



CONTROLS WIRING DIAGRAM (WD07R)

DESCRIPTION:

- SINGLE CIRCUIT, 2 X TWO 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 ROOM CONTROLLERS 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 AS INDICATED ON PLANS. PROVIDE ONE OR MORE LOW-VOLTAGE SWITCHES FOR EACH SPACE TO BE CONTROLLED. SEE PROGRAMMING NOTES.
- PROGRAM TOP BUTTON TO OPERATE 'b' LOADS "ON" AND "OFF", PROGRAM BOTTOM BUTTON TO OPERATE 'd' LOADS "ON" AND "OFF".
- IT IS THE INTENT OF THIS WIRING DIAGRAM TO REPRESENT SITUATIONS INVOLVING LUMINAIRES WITH MULTIPLE LIGHT LEVELS (STEP-DIMMING) AS WELL AS LUMINAIRES IN THE SAME ROOM WHICH ARE CONTROLLED INDEPENDENTLY OF EACH OTHER. THEREFORE LIGHTING LOAD 'a' MAY REPRESENT A BALLAST OR A DRIVER, OR IT MAY REPRESENT AN ENTIRE LUMINAIRE. REFER TO LIGHTING PLANS FOR SPECIFIC APPLICATION.

SEQUENCE OF OPERATION:

- LIGHTING SYSTEM AUTOMATICALLY TURNS "ON" TO 50% (LIGHTING LOAD 'a' AND 'c') AND CONTROLLED RECEPTACLES AUTOMATICALLY TURNS "ON" WHEN SENSOR DETECTS OCCUPANCY.
- REMAINING 50% TURNS "ON" LIGHTING SYSTEM (LIGHTING LOAD 'b' OR 'd') WHEN LOW-VOLTAGE SWITCH IS OPERATED.
- LIGHTING SYSTEM TURNS "OFF" TO 50% (LIGHTING LOAD 'b' OR 'd') 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

REVISIONS		
No.	Description	Date

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

Project:

NMC
PACKAGE 1: STUDENT
CENTER BUILDING

Title:

MISCELLANEOUS
DIAGRAMS - SHEET 12

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.

E2.16

Sheet No. _____ of _____