POWER ALL NETWORK SEGMENT MANAGERS, SWITCHES AND ROUTERS.

f. NETWORK SYSTEMS SHALL BE INSPECTED, STARTED UP, CONFIGURED AND PROGRAMMED BY FACTORY START-UP TECHNICIANS TO MEET THE INTENDED CONTROLS SCENARIOS AND FUNCTIONALITY DESIRED BY THE SYSTEM USER. WHERE NETWORK SYSTEMS ARE INTEGRATED WITH BUILDING MANAGEMENT SYSTEMS (BMS), THE FACTORY TECHNICIAN SHALL ASSIST THE CONTROLS INTEGRATOR WITH DLCS POINT INTEGRATION.

f.a. INPUT CONTROL UNIT INTERFACE DEVICE CAPABLE OF RECEIVING SEPARATE DRY CONTACT INPUTS ACTIVATING A DIMMED SCENE WITH AT LEAST A 15% LOAD REDUCTION AND, WHEN SERVING CORRIDORS AN/OR STAIRWELL CONTROLLERS, ACTIVATING EITHER MODE OF THE DUAL MODE CORRIDOR/STAIRWAY CONTROL SYSTEM.

f.b. PLENUM-RATED INTERCONNECT WIRING MEETING ALL THE OTHER REQUIREMENTS REQUIREMENTS OF THE DLCS MANUFACTURER SHALL BE RUN BETWEEN EACH INPUT CONTROL UNIT INTERFACE DEVICE TO A LOCATION IN THE ELECTRICAL ROOM CONTAINING THE LIGHTING BRANCH CIRCUIT PANEL. WHERE DUAL MODE CORRIDOR/STAIRWAY CONTROL IS ALSO REQUIRED - PROVIDE ADDITIONAL INTERCONNECT WIRING & DEVICES AS REQUIRED TO ACCOMPLISH BOTH DEMAND RESPONSE AND DUAL MODE CONTROL.

f.c. DEMONSTRATE DLCS RESPONSE TO A SIMULATED DEMAND RESPONSE REQUEST AS PART OF THE LIGHTING COMMISSIONING PROCESS. WHERE MORE THAN ONE WIRING TOPOLOGY AND/OR ZONE IS REQUIRED TO ACCOMPLISH DEMAND RESPONSE - ALL WIRING TOPOLOGIES AND ZONES SHALL BE TESTED ACCORDINGLY.

g. WHERE INDICATED ON DRAWINGS, PROVIDE INTEGRATED DAY-LIGHTING CONTROLS AS FOLLOWS:

g.a. AUTOMATIC SWITCHING DAYLIGHTING CONTROLS SHALL BE PROVIDED TO SWITCH SELECTED FIXTURES AND/OR LAMPS OFF AND ON BASED UPON LIGHTING LEVELS PRESENT IN THE CONTROLLED SPACE. THE DAYLIGHTING CONTROLS SHALL BE CONNECTED TO THE CONTROL UNIT. THE SENSOR SHALL UTILIZE AN INTEGRAL PHOTO DIODE TO MEASURE AMBIENT LIGHT LEVELS. CONTROLS SHALL BE FULLY ADJUSTABLE FROM 1 TO 6,500 FOOTCANDLES AND SHALL BE PROVIDED WITH AN ADJUSTABLE TIME DELAY AND ADJUSTABLE DEAD BAND SETTINGS.

g.b. AUTOMATIC DIMMING DAYLIGHTING CONTROLS SHALL BE PROVIDED TO CONTINUOUSLY DIM SELECTED FIXTURES/LAMPS UP AND DOWN BASED UPON LIGHTING LEVELS PRESENT IN THE CONTROLLED SPACE. THE SENSOR SHALL UTILIZE AN INTERNAL PHOTO DIODE TO MEASURE AMBIENT LIGHT LEVELS. 0-10 VOLT DIMMING CONTROLS SHALL RANGE FROM 0.2 VOLTS TO 10 VOLTS, WITH AMBIENT LIGHTING SET POINTS FROM 1-6,500 FOOTCANDLES.

g.c. AUTOMATIC DAYLIGHTING CONTROLS SHALL BE CONNECTED TO CONTROL UNITS TO PERFORM THE FIXTURE SWITCHING / DIMMING REQUIREMENTS INDICATED BY THE DRAWINGS - CONNECTIONS DIRECTLY TO A BALLAST ARE NOT ALLOWED.

g.d. DAYLIGHT SENSOR SHALL PROVIDE CONTROLS FOR UP TO THREE DISTINCT LIGHTING ZONES TO ALLOW SEPARATE CONTROL OF PRIMARY DAYLIT, SECONDARY DAYLIT, AND SKYLIT ZONES.

h. PROVIDE CONTROL UNITS AND SYSTEM FUNCTIONALITY AS FOLLOWS:

h.a. CONTINUOUS DIMMING CONTROLS: SYSTEM-BASED WALL OR CEILING MOUNTED OCCUPANCY SENSORS (CONTINUOUS DIMMED - AUTO ON 50% / MANUAL ON 100%) SHALL BE PROVIDED WITH CONTROL UNITS TO PERFORM THE FIXTURE DIMMING REQUIREMENTS INDICATED BY THE BALLAST AND FIXTURE TYPE. SWITCH LEG INDICATED OUTSIDE THE PARENTHESIS TO BE CONFIGURED AS "AUTO ON 50% / MANUAL ON 100% FOR CONTINUOUS DIMMED. SWITCH LEGS INSIDE PARENTHESIS INDICATES A MANUAL ACTION REQUIRED TO INCREASE LIGHTING LEVELS ABOVE 50%. CONTROL UNITS WITH INTEGRAL TRANSFORMERS SHALL BE UTILIZED TO PROVIDE POWER TO OCCUPANCY SENSORS AND OTHER CONTROL DEVICES. CONTROL UNITS SHALL BE LOCATED WITHIN JUNCTION BOXES AND NOT EXPOSED IN THE CEILING SPACE. CONTROL UNIT SHALL BE 120 /277 VOLT RATED WITH NO MINIMUM LOAD, COMPATIBLE WITH ALL THE SPECIFIED BALLASTS PROVIDED WITH A NEUTRAL CONNECTION (NO LEAKAGE TO GROUND) AND NO LEAKAGE TO LOAD IN THE "OFF" MODE. ADDITIONAL RELAY ZONES MAY BE REQUIRED FOR THE ADDITION OF PRIMARY DAYLIT, SECONDARY DAYLIT, AND PRIMARY SKYLIT UTILIZING THE SAME CONTROL CHANNEL. (I.E. EVEN THOUGH A SINGLE LETTER "a" IS INDICATED AT THE PRIMARY SENSOR), ADDITIONAL RELAYS WOULD BE REQUIRED FOR THE "a+" (PRIMARY SIDELIT DAYLIT ZONE), "a++ (SECONDARY SIDELIT DAYLIT ZONE), AND "a*" (SKYLIT DAYLIT ZONE). WHERE MORE THAN ONE CIRCUIT/THREE SWITCH LEGS/THREE RELAY ZONES ARE REQUIRED, PROVIDE ADDITIONAL FULL FEATURE CONTROL UNITS AS REQUIRED.

h.b. WHERE ADDITIONAL 120/ 277 VOLT DEVICES, RECEPTACLES, OR BRANCH CIRCUITS ARE BEING CONTROLLED BY THE ROOM CONTROLLER, AN ADDITIONAL CONTROL UNIT SHALL BE PROVIDED AS REQUIRED.

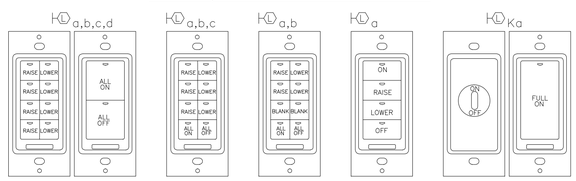
h.c. I OCCUPANCY SENSOR CONTROLLED RECEPTACLE BRANCH CIRCUIT RELAY CONNECTED TO THE SPACES I DISTRIBUTED LIGHTING CONTROL OCCUPANCY SENSOR. / RELAY SHALL TURN ON WHEN THE ROOM IS OCCUPIED, REGARDLESS OF THE CONFIGURATION OF THE LIGHTING CONTROL STATE - I.E. AUTO ON / MANUAL ON. SEE THE DISTRIBUTED LIGHTING CONTROL SPECIFICATION FOR MORE INFORMATION. EVEN THOUGH A SINGLE SYMBOL IS INDICATED, MULTIPLE RELAYS MAY BE REQUIRED TO CONTROL THE REQUIRED NUMBER OF SWITCHLEGS/CIRCUITS.

h.d. LOW VOLTAGE WALL CONTROLS SHALL BE DECORA STYLE, LOW-VOLTAGE, MOMENTARY SWITCHES WITH COLOR TO MATCH OTHER WALL DEVICES / SWITCHES. LOWER CASE LETTERS INDICATE SWITCHING CONFIGURATION. PROVIDE SWITCHING OR DIMMING CONTROL DEVICES AS REQUIRED BY DRAWINGS. DIMMING - NUMBER OF SWITCHES AS REQUIRED - 4 ZONES/YOKE MAX. EACH CONTROL ZONE TO HAVE A DEDICATED RAISE AND LOWER BUTTONS. FACTORY STANDARD COLOR BY ARCHITECT. EACH MULTI-ZONE DIMMING CONTROL STATION SHALL BE PROVIDED WITH MASTER ON AND MASTER OFF BUTTON IN ADDITION TO THE INDIVIDUAL CONTROL ZONE BUTTONS.

h.e. WHERE INDICATED, PROVIDE VANDAL RESISTANT, HIGH ABUSE SWITCH CONNECTED TO THE DLCS INPUT / OUTPUT INTERFACE DEVICE FOR ON/ OFF & DIMMING CONTROLS. SWITCHES LOCATED IN HIGH ABUSE AREAS (EXTERIOR AREAS OR AREAS SUBJECT TO WASH-DOWN ETC.) OR IDENTIFIED ON PLANS AS HIGH-ABUSE SWITCHES SHALL BE VANDAL RESISTANT, STAINLESS STEEL, TOUCH SENSITIVE AND AVAILABLE WITH UP TO TWO BUTTONS IN A SINGLE GANG. EACH HIGH ABUSE SWITCH SHALL BE ABLE TO BE PROGRAMMED FOR ON, OFF, TOGGLE OR MAINTAIN OPERATION. SWITCHES MUST BE CAPABLE OF HANDLING ELECTROSTATIC DISCHARGES OF AT LEAST 30,000 VOLTS (1 CMSPARK) WITHOUT ANY INTERRUPTION OR FAILURE IN OPERATION.

h.f. WHERE INDICATED, PROVIDE A LOCKING SINGLE POLE SWITCH CONNECTED TO THE ROOM CONTROLLER VIA A INPUT / OUTPUT INTERFACE DEVICE FOR ON/OFF CONTROLS. DIRECT CONNECTION OF THE KEYED SWITCH ON THE LOAD SIDE OF THE CONTROLLER IS PROHIBITED. PROVIDE AT LEAST THREE (3) KEYS TO OWNER AT CONCLUSION OF PROJECT. ADJACENT SWITCH SHALL ONLY BRING LIGHTS FULL ON. KEYED SWITCH ALLOWS MANUAL OFF FUNCTIONALITY. DIMMER SWITCH ALLOWS AUTO-ON 50% OVERRIDE TO 100% ALL-ON AND SHALL NOT ALLOW LIGHTING LEVELS TO DECREASE IN ANY WAY.

SYMBOLS / REPRESENTATIVE GRAPHIC IMAGES



GENERAL NOTES

DLM

1. Plug n' Go™ (PnG): Default Operation.
   Upon initial power up, the DLM system automatically identifies the devices on the Local Network then enters the WattStopper patented Plug n' Go™ configuration to allow basic operation of all DLM devices. In most applications the relationship between quantity of loads, switches and occupancy sensors will not require any adjustments. PnG automatically maximizes lighting energy efficiency.

2. Push n' Learn™ (PnL): Custom Operation
   "A" configuration (Config) button on most DLM devices allows easy access to the WattStopper patented PnL technology to modify system operation. Functionality of the Config button is standardized throughout the DLM product line, as is the operation of the Config LED indicators. In addition, the Configuration Tool provides remote infrared access to PnL and sensor adjustment parameters.

Analog

A. Contractor is responsible for field verification of required number of power packs.
B. One power pack is required for each circuit that is to be controlled.
C. Maximum number of sensors that can be wired in parallel to a single power pack is dependent on sensor model (see individual data sheets for mA consumption).

Wattstopper
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Phone: 888-852-2278

PROJECT:

ORIGINAL DOCUMENT:
WS PROJECT NUMBER:
APPLICATION ENGINEER:

REV	DESCRIPTION	DATE

Sheet Information:

SHEET #:
DATE:
QUOTE: