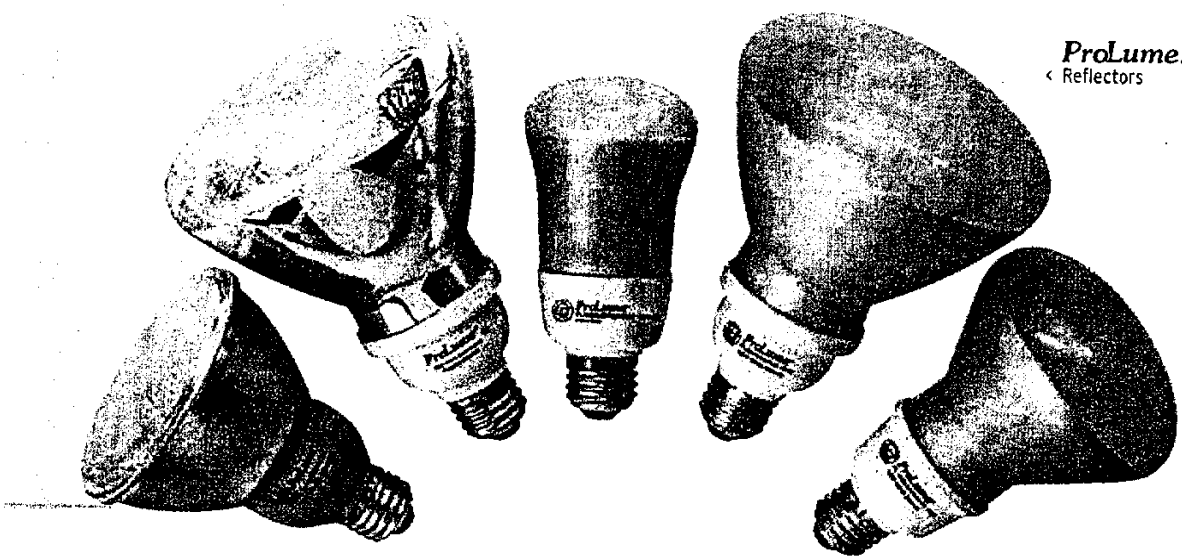
Hg Hg–LAMP CONTAINS MERCURY, MANAGE IN ACCORD WITH DISPOSAL LAWS.
Visit www.lamprecycle.org for disposal information for your state or local government.

c UL us

ENERGY STAR

CAUTION: Non-dimmable lamps should not be used on dimming circuits, timing devices, photo sensors or occupancy sensors.
This device is not intended for use with emergency exit fixtures. Dimmable lamps may not be compatible with all dimmers.
This device complies with Part 18 of the FCC Rules. This product may cause interference with radio equipment and should not be installed near maritime safety communications equipment, ships at sea or other critical navigation or communications equipment operating between 0.45-30 MHz.

WARRANTY - Commercial/Industrial: Dimmable lamps are warranted for 2 years from date of purchase based on 3 hours of use per day.
Non-dimmable lamps are warranted for 2 years from date of purchase based on 10 hours of use per day.



ProLume.
‹ Reflectors

COMPACTS

ProLume. Reflectors

Halco.
LIGHTING TECHNOLOGIES

Energy Efficient
- Maximum light distribution achieved through compact design
- Saves up-to 77% in energy costs compared to incandescent lamps
- Tri-phosphor coating enhances lumen efficacy and color rendering, 82 CRI

Technical Data
- Contains amalgam
- E26 base and GU24 base
- Electronic instant start ballast
- 120 volt, 60Hz
- Minimum starting temperature -20°F
- Nickel-plated brass base

Broad Assortment
- Dimmable R30, R40 and PAR30
- 11 to 23 watts
- BR38, R20, R30, R40, PAR20, PAR30 and PAR38
- R30 Colors Blue, Green, Pink, Yellow

Long Life
- 8,000–10,000 Hours Average Rated Life

Benefits
- Saves energy
- Amalgam technology maintains light output in extreme temperatures
- Low maintenance

Applications
- Track lighting
- Down lighting
- General lighting

Available in Dimmable R30, R40 and PAR30

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CONSTRUCTION

Unit & Lamp Housing: Precision molded housings constructed of flame retardant, corrosion proof, UV stable thermoplastic. N.F.P.A. approved field selectable chevrons. Units resist denting, peeling, scratching and corrosion.

Finish: Textured white or black.

EXIT ILLUMINATION

Fully illuminated 6" letters with 3/4" stroke is achieved with high output, long lasting red or green Light Emitting Diodes (LEDs). An exclusive color-matched diffuser eliminates hot spots and striations, providing optimal light output. LEDs and electronics have an expected service life of up to 100,000 hours.

INSTALLATION

Simple snap together universal design allows for faceplate and backplate to be fully interchangeable. Mounting canopy is supplied with all signs and snaps into enclosure with two positive locking tabs.

ELECTRONICS

120/277 VAC dual voltage input with surge protected, solid state circuitry.

EMERGENCY OPERATION

Charging circuit is solid state type with constant current charge and transfer design. Circuit is brown-out protected and provides a minimum of 90 minutes of emergency run time and recharge time of 24 hours. Push to test switch and an LED AC indicator provides simple means for manual test.

REMOTE CAPACITY OPTION

The EL90 is available with an additional 12 watts of remote capacity and is supplied with 5.4 watt lamps. This option utilizes maintenance-free, sealed lead acid batteries with an estimated service life of 10 years with an operating temperature range of 65°F (19°C) to 85°F (30°C).

GUARDIAN SELF-TEST/SELF-DIAGNOSTICS (Option: G2)

The circuit continuously monitors the operating condition of the AC power, battery supply voltage, emergency lamp continuity and charging circuit.

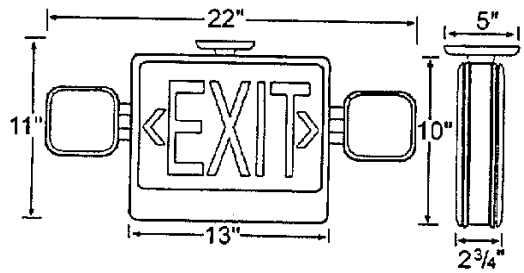
If a failure is detected, visual status will occur immediately via the multi-colored LEDs. LED indicator(s) will illuminate until fault has been corrected.

The Guardian also monitors the transfer circuit as well as performing automatic code compliant testing. The self-test will operate the equipment in emergency mode five minutes every 28 days. Also, a 90 minute full-function test is performed every six months.

CONFORMANCE TO CODES & STANDARDS

The EL90 Series is E.T.L. listed and meets or exceeds the following: U.L. 924, N.E.C. requirements and N.F.P.A.

DIMENSIONS



BARRON lighting group
1911 W. Parkside Lane • Phoenix, AZ 85027
(800) 533-3948 • Fax: (623) 580-8948
www.barronltg.com

EXITRONIX

VEX-EL90 Series

THERMOPLASTIC COMBINATION LED EXIT

Model Number: VEXVB pw Bw H-R

Accessories:

Job: Type:

Approvals:

FEATURES

- Easy to install, snap together design
- Rugged, injection-molded UL94 V-0 flame retardant, high-temperature thermoplastic housing
- Universal style – includes 2 face plates, a back plate and mounting canopy
- Each fully-adjustable lamp head contains 6 volt, 5.4 watt, tungsten lamps
- Remote capabilities (6 volt) - up to 12 watts
- Low voltage disconnect eliminates deep discharge
- Brown-out, short circuit and voltage surge protection
- Overcharge protection
- UL recognized maintenance-free NiCad battery
- Universal J-Box mounting system – Ceiling, wall or end mount
- ETL listed 90 minute emergency run time, 24 hour recharge time
- Constant, uniform illumination by long-life, high intensity, red or green LEDs
- Fully-illuminated 6" characters with 3/4" stroke
- Optional Guardian Self-Test/Self-Diagnostics (G2) available
- Chevron-style, universal arrow knockouts
- 120/277V dual primary, 60Hz input
- Standard finishes: Black and white
- Suitable for damp location
- Fixture series may be built to comply with the American Recovery and Reinvestment Act of 2009 (ARRA) requirements and Buy American provisions - call factory for details

Attractive low-profile design allows for mounting above doors and restricted spaces. The EL90 offers full 180° lamp rotation to fit any application.

5/5 WARRANTY

WARRANTY

Any component that fails due to manufacturers defect is guaranteed for 5 years with a separate 5 year pro-rated warranty on the battery. The warranty does not cover physical damage, abuse or acts of God. Manufacturer reserves the right to charge for such repairs if deemed necessary.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

ORDERING INFORMATION Example: VEX-U-BP-WB-WH-EL90-G2

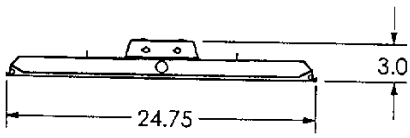
Series	Style	Housing Type	Power Source	Finish	Type	Options (Factory Installed)
VEX = Red	S = Single Face	BP = Plastic	WB = With Battery	WH = White	EL90 = 6V/5.4W Lamps	G2 = Self Test / Diagnostics
GVEX = Green	U[1] = Universal			BL = Black		R[2] = Remote Capacity (12 Watts)
						USA = Meets Buy American Requirements

[1] Universal includes 2nd exit face and backplate
[2] Remote units with G2 option MUST have remote heads attached for G2 to function correctly

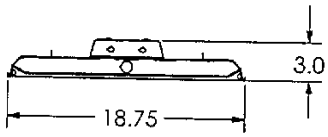
Reflect-A-Bay T5/T8 Fluorescent Industrial Bay Lighter

Dimensions

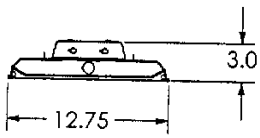
Reflect-A-Bay 8 lamp

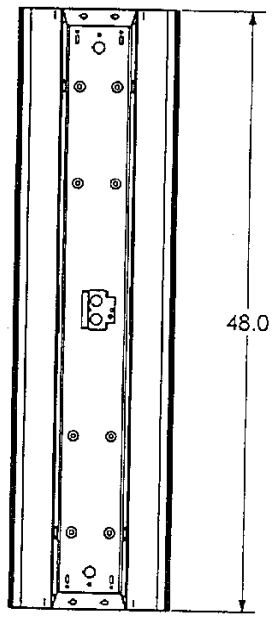


Reflect-A-Bay 6 lamp

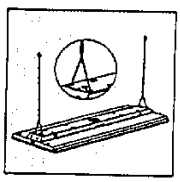


Reflect-A-Bay 4 lamp



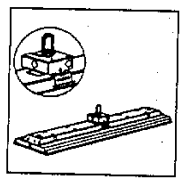


Mountings



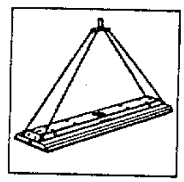
Chain Hanger Assembly

Ordering Code
CA24



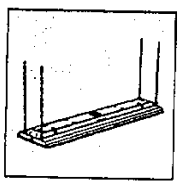
Center Mount Slide Box w/Hook Assembly

Ordering Code
SBH

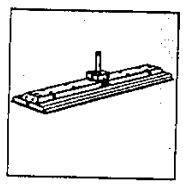


Hook & Chain Assembly

Ordering Code
HKSC

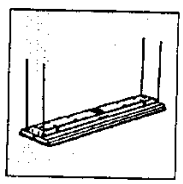


"S" Hook (4) Chain Hanger Assembly
Ordering Code
CS24

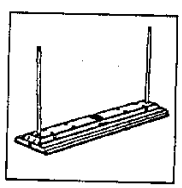


Center Mount Slide Box w/ Pendant Mount

Ordering Code
SBP



Adjustable Aircraft Cables
Ordering Code
CAB72



Twin Pendant Mount

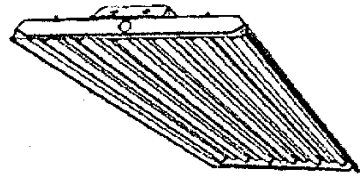
Ordering Code
PM2

SIMKAR CORPORATION

TECHNICAL SPECIFICATIONS

CATALOG NUMBER REF 454SSR B12 UNV
TYPE
DATE
PREPARED BY
PROJECT

Reflect-A-Bay
T5/T8 Fluorescent Industrial Bay Lighter



HOUSING: Die formed heavy gauge steel housing with high-gloss baked white enamel finish over rust inhibiting phosphate coat. Fixture is shipped fully wired.

ELECTRICAL: Fully wired for 120-277V, 60 Hz AC operation with ETL-CBM, thermally protected, automatic resetting, Class P, sound rated A, programmed-start, electronic T5 HO or T8 ballast. High ballast factor T8 ballasts are also available. 8 lamp unit contains 2 - (4) lamp ballasts.The 6 lamp unit contains 1-(2) lamp and 1-(4) lamp ballast. The 4 lamp unit contains 1- (4) lamp ballast as standard. UL listed.

REFLECTORS: Computer designed, faceted, highly reflective specular aluminum. Slotting available for cooler operation and up-light. Miro 4 option provides 95% reflectivity.

OPERATION: T5 and T8 fixtures are suitable for ambient temperature up to 113° F (45° C)

OPTIONS: Occupancy sensors and an emergency lighting system are available. Please specify in the order code.

MOUNTING: Pendant, slide box, and various chain hanger configurations. Order kit separately.

Reflect-A-Bay Series Ordering Information

REF 4 54 S SR B12 4L UNV

Series	# Lamps	Lamp Type	Aperture	Reflector	Options	Ballast	Switching	Voltage
REF	4 6 8	32 = F32T8 54 = F54T5HO	A = Aperture S = Solid	SR = Specular Aluminum WR = White M4 = MIRO 4	ELS1 = Emergency Lighting (low lumens) ELS2 = Emergency Lighting (medium lumens) ELS3 = Emergency Lighting (high lumens) *NOTE: ELS2 AND ELS3 FOR T8 OPERATE ONE OR TWO LAMPS. ALL OTHERS OPERATE ONE LAMP ONLY.*	B11 = T8 B11HP(x) = HPT8* B12 = T5 HO	*For 4 lamp units* 4L = (1) 4-lamp ballast (standard) 2/2L = (2) 2-lamp ballasts *For 6 lamp units* *Blank* = (1) 4-lamp ballast and (1) 2-lamp ballast (standard) 2/3L = (2) 3-lamp ballasts *For 8 lamp units* *Blank* = (2) 4-lamp ballasts (standard)	UNV = 120-277V 347 = 347V 480 = 480V

*CEE listed T8; specify (L)ow, (N)ormal, or (H)igh ballast factor. Contact factory for NEMA Premium.

Options	Mounting Accessories	Accessories
OS(x) = Occupancy Sensor (specify # of lamps controlled - 2, 4, 6 or 8) OSI(x) = Occupancy Sensor; factory-installed (specify # of lamps controlled - 2, 4, 6 or 8) OSDL(x) = Daylight Sensor (specify # of lamps controlled - 2, 4, 6 or 8) FB = Fast blow fuse SB = Slow blow fuse BP = Bulk Pack *6' Cord and Plug* CPT(x) 1 = 120V 2 = 277V 3 = 208V 4 = 240V 5 = 480V CP3 = Cord & Plug - 120V Straight Blade 5-15P	CA24 = Chain Hanger Assembly - (2) 18" chains, (2) "V" hooks, (2) "S" hooks for total drop 24" CS24 = S-hook Chain Hanger Assembly - (2) 18" chains, (2) "V" hooks, (2) "S" hooks for total drop 24" PM(x) = Twin Pendant Mount - 2 white stems - specify length (24", 36", 48", 60", 72") HKSC = Hook & Chain Assembly - Monopoint mount to four point suspension. (Includes hook, chain, and mounting plate) CAB(x)72 = Adjustable Cables - includes 6-foot steel aircraft cables, toolless adjusters and mounting hardware. Specify "2" for 2 cables & Y-hanger or "4" for 4 cables. SBH = Slide Box with hook - Level adjustable for mono-point hook mount. SBP(x) = Slide Box & Single Pendant Mount- Level adjustable for mono-point pendant mount - specify length (24", 36", 48", 60", 72"). Other lengths available.	RWG(x) = Heavy Duty Wire Guard REF(x) = acrylic Lens WREF(x) = acrylic Lens And Heavy Duty Wire Guard Combo *For above, please specify # of lamps (4, 6, or 8)*

Summary: Application In the Matter of Mako Rick and Ohio Power Company for Approval of a Special Arrangement Agreement with a Mercantile Customer electronically filed by Mr. Yazen Alami on behalf of Ohio Power Company