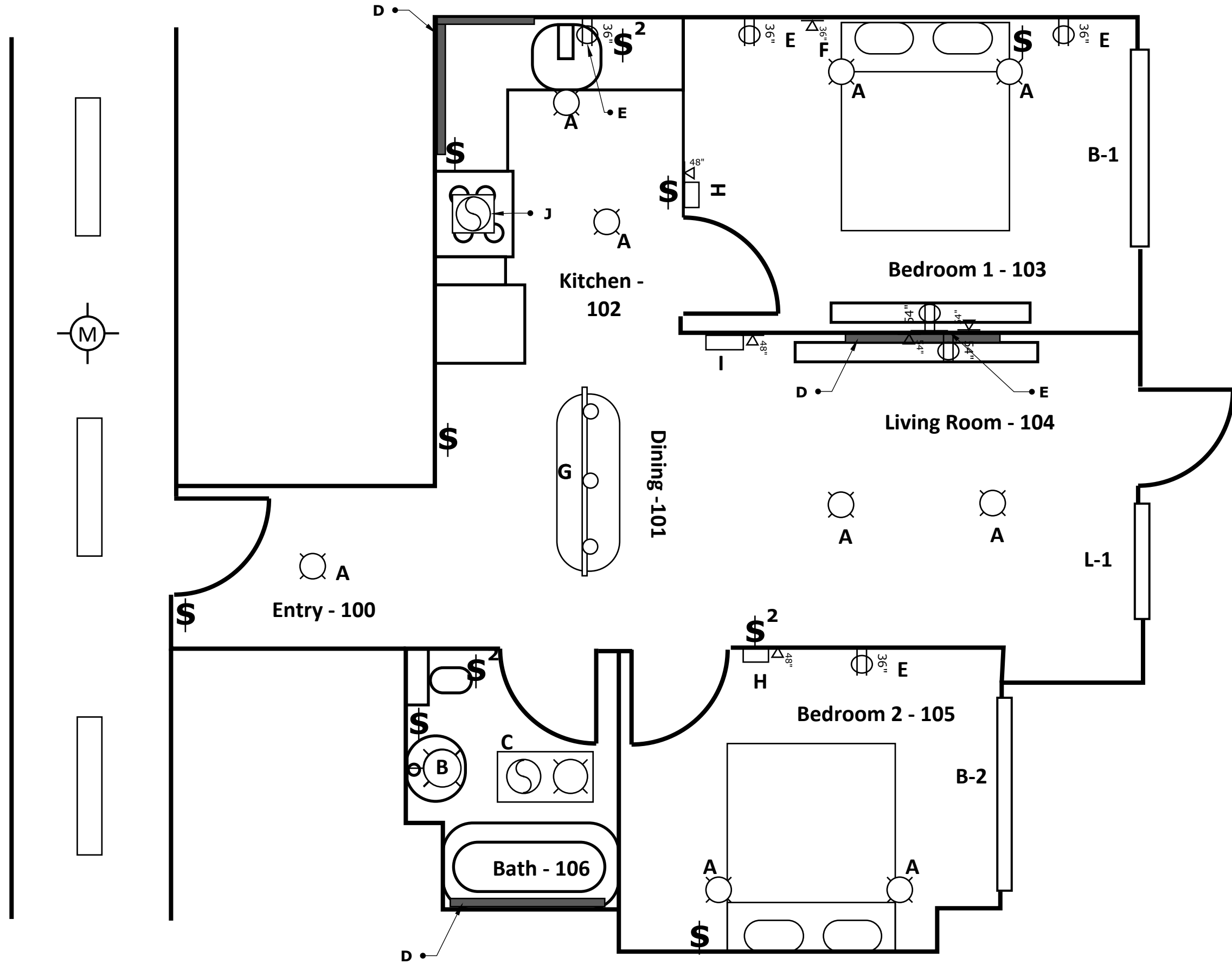


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Residential Practice**

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Notes: (Note briefly what you immediately notice about this design)

DATE:
December 28, 2022

TITLE:
RCP

DRAWING NUMBER:

A

Lighting and Device Schedule

Device	Description	Manufacturer Part Number	Size	Qty	Power ea (watts)	Budgeted Power (Watts)
A	4" Color Tuning Gimbal Down Fixtures - White	PoE Texas DWN-4-RDG-WH	4"	9	10	10
B	Wall Sconce - Black - with Edison Bulb	Revtronic 3 Bulb Vanity - Black 3x LTG-LVA19Bulb	2'	1	18	18
C	Fan/Light Bath Combo - White	Delta Breez ITG100ELED	100 CFM	1	15	15
D	RGBW Light Strip - 12/24 Volts	PoE Texas DENT-LTG-RGBW	4'	4	20	20
E	Enocean Controlled AC Outlet	PoE Texas DENT-LC-Plugload	1 gang	6	N/A	N/A
F	PoE Enabled USB Charger	PoE Texas GAT-USB-IW	1 gang	1	25	25
G	Mag-track Pendant Light Fixture - Black	PoE Texas LTG-Track-Mag	4'	1	36	36
H	5" PoE Enabled Touch Controller	PoE Texas DENT-TAB-5	1 gang	2	10	10
I	8" PoE Enabled Touch Controller	PoE Texas DENT-TAB-8	1 gang	1	10	10
J	Kitchen Vent Fan	PoE Texas DENT-FAN	100 CFM	1	20	20
S	Single Rocker Enocean Switch - White	PoE Texas DENT-WS-W-WH	N/A	6	N/A	N/A
S2	Double Rocker Enocean Switch	PoE Texas DENT-WS-W2-WH	N/A	2	N/A	N/A

Curtain Schedule

Device	Description	Manufacturer Part Number	Size	Qty	Power ea (watts)	Budgeted Power (Watts)
B-1	PoE Motorized Curtains	PoE Texas	4'	1	10	10
B-2	PoE Motorized Curtains	PoE Texas	4'	1	10	10
L-1	PoE Interior Roller Shade	PoE Texas	3'	1	10	10

Notes: (Note briefly what you immediately notice about this design)

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DATE:
December 28, 2022

TITLE:
**DEVICE
SCHEDULE**

DRAWING NUMBER:

B

**Compare this Controls Narrative with the provided RCP and Device Schedule.
Create a Sequence of Operations or a "Controls Narrative" for Bedroom 2 (hint: look at Bedroom 1):**



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Entry:

S-Single Rocker:

- Switch button up, turn on A fixture in entry
- Switch button down, turn off A fixture in entry

Dining:

S-Single Rocker (for Mag Track)

- Switch momentary button up, turn on G fixture in dining room to 80%
- Switch momentary button down, turn off G fixture in dining room

Kitchen:S-Single Rocker (A)

- Switch button up, turn on A fixture in entry of kitchen
- Switch button down, turn off A fixture in entry of kitchen

S-Single Rocker (J)

- Switch button up, turn on Fan (J) in kitchen
- Switch button down, turn off Fan (J) in kitchen

S-2-Double Rocker (A+E)

- Switch button top left, turn on A fixture over sink
- Switch button bottom left, turn off A fixture over sink
- Switch button top right, turn on E AC outlet
- Switch button bottom right, turn off E AC outlet

S-Single Rocker (2-A)

- Switch button up, turn on x2 A fixtures in kitchen
- Switch button down, turn off x2 A fixtures in kitchen

Bedroom 1:

H- 5" PoE Enabled Touch controller

- Will be able to operate Bedroom x2 A fixtures as a group or independently
- Will be able to operate Bedroom 1 B-1 Motorized Curtains
- Will be able to control E AC outlets in Bedroom 1
- Will be able to produce an alarm

S-Single Rocker (A)

- Switch button up, turn on x2 A fixtures in Bedroom 1
- Switch button down, turn off x2 A fixtures in Bedroom 1

Living Room:

I- 8" PoE Enabled Touch Controller

- Will be able to operate and control x2 A fixtures as a group or independently in living room
- Will be able to control color on D fixture in living room and in kitchen cabinet
- Will be able to control E AC outlet in living room
- Will be able to operate living room L-1 PoE interior roller shades
- Will be able to produce an alarm

S-2- Double Rocker

- Switch momentary button top left, increase brightness of x2 A fixtures by 20%
- Switch momentary button bottom left, decrease brightness of x2 A fixtures by 20%
- Switch momentary button top right, increase color temperature of x2 A fixtures by 20%
- Switch momentary button bottom right, decrease color temperature of x2 A fixtures by 20%

Bedroom 2:

-
-
-
-

-
-

Bath:

S-2-Double Rocker

- Switch button top left, turn on fixture C light
- Switch button bottom left, turn off fixture C light
- Switch button top right, turn on/off fixture C Fan
- Switch button bottom right will cycle colors on fixture D, including off

S-Single Rocker

- Switch button up, turn on vanity fixture B
- Switch button down, turn off vanity fixture B

DATE:
December 28, 2022

TITLE:
**CONTROLS
NARRATIVE**

DRAWING NUMBER:

C

Steps:

How many LINC's in total will you need for this space? There are two LINC's missing in the space, please find where they are needed.

Extra Credit: Will these LINC's be CC or CV?

Please draw onelines for how you will run the wiring

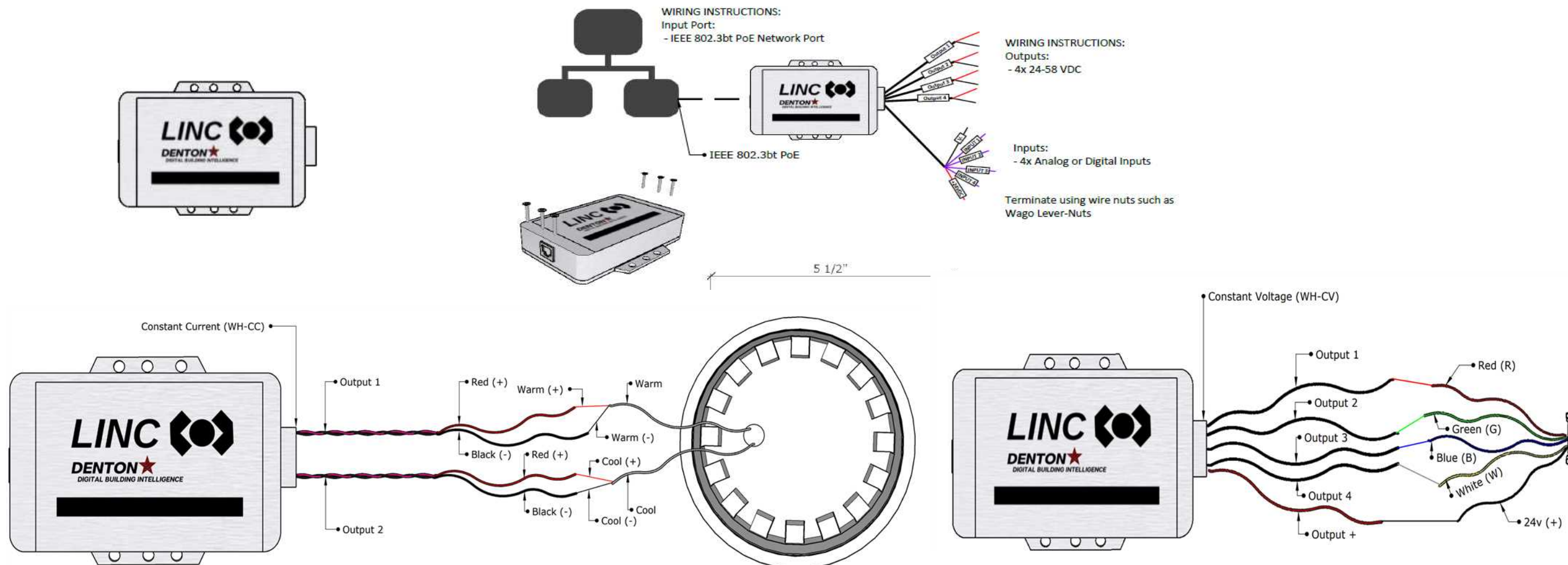
- CAT 6 wiring
- DC Wiring

Considerations:

- LINC's have four inputs and four outputs
- LINC's have a total power budget of 80 watts

Fixture A requires two outputs because it is color tuning - 1x for warm light and 1x for cool light

Assume the ceiling is a sheet rock ceiling and you can use ceiling boxes for LINC's



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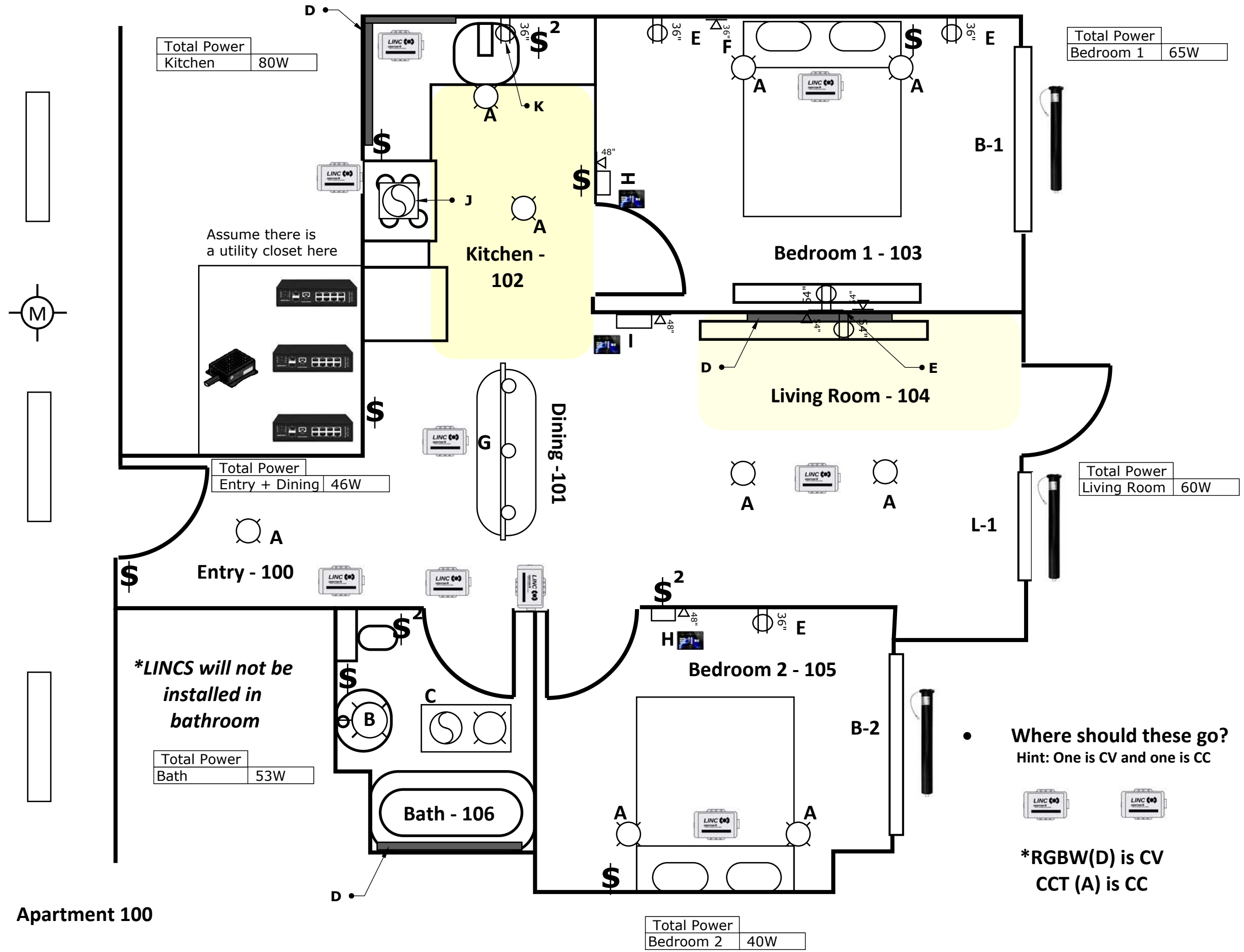
TITLE:
PoE LIGHTING
STEP

DRAWING NUMBER:

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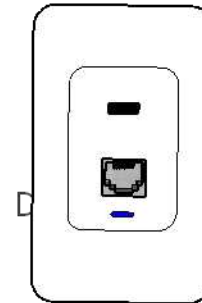
Apartment 100



DATE:
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TITLE:
PoE LIGHTING DESIGN

DRAWING NUMBER:



Steps:

Based on the drawings what other devices are in the system besides the lights and light switch? Which ones are PoE?

Return to the previous page to add the wiring for the accessories

Considerations:

At a minimum each deployment must have a COR-TAP controller

The 5" & 8" wall controller is Power Over Ethernet

The "F" device is a PoE enabled USB Charging Station

DATE:
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TITLE:
ACCESSORIES

DRAWING NUMBER:

F

Lighting and Device Schedule



Device				Controls		
Room	Type	Size	Power (W)	Node Name	Output or Input	MAC address (last 4)
Entry	A	4"	10	F100A_1_2_00AD	1_2	00:AD
Dining	G	4'	36	F101A_1_0051	1	00:51
Kitchen	D	8'	40	F102D_1_2_3_4_0039	1_2_3_4	00:39
Kitchen	A	4"	10	F102A_1_2_0049	1_2	00:49
Kitchen	A	4"	10	F102A_3_4_0049	3_4	00:49
Kitchen	J		20	V102J_1_00A1	1	00:A1
Bed 1	A	4"	10	F103A_1_2_00AC	1_2	00:AC
Bed 1	A	4"	10	F103A_3_4_00AC	3_4	00:AC
Bed 1	B-1	4'	10	N/A	N/A	N/A
Bed 1	H	5"	10	WS_Bed_1	N/A	N/A
Bed1	F	1g	25	N/A	N/A	N/A
Living	A	4"	10	F104A_1_2_005D	1_2	00:5D

Device				Controls		
Room	Type	Size	Power (W)	Node Name	Output or Input	MAC address (last 4)
Living	A	4"	10	F104A_3_4_005D	3_4	00:5D
Living	D	4'	20	F104D_1_2_3_4_0061	1_2_3_4	00:61
Living	L-1	3'	10	N/A	N/A	N/A
Living	I	8"	10	WS_LIVING	N/A	N/A
Bed 2						00:C6
Bed 2						00:C6
Bed 2				N/A	N/A	N/A
Bed 2	H	5"	10	WS_Bed_2	N/A	N/A
Bath	B	2'	18	F106B_3_00AD	3	00:AD
Bath	C		15	VF106C_1_2_00A7	1_2	00:A7
Bath	D	4'	20	F106D_1_2_3_4_005E	1_2_3_4	00:5E
N/A			15	COR-TAP		

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Steps:

Complete the PoE Schedule by adding a fixtures to Bedroom 2, the MAC addresses have been filled for you. Compare your answers to Bedroom 1.

Considerations:

You want to identify each device and how much power it draws so you can create a power schedule for your networking hardware

You are also starting to use labeling. Either match the device labeling scheme provided by the owner or you can use ours developed over many projects:

F [Type of Device] 100 [Room number] A [Device schedule] _1_2 [Channels] 00:AC [Last 4 MAC]

The LINC MAC address is a unique identifier. You can choose to add them now to your node name or add them later.

- **F - Light fixture**
- **SW - Light switch**
- **M - Motion detector**
- **WS - Wallstation**
- **S - Sensor (Various)**
- **SH - Shade**
- **V-Vent/Fan**

DATE:
December 28, 2022

TITLE:
PoE SCHEDULE

DRAWING NUMBER:

Power Schedule

PoE Device Schedule

Device				Controls		
Room	Type	Size	Power (max)	Node Name	Output or Input	MAC address (last 4)
Living	A	4"	10	F104A_3_4_005D	3_4	00:5D
Living	D	4'	20	F104D_1_2_3_4_0061	1_2_3_4	00:61
Living	L-1	3'	10	N/A	N/A	N/A
Living	I	8"	10	WS_LIVING	N/A	N/A
Bed 2						00:C6
Bed 2						00:C6
Bed 2				N/A	N/A	N/A
Bed 2	H	5"	10	WS_Bed_2	N/A	N/A
Bath	B	2'	18	F106B_3_00AD	3	00:AD
Bath	C		15	VF106C_1_2_00A7	1_2	00:A7
Bath	D	4'	20	F106D_1_2_3_4_005E	1_2_3_4	00:5E

PSE Total Power Schedule

PSE	PSE Power Budget	Total power (kW)
GBTS-10-8-M-480	480W	.48
GBTS-10-8-M-480	480W	.48
GBTS-10-8-M-240	240W	.24

Steps:

Translate the PoE Device Schedule from the previous page into a Port and Switch Schedule - The information is organized by room and Device Schedule.

Recall the device naming formula.

Considerations:

Make sure to identify the power you need, should we over specify power?

What lights need to be on their own switch for emergency lighting?

How you will label the switches? Has the owner provided a schema?

PSE Power Schedule by Port

Node	Power (W)	Mfg	PSE Port
F100A_00_AD	10	DENT	GBTS-10-8-M_1_1
F101A_1_00_51	36	DENT	GBTS-10-8-M_1_2
F102D_1_2_3_4_00_39	40	DENT	GBTS-10-8-M_1_3
F102A_1_2_00_49	10	DENT	GBTS-10-8-M_1_4
F102A_3_4_00_49	10	DENT	GBTS-10-8-M_1_4
V102J_1_00_A1	10	DENT	GBTS-10-8-M_1_5
F103A_1_2_00_AC	10	DENT	GBTS-10-8-M_1_6
F103A_3_4_00_AC	10	DENT	GBTS-10-8-M_1_6
N/A-B-1	10	DENT	GBTS-10-8-M_1_7
N/A-WS_Bed_1	10	DENT	GBTS-10-8-M_1_8
N/A-SW-USB-IW	25	DENT	GBTS-10-8-M_2_1
F104D_1_2_3_4_00_61	20	DENT	GBTS-10-8-M_2_3
N/A-L-1	10	DENT	GBTS-10-8-M_2_4
N/A-WS_LIVING	10	DENT	GBTS-10-8-M_2_5
F105A_1_2_00_C6	10	DENT	GBTS-10-8-M_2_6
N/A-B-2	10	DENT	GBTS-10-8-M_2_7
N/A-WS_BED_2	10	DENT	GBTS-10-8-M_2_8
F106B_1_00:B6	18	DENT	GBTS-10-8-M_3_1
N/A-CORTAP	15	DENT	GBTS-10-8-M_3_4



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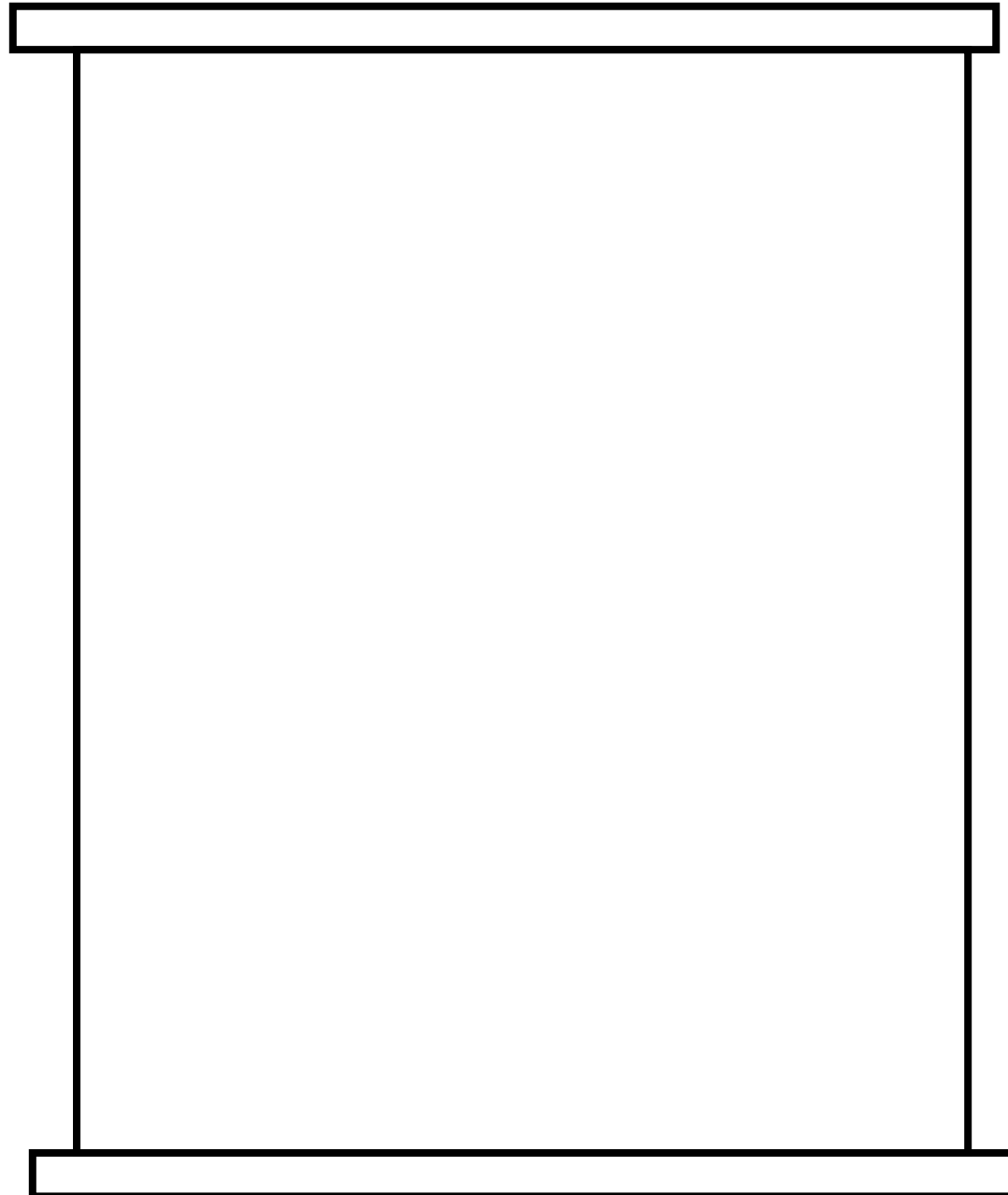
DATE:
December 28, 2022

TITLE:
POWER SCHEDULE

DRAWING NUMBER:

H

FOR EXAMPLE



Steps:

Free hand draw your closet - Add your GBTS-10-8-M's and a power supplies

Considerations:

How many AC circuits at what amp do you need for this closet? $\text{Watts/Volts AC} = \text{Amps AC}$

How do you dissipate heat from this closet? Fans? Convection?

The switches and power supplies are DIN rail mounted. How do you mount them? Power supplies on one rail, switches on another?

How do you route the AC wiring? How do you route the Ethernet wiring? How do you route the DC wiring to the switches?

Can this project be completed with the use of 1x GBTS-28-24-M? Assuming noise is not a factor and there is space?

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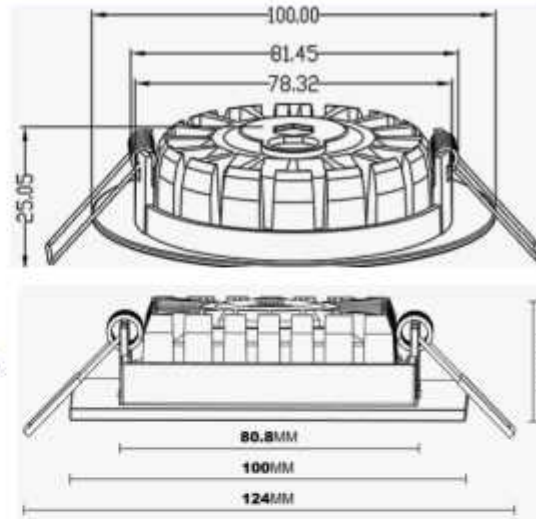
TITLE:
**RACK/SWITCH
SCHEDULE**

DRAWING NUMBER:

DENT-LTG-DWN

Features

- ◊ CREE LED, high lumen
- ◊ 26mm (~ 1") thin profile
- ◊ 900+ Lumens
- ◊ UGR<19
- ◊ Several lensing options
- ◊ 90+ CRI
- ◊ 10W @ 90lm/W
- ◊ Constant Current: 200mA, 36-42VDC
- ◊ 2700K—5000K selectable via software
- ◊ Beam Angle 38°
- ◊ Weight 146g
- ◊ Operating Temp -10°- 40° C
- ◊ Dimming in 0.4% increments



4" Style Options (DENT-LTG-DWN-4-<shape>-<color>)



<shape>	Description
-RDF-	Round Flat
-RDG-	Round Gimbal
-SQF-	Square Flat
-SQG-	Square Gimbal

<color>	Description
-WHT	White
-BLK	Black

512-479-0317

Since 2011

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Wireless Self Powered Wall Switches

DENT-WS-*

Features

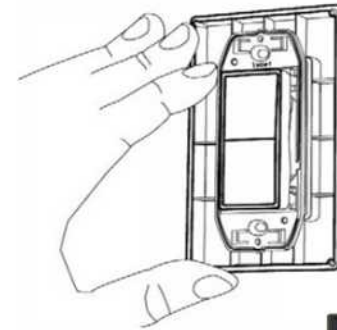
- Fits onto or over Single gang box or
- Surface mount option to desk or wall
- Mount switches anywhere
- Create 3-way and 4-way switches
- Control lights, motors, or other electrical loads
- Reconfigure or relocate as needed
- Self powered (single and dual rocker) with 20+ yr life expectancy
- No wiring required
- No Batteries required (single and dual rocker)

Specifications

- 4.5" h x 2.75" w x 0.62" d
- 80-100ft range to CORTAP gateway
- Weight 112g (4oz)
- FCC compliant

Ordering Options

(DENT-WS-W-NB-C)



NB = Number of Buttons	C=Color
1 (Single Rocker)	W=White
2 (Dual Rocker)	LA=Light Almond
4 (Battery)	I=Ivory
	G=Grey
	B=Black

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Steps:

Mark the submittals as how you would submit them to the client. On DENT-LTG-DWN, circle the color that matches the color of the fixture in your lab kit. Do the same for the Wall Switches. What else is important to note regarding the PoE switch? (next page)

Considerations:

Identify selections of color, length, power, type. The better you identify them now the less risk you have later.

DATE:
December 28, 2022

TITLE:
SUBMITTAL
PACKAGE

DRAWING NUMBER:

GBTS-10-8-M-720w

**Fanless IEEE 802.3bt
Power Over Ethernet**

Drive building infrastructure with a distributed 90 watt system with data and power redundancy capacity.



**DISTRIBUTED POWER AND
INTELLIGENCE**

The GBTS-10-8-M, as a fanless full gigabit Managed Industrial BT PoE switch, provides reliable, cost effective, high power PoE on eight 10/100/1000Base-T Ethernet PoE ports and with two 1000Base-X SFP Slots. The switch includes HTML based L2 managed functions, including IGMP Snooping QVLAN, QoS, DHCP and Fast-ring and PoE control. This switch brings cost effective, ring networked technology to lighting, security monitoring, enterprise park and other applications.

512-479-0317

Since 2011

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DISTRIBUTED PoE SWITCH

Features

- ◇ 8 x 10/100/1000Mbps Ethernet PoE port +2*1000Mbps SFP Slots
- ◇ Ports 1-8 output IEEE802.3at/af/bt
- ◇ Total PoE power budget is 480W, max PoE power for single port is 90W
- ◇ Supports Perpetual PoE and PoE watchdog.
- ◇ Supports Layer 2 managed functions including DHCP, Fast-Ring, IPv6, etc.
- ◇ Relay alarm output
- ◇ Fanless, wave metal shell, and low power consumption design
- ◇ DIN rail and wall mountable

GBTS-10-8-M-720w



PoE Function	Port Enable/Disable Scheduled port management Voltage, current and power Display System total power display and configuration PoE Watch dog, automatically restart and timed restart when device crashes with IP binding restart Port power configuration Over-power Indicator Port PoE type configuration (af/at)
--------------	---

Steps:

Mark the submittals as how you would submit them to the client. On DENT-LTG-DWN, circle the color that matches the color of the fixture in your lab kit. Do the same for the Wall Switches. What else is important to note regarding the PoE switch?

Considerations:

Identify selections of color, length, power, type. The better you identify them now the less risk you have later.

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DATE:
December 28, 2022

TITLE:
**SUBMITTAL
PACKAGE 2**

DRAWING NUMBER:

K