BUILDING MANAGEMENT SYSTEMS INTEGRATION SPECIFICATIONS:

GFXX - nPOD TOUCH XX

BUILDING CONTROLLER (B-BC). 2. OPTIONAL AUTOMATIC DEMAND RESPONSE CLIENT OPTION ALLOWS ACTIVATION OF CONFIGURABLE LOAD SHED DIMMING LEVELS THROUGH AN OpenADR 2.0a VIRTUAL END NODE. REQUIRES OUTBOUND IP CONNECTION TO UTILITY DRAS. 3. ENHANCED SECURITY PROVIDED BY BOTH:

1. BACnet TESTING LABORATORIES (BTL) LISTED AS A BACnet

3.1. HTTPS SERVER 3.2. U.S. GOVERNMENT SECURITY STANDARD OF FEDERAL INFORMATION PROCESSING STANDARD (FIPS) PUBLICATION 140-2, LEVEL 1, INSIDE (VALIDATION CERTIFICATE PENDING). 4. THE INSTALLING CONTRACTOR WILL BE RESPONSIBLE FOR THE

FOLLOWING WHEN INTEGRATING LIGHTING CONTROL SYSTEM TO THE BUILDING MANAGEMENT SYSTEM: 4.1. PROVIDING A PHYSICAL CONNECTION FROM LIGHTING CONTROL SYSTEM TO BMS VIA BACnet I/P. 4.2. TO COORDINATE WITH THE BMS INSTALLER ON SPECIAL

LABELING CONFIGURATIONS THAT THE LIGHTING CONTROLS PROGRAMMER WILL NEED TO FOLLOW FOR SEAMLESS INTEGRATION OF THE TWO SYSTEMS. 4.3. TO COORDINATE ONSITE MEETING WITH LIGHTING CONTROLS PROGRAMMER & BMS/CONTROLS CONTRACTOR.

5. CONTACT HILA FOR FOR INTEGRATION WITH BMS,

SYSTEM OPERATIONS TRAINING OPTIONS, PER SECTION

CONTROLS@HI-LTG.COM - PHONE # 808-683-9344.

1. 2-HOUR ONSITE OR REMOTE TRAINING.

2-DAY IN PERSON OR REMOTE TRAINING @ HILA, AT CUSTOMER LOCATION, OR VIDEOCONFERENCING SOFTWARE.

3. VIDEO TRAINING GIVEN TO EVERYONE WHO PARTICIPATES IN THE 2-DAY IN PERSON OR REMOTE TRAINING. 4. CONTACT HILA FOR TRAINING, CONTROLS@HI-LTG.COM - PHONE # 808-683-9344.

REV DATE

Drawn By: Quote #:

DWG Ref:

OPTION FOR NETWORKED SYSTEM. WIRELESS

NECYD ANTENNA SHOWN

COMMUNICATION TO

ON DETAIL 1

DETAILS

NAME

XX/XX/2015

Scale: NOT TO SCALE

PASSIVE DUAL TECHNOLOGY (PDT) PIR/MICROPHONICS/BOTH OS - rCMS PDT 10 G2

LIGHTING CONTROLS LEGEND AND DESCRIPTIONS

SUBSCRIPT REFERENCES ZONE OF CONTROL

2-SCENE = SS2 - rPODLA 2S DX MVOLT XX G2

4-SCENE = SS4 - rPODLA 4S DX MVOLT XX G2

SUBSCRIPT REFERENCES ZONE OF CONTROL

SUBSCRIPT REFERENCES ZONE OF CONTROL

16-ZONES AND 16-SCENES WITH DIMMING

LOW VOLTAGE SCENE SELECTOR WITH DIMMING

LOW VOLTAGE GRAPHIC TOUCHSCREEN CONTROLLER, INCLUDES

2. DETAILS ARE DIAGRAMMATIC AND FOR REFERENCE OF SYSTEM AND ROOM TYPE REQUIREMENTS TO MEET BASIS OF DESIGN.

REFER TO MANUFACTURERS SHOP DRAWINGS FOR QUANTITIES AND DEVICES USED FOR EACH SPACE AND NETWORK. SHALL BE PROVIDED BY THE MANUFACTURER OR FACTORY

3. LIGHTING CONTROL SUBMITTALS FOR NETWORKED SYSTEM REPRESENATIVE AND SHALL INCLUDE THE FOLLOWING DOCUMENTS(NOT LIMITED TO FOLLOWING):

1. DETAILS AND DESIGN IS BASED ON AN nLIGHT LIGHTING

3.1. SHOP DRAWINGS SHOWING QUANTITY AND LOCATION OF ALL DEVICES.

3.2. STANDALONE/NETWORK SINGLE LINE DIAGRAM.

GENERAL NOTES:

CONTROLS SYSTEM.

3.3. BASIS OF DESIGN PROGRAMMING OPERATION FOR EACH ROOM TYPE. 3.4. DEVICE CUTSHEETS.

4. MANUFACTURER OR FACTORY REPRESENTATIVE TO INCLUDE STARTUP AND COMMISSIONING OF THE LIGHTING CONTROL SYSTEM. MUST INCLUDE A SITE VISIT FOR THE FOLLOWING: 4.1. A PRE-CONSTRUCTION MEETING TO CONFIRM DESIGN AND FIELD INSTALLATION REQUIREMENTS.

4.2. PROGRAMMING AND COMMISSIONING OF THE LIGHTING CONTROL SYSTEM TO MEET THE BASIS OF DESIGN AND IECC REQUIREMENTS. 4.3. MAINTENANCE / OWNER WALK THROUGH FOR MAKING FINAL

ADJUSTMENTS TO PROGRAMMING. 5. CONTRACTOR SHALL FURNISH AND INSTALL ALL LIGHTING CONTROL DEVICES, CABLES, ACCESSORIES AS REQUIRED BY MANUFACTURER'S RECOMMENDATION TO PROVIDE A

COMPLETE AND FULLY FUNCTIONAL COMPLIANT IECC SYSTEM. 6. CONTRACTOR SHALL TEST ALL LOW VOLTAGE NETWORK CABLES IN THE FIELD TO THE VERIFICATION AND

STARTUP. 7. ALL DEVICES SHALL BE MOUNTED AND INSTALLED IN ACCESSIBLE CEILING LOCATIONS. CONTRACTOR WILL VERIFY

BEST FIT LOCATIONS IN THE FIELD.

REQUIREMENTS BY THE MANUFACTURER PRIOR TO SYSTEM

8. CONTRACTOR TO VERIFY COMPATIBILITY BETWEEN DIMMING POWERPACKS AND INSTALLED FIXTURES.

9. CONTACT HILA FOR COMPLETE nLIGHT LIGHTING CONTROLS

BOM, CONTROLS@HI-LTG.COM - PHONE # 808-683-9344.

IECC 2018 COMPLIANCE:

1. OCCUPANT SENSOR CONTROLS, SECTION C405.2.1.

2. TIME-SWITCH CONTROLS, **SECTION C405.2.2**.

MANUAL CONTROLS, SECTION C405.2.5.

7. ENHANCED DIGITAL LIGHTING CONTROLS, **SECTION C406.4** 8. FUNCTIONAL TESTING OF LIGHTING CONTROLS, SECTION C408.3

9. CONTACT HILA FOR COMPLETE ILIGHT LIGHTING CONTROLS

2VTL4 rES7 CORRIDOR

rPODLA DX MVOL7

WH G2

CORRIDOR

*USE LOCKABLE

SWITCH COVER TO

PREVENT

UNAUTHORIZED USE*

(7) CORRIDOR/STAIRWELL DETAIL

BLWP4 rES7

STAIRWELL

rPODLA DX MVOLT

WH G2

STAIRWELL

*USE LOCKABLE

SWITCH COVER TO

PREVENT

UNAUTHORIZED USE*

BOM, CONTROLS@HI-LTG.COM - PHONE # 808-683-9344.

3. DAYLIGHT-RESPONSIVE CONTROLS, SECTION C405.2.3. 4. SPECIFIC APPLICATION CONTROLS, **SECTION C405.2.4**.

6. EXTERIOR LIGHTING CONTROLS, **SECTION C405.2.6**.

OPTION FOR NETWORKED

SYSTEM. WIRELESS

ON DETAIL (1)

COMMUNICATION TO NECYD ANTENNA SHOWN

WALL SWITCH DAYLIGHT SENSOR

| X |

| X |

| X | X |

| X | X

| X | X

TIME CLOCK

*** LIGHTING IN OPEN OFFICE AREAS GREATER THAN 300 SQUARE FEET, LIGHTING SHALL BE CONTROLLED SEPARATELY IN CONTROL ZONES NOT GREATER THAN 600 SQUARE. THE FIXTURES IN THE OCCUPIED CONTROL ZONES WILL BE ON AT 100% FULL BRIGHT AND THE FIXTURES IN THE UNOCCUPIED (AFTER 7.5 MINUTES OF NO DETECTED MOVEMENT) CONTROL ZONES WILL BE AT 20% FULL BRIGHT. IF ALL AREAS ARE UNOCCUPIED (AFTER 10 MINUTES OF NO DETECTED MOVEMENT IN ALL CONTROL ZONES) THEN THE LIGHTS WILL TURN OFF.

100 | 10 | 50 | 12.5 | TBD | TBD

** AUTOMATIC SCHEDULING CONTROLS SHALL BE CAPABLE OF LIGHTING SETBACK CONTROL IN ACCORDANCE TO C405.2.6.2 FOR

* 5 MINUTES BEFORE THE LIGHTING IS SCHEDULED TO TURN OFF, THE LIGHTS WILL TURN OFF FOR 1 SECOND AND THEN GO BACK TO IT'S

PREVIOUS DIMMING LEVEL. THIS BLINK WARNING PREVENTS FALSE OFFS AND GIVES AUTHORIZED PERSONNEL A WARNING TO PRESS

DUSK

TBD

DAWN

TBD

SEQUENCE OF OPERATION / BASIS OF DESIGN TABLE

OCCUPANCY SENSOR

X X 100 7.5 10 10

X X 50 7.5 10 10

X X 100 7.5 10 10

100

100

X | X | 100 | 7.5 | 10 | 10

WALL SWITCH TO ACTIVATE A 2-HOUR OVERRIDE. OWNER TO VERIFY TIME SCHEDULES.

DECORATIVE FIXTURES AND C405.6.2.3 FOR NON-DECORATIVE FIXTURES.

X 50 7.5 10 10

X 100 17.5 10 20

X 50 7.5 10 10

X | 100 | 7.5 | 10 | 10

X 50 7.5 10 10

100 | 7.5 | 10 | 10

100 | 10 | 10 | 12.5

100 7.5 10 10

10

ROOM TYPE

CLASSROOMS

COPY ROOMS

EXTERIOR

BREAKROOMS/KITCHENS

CONFERENCE ROOMS

CORRIDORS/STAIRWELLS

MULTIPURPOSE ROOMS

RESTAURANTS/STORES

STORAGE ROOMS > 100 SQ FT

OFFICES < 300 SQ FT

PARKING GARAGE

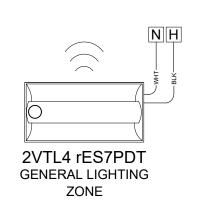
RESTROOMS

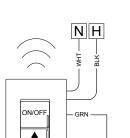
WAREHOUSES

OPEN OFFICE AREAS > 300 SQ FT

OFF







rPODLA DX MVOLT WH G2

NETWORK CONTROLLER INCLUDES THE FOLLOWING CAPABILITIES:

2. ASTRONOMICAL TIME CLOCK VIA SENSORVIEW SOFTWARE.

4. DEMAND RESPONSE READY DEVICE. AUTOMATIC DEMAND

CONFIGURABLE LOAD SHED DIMMING LEVELS THROUGH AN

API SYSTEMS. BACnet TESTING LABORATORIES LISTED B-BC.

5. SOFTWARE INTEGRATION FOR BACNET IP/MSTP BAS OR REST

6. SECURITY FIPS PUBLICATION 140-2, LEVEL 1 INSIDE COMPLIANT

3. ETHERNET PORT TO CONNECT TO LAN/WAN NETWORK.

RESPONSE (ADR) CLIENT THAT ALLOWS ACTIVATION OF

OpenADR 2.0a VIRTUAL END NODE.

SECURITY INTERFACE

TO ADDITIONAL nLIGHT DEVICES

REQUIRED OR AS INDICATED ON

AND/OR ENABLED FIXTURES IF

FLOOR PLANS

1. STANDALONE AND NETWORKED nLIGHT SYSTEM

FUNCTIONALITY.

nECYD NLTAIR G2

nECY MVOLT ENC NW GFXK

2VTL4 rES7PDT

GENERAL LIGHTING

ZONE

rPODLA DX MVOLT WH G2

2VTL4 rES7PDT

GENERAL LIGHTING

CONTROL ZONE 1

2VTL4 rES7PDT

GENERAL LIGHTING

CONTROL ZONE 2

nlight backbone network detail

CONNECTION TO LAN/WAN FOR

SENSORVIEW SOFTWARE, ADR (

ADDITIONAL nECY CONTROLLERS

N.T.S.

AND/OR BAS INTEGRATION

SMALL OFFICE DETAIL

N.T.S.

2VTL4 rES7PDT

CONTROL ZONE 1

2VTL4 rES7PDT PRIMARY DAYLIGHT

CONTROL ZONE 2

N H

LHW

ON/OFF

GRN

— GRN

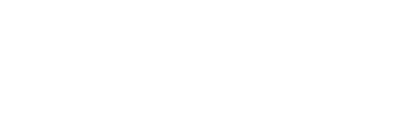
rPODLA DX MVOLT WH G2

PRIMARY DAYLIGHT

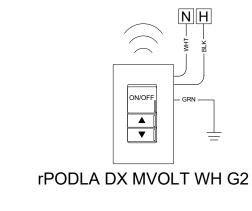
OPTION FOR NETWORKED SYSTEM. WIRELESS COMMUNICATION TO NECYD ANTENNA SHOWN ON DETAIL (1)

LARGE OFFICE (LESS THAN 300 SQUARE FEET) DETAIL

N.T.S.

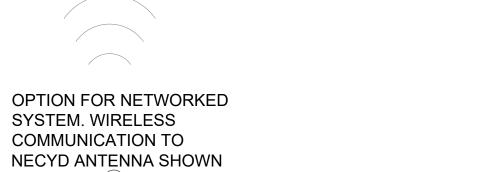


2VTL4 rES7PDT PRIMARY 2VTL4 rES7PDT GENERAL LIGHTING DAYLIGHT ZONE ZONE





OPTION FOR NETWORKED SYSTEM. WIRELESS COMMUNICATION TO NECYD ANTENNA SHOWN ON DETAIL 1





OPEN OFFICE (GREATER THAN 300 SQUARE FEET) DETAIL

No.

No.

No.

No. ON DETAIL 1

WIRELESS
COMMUNICATION TO
NECYD ANTENNA SHOWN

ON DETAIL 1

GARAGE DETAIL

N.T.S.

(PROVINCE)

CITY,

XX/XX/2015 Scale: NOT TO SCALE Drawn By: Quote #: DWG Ref:

DETAILS (2)