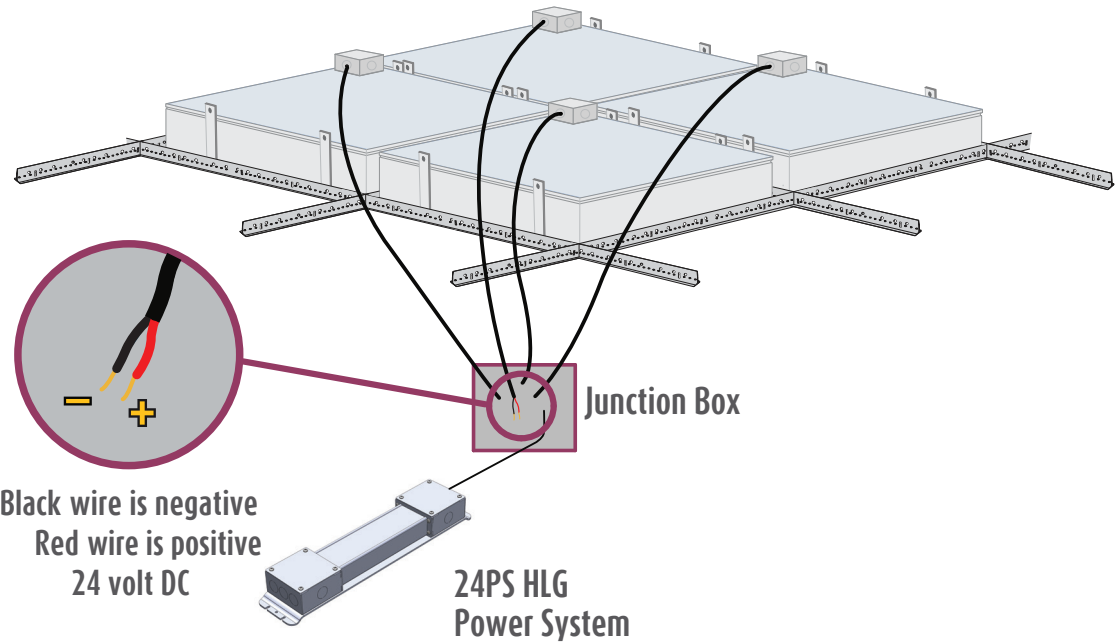




## Custom EcoPlus Electrical Instructions (24PS HLG)



### Installation Packet Includes:

Custom EcoPlus Electrical Instructions (24PS HLG)

- EL001250 - Without Dimmer
- EL001450 - With Lutron Dimmers
- EL001449 - With Jung Dimmers
- EL001455 - Lutron Dimmers with Multiple Power Systems
- EL001447 - Jung Dimmers with Multiple Power Systems
- Wire Sizing Chart

Electrical Layout EL1 & EL2

Sky Factory 24PS HLG Power System Installation

For technical support at any time during the installation, please call us **toll free at 866-759-3228**.  
We want your installation to go as smoothly as possible. Thank you for choosing Sky Factory.

## Custom EcoPlus electrical requirements:

All EcoPlus fixtures are 24V DC only.

EcoPlus fixtures must be mounted in dry locations only.

EcoPlus fixtures must be powered by provided UL, CSA and CE Compliant 24PS HLG Power System

### Sky Factory 24PS HLG Power System:

Input (Typ): 90-305V, 47 - 63 Hz

Output: 24V DC

Maximum Watts (useable) per power system: 600 Watts

Available sizes: 40W, 60W, 80W, 100W, 120W, 150W, 185W, 240W, 320W, 480W, 600W

Power System aluminum enclosure

Mounted on baseplate with junction box on input and output ends

For mounting dimensions and weights, see "Sky Factory 24PS HLG Power System Installation"

For power system wire sizes, see "Sky Factory 24PS HLG Power System Installation"

Power system must have 2" clearance for air flow. A 4-6" (10-15cm) clearance must be kept when the adjacent device is a heat source

Power system must be mounted in dry locations. Wall mount recommended.

For installation specific number of power systems and number of fixtures per power system,  
see Electrical Layout EL1 & EL2

For EcoPlus with 24PS HLG Power System general wiring diagrams, see  
EL001250, EL001449 & EL001450

For single dimmer control and multiple power systems, see  
EL001447 & EL001455

RF filter, if used, is not provided by Sky Factory. One filter per power system required.

## Custom EcoPlus electrical requirements (cont'd):

Sky Factory provided dimmer control (where specified):

Lutron Diva DVSTV 0 - 10V dimmer/switch (UL & CSA compliant)

Input: auto-ranging 120 - 277V AC

Lutron Diva DVTV 0 - 10V dimmer/switch and PP-DV power pack (UL & CSA compliant)

Input: auto-ranging 120 - 277V AC

Lutron Diva mounts in standard single-gang electrical box

White standard, other colors available on request

Jung 240-10 dimmer/switch and external relay where specified (CE compliant)

Input: 230 - 240V AC

Installs in appliance box to DIN 49073

For dimming requirements, see page 5.

For dimmer wiring diagrams, see dimmer control (and relay where specified) and wiring diagrams included

For other dimmer controls provided, see installation specific EL2 included

*Electrical work must be performed by a qualified electrician who is familiar with DC lighting systems and must conform to all local and national codes.*

## Non-Dimmable and Dimmable Certification:

ES22 Series, ES24 Series, ES26 Series, ES33 Series, ES34 Series, ES36 Series, ES44 Series, ES46 Series, ESCST Series, EP22 Series, EP24 Series, EP26 Series, EP28 Series, EP33 Series, EP34 Series, EP36 Series, EP44 Series, EP46 Series, EP48 Series, EP55 Series and EPCST Series fixtures when used with 24PS HLG Power System UL, CSA and CE Listed by Intertek Group plc

## Step 1: Wiring the EcoPlus fixtures to the power system

See also wiring diagrams on pages 6-10 and Electrical Layout EL1 & EL2



**Notice:** The LED fixtures are 24V DC ONLY.  
AC voltage connected directly to the fixtures  
will destroy the lighting system.

Fixtures are wired together in single or multiple circuits.

Each circuit is dedicated to a single power system and may be arranged in rows or clusters, depending on installation.

For installation specific number of fixtures per power system, see Electrical Layout EL2

A junction box with 1/2" trade size knock-outs is attached on top corner of each fixture.

- Power leads inside fixture junction box are polarized, red (+) and black (-).
- Some fixture junction boxes have two sets of leads. When making connections, leads are wired together red (+) to red (+) and black (-) to black (-) unless otherwise specified.
- Where fixtures have multiple junction boxes, see fixture and/or installation specific wiring diagram(s) included.
- Wire size 18 AWG stranded.

Wiring from fixtures to V DC side of provided power system is polarized, positive (+) to positive (+) and negative (-) to negative (-):

EcoPlus fixture red “+” to power system **Vo+**

EcoPlus fixture black “-” to power system **Vo-**

For power system V DC wire sizes, see EL001250

HLG-480H-24B and HLG-600H-24B have two sets of output leads. Meanwell recommends loading no more than:

240 Watts on each set of cables for HLG-480H-24B

480 Watts on each set of cables for HLG-600H-24B

Wire and additional junction boxes from the fixtures to the power system supplied by others.

Wire gauge must conform to local and national codes. Voltage drop of no more than 3% is recommended.  
See Wire Sizing Chart on page 11.

## Step 2: Wiring the power system to source V AC

Run power to V AC side of the power system. For power system V AC wire size, see “Sky Factory 24PS HLG Power System Installation”

Load to power system **ACL**

Neutral to power system **ACN**

Ground to power system  **(GREEN/YELLOW)**

Wire gauge must conform to local and national codes.

Install the power switch on the V AC input side of the power system.

## Step 3: Dimming requirements

Contact the Sky Factory if you plan on using a dimming system provided by others.



**Notice:** Dimming using non-approved systems may permanently damage LED's and will void the warranty!

### Wiring a Sky Factory provided dimmer control:

To wire the dimmer control (and external relay where specified), refer to wiring diagram included with dimmer and relay and wiring diagrams included.

## Step 4: Checking the polarity



**Notice:** CHECK THE POLARITY BEFORE TURNING ON POWER. MAKE SURE:

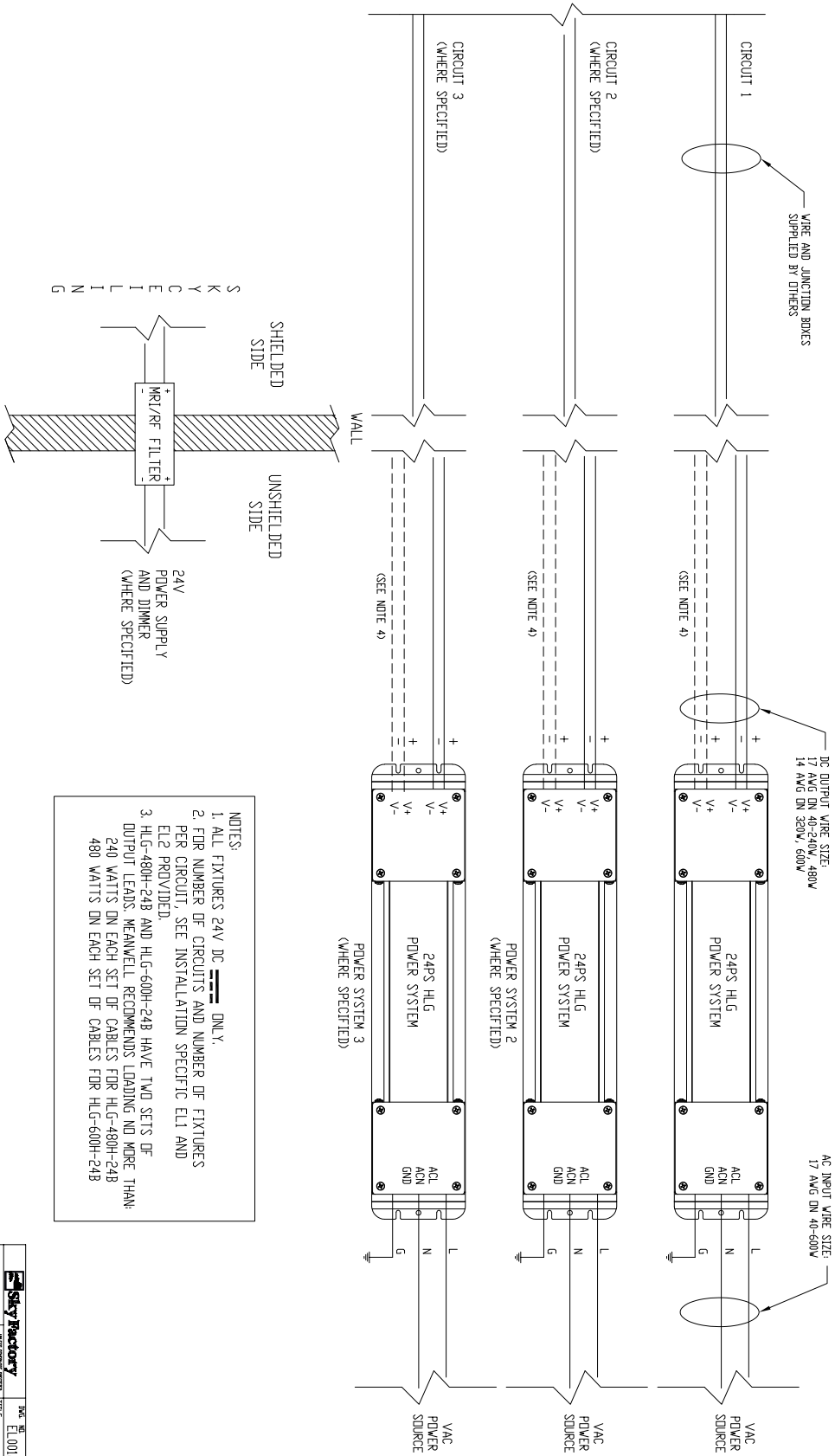
Red wires on the fixtures go to the “+” terminals of the power supply

Black wires on the fixtures go to the “-” terminals of the power supply

**IF THE SYSTEM IS WIRED BACKWARD, IT WILL DESTROY THE LED'S!**

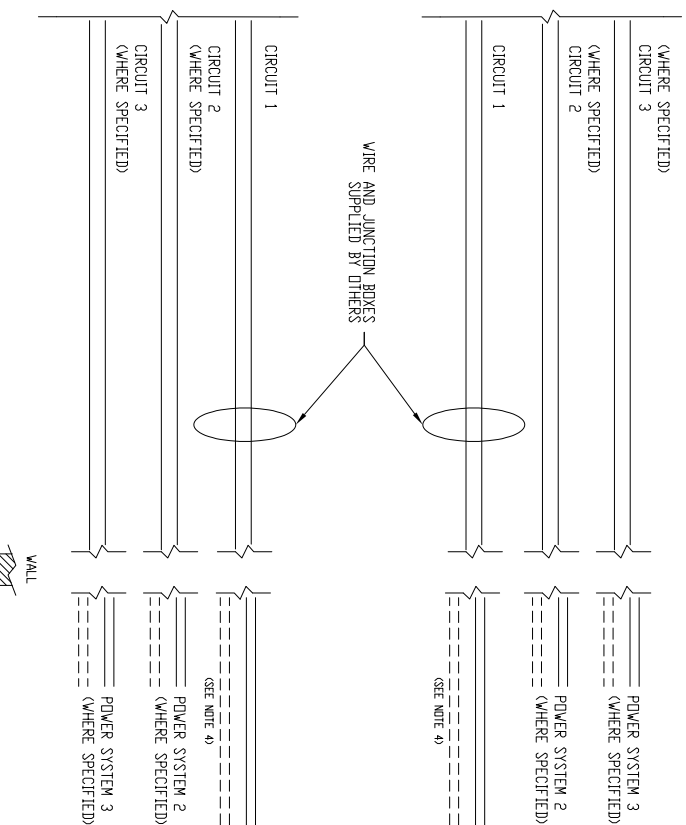
APERTURE, CIRCLE, ELLIPSE OR CUSTOM  
 ECOPUS WITH 24PS HLG POWER SYSTEM  
 NON-DIMMING OPTION

S K Y F A C T O R Y  
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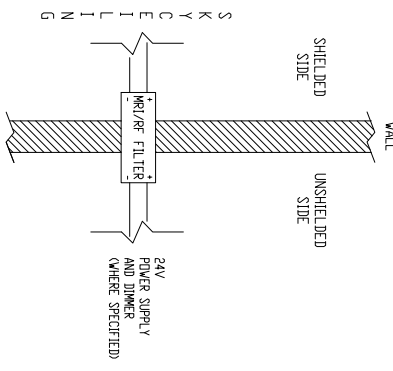


<b>Sky Factory</b>	
MANUFACTURER OF SKYFACTORY 10000 WILSON AVENUE SUITE 100 BAYVIEW, MI 48064 TEL: 586.223.8800 WWW.SKYFACTORY.COM	DOC. NO. E.001250 REV. 5 TITLE: APERTURE, CIRCLE, ELLIPSE OR CUSTOM ECOPUS WITH 24PS HLG POWER SYSTEM NON-DIMMING OPTION DRAWN BY: SJA DATE: 04/02/23 CHECKED BY: [REDACTED] DATE: 04/02/23 SCALE: NTS (FORM - B) SHEET 1 OF 1

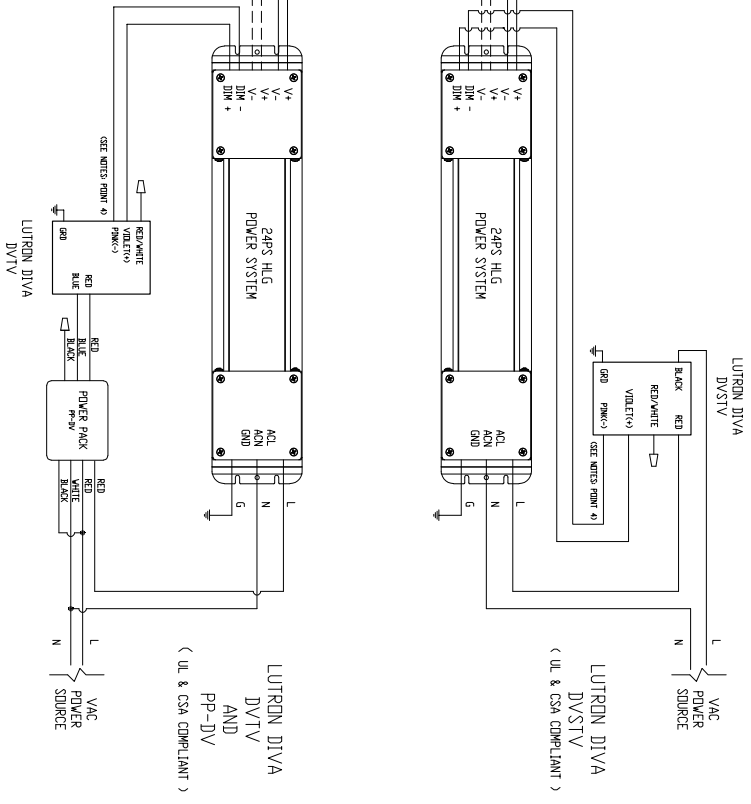
S K Y C C E I L I N G



- NOTES:
1. ALL FIXTURES 24V DC ONLY.
  2. FOR NUMBER OF CIRCUITS AND NUMBER OF FIXTURES PER CIRCUIT, SEE INSTALLATION SPECIFIC ELL AND EL2 PROVIDED.
  3. HLG-480H-24B AND HLG-600H-24B HAVE TWO SETS OF OUTPUT LEADS. MEANWELL RECOMMENDS LOADING NO MORE THAN 240 WATTS ON EACH SET OF CABLES FOR HLG-480H-24B 480 WATTS ON EACH SET OF CABLES FOR HLG-600H-24B 480 WATTS ON EACH SET OF CABLES FOR OLDER PRODUCTS.
  4. THIS WIRE/TERMINAL MAY BE GRAY ON OLDER PRODUCTS.

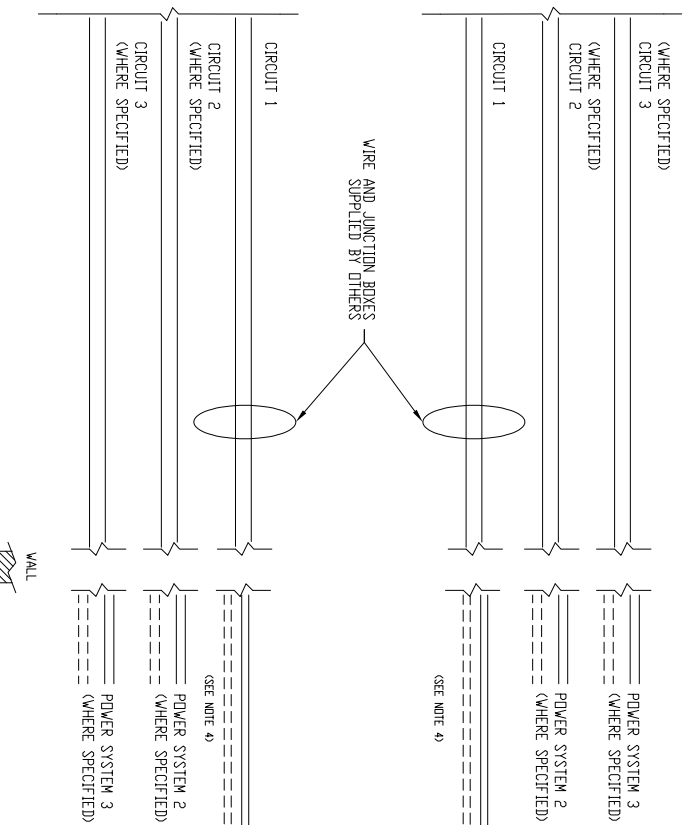



APERTURE, CIRCLE, ELLIPSE OR CUSTOM  
 ECOPLUS WITH 24PS HLG POWER SYSTEM  
 DIMMING OPTION

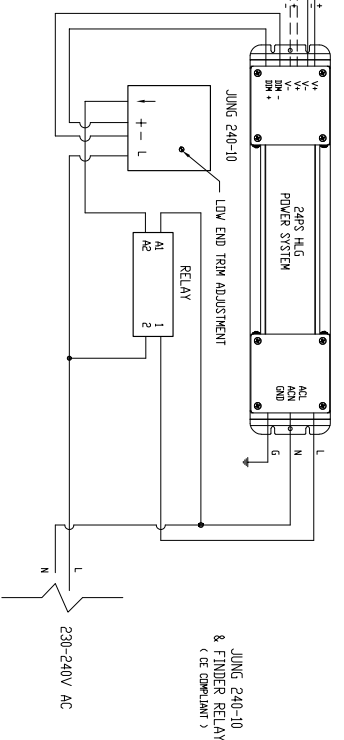
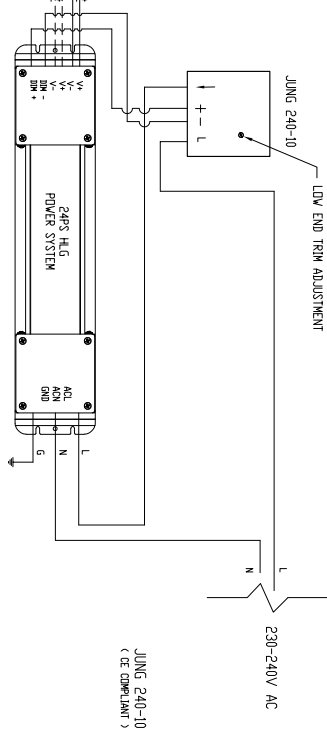
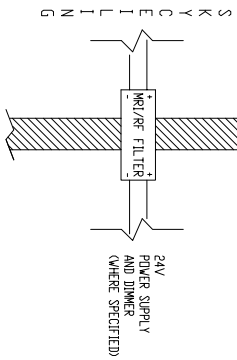


<b>Sky Factory</b>		DATE: 04/17/2023
PROJECT: APERTURE, CIRCLE, ELLIPSE OR CUSTOM ECOPLUS WITH 24PS HLG POWER SYSTEM DIMMING OPTION		DRAWN BY: SJA
SHEET 1 OF 1		DATE: 04/17/2023
TITLE: APERTURE, CIRCLE, ELLIPSE OR CUSTOM ECOPLUS WITH 24PS HLG POWER SYSTEM DIMMING OPTION		DATE: 04/17/2023
PROJECT: APERTURE, CIRCLE, ELLIPSE OR CUSTOM ECOPLUS WITH 24PS HLG POWER SYSTEM DIMMING OPTION		DRAWN BY: SJA
SHEET 1 OF 1		DATE: 04/17/2023

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- NOTES:
1. ALL FIXTURES 24V DC  ONLY.
  2. FOR NUMBER OF CIRCUITS AND NUMBER OF FIXTURES PER CIRCUIT, SEE INSTALLATION SPECIFIC E11 AND E12 PROVIDED.
  3. HLG-480H-24B AND HLG-600H-24B HAVE TWO SETS OF OUTPUT LEADS. MEANWELL RECOMMENDS LOADING NO MORE THAN 240 WATTS ON EACH SET OF CABLES FOR HLG-480H-24B AND 480 WATTS ON EACH SET OF CABLES FOR HLG-600H-24B

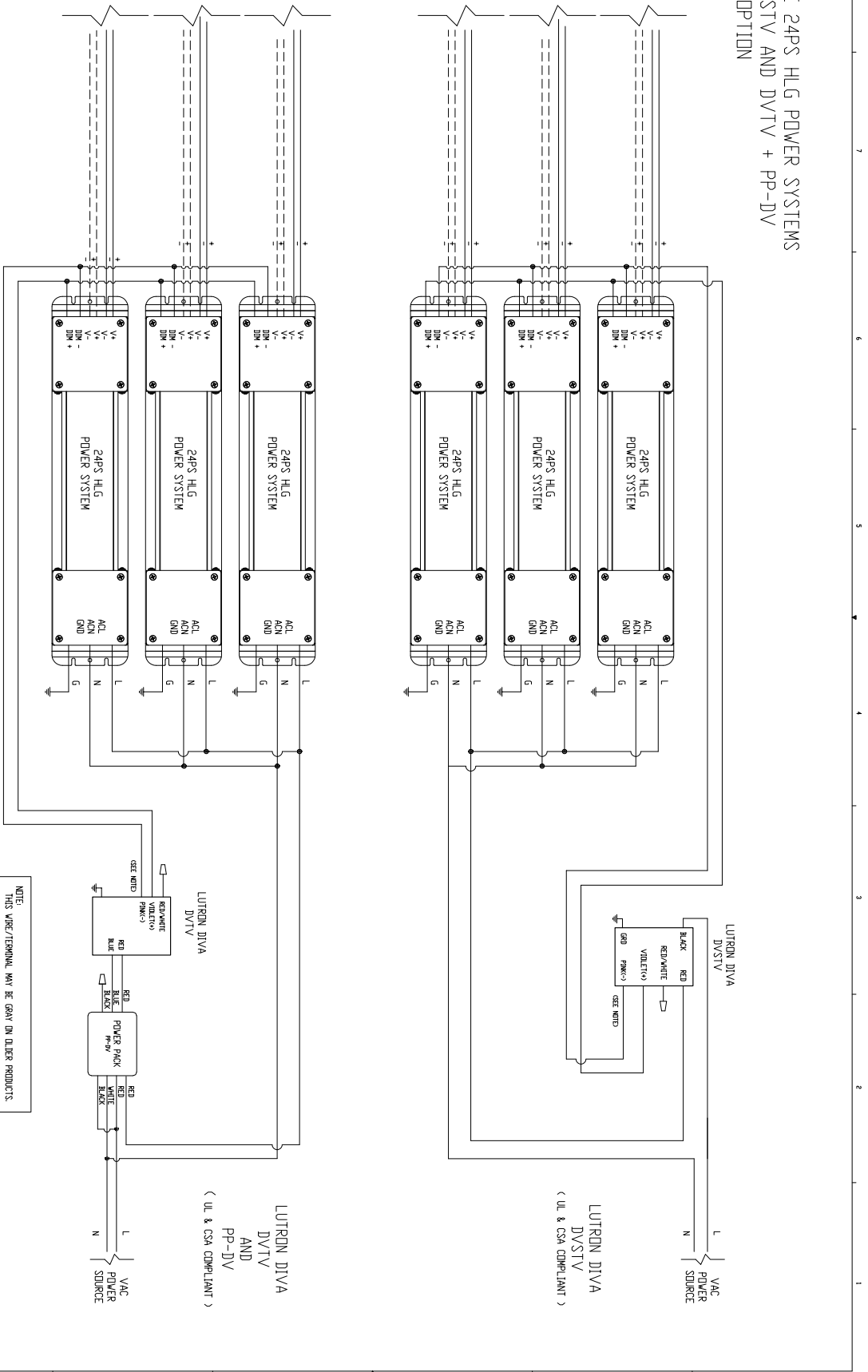


APERTURE, CIRCLE, ELLIPSE OR CUSTOM  
ECOPUS WITH 24PS HLG POWER SYSTEM  
DIMMING OPTION

<b>Sky Factory</b>	DATE: 01/04/23	REV: C
MANUFACTURE OF SKY FACTORY	TITLE: APERTURE CIRCLE SQUARE OR CUSTOM	DATE: 01/04/23
DESIGNER: [Name]	DESIGNER: [Name]	DATE: 01/04/23
CHECKER: [Name]	CHECKER: [Name]	DATE: 01/04/23
APPROVER: [Name]	APPROVER: [Name]	DATE: 01/04/23
PROJECT NO: [Number]	PROJECT NO: [Number]	DATE: 01/04/23
SCALE: 1:1 (DIMENSIONS)	SCALE: 1:1 (DIMENSIONS)	DATE: 01/04/23
SHEET 1 OF 1		



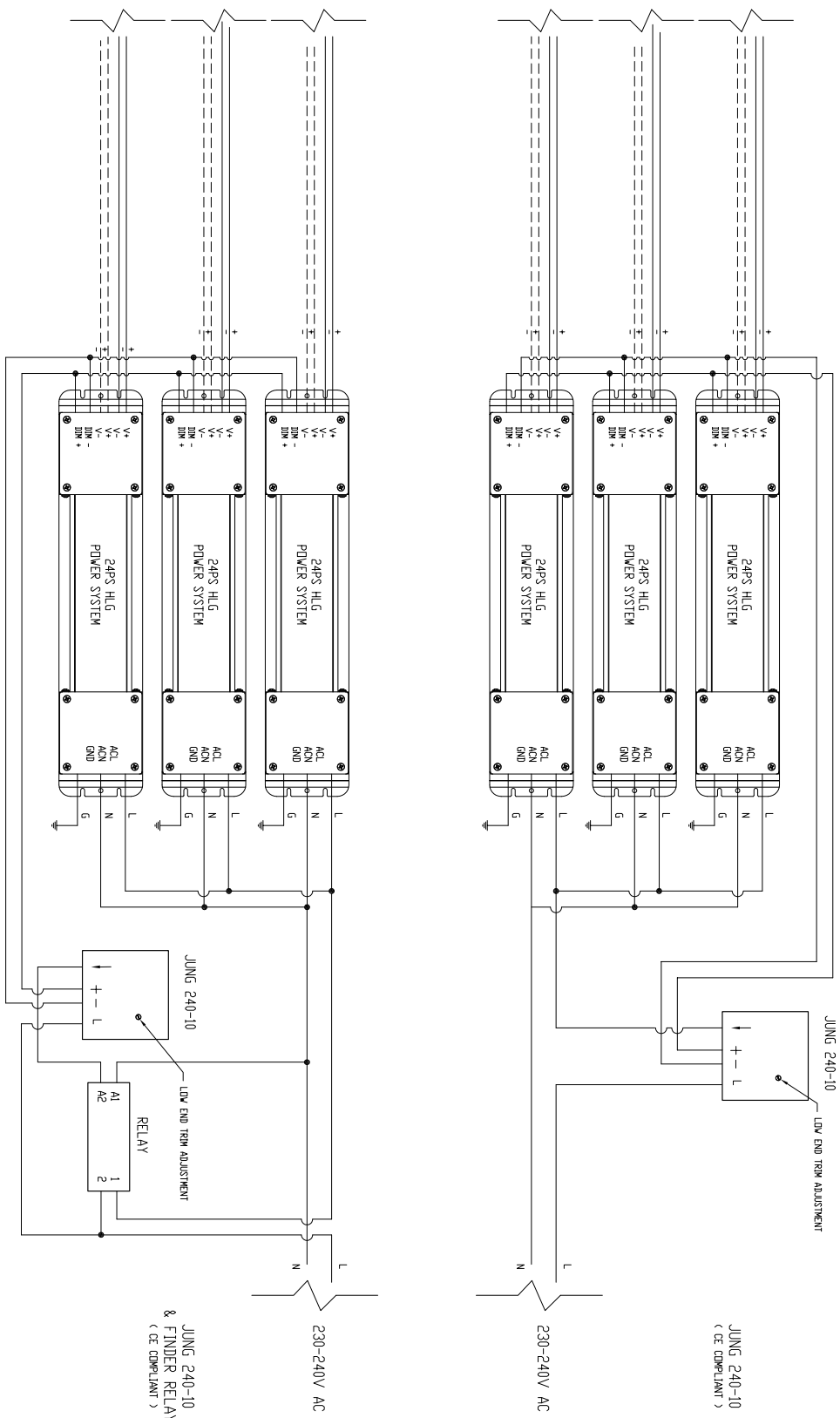
MULTIPLE 24PS HLG POWER SYSTEMS  
WITH DVSTV AND DVTV + PP-DV  
DIMMING OPTION



NOTE:  
THIS WIRE/TERMINAL MAY BE DIFFERENT ON OLDER PRODUCTS.

<p><b>SKY Factory</b></p> <p>MANUFACTURER OF DIMMERS                  10000 Skyway Blvd                  Suite 100                  Dallas, TX 75243                  Phone: 972.443.8888                  Fax: 972.443.8889                  Email: sales@skyfactory.com                  Website: www.skyfactory.com</p>	<p>DATE: 07/28/2023                  DRAWN BY: RJA                  CHECKED BY: JLD                  SCALE: AS SHOWN</p>	<p>TITLE: 24PS HLG POWER SYSTEMS WITH DVSTV AND DVTV + PP-DV DIMMING OPTION</p>	<p>REV: B</p>
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MULTIPLE 24PS HLG POWER SYSTEMS  
WITH JUNG 240-10 AND JUNG 240-10 + FINDER RELAY  
DIMMING OPTION



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<b>Sky Factory</b>		PK. NO.	EJ.001447	REV.	A
<small>                 SKY FACTORY (INDONESIA) PT. LTD.                  JALAN KEMUNING, NO. 100, KEMUNING, BOJONEgara, Jawa Timur 60119, Indonesia                  TEL: +62 31 76301000 FAX: +62 31 76301001                  E-MAIL: SALES@SKYFACTORY.COM             </small>		TITLE	WIRING DIAGRAM OF MULTIPLE 24PS HLG POWER SYSTEMS WITH JUNG 240-10 AND JUNG 240-10 + FINDER RELAY DIMMING OPTION		
NO. OF SHEETS	3	DATE	02/07/2021		
SCALE	1/1	SHEET NO.	3		

EJ.001447

## Wire Sizing Chart:

Wire Sizing Chart is calculated for a recommended voltage drop of no more than 3%.

For amps per luminaire at 24V DC, see below. For custom sizes, see custom wiring diagram included (where applicable).

NOTE: Some larger installations have multiple branches. See installation specific wiring diagrams included and/or custom wiring diagram (where applicable).

NOTE: Two largest power systems have two sets of leads. See installation specific wiring diagrams included and/or custom wiring diagram (where applicable).

We recommend dividing the load as evenly as possible to minimize voltage drop and maximize placement options.

Length	5	10	15	20	25	30	35	40	45	50
Amperage										
1	18	18	18	18	18	18	18	18	18	18
2	18	18	18	18	18	16	16	16	16	14
3	18	18	18	16	16	16	14	14	14	12
4	18	18	18	16	14	14	14	12	12	12
5	18	18	16	14	14	12	12	12	12	10
6	18	16	16	14	12	12	12	10	10	10
7	18	16	14	14	12	12	10	10	10	10
8	18	16	14	12	12	10	10	10	10	-
9	18	16	14	12	12	10	10	10	-	-
10	16	14	12	12	10	10	10	-	-	-
11	16	14	12	12	10	10	-	-	-	-
12	16	14	12	10	10	-	-	-	-	-
13	16	14	12	10	10	-	-	-	-	-
14	16	14	12	10	10	-	-	-	-	-
15	16	14	12	10	-	-	-	-	-	-
16	16	12	10	10	-	-	-	-	-	-
17	16	12	10	10	-	-	-	-	-	-
18	16	12	10	10	-	-	-	-	-	-
19	16	12	10	-	-	-	-	-	-	-
20	14	12	10	-	-	-	-	-	-	-

### Amps per Luminaire at 24V DC

<b>Aperture</b>	<b>Amps</b>	<b>Aperture</b>	<b>Amps</b>	<b>Infinity</b>	<b>Amps</b>	<b>Infinity</b>	<b>Amps</b>
AP-CIR-3	1.6	AP-ELP-4x6	4.8	INF-4	3.4	INF-9	15.1
AP-CIR-4	2.9	AP-ELP-5x8	8.2	INF-6	8.0	INF-12	29.0
AP-CIR-5	4.7						

<b>Circles</b>	<b>Amps</b>	<b>Circles</b>	<b>Amps</b>	<b>Ellipses</b>	<b>Amps</b>
CIR-5	4.31	CIR-9	15.1	ELP-5x9	8.03
CIR-6	6.47	CIR-10	17.97	ELP-6x8	9.07
CIR-8	11.74	CIR-11/9	25.16	ELP-6x10	10.9
CIR-8/658	13.18	CIR-14/3	38.1	ELP-7'9x10'2	14.38
				ELP-9x12	19.53