



CONTROLS WIRING DIAGRAM (WD11)

DESCRIPTION:

- SINGLE CIRCUIT, TWO RELAY LIGHTING CONTROL, PARTIAL AUTO ON, PARTIAL AUTO OFF
- NO RECEPTACLE CONTROL
- CEILING OCCUPANCY SENSOR(S), LOW-VOLTAGE SWITCH(ES)

NOTES:

1. 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 OCCUPANCY SENSORS AS INDICATED ON PLANS. PROVIDE ONE OR MORE LOW-VOLTAGE SWITCHES FOR EACH SPACE TO BE CONTROLLED. SEE PROGRAMMING NOTES.
2. PROGRAM BUTTON TO OPERATE 'b' LOADS "ON" AND "OFF".
3. PROGRAM BUTTON TO OPERATE 'c' LOADS "ON" AND "OFF".
4. IT IS THE INTENT OF THIS WIRING DIAGRAM TO REPRESENT SITUATIONS INVOLVING LUMINAIRES WITH MULTIPLE LIGHT LEVELS (STEP-DIMMING).

SEQUENCE OF OPERATION:

1. LIGHTING LOAD 'a' IS ALWAYS "ON". LIGHTING LOAD 'b' TURNS "ON" WHEN LOW-VOLTAGE SWITCH IS OPERATED, OR AUTOMATICALLY TURNS "ON" WHEN SENSOR DETECTS OCCUPANCY. LIGHTING LOAD 'c' TURNS "ON" WHEN LOW-VOLTAGE SWITCH IS OPERATED.
2. LIGHTING LOAD 'b' TURNS "OFF" WHEN LOW-VOLTAGE SWITCH IS OPERATED, OR WHEN OCCUPANCY SENSORS NO LONGER DETECT THAT THE ROOM IS OCCUPIED AND THE PROGRAMMED TIME DELAY HAS ELAPSED. LIGHTING LOAD 'c' TURNS "OFF" WHEN LOW VOLTAGE SWITCH IS OPERATED.
3. ENTIRE SYSTEM TURNS "OFF" WHEN THE BUILDING IS UNOCCUPIED, OR WHEN 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

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Project:

NMC
PACKAGE 1: STUDENT
CENTER BUILDING

Title:

MISCELLANEOUS
DIAGRAMS - SHEET 17

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.

E2.21

Sheet No. _____ of _____