



DESCRIPTION:

- SINGLE CIRCUIT, 1 - THREE RELAY LIGHTING CONTROL, RESTRICTED TO PARTIAL AUTO ON AND PARTIAL MANUAL ON, FULL AUTO OFF
- AUTOMATIC RECEPTACLE CONTROL
- CEILING OCCUPANCY SENSOR(S), LOW-VOLTAGE SWITCH(ES)

NOTES:

- PROVIDE ONE ROOM CONTROLLER FOR THE SET OF LUMINAIRES IN THE ROOM DESIGNED TO BE CONTROLLED SEPARATELY, OR FOR EACH CIRCUIT TO BE CONTROLLED. PROVIDE ONE SINGLE-RELAY ROOM CONTROLLER FOR EACH CIRCUIT FOR RECEPTACLE CONTROL. PROVIDE OCCUPANCY SENSORS AND PHOTOSENSORS AS INDICATED ON PLANS. PROVIDE ONE OR MORE LOW-VOLTAGE SWITCHES FOR EACH SPACE TO BE CONTROLLED. SEE PROGRAMMING NOTES.
- PROGRAM LEFT LOAD CONTROL TOP BUTTON TO OPERATE "b" LOADS "ON" AND "OFF".
- PROGRAM LOAD CONTROL BUTTON TO TURN ON ALL DIMMABLE LIGHTING LOAD "c" AT 50% PRESET LEVEL. TAP THE TOP BUTTON TO OPERATE "c" LOADS TO TURN "ON" THE LIGHTS AND TAP THE BOTTOM BUTTON TO OPERATE "c" LOADS TO TURN "OFF" THE LIGHTS. PRESS AND HOLD THE TOP BUTTON TO RAISE THE LIGHTING LEVEL. PRESS AND HOLD THE BOTTOM BUTTON TO LOWER THE LIGHTING LEVEL.
- PROVIDE A SINGLE ZONE, CLOSED LOOP SENSOR. THE SENSOR IS TO BE PROGRAMMED TO CONTINUOUSLY DIM LIGHTING LOAD "b" BASED ON DAYLIGHT CONTRIBUTION TO MAINTAIN THE REQUIREMENT OF ROOM AT TASK LEVEL.
- IT IS THE INTENT OF THIS WIRING DIAGRAM TO REPRESENT SITUATIONS INVOLVING LUMINAIRES WITH MULTIPLE LIGHT LEVELS (STEP-DIMMING AND FULL-DIMMING) AS WELL AS LUMINAIRES IN THE SAME ROOM WHICH ARE CONTROLLED INDEPENDENTLY OF EACH OTHER.

SEQUENCE OF OPERATION:

- LIGHTING SYSTEM AUTOMATICALLY TURNS "ON" TO 50% (LIGHTING LOAD 'a' AND PRESET DIMMABLE LIGHTING LOAD 'c') AND CONTROLLED RECEPTACLES AUTOMATICALLY TURNS "ON" WHEN SENSOR DETECTS OCCUPANCY.
- REMAINING 50% TURNS "ON" LIGHTING SYSTEM (LIGHTING LOAD 'b' AND THE REST OF PRESET DIMMABLE LIGHTING LOAD 'c') WHEN LOW-VOLTAGE SWITCH IS OPERATED.
- LIGHTING SYSTEM OUTPUT (DIMMABLE LIGHTING LOAD 'c') IS REDUCED WHEN PHOTOSENSOR DETECTS THAT THE AMBIENT LIGHT LEVEL MEETS OR EXCEEDS THE PROGRAMMED THRESHOLD.
- LIGHTING SYSTEM TURNS "OFF" TO 50% (LIGHTING LOAD 'b') WHEN LOW VOLTAGE SWITCH IS OPERATED.
- ENTIRE SYSTEM TURNS "OFF" (LIGHTING AND CONTROLLED RECEPTACLES) WHEN OCCUPANCY SENSORS NO LONGER DETECT THAT THE ROOM IS OCCUPIED AND THE PROGRAMMED TIME DELAY HAS ELAPSED.

GENERAL NOTES: (APPLICABLE TO ENTIRE SHEET)

- VERIFY WIRING REQUIREMENTS WITH MANUFACTURER. WIRING MAY DIFFER BETWEEN MANUFACTURERS.
- FOR QUANTITY OF SENSORS AND SWITCHES, REFER TO LIGHTING PLANS.
- AUTOMATIC LIGHTING CONTROL SYSTEM MUST COMPLY WITH NFPA 101, 7.8.1, TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
 - THE AUTOMATIC LIGHTING CONTROL DEVICE MUST BE LISTED.
 - THE AUTOMATIC LIGHTING CONTROL MUST BE EQUIPPED TO AUTOMATICALLY ENERGIZE THE CONTROLLED LIGHTS UPON LOSS OF NORMAL POWER. SEE FIRE PROTECTION DRAWINGS FOR REQUIREMENTS.
 - THE AUTOMATIC LIGHTING CONTROL DEVICE IS ACTIVATED BY OCCUPANT MOVEMENT IN THE AREA SERVED.
 - THE AUTOMATIC LIGHTING CONTROL DEVICE IS ACTIVATED BY ACTIVATION OF THE BUILDING FIRE ALARM SYSTEM.
 - THE AUTOMATIC LIGHTING CONTROL DEVICE DOES NOT CAUSE THE DE-ENERGIZING OF EMERGENCY BATTERIES.
 - PROVIDE ALL CONDUIT, WIRING DEVICES, AND CONNECTIONS REQUIRED.
- SUBMIT SHOP DRAWING OF ENTIRE SYSTEM, TO INCLUDE BUT NOT LIMITED TO PRODUCT DATA AND WIRING/CONTROL DIAGRAMS FOR REVIEW AND APPROVAL.
- INSTALL ALL CABLES IN CONDUIT. MINIMUM CONDUIT SIZE AS PER SPECIFICATION 16402.

IF SHEET IS LESS THAN 24" X 36"
REDUCED PRINT - USE GRAPHIC SCALES

CONTROLS WIRING DIAGRAM (WD05PR)

| REVISIONS | | |
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REGISTERED PROFESSIONAL ENGINEER
373
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION
10/7/2022

Project:

NMC

PACKAGE 1: STUDENT
CENTER BUILDING

Title:

MISCELLANEOUS
DIAGRAMS - SHEET 10

CONSTRUCTION
DOCUMENTS

Designed: JF/LB

Drawn: NP/RS

Checked: IA/AM

Supv: AM

Scale: AS INDICATED

Date: 10/07/2022

Project No.

File

Drawing No.

No.

E2.14

Sheet No. _____ of _____