



CONTROLS WIRING DIAGRAM (WD03PR)

**DESCRIPTION:**

- SINGLE CIRCUIT, TWO RELAY LIGHTING CONTROL WITH DIMMING, RESTRICTED TO MANUAL ON, FULL AUTO OFF, MANUAL OFF
- AUTOMATIC RECEPTACLE CONTROL
- CEILING OCCUPANCY SENSOR(S), PHOTOSENSOR(S), LOW-VOLTAGE SWITCH(ES)

**NOTES:**

1. PROVIDE ONE ROOM CONTROLLER FOR THE SET OF LUMINAIRE 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 AS INDICATED ON PLANS. PROVIDE ONE OR MORE LOW-VOLTAGE SWITCHES FOR EACH SPACE TO BE CONTROLLED. SEE PROGRAMMING NOTES.
2. PROGRAMMING OF LOAD CONTROL BUTTONS: ON LEFT SIDE, PROGRAM THE TOP TWO (2) BUTTONS AS RAISE/ON (AT 100% PRESET LEVEL) - LOWER/OFF CONTROLS FOR DIMMABLE LIGHTING LOAD 'a' AND BOTTOM TWO (2) BUTTONS AS RAISE/ON (AT 100% PRESET LEVEL) - LOWER/OFF CONTROLS FOR DIMMABLE LIGHTING LOAD 'b'. ON THE RIGHT SIDE, PROGRAM ALL FOUR (4) BUTTONS AS SCENE SELECTION BUTTONS IN ACCORDANCE WITH USER DIRECTION.
3. PROVIDE A SINGLE ZONE, CLOSED LOOP SENSOR. THE SENSOR IS TO BE PROGRAMMED TO CONTINUOUSLY DIM LIGHTING LOAD BASED ON DAYLIGHT CONTRIBUTION TO MAINTAIN THE REQUIREMENT OF ROOM AT TASK LEVEL.
4. IT IS THE INTENT OF THIS WIRING DIAGRAM TO REPRESENT SITUATIONS INVOLVING LUMINAIRE WITH MULTIPLE LIGHT LEVELS (FULL-DIMMING).

**SEQUENCE OF OPERATION:**

1. LIGHTING SYSTEM TURNS "ON" WHEN LOW-VOLTAGE SWITCH IS OPERATED.
2. CONTROLLED RECEPTACLES TURNS "ON" WHEN SENSOR DETECTS OCCUPANCY.
3. LIGHTING SYSTEM OUTPUT IS REDUCED WHEN PHOTOSENSOR DETECTS THAT AMBIENT LIGHT LEVEL MEETS OR EXCEEDS THE PROGRAMMED THRESHOLD.
4. LIGHTING SYSTEM TURNS "OFF" WHEN LOW-VOLTAGE SWITCH IS OPERATED, OR 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)**

- ① VERIFY WIRING REQUIREMENTS WITH MANUFACTURER. WIRING MAY DIFFER BETWEEN MANUFACTURERS.
- ② FOR QUANTITY OF SENSORS AND SWITCHES, REFER TO LIGHTING PLANS.
- ③ AUTOMATIC LIGHTING CONTROL SYSTEM MUST COMPLY WITH NFPA 101, 7.8.1, TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
  1. THE AUTOMATIC LIGHTING CONTROL DEVICE MUST BE LISTED.
  2. THE AUTOMATIC LIGHTING CONTROL MUST BE EQUIPPED TO AUTOMATICALLY ENERGIZE THE CONTROLLED LIGHTS UPON LOSS OF NORMAL POWER. SEE FIRE PROTECTION DRAWINGS FOR REQUIREMENTS.
  3. THE AUTOMATIC LIGHTING CONTROL DEVICE IS ACTIVATED BY OCCUPANT MOVEMENT IN THE AREA SERVED.
  4. THE AUTOMATIC LIGHTING CONTROL DEVICE IS ACTIVATED BY ACTIVATION OF THE BUILDING FIRE ALARM SYSTEM.
  5. THE AUTOMATIC LIGHTING CONTROL DEVICE DOES NOT CAUSE THE DE-ENERGIZING OF EMERGENCY BATTERIES.
  6. PROVIDE ALL CONDUIT, WIRING DEVICES, AND CONNECTIONS REQUIRED.
- ④ SUBMIT SHOP DRAWING OF ENTIRE SYSTEM, TO INCLUDE BUT NOT LIMITED TO PRODUCT DATA AND WIRING/CONTROL DIAGRAMS FOR REVIEW AND APPROVAL.
- ⑤ 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

REVISIONS		
No.	Description	Date
Δ	ADDENDUM 2	01/16/23

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REGISTERED PROFESSIONAL ENGINEER 373  
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION  
*Abim V. Moris*  
DATE: 10/7/2022

Project: NMC  
PACKAGE 1: STUDENT CENTER BUILDING

Title: MISCELLANEOUS DIAGRAMS - SHEET 5  
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. **E2.9**  
Sheet No. \_\_\_\_\_ of \_\_\_\_\_