Annie Griffiths

m: Matt Morris <matt@morriseng.ca>
Sent: Friday, September 4, 2020 2:44 PM
To: gaines@bellnet.ca
Cc: Keith Oster; Annie Griffiths; Dena Zwarich
Subject: FW: Carleton Place Arena - Electrical Shop Drawings #2
Attachments: GBE Letter of Transmittal 02.pdf

SUBMITTAL / SHOP DRAWING REVIEW This submittal/shop drawing review is for general conformance with drawings and specifications only. Contractor is completely responsible for all dimensions, details, quantities, supply, installation and construction. This review does not in any way relieve the Contractor of responsibility for compliance with the Contract Documents.	
Client:	Larry Gaines Architect
Project:	Carleton Place Arena
Submittal:	Lighting Controls
`lotes:	***- No comment***
MORRIS ENGINEERING LTD. *68 William Street, Suite 200, Brockville, Ontario* *(613)499-2077*	

Thanks,

Matt

Matt Morris P.Eng.
MORRIS Engineering Ltd.
68 William Street, Suite 206
Brockville, ON
Bus. (613)499-2077
Cel. (613)349-0555

From: Dena Zwarich [mailto:dena@tal-co.com]
Sent: Tuesday, August 18, 2020 10:44 AM

GBE

Gannon/Blackburn Electric Inc.

Letter of Transmittal # 02

Date: August 17th 2020

Project: Carleton Place Arena

To:
TAL-CO BUILDING INNOVATIONS LTD
4728 Bank Street, Suite A
Ottawa, Ontario, K1T 3W7
Attention:
Keith & Dena

From:
Martin Bergeron
Gannon/Blackburn Electric
2000 Thurston Drive, Suite 25
Cell# 613-859-3550
Office: 613-738-9165

quantity	description	attachments
1	Shop drawing - Lighting Controls	yes

Sender:
Martin Bergeron

Reviewed	
Reviewed as Modified	
Submitted for Review	X
Reviewed by: M. Bergeron	
Date:	

Leviton Canada
165 Hymus Blvd.
Pointe-Claire, Quebec
H9R 1E9 Canada
Phone # 1-800-461-2002
Fax # 1-800-563-1853

Carleton Place Arena

Carleton Place, Ontario

Submittal for Leviton Manufacturing Co., Inc.

LEVITON

Submittal

Company:
Address:
City: Carleton Place
Province: Ontario
Postal Code:
Phone:
Fax:

Prepared by: M. Slanik for B. Charbonneau – BDS Leviton Canada

Approved By: _____ Date: August 17, 2020

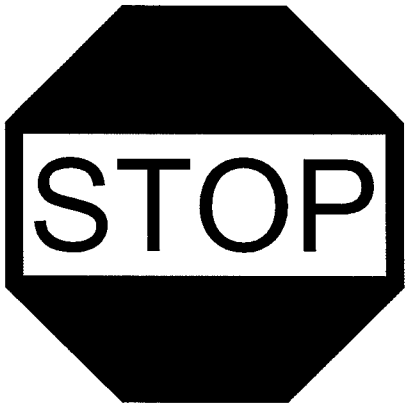
LEVITON

BILL OF MATERIALS: Carelton Place Arena

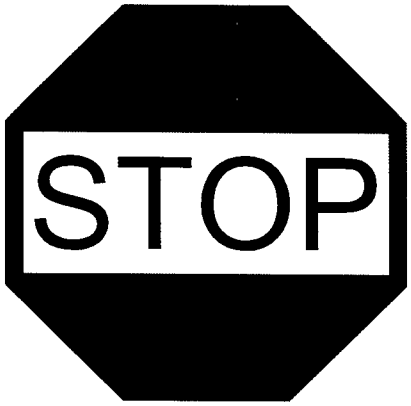
ITEM #	QTY	LEVITON CAT. NO	DESCRIPTION
1	1	R08BD	EB EZ-MAX+ 8 RLY CAB NO RLY 120/277/347V
2	4	RELAY-L30	EB SP NO/NC RELAY W/HANDLE 30A120/277V
3	1	PCOUT	OUTDOOR PHOTOCELL 5-750 FC
4	6	OSSMT-MDW	WH MULTITECH WALL SENS SW W/NEUTRAL
5	8	OSC20-M0W	WH OCC SENS CEILING LV MULTITECH 24VDC
6	8	OSP20-RD0	EB OC SENS PWR PCK20A HVAC RLAY 120/277V
7	3	ODD10-IDW	SMART WB BLE PIR, 10A, 0-10V, 120-277V
8	3	IP710-LFZ	W/I/LA SLIDE DIM 0-10V SP-3W 1200VA120V
9	1	KENG0-000	LES ENG SERVICE APPROVAL DRAWING SET

DRAWINGS

LEVITON®



READ ME FIRST!



- ✓ THE NOTES IN THIS DRAWING PACKAGE ARE ESSENTIAL TO A SUCCESSFUL INSTALLATION AND OPERATIONAL SYSTEM. PLEASE READ ALL NOTES ON ALL DRAWINGS AND ADHERE TO WIRING CHARTS. ADDITIONAL INFORMATION CAN BE FOUND IN PRODUCT INSTALLATION GUIDES.
- ✓ LEVITON'S CONTROL WIRING INFORMATION MUST BE THE ONLY SOURCE FOR INSTALLATION OF EQUIPMENT. LEVITON CAN NOT ACCEPT RESPONSIBILITY FOR INSTALLATIONS THAT USE 3RD-PARTY DOCUMENTATION.
- ✓ "PROPOSAL" AND "APPROVAL" DRAWINGS ARE NOT INTENDED OR APPROPRIATE FOR INSTALLATION OF EQUIPMENT. DO NOT RUN WIRE OR CONDUIT BASED ON "PROPOSAL" OR "APPROVAL" DRAWINGS.
- ✓ USE ONLY THOSE DIGITAL CONTROL CABLE TYPES AND BRANDS AS SHOWN IN THESE DRAWINGS. LEVITON'S APPLICABLE PRODUCT WARRANTIES WILL BE VOID UNLESS LEVITON APPROVED CABLES ARE USED.
- ✓ ADHERE TO THE WIRING FORMAT OR METHOD AS SHOWN ON THE SYSTEM BLOCK DIAGRAM FOR THIS PROJECT.
- ✓ DIGITAL CONTROL CABLE RUNS HAVE MAXIMUM LENGTH LIMITATIONS. RUNS THAT EXCEED THIS LENGTH WILL NOT FUNCTION. CONSULT PRODUCT INSTALLATION DOCUMENTS FOR DETAILS.
- ✓ LOW VOLTAGE POWER SUPPLY CABLE RUNS MUST BE SIZED CORRECTLY FOR THE DISTANCE OF TRAVEL, AVAILABLE CURRENT AND TOTAL LOAD OF CONTROL DEVICES. CONSULT PRODUCT INSTALLATION DOCUMENTS FOR DETAILS.

FAILURE TO ADHERE TO THE ABOVE GUIDELINES MAY VOID THE WARRANTY.

IF YOU HAVE INSTALLATION QUESTIONS, STOP AND CALL: 800-959-6004

INSTALLATION NOTES

1. IF ENGINEERING CHECKOUT WAS PURCHASED, NO PART OF THIS SYSTEM SHALL BE ENERGIZED BEFORE BEING CHECKED AND INSTALLATION APPROVED BY A LEVITON FIELD SERVICE AGENT. LEVITON MUST BE NOTIFIED IN WRITING AT LEAST 3 WEEKS PRIOR TO THE ENERGIZING OF THE SYSTEM. FAILURE TO OBSERVE THESE RESTRICTIONS SHALL AUTOMATICALLY RELIEVE LEVITON OF ANY RESPONSIBILITY CONCERNING THE PROPER OPERATION OF THIS SYSTEM OR ANY PART THEREOF, AND THE REPLACEMENT OF PARTS WHICH MAY HAVE BEEN DAMAGED BY PREMATURE ENERGIZING OF THE SYSTEM.
2. REFER TO DEVICE INSTALLATION MANUALS.

ONLINE RESOURCES

GENERAL INFORMATION:
WWW.LEVITON.COM/LES

KNOWLEDGE BASE:
COMMUNITIES.LEVITON.COM

DATA SHEETS:
WWW.LEVITON.COM/DATASHEETS

INSTALLATION MANUALS:
WWW.LEVITON.COM/MANUALS

DRAWINGS AND COOKBOOKS:
WWW.LEVITON.COM/DRAWINGS

OCCUPANCY SENSORS:
WWW.LEVITON.COM/OCCUPANCYSENSORS

GREENMAX:
WWW.LEVITON.COM/GREENMAX

SECTOR:
WWW.LEVITON.COM/SECTOR

SUBMETERING:
WWW.LEVITON.COM/METERS

MADE IN AMERICA:
WWW.LEVITON.COM/ARRA
WWW.LEVITON.COM/NAFTA

EVERYTHING ELSE:
WWW.LEVITON.COM/EZLINKS

INDEX OF DRAWINGS

CHANGE NOTES

LEVITON
Leviton Manufacturing of Canada, Ltd.
165 Hymus Blvd.
Pointe-Claire, Quebec
H9R 1E9 Canada
1 800.461.2002 x3.37583

REGIONAL MGR.
J. MARINEAU

PROJECT MGR.
A. BARNES

DRAWN BY
M. SLANIK

REVIEWED BY
A. BARNES

PROJECT PHASE
PRODUCTION

DATE
08-17-20

SCALE
NONE

DIMENSION

RELEASE
R1

TITLE
INDEX OF DRAWINGS, SYMBOLS, AND SYMBOLS USE KEY

MODEL #

PROJECT
THE ARC

WINNIPEG
MANITOBA

QUOTE -DWG
100.0

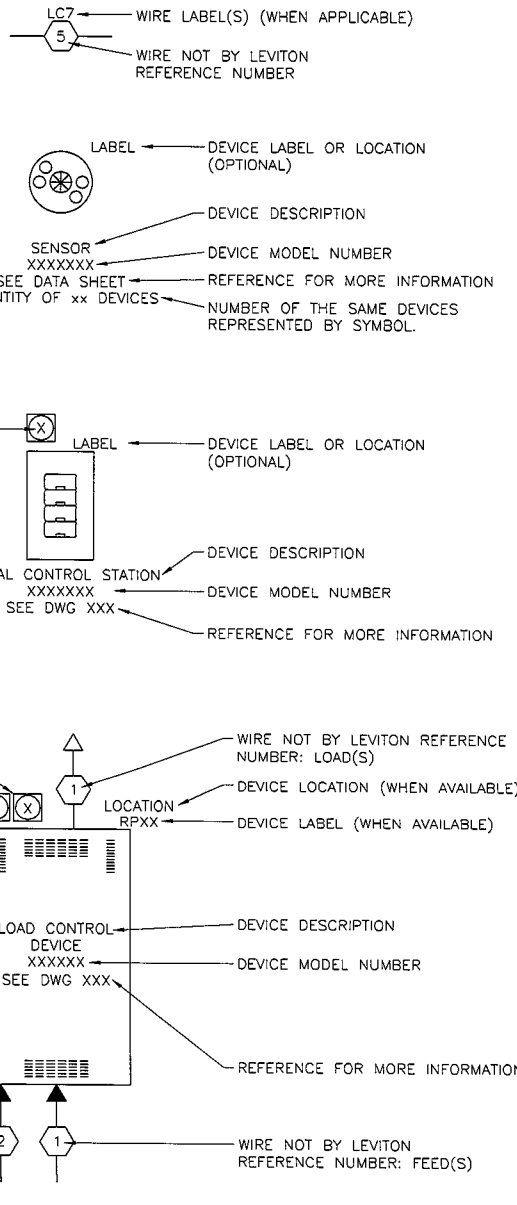
SHEET
1 OF 2

PLOT STAMP: Aug. 17, 2020 (10:16 AM) PLOTTED BY: Marko

SYMBOLS

POWER LOAD BY INSTALLER		POWER FEED BY INSTALLER	
CONNECTOR BODY – FEMALE [CABLE MT'G]		RECEPTACLE – FEMALE [PANEL MT'G]	
PLUG – MALE [CABLE MT'G]		INLET – MALE [PANEL MT'G]	
CROSSING WIRES, NO CONNECTION		CONNECTED WIRES	
TWISTED PAIR WIRES	BUNDLE / SPLIT	WIRES SPLIT FROM BUNDLE. BOTH BUNDLE AND SPLIT LABELED.	
CABLES SUPPLIED BY LEVITON	(#) & ◇(#)	DEVICE ADDRESS	
WIRE RUNS NOT BY LEVITON		DEVICE SLAVE ADDRESS	
REFERENCE TO CHANGE NOTES REV. PLACED SHEETS THAT CONTAIN CHANGES.		STATION LOCKOUT CIRCUIT	
WIRE RUN CONTINUATION REFERENCE		NOTES BY SYMBOL. MAY BE USED FOR OPERATIONAL NOTE OR ASSEMBLY NOTE.	

SYMBOL USE KEY



LEVITON
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REGIONAL MGR.	J. MARINEAU
PROJECT MGR.	A. BARNES
DRAWN BY	M. SLANIK
REVIEWED BY	A. BARNES
PROJECT PHASE	PRODUCTION
DATE	08-17-20
SCALE	NONE
DIMENSION	
RELEASE	R1
TITLE	INDEX OF DRAWINGS, SYMBOLS, AND SYMBOLS USE KEY
MODEL #	
PROJECT	THE ARC WINNIPEG MANITOBA
QUOTE –DWG	100.0
SHEET	2 OF 2

PLOT STAMP: Aug. 17, 2020 (10:16 AM) PLOTTED BY: Marta

GENERAL NOTES: (UNLESS OTHERWISE SPECIFIED)

1. REFER TO BILL OF MATERIALS FOR INCLUDED STAND-ALONE BOXED GOODS, PORTABLE EQUIPMENT, SPARES, ACCESSORIES AND OTHER EQUIPMENT NOT SHOWN ON THESE DRAWINGS. REFER TO DEVICE DATA SHEETS OR INSTALLATION LITERATURE FOR ADDITIONAL INFORMATION. SYSTEM DRAWINGS BASED ON LEVITON QUOTE. AN ORDER WILL ONLY BE ACCEPTED PER LEVITON'S BILL OF MATERIALS.
2. IF ENGINEERING CHECKOUT WAS PURCHASED, NO PART OF THIS SYSTEM SHALL BE ENERGIZED BEFORE BEING CHECKED AND INSTALLATION APPROVED BY A LEVITON ENGINEER. LEVITON MUST BE NOTIFIED IN WRITING AT LEAST 3 WEEKS PRIOR TO THE ENERGIZING OF THE SYSTEM. FAILURE TO OBSERVE THESE RESTRICTIONS SHALL AUTOMATICALLY RELIEVE LEVITON OF ANY RESPONSIBILITY CONCERNING THE PROPER OPERATION OF THIS SYSTEM OR ANY PART THEREOF, AND THE REPLACEMENT OF PARTS WHICH MAY HAVE BEEN DAMAGED BY PREMATURE ENERGIZING OF THE SYSTEM.
3. CIRCUMSTANCES THAT ARISE FROM FAILURE TO ADHERE TO LEVITON INSTALLATION GUIDELINES ARE SUBJECT TO ADDITIONAL CHARGES. ADDITIONALLY, IF SYSTEM-CRITICAL INFORMATION IS NOT FURNISHED TO LEVITON PRIOR TO QUOTATION OR DURING SUBMITTAL REVIEW, RESULTANT SYSTEM FUNCTIONALITY MAY BE ADVERSELY IMPACTED. AS SUCH, ADDITIONAL EQUIPMENT AND/OR LEVITON FACTORY SERVICE VISIT(S) MAY BE REQUIRED AT ADDITIONAL EXPENSE.
4. ALL CLASS 2 LOW VOLTAGE AND NETWORK WIRING SHALL BE RUN SEPARATE FROM LINE VOLTAGE WIRING AND PER NEC AND BEST PRACTICES UNLESS OTHERWISE NOTED.
5. PROVIDE AN EQUIPMENT GROUND, AS REQUIRED BY THE NATIONAL ELECTRICAL CODE, BETWEEN BUILDING SERVICE ENTRANCE AND THE DIMMER AND OR RELAY EQUIPMENT.
6. THIS DRAWING DOES NOT INDICATE THE NUMBER OR SIZE OF CONDUITS REQUIRED, BUT THE SEPARATION OF GROUPS OF WIRES. INTERCONNECTING WIRE AND CONDUIT ARE NOT BY LEVITON.
7. INDUSTRY STANDARD GROUNDED BACK BOXES NOT BY LEVITON.
8. SINGLE-GANG DEVICES THAT MAY BE INSTALLED WITH OTHER SINGLE-GANG DEVICES THAT ARE SHOWN INDIVIDUALLY ON LEVITON DRAWINGS MAY BE INSTALLED IN MULTI-GANG LOCATIONS. SPECIFIER DRAWINGS FOR GANGING TAKES PRECEDENCE.
9. INTERFACE OF LEVITON EQUIPMENT WITH EQUIPMENT BY OTHERS IS THE SOLE RESPONSIBILITY OF THE ELECTRICAL OR THEATRICAL CONTRACTOR.
   - LEVITON ASSUMES NO RESPONSIBILITY FOR THE FUNCTIONALITY OF EQUIPMENT BY OTHERS AS IT RELATES TO THIS SYSTEM, OR LEVITON SYSTEMS UNDER SEPARATE CONTRACT.
   - LAMP AND TRANSFORMER OR BALLAST COMBINATION COMPATIBILITY MUST BE VERIFIED BY THEIR RESPECTIVE MANUFACTURERS.
10. CABLE RUNS ARE CONTINUOUS BETWEEN CONNECTED DEVICES, NO SPLICING ALLOWED.
11. APPLICATION OF OCCUPANCY BASED LIGHTING CONTROL IN COMMON AREAS MAY PROVIDE ADDITIONAL ENERGY SAVINGS. CONTACT YOUR LES PROJECT MANAGER FOR DETAILS ABOUT HOW TO INCORPORATE AN OCCUPANCY SENSOR LAYOUT WITH THIS SYSTEM.
12. MAIN DISCONNECT AMPERAGE RATING TO BE DETERMINED AND PROVIDED BY OTHERS WHERE APPLICABLE.
13. ANALOG CONTROL CABLE WIRE RUNS:
   - FROM END TO END NOT TO EXCEED 1000 FEET.
   - 10% SPARES RECOMMENDED.
   - MULTIPLE CONTROL DEVICES TERMINATED TO THE SAME ANALOG INPUT ARE TO BE RUN IN PARALLEL. ADDITIONAL POWER MAY BE REQUIRED FOR POWERED DEVICES.
   - DO NOT MIX DISSIMILAR CONTROL DEVICES TO THE SAME ANALOG INPUT.
14. EVERY ATTEMPT IS MADE TO FOLLOW CONTRACT DOCUMENT ROUTING. IN SOME CASES ACCOMMODATIONS MUST BE MADE FOR DIFFERENCES IN CONTROL SCHEMES AND PROTOCOLS THAT VARY AMONG MANUFACTURERS.
15. SET DEVICE ADDRESS TO THE NUMBER SHOWN IN THE SYMBOL, OR TO A DISCRETE ADDRESS IF NOT SHOWN.
   - GREENMAX COMMAND AND INPUT MODULES CONSUME A NETWORK NODE ADDRESS EACH.
   - ADDRESSES MAY NOT EXCEED 110 ON A SINGLE LUMA-CAN UNIVERSE, WITH 250 AVAILABLE NUMERIC ADDRESSES.
   - LUMA-NET DEVICE ADDRESSES MAY NOT EXCEED 128 ON A SINGLE LUMA-NET UNIVERSE.
16. RELAY PANEL(S) WITH EMERGENCY CIRCUITS REQUIRE:
   - CONTROL MODULE POWER SOURCE MUST BE ON EMERGENCY/NORMAL POWER UPSTREAM OF RELAY PANEL(S), IF CONTROL IS REQUIRED UNDER EMERGENCY CONDITIONS.
   - EMERGENCY RELAYS MUST BE ADJACENT TO CONTROL MODULE IN ZMAX. VOLTAGE BARRIER IN RELAY RACK WILL SEPARATE EMERGENCY CIRCUITS FROM NORMAL CIRCUITS IN THE SAME RELAY PANEL.
   - A DRY CONTACT CLOSURE MUST BE PROVIDED TO ACTIVATE THE EMERGENCY STATE IN THE RELAY PANEL(S).
   - COMPLIANCE WITH LOCAL CODES IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR.
17. LUMA-NET CABLE:
   - TOTAL NETWORK CABLE RUNS NOT TO EXCEED 2000 FEET.
   - CONNECTION TOPOLOGY IS MULTI-DROP BUS WITH A 0" MAXIMUM DROP LENGTH (NO DROPS PERMITTED).
   - SEQUENTIAL CONNECTION ONLY; NO BRANCHING ALLOWED UNLESS A LUMA-NET HUB IS USED.
   - DEVICE ADDRESSES MAY NOT EXCEED 128 ON A SINGLE LUMA-NET UNIVERSE.
   - UP TO 2 HUBS ARE ALLOWED PER NETWORK OR SUBNET. ALWAYS CONNECT HUBS TO NPC ON PORT 8. HUBS MAY NEVER CASCADE.
   - IF DEVICES ARE NOT CONNECTED AS SHOWN, TOTAL NETWORK CABLE LENGTH MAY BE REDUCED BY DEVICE POWER REQUIREMENTS AND A NEW POWER CALCULATION WILL BE NECESSARY.
   - DEVICES MAY APPEAR ON THE NETWORK IN ANY ORDER. SAMPLE DEVICE ORDER SHOWN.
   - CHANNELS REQUIRED, INCLUDING CONVENTIONAL DIMMERS, EFFECTS MACHINES, AND INTELLIGENT LIGHTING DEVICES. ADDITIONAL EQUIPMENT MAY BE REQUIRED.

LEVITON
Leviton Manufacturing of Canada, Ltd.
165 Hymus Blvd.
Pointe-Claire, Quebec
H9R 1E9 Canada
1 800.461.2002 x3.37583

REGIONAL MGR.	J. MARINEAU
PROJECT MGR.	A. BARNES
DRAWN BY	M. SLANIK
REVIEWED BY	A. BARNES
PROJECT PHASE	PRODUCTION
DATE	08-17-20
SCALE	NONE
DIMENSION	
RELEASE	R1
TITLE	SYSTEM BLOCK DIAGRAM NOTES
MODEL #	
PROJECT	THE ARC WINNIPEG MANITOBA
QUOTE -DWG	110.0
SHEET	1 OF 2

PLOT STAMP: Aug. 17, 2020 (10:16 AM) PLOTTED BY: Marko

WIRE RUNS NOT BY LEVITON ⟨#⟩

1. REFER TO DEVICE CIRCUIT SCHEDULE(S) OR DEVICE TYPE FOR ASSOCIATED FEED AND LOAD CIRCUIT QUANTITY AND TYPE(S).
2. LINE: 15AMP, 120VAC, 2 WIRE PLUS GROUND, 60HZ DIRECT FROM SERVICE PANEL, DO NOT SWITCH.
3. QUANTITY OF #18 AWG STRANDED CU CONTROL CONDUCTORS PER WIRING DIAGRAM ON DATA SHEET OR INSTALL SHEET. # DENOTES INPUT NUMBER OF LOCATION AT WHICH CONDUCTORS TERMINATE. CONDUCTORS BUNDLED AND LABELED BY E.C.

CABLES PROVIDED BY LEVITON [#]

1. POWER CORD WITH NEMA 5-15P PLUG PROVIDED WITH DEVICE.
2. DMX CABLE
3. HHR CABLE
4. COLORNET ETHERNET NETWORK CABLE
5. LUMA-NET PORTABLE CONTROL CABLE

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SHEET	2 OF 2

SYSTEM WIRING CHARTS

SIGNAL PROTOCOLS AND MAXIMUM RUN LENGTHS INCLUDING PORTABLE DEVICE CABLES (WHEN APPLICABLE). SEE CHARTS FOR CABLE TYPE AND TERMINATION INFORMATION.

PROTOCOL	MAX LENGTH	CONNECTION TOPOLOGY*, UON
LUMA-NET	2000 FT	BUS NETWORK (NO DROPS)
ANALOG	1000 FT	DAISY-CHAIN / HOMERUN

* AS SHOWN AND AS NOTED ON SYSTEM BLOCK DIAGRAM(S).
** REFER TO THE SYSTEM BLOCK DIAGRAM(S)
UON = UNLESS OTHERWISE NOTED.

AVAILABLE POWER FOR CONTROL DEVICES PRIOR TO SYSTEM INTEGRATION AT 24VDC	
Z-MAX 8, 24, 48	500mA
EZ-MAX PLUS 8, 24, 48	500mA
EZ-MAX	150mA
RRP REMOTE RELAY PANEL	150mA
OCCUPANCY SENSOR POWER PACK	150mA
NPC POWER SUPPLY	1540mA
AUXILIARY POWER SUPPLY PST24	2500mA

POWER CONSUMPTION BY DEVICE	
Z-MAX DIGITAL 1 BUTTON	15mA
Z-MAX DIGITAL & ANALOG 2 BUTTON	20mA
Z-MAX DIGITAL 3 & 6 BUTTON	25mA
Z-MAX DIGITAL 4 & 8 BUTTON, ANALOG 3 BUTTON	28mA
Z-MAX DIGITAL 5 & 10 BUTTON	33mA
OSC04-I, OSC05-I, OSWHB-I, OSWLR-I, OSWWV-I	20mA
OSC05-M, OSC05-U, OSW12-M	30mA
OSC20-M, OSC20-U	32mA
OSC10-M, OSC10-U	40mA
OCCUPANCY SENSOR ADD-A-RELAY	50mA
PHOTOCELL	10mA
NPC (ALL VERSIONS)	1000mA

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SCALE
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DIMENSION

RELEASE
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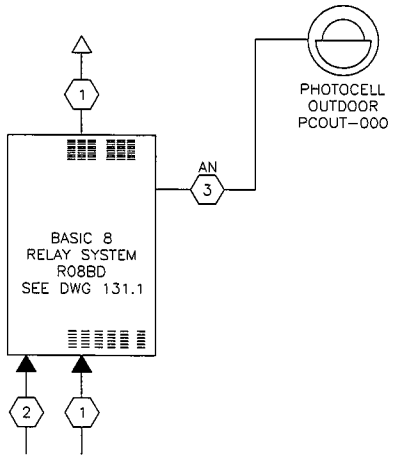
TITLE
SYSTEM WIRING CHARTS

MODEL #

PROJECT
THE ARC
WINNIPEG
MANITOBA

QUOTE -DWG
110.1

SHEET
1 OF 1



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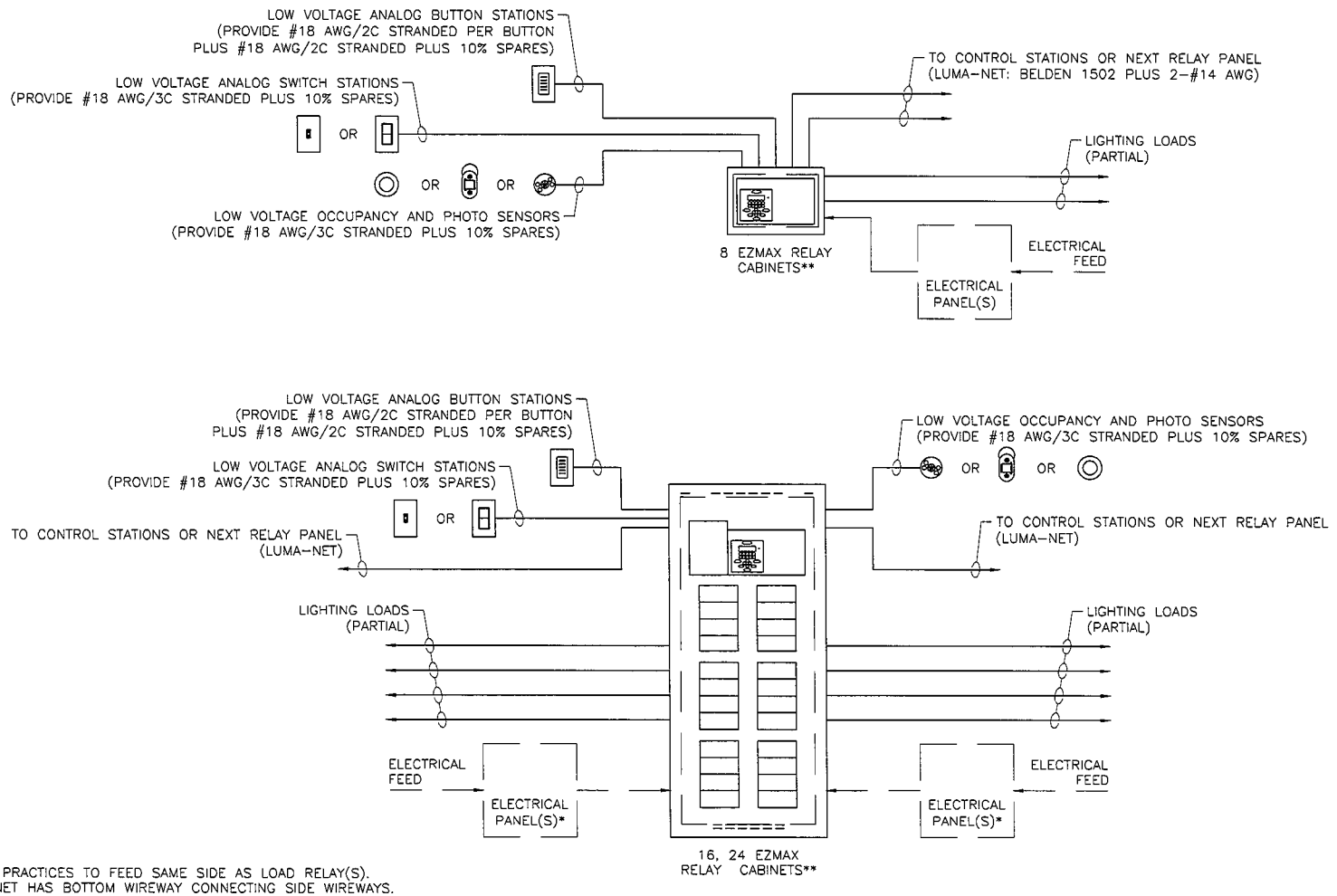
DIMENSION	
RELEASE	R1
TITLE	SYSTEM BLOCK DIAGRAM
MODEL #	
PROJECT	THE ARC WINNIPEG MANITOBA
QUOTE -DWG	111.0
SHEET	1 OF 1

EZMAX RELAY PANEL SYSTEM INTERCONNECTIONS ONE-LINE



* BEST PRACTICES TO FEED SAME SIDE AS LOAD RELAY(S).
CABINET HAS BOTTOM WIREWAY CONNECTING SIDE WIREWAYS.

** CONSULT FACTORY DOCUMENTS FOR LOADING WITH EMERGENCY
AND NORMAL CIRCUITS.

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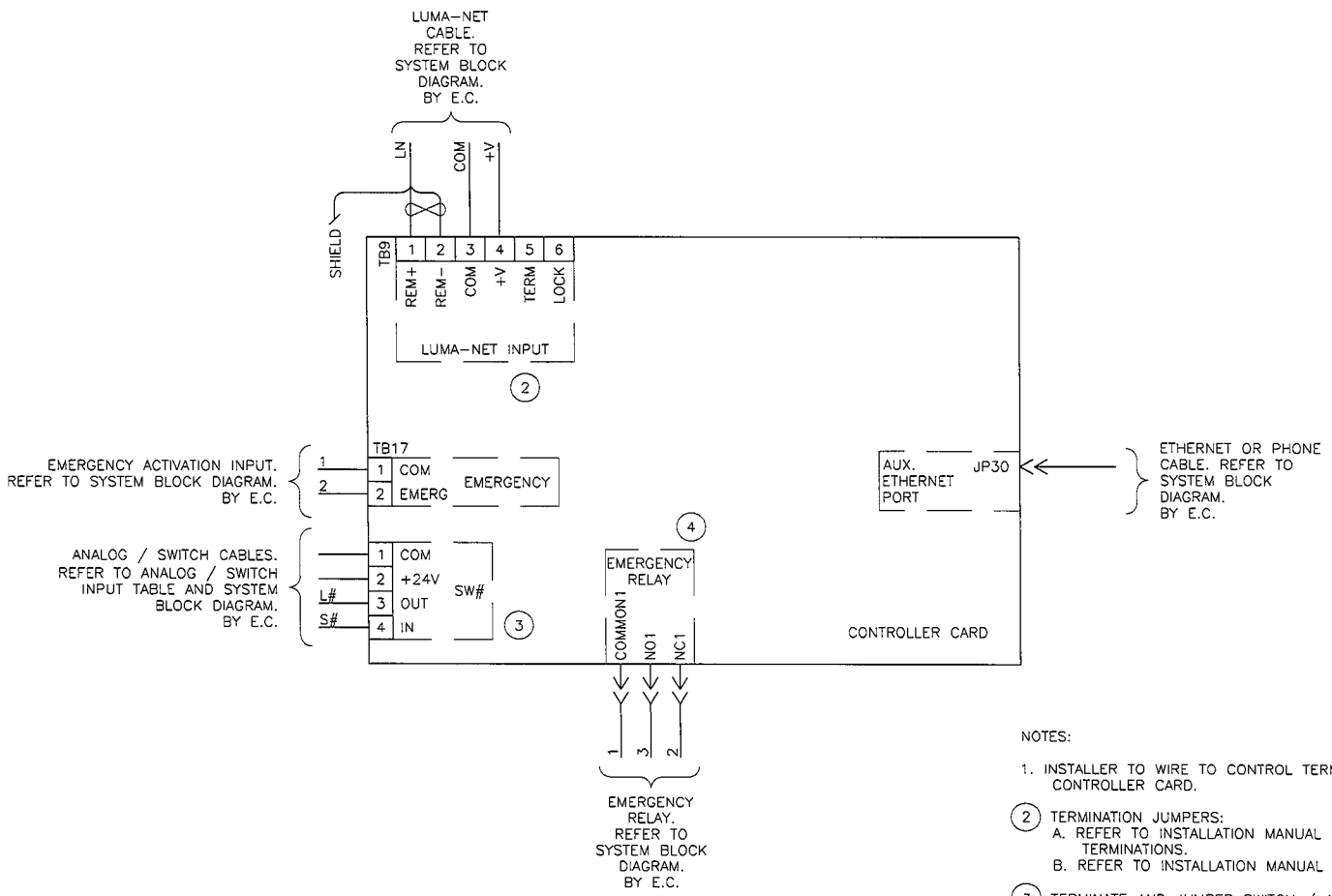
DATE	08-17-20
SCALE	NONE
DIMENSION	
RELEASE	R1
TITLE	TYPICAL WIRING DETAILS
MODEL #	
PROJECT	THE ARC WINNIPEG MANITOBA
QUOTE -DWG	130.0
SHEET	1 OF 4

EZMAX RELAY PANEL TERMINATIONS



NOTES:

1. INSTALLER TO WIRE TO CONTROL TERMINALS LOCATED ON CONTROLLER CARD.
2. (2) TERMINATION JUMPERS:
   A. REFER TO INSTALLATION MANUAL FOR WIRING RUN TERMINATIONS.
   B. REFER TO INSTALLATION MANUAL FOR JUMPER DETAILS.
3. (3) TERMINATE AND JUMPER SWITCH / ANALOG INPUTS PER INPUT CONNECTION TABLE. TYPICAL.
4. (4) PCB MOUNTED SPADE LUGS.
5. THIS MODEL CABINET COMES STANDARD WITH EIGHT (8) ANALOG INPUTS.

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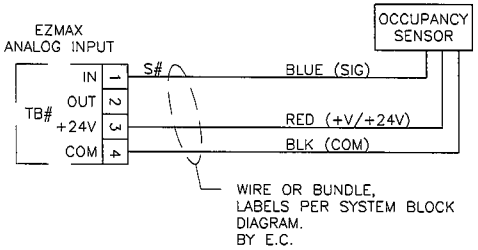
SCALE	NONE
DIMENSION	
RELEASE	R1
TITLE	TYPICAL WIRING DETAILS
MODEL #	
PROJECT	THE ARC WINNIPEG MANITOBA
QUOTE –DWG	130.0
SHEET	2 OF 4

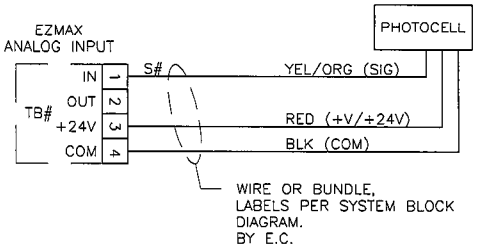
PLOT STAMP: Aug. 17, 2020 (10:16 AM) PLOTTED BY: Marta

EZMAX INPUT TERMINATION EXAMPLES

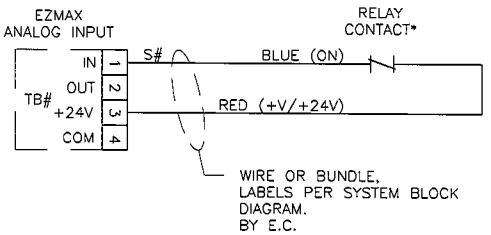
OCCUPANCY SENSOR TERMINATED TO EZMAX INPUT



PHOTOCELL SENSOR TERMINATED TO EZMAX INPUT

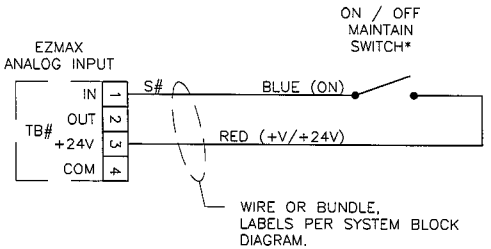


DRY CONTACT CLOSURE* TERMINATED TO EZMAX INPUT



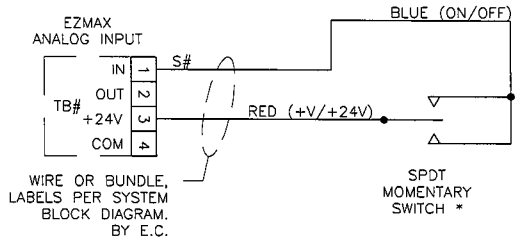
* CLOSURE MAY BE NORMALLY-OPEN OR NORMALLY CLOSED AND TERMINATED TO "ON" OR "OFF". CABINET PROGRAMMING REQUIRED.

MAINTAIN SWITCH TERMINATED TO EZMAX INPUT



* 3- AND 4-WAY SWITCH OPERATION REQUIRES SWITCH POLE AND LOW VOLTAGE CONDUCTOR CONFIGURATION SIMILAR TO STANDARD LINE VOLTAGE 3- AND 4-WAY SWITCHES.

MOMENTARY SWITCH(ES) TERMINATED TO EZMAX INPUT



* WIRE ADDITIONAL SWITCHES IN PARALLEL FOR 3- AND 4-WAY OPERATION

LEVITON
Leviton Manufacturing of Canada, Ltd.
165 Hymus Blvd.
Pointe-Claire, Quebec
H9R 1E9 Canada
1 800.461.2002 x3.37583

REGIONAL MGR.
J. MARINEAU

PROJECT MGR.
A. BARNES

DRAWN BY
M. SLANIK

REVIEWED BY
A. BARNES

PROJECT PHASE
PRODUCTION

DATE
08-17-20

SCALE
NONE

DIMENSION

RELEASE
R1

TITLE
TYPICAL WIRING DETAILS

MODEL #

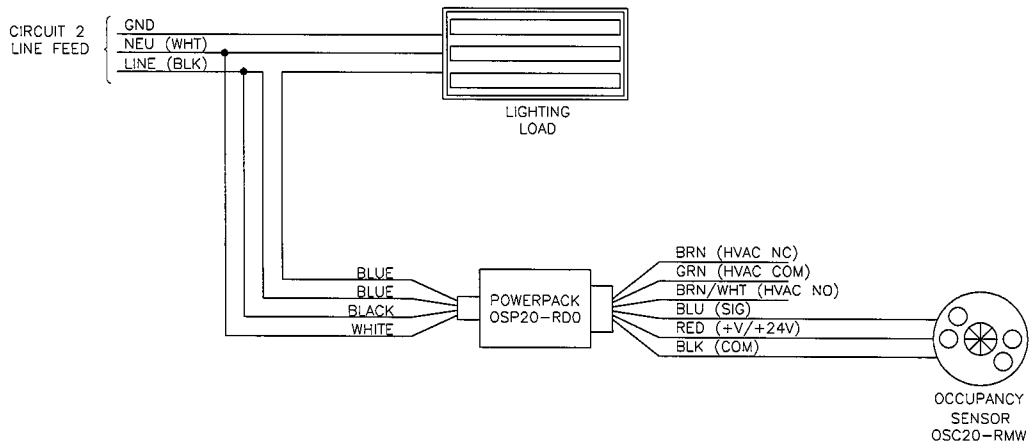
PROJECT
THE ARC
WINNIPEG
MANITOBA

QUOTE -DWG
130.0

SHEET
3 OF 4

PLOT STAMP: Aug. 17, 2020 (10:16 AM) PLOTTED BY: Marlo

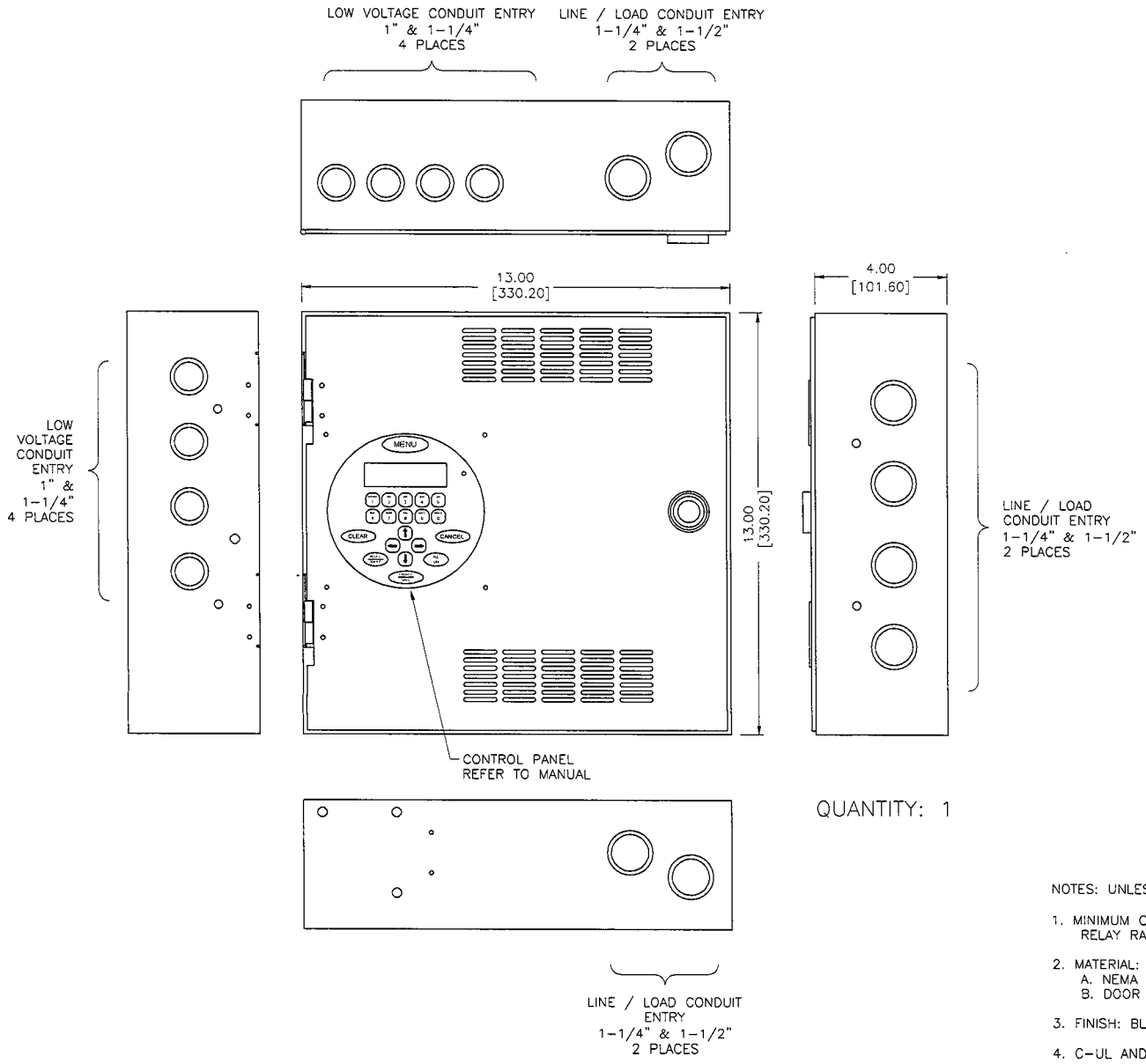
OCCUPANCY SENSOR POWERED BY POWER PACK



LEVITON
Leviton Manufacturing of Canada, Ltd.
165 Hymus Blvd.
Pointe-Claire, Quebec
H9R 1E9 Canada
1 800.461.2002 x3.37583

REGIONAL MGR.	J. MARINEAU
PROJECT MGR.	A. BARNES
DRAWN BY	M. SLANIK
REVIEWED BY	A. BARNES
PROJECT PHASE	PRODUCTION
DATE	08-17-20
SCALE	NONE
DIMENSION	
RELEASE	R1
TITLE	TYPICAL WIRING DETAILS
MODEL #	
PROJECT	THE ARC WINNIPEG MANITOBA
QUOTE -DWG	130.0
SHEET	4 OF 4

PLOT STAMP: Aug. 17, 2020 (10:17 AM) PLOTTED BY: Marta



QUANTITY: 1

NOTES: UNLESS OTHERWISE SPECIFIED

1. MINIMUM CLEARANCES: 36" FROM FRONT OF RELAY RACK FOR WIRING ACCESS..
2. MATERIAL:
   A. NEMA TYPE 1 ENCLOSURE – 16 GAUGE CRS.
   B. DOOR – 16 GAUGE CRS.
3. FINISH: BLUE POWDER COAT.
4. C-UL AND UL LISTED FILE E123072.
5. UL 508, UL 924 & UL 916 LISTED.

LEVITON
Leviton Manufacturing of Canada, Ltd.
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Pointe-Claire, Quebec
H9R 1E9 Canada
1 800.461.2002 x3.37583

REGIONAL MGR.	J. MARINEAU
PROJECT MGR.	A. BARNES
DRAWN BY	M. SLANIK
REVIEWED BY	A. BARNES
PROJECT PHASE	PRODUCTION
DATE	08-17-20
SCALE	NONE
DIMENSION	
RELEASE	R1
TITLE	EZ-MAX R08BD
MODEL #	
PROJECT	THE ARC WINNIPEG MANITOBA
QUOTE -DWG	131.1
SHEET	1 OF 1

PLOT STAMP: Aug. 17, 2020 (10:17 AM) PLOTTED BY: Marlo

SPECIFICATION SHEETS

LEVITON®

LEVITON

EZ-MAX® Plus Relay Control Panels

Integrated building lighting control in a contractor friendly, quick to install and simple to configure compact enclosure

DEFINITION

EZ-MAX Plus relay lighting control panels deliver power and performance in compact and cost-effective 8-circuit and 16/24-circuit models. EZ-MAX Plus is the ideal solution for smaller, stand-alone applications that do not require the field configuration or advanced networking features like GreenMAX® Relay Control Systems.

The EZ-MAX Plus switching circuit offers an unprecedented 1,000,000 cycle life for unmatched durability. For maximum equipment protection, the standard 30A latching relay card has a short circuit current rating (SCCR) of 18,000A to allow it to withstand higher current inrushes caused by short circuit conditions. Low-voltage inputs allow connection of photocells, occupancy sensors, low-voltage switches and digital switches for a comprehensive yet easily installed energy management solution.

Designed in a compact, 13" x 13" (8-circuit model) or 20-1/4" x 34" (16/24-circuit model) standard electrical enclosure, EZ-MAX Plus is engineered to be contractor friendly, quick to install and simple to configure.

APPLICATIONS

- Smart replacement for time clock/contactor installations
- Low-voltage control
- Site lighting
- Daylight harvesting
- Occupancy sensor integration
- Parking garage/parking lot lighting
- Any application requiring reliable and cost-effective automatic lighting control

FEATURES

- Easy programming alternatives
  - Off-line editor for easy programming (Visual Programmer 4.0 included)
  - Large, bright LCD screen with oversize buttons for easy programming
- Easy standard programming configuration
  - Occupancy sensors: manual-ON or auto-ON applications
  - Photocells: interior or exterior applications
  - Photocell light level trip points: on or off
- Built-in astronomical time clock
  - 101 major city and states programmed for easy astronomical setup
- Time clock and scheduler
- Sunrise/sunset time clock events
- Auto-detection/auto-assign of installed digital switches
- Enable/disable of low-voltage and digital input devices minimizes power consumption
- Clearly labeled access points allow installer to locate optimum knock-out locations
- UL and C-UL Listed Industrial Control Equipment and Emergency Lighting Equipment for 120V, 277V and 347V Panels
- ASHRAE 90.1 compliant
- CA Title 24 2013 compliant
- Rated for 100% load capacity

Leviton Mfg. Co., Inc. Lighting & Energy Solutions
20497 SW Teton Avenue, Tualatin, OR 97062 1-800-736-6682 Tech Line: 1-800-959-6004 Fax: 503-404-5594 www.leviton.com/les

PRODUCT BULLETIN

LEVITON®

EZ-MAX® PLUS RELAY CONTROL PANELS

SPECIFICATIONS

ELECTRICAL

Input Power (Domestic): 120V, 277V or 347V
Input Power (International): 230V +/- 15%
All voltages 50/60Hz
Non-volatile lifetime memory blackout protection

PHYSICAL

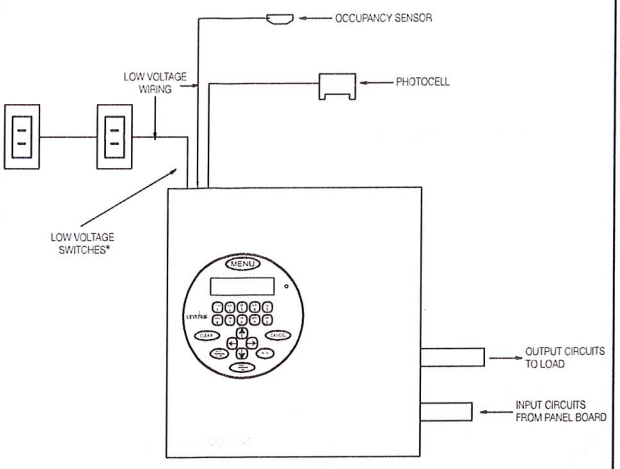
8-Circuit EZ-MAX Plus
Size: 13" W x 13" H x 4-9/32" D
(330.20 mm x 330.20 mm x 108.74 mm)
Weight - fully loaded: 16 lbs (7.26 kg)
Color: Black

16/24-Circuit EZ-MAX Plus
Size: 20-1/4" W x 34" H x 4-9/32" D
(514.35 mm x 863.6 mm x 108.74 mm)
Weight - fully loaded: 44 lbs (19.96 kg)
Color: Black

WARRANTY

- Panels backed by Two-Year Warranty
- Relay Cards backed by Two-Year Warranty

EZ-MAX Plus Typical Installation



*Up to 8 inputs on 8-relay units, 16 inputs on 18/24 relay units

ORDERING INFORMATION

CAT. NO.	DESCRIPTION
Ro8BD-000	EZ-MAX Plus 8 Relay Panel, (0) No Relays, (8) empty slots. 120V, 277V, 347V input power. With 8 Low Voltage Inputs
Ro8BD-L04	EZ-MAX Plus 8 Relay Panel, (4) 1-Pole 30A 120V/277V Relays, (4) empty slots. 120V, 277V, 347V input power. With 8 Low Voltage Inputs
Ro8BD-L08	EZ-MAX Plus 8 Relay Panel, (8) 1-Pole 30A 120V/277V Relays. 120V, 277V, 347V input power. With 8 Low Voltage Inputs
Ro8BD-208	EZ-MAX Plus 8 Relay Panel, (8) 2-Pole 20A 240V/480V Relays. 120V, 277V, 347V input power. With 8 Low Voltage Inputs
R24BD-000	EZ-MAX Plus 24 Relay Panel, (0) No Relays, (24) empty slots. 120V, 277V, 347V input power. With 12 Low Voltage Inputs
R24BD-L16	EZ-MAX Plus 24 Relay Panel, (16) 1-Pole 30A 120V/277V Relays, (8) empty slots. 120V, 277V, 347V input power. With 12 Low Voltage Inputs
R24BD-L24	EZ-MAX Plus 24 Relay Panel, (24) 1-Pole 30A 120V/277V Relays. 120V, 277V, 347V input power. With 12 Low Voltage Inputs
R24BD-216	EZ-MAX Plus 24 Relay Panel, (16) 2-Pole 20A 240V/480V Relays, (8) empty slots. 120V, 277V, 347V input power. With 12 Low Voltage Inputs
R24BD-224	EZ-MAX Plus 24 Relay Panel, (24) 2-Pole 20A 240V/480V Relays. 120V, 277V, 347V input power. With 12 Low Voltage Inputs
Ro8BF-000	EZ-MAX Plus 8 Relay Panel, (0) No Relays, (8) empty slots. 230V input power. With 8 Low Voltage Inputs
Ro8BF-L08	EZ-MAX Plus 8 Relay Panel, (8) 1-Pole 30A 120V/230V/277V Relays. 230V input power. With 8 Low Voltage Inputs
R24BF-000	EZ-MAX Plus 24 Relay Panel, (0) No Relays, (24) empty slots. 230V input power. With 12 Low Voltage Inputs

ACCESSORIES*

RACoo-2SB	Low Voltage Switch Adapter for GE 5-wire switches
ooLVS-xxW**	xx Button, Low Voltage Switch, White
ZMDSW-xxW**	xx Button, Digital Switch, White
PCOUT-000	Outdoor Photocell, 0-10V, 0-250 fc
PCIND-000	Indoor Photocell, 0-10V, 0-100 fc
PCATR-000	Atrium Photocell, 0-10V, 0-1000 fc
PCSKY-000	Skylight Photocell, 0-10V, 0-2000 fc
RELAY-L30	EZ-MAX Relay 1-Pole 30A NO/NC, with handle, 120VAC/230VAC/277VAC, 18K SCCR
RELAY-2PL	EZ-MAX Relay 2-Pole 20A NO, 240VAC/480VAC
RELAY-347	EZ-MAX Relay 1-Pole 20A NO, 347VAC

* For a complete range of occupancy sensors for use with EZ-MAX Plus, refer to www.leviton.com/cenergyproducts.
** xx = 1, 2, 3, 4, 5, 6, 8, 10 Button Switch

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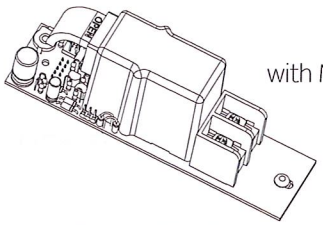
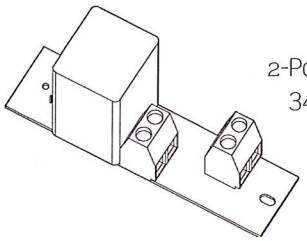
B-1334B/L13-aa
REV DEC 2013

LEVITON

EZ-MAX™ Plus Relay Cards



30A Relay Card
with Manual Override



2-Pole Relay Card/
347V Relay Card

Leviton EZ-MAX Plus Panels use individual Relay Cards for each circuit allowing for the most flexibility in matching the relay type to your specific load requirements. The benefit of a single relay card for a single circuit allows an infinite arrangement of relay types to position in your system and supports individual replacement should the need ever occur. For maximum equipment protection, the standard 30A relay card has a short circuit current rating (SCCR) of 20,000A to allow it to withstand higher current inrushes caused by short circuit conditions.

RELAY TYPE	WIRE SIZE	WIRE TYPE	TORQUE	MAX VOLTAGE	TUNGSTEN RATING (120V)	BALLAST RATING	MOTOR RATING (120V/277V)	INDUCTIVE BALLAST TRANSFORMER, HID RATING
1-Pole N/O or N/C Relay Card w/Manual Override (20,000 SCCR) (RELAY-L30)	#14-#8 AWG	Solid or Stranded	16 in-lbs	277V	20A	30A	1/2 HP/1 HP	30A
				347V		20A		20A
2-Pole N/O Relay Card (RELAY-2PL)	#14-#6 AWG	Solid or Stranded	20.5 in-lbs	277V Per Pole (480V)		20A	2 HP @ 240V & 480V	20A
347V N/O Relay Card (RELAY-347)	#14-#6 AWG	Solid or Stranded	20.5 in-lbs	347V	-	20A	-	20A

FEATURES

- Relay cards individually replaceable
- Mechanical attachment to panel of each relay card is with a single screw
- Listed for use with ballasted loads
- From the panel, each relay card can be controlled as follows:
  - Override On
  - Override Off
  - Locked Override On
  - Locked Override Off
  - Timed On
  - Timed Override Off
- 10 year warranty on relay cards

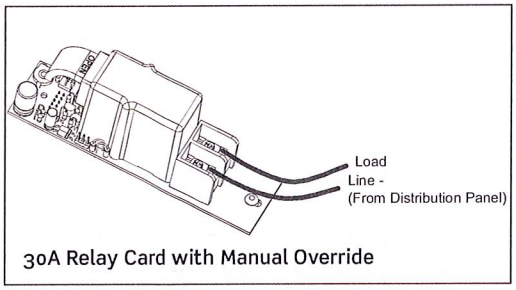
Environmental

- Operating Temperature Range: 32-104°F (0-40°C)
- Relative Humidity: less than 90% non-condensing

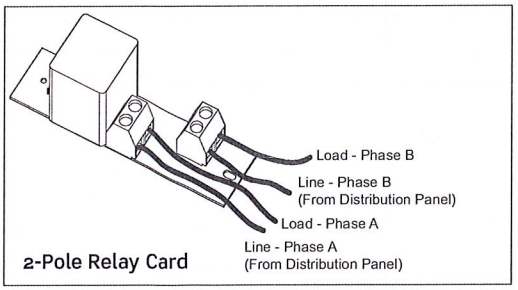
ORDERING INFORMATION

CAT. NO.	DESCRIPTION
RELAY-L30	1-Pole N/O or N/C Relay Card with Manual Override, 30A, 120-277V, 347V, 20A Ballast
RELAY-2PL	2-Pole, N/O Relay Card, 20A, 208-480V
RELAY-347	347V N/O Relay Card, 20A, 347V

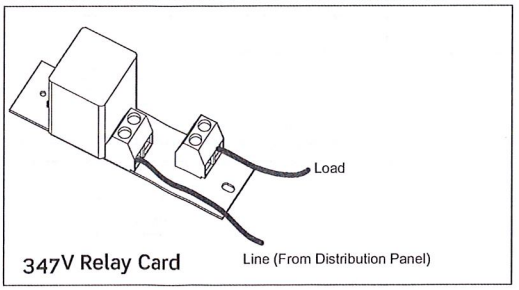
TYPICAL WIRING DIAGRAMS



30A Relay Card with Manual Override



2-Pole Relay Card



347V Relay Card

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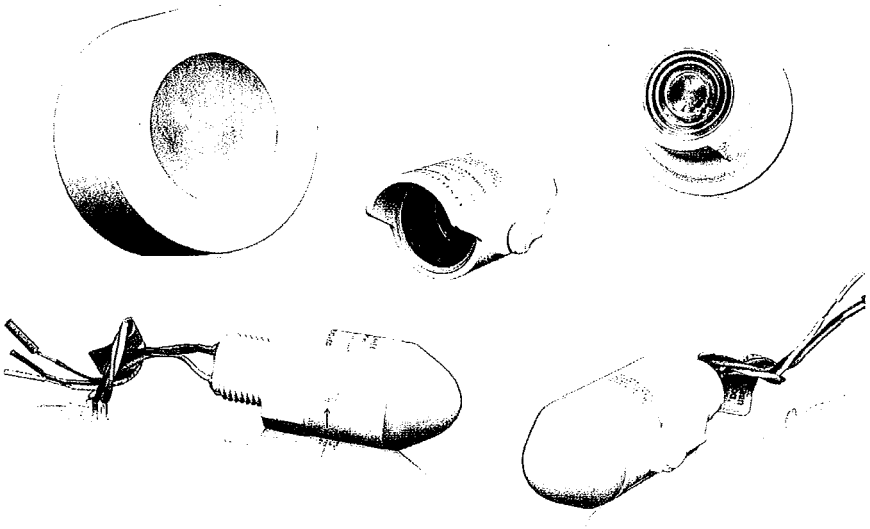
LEVITON®

Photocells

Measures Light levels to Automatically Adjust Light Levels to a User-Defined Level



Leviton's Photocells are sensors used to precisely monitor either task or ambient light levels. As part of a Leviton lighting control system, photocells work with other components in the system to automatically adjust light levels to a user-defined level. The photocell is most suitable for installation in rooms with windows and open spaces receiving substantial ambient light.

Photocells must be hardwired to a compatible Leviton lighting control system. The photocell measures ambient light in a specific area and sends this data to a dimmer or relay that, in turn, adjusts fixtures to a constant lighting level as measured in that specific area. This is called Daylight Harvesting when lights in a room (with windows or significant, artificial ambient light) will automatically brighten or dim depending on how much light the photocell detects.

DAYLIGHT HARVESTING

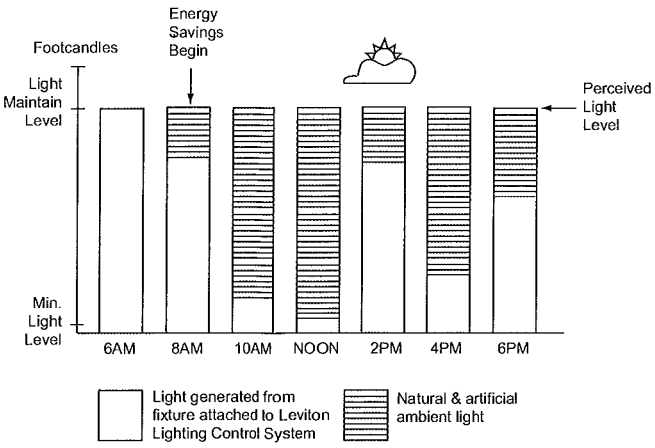
With Daylight Harvesting, ambient (often natural) light supplements in-room, artificial light in order to keep a constant lighting level while saving electricity. This constant level is programmed into a compatible control device. Once hardwired to the photocell, the dimmer or relay will receive the photocell's real-time light measurement and maintain a steady level within the photocell's area of detection.

RULES OF OPERATION

Measured light level = Light Maintain Level
Action: Output to lights remains constant

Measured light level < Light Maintain Level
Action: Lights are brightened

Measured light level > Light Maintain Level
Action: Lights are dimmed



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PRODUCT DATA

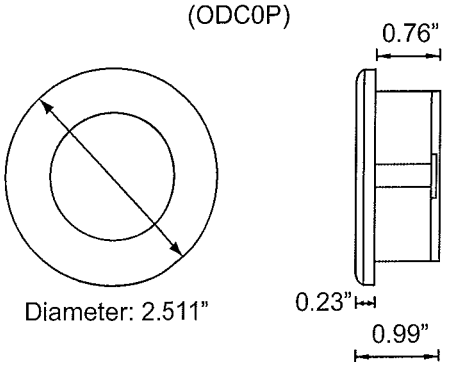
FEATURES

All indoor photocells have a flat Fresnel lens that looks downward in a 60° cone of reference to measure actual light on the work surface. The Fresnel lens is used to reduce the influence of stray light striking the photocell from nearby windows or incidental side lighting. The Outdoor photocell is enclosed in a weatherproof housing with a visor for shading and lens protection. The Atrium and Skylight photocells both use diffusing dome lenses to provide a 180° angle of response.

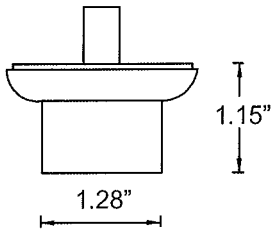
- Constant lighting at the optimal level for greater visual comfort and acuity, which contributes to improved productivity.
- Provides convenient, automatic hands-free lighting control.
- Lowers electric bills by reducing usage of lighting where ambient natural light is also present.
- Measures light from any source in the visible spectrum within a 60° cone or 180° angle of response depending on the model.
- If ambient light fluctuates rapidly, dimmers or relays may average the lighting input signal to avoid unnecessary adjustments and provide constant lighting.
- ODC0P photocell with 60° clear Fresnel lens operates between 0-70fc. ODC0P should be surface mounted or direct to ceiling box.
- PCIND indoor photocell with 60° clear Fresnel lens is set at a default of 0-100fc. The maximum range can be adjusted to 750fc. PCIND should be mounted to the ceiling, facing down.
- PCOUT outdoor photocell with flat clear lens is set at a default of 0-250fc. The maximum upper limit is 750fc. PCOUT has a 1/2" IPT connection for horizontal mounting. It also features a weather proof housing.
- PCATR atrium photocell with opaque dome lens filters 33% of light level in upper atrium and is set at a default of 0-1000fc. The maximum upper limit is 2,500fc. PCATR has a 1/2" IPT connection for horizontal mounting.
- PCSKY skylight photocell with dark dome lens filters 90% of light level in skylight and is set at a default of 0-2000fc. The maximum upper range is 7,500fc. PCSKY has a 1/2" IPT connection to for upward vertical mounting.

DIMENSIONS

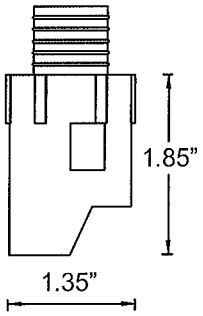
PHOTOCELL
(ODC0P)



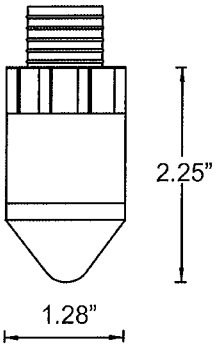
INDOOR
(PCIND)



OUTDOOR
(PCOUT)

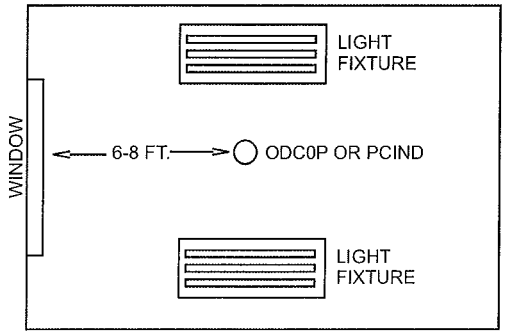


ATRIUM/SKYLIGHT
(PCATR/PCSKY)

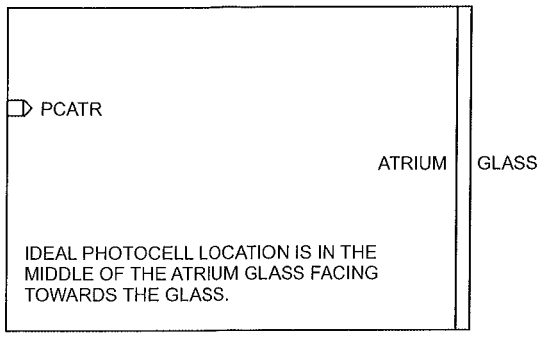


PHOTOCELL PLACEMENT

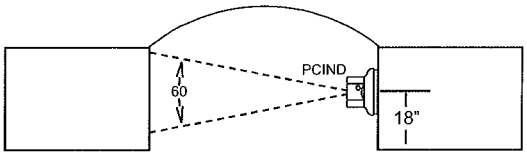
ODC0P/INDOOR PHOTOCELL MOUNTING LOCATION



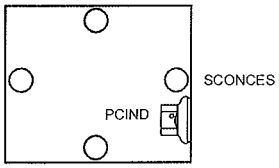
ATRIUM PHOTOCELL MOUNTING LOCATION



REFLECTING WALL USING INDOOR/LOW SENSOR



LIGHT WELL - NO SCONCES - INDOOR PHOTOCELL

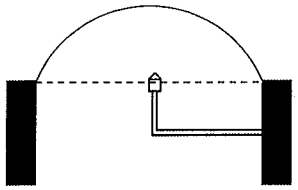


LIGHT WELL - WITH SCONCES - (UP OR UP/DOWN) MOUNT PHOTOCELL IN ELEVATION ON CENTERLINE OF FIXTURE. DO NOT MOUNT DIRECTLY IN LINE WITH SCONCES.

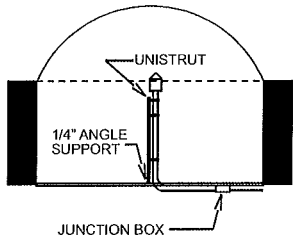
SKYLIGHT APPLICATION WITH SKYLIGHT PHOTOCELL

TOP OF PHOTOCELL SHOULD BE LEVEL WITH TOP OF SKYLIHGT CURB.

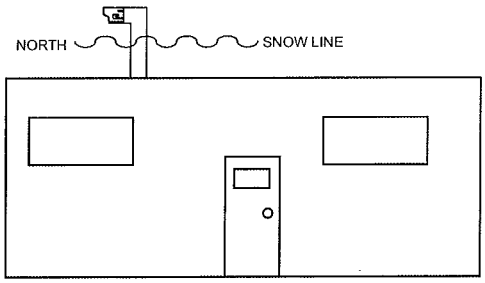
PHOTOCELL IN 1/2" CONDUIT. PHOTOCELL MUST BE AT LEAST 12" FROM SIDE OF SKYLIGHT AND FACING UP.



NOTE:
SUPPORT CONDUIT FROM UNISTRUT AS REQUIRED PER NEC.



OUTDOOR PHOTOCELL MOUNTED IN 1/2" CONDUIT



OUTDOOR PHOTOCELL MOUNTED HORIZONTALLY ON ROOF OR EQUAL, FACING NORTHERN SKY. HOODED PORTION ON TOP, POINTED AWAY FROM ANY NIGHTTIME LIGHT SOURCES.

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LEVITON®

INSTALLATION

- Low Voltage Class 2 Wiring
  - Connect directly to dimmer or relay panel.

SPECIFICATIONS

	ODCoP	PCIND	PCOUT	PCATR	PCSKY
Input Voltage	24VDC	5, 10, 12, 24VDC			
Input Current	10mA				
Sensor Ranges (foot-candles)	Adjustable: 0 FC (min) 70FC (max)	Adjustable: 0 FC (min) 50-750FC (max)	Adjustable: 0 FC (min) 50-750FC (max)	Adjustable: 2 FC (min) 200-2,500FC (max)	Adjustable: 10 FC (min) 1,000-7,500FC (max)
Output Voltage	0 to 10VDC	5VDC or 10VDC full output			
Operating Temperature Range	0°C to +55°C	-11°C to 60°C			
Storage Temperature Range	-10°C to +85°C				
Relative Humidity	20% to 90% non-condensing				
Warranty	Limited 5-Year Warranty	2-Year Warranty			

SELECTION

PHOTOCELL	LENS	FILTER	MOUNTING	ORIENTATION	HEIGHT	DIAMETER
ODCoP	Fresnel	Clear	Ceiling	Down	0.99" (2.5cm)	2.51" (6.4cm)
PCIND	Fresnel	Clear	Ceiling	Down	2.00" (5.1cm)	1.23" (3.1cm)
PCOUT	Flat	Clear	½" IPT	Horizontal	1.85" (4.7cm)	1.28" (3.3cm)
PCATR	Dome	Opaque	½" IPT	Horizontal	2.25" (5.7 cm)	1.28" (3.3cm)
PCSKY	Dome	Dark	½" IPT	Up	2.25" (5.7 cm)	1.28" (3.3cm)

ORDERING INFORMATION

CAT. NO.	DESCRIPTION	COLOR
ODCoP	Photocell	White
PCIND	Indoor Photocell	White
PCOUT	Outdoor Photocell	White
PCATR	Atrium Photocell	White
PCSKY	Skylight Photocell	White

LEVITON SPECIFICATION SUBMITTAL	
JOB NAME:	CATALOG NUMBERS:
JOB NUMBER:	

Leviton Manufacturing Co., Inc. Lighting Management Systems
20497 SW Teton Avenue, Tualatin, OR 97062
Telephone: 1-800-736-6682 • FAX: 503-404-5594 • Tech Line (6:00AM-4:00PM P.S.T. Monday-Friday): 1-800-959-6004

Leviton Manufacturing of Canada, Ltd.
165 Hymus Boulevard, Pointe Claire, Quebec H9R 1E9 • Telephone: 1-800-469-7890 • FAX: 1-800-563-1853

Leviton S. de R.L. de C.V.
Lago Tana 43, Mexico DF, Mexico CP 11290 • Tel. (+52) 55-5082-1040 • FAX: (+52) 5386-1797 • www.leviton.com.mx

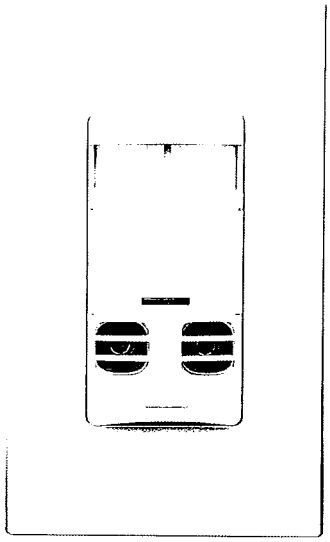
Visit our Website at: www.leviton.com/lms

G-7189A/Dg-ak
REV APR 2009

PRODUCT DATA

LEVITON®

Decora® Wall Switch Multi-Technology Occupancy Sensor



OSSMT-MD/GD

OSSMT

BASIC OPERATION

Occupancy sensors have two tasks: keeping the lights ON while the space is occupied and turning the lights OFF when unoccupied.

The PIR sensors provide immunity to false ON through a specialized Fresnel lens which divides the field-of-view into sensor zones. When a person passes into or out of a sensor zone, the sensor detects motion and switches the lights ON.

The Ultrasonic (U/S) sensors provide maximum sensitivity and range in difficult spaces with irregular shaped rooms and partitions that can block the PIR field-of-view. A pair of U/S sensors will detect Doppler shifts caused by motion in a space preventing false OFF. These sensors are more sensitive to small movements since they do not rely on zones.

APPLICATIONS

Leviton's OSSMT Multi-Technology Decora Wall Switch Occupancy Sensor is used to provide automatic lighting control for energy savings and convenience in a variety of commercial applications:

- Retrofit
- Private and executive offices
- Conference rooms
- Storage areas
- Restrooms
- Classrooms
- Lounges
- Training areas
- Multi-location switching (similar to 3-way)

SELF-ADAPTIVE TECHNOLOGY

Designed for "install and forget" use, the OSSMT automatically analyzes room conditions and adapts to errors or changing environment.

HOW THE OSSMT-MD AUTOMATICALLY ADAPTS

CONDITION	EXAMPLE	ADAPTIVE REACTION
False-ON: Sensor incorrectly turns the lights ON.	The sensor detects movement in the corridor or hallway and the room light turns ON.	After an initial movement is sensed, if another movement is not sensed within the timer setting the delayed off-time setting is automatically reduced.
False-OFF: Sensor incorrectly turns the lights OFF.	The sensor does not detect movement because an occupant is virtually motionless and the lights turn OFF.	If motion is detected shortly after the lights go OFF, the current delayed off-time setting is increased.

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201 N. Service Rd. Melville, NY 11747-3138 Tech Line: 1-800-824-3005 Fax: 1-800-832-9538 www.leviton.com/les

PRODUCT DATA

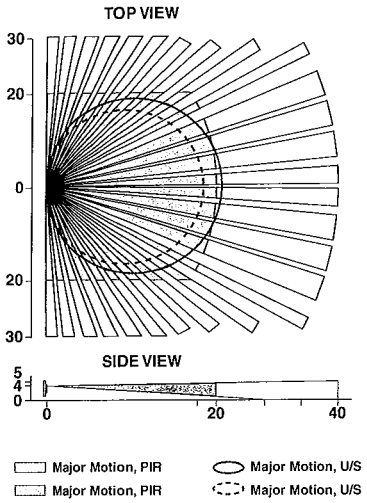
OSSMT

FEATURES

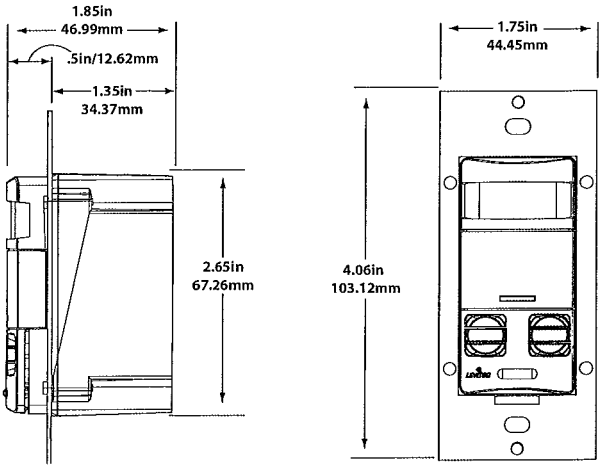
- Fast, simple Installation: Fits in a standard wall box and replaces a single-pole wall-switch; neutral and no neutral options available. Sensor can be ganged together with other units in a multiple-switch wall plate.
- Low-profile design eliminates obtrusive "scanning-device" look. Elegant Decora wallplates complement any interior for sleek aesthetics; uses Decora wallplates and coordinates with Leviton's popular line of Decora wiring devices.
- Convenient Pushbutton provides manual-ON/OFF light switching at any time.
- Segmented Fresnel lens provides optimum sensitivity and performance. Designed with an extensive "minor motion" area where even slight body movements will be detected.
- Vandal resistant PIR lens.
- Patented Blinders: Adjustable horizontal field-of-view (PIR may be adjusted between 180° and 60° of arc by using integral blinders located on either side of the lens). No masking required.
- Manual-ON/auto-OFF mode for installations where manual-ON switching is required but auto-OFF switching is still desired for CEC Title 24 energy savings.
- To comply with CED Title 24, LED indicator light flashes when sensor detects motion to verify detection is active. Green flashes for ultrasonic, red flashes for PIR.
- Time: The delayed OFF time is preset at 30 minutes in the Auto Adapting mode. A choice of four delayed-OFF time settings are available: 30-seconds (for walking test purposes only), 10, 20, and 30 minutes for fixed time and auto adapting. The LED will flash when the adjusting knob is set to the indicated time value.
- Ambient Light Recognition: Integrated light sensor prevents lights from turning on when the room is adequately illuminated by natural light.
- Self-Adaptive Technology: Callbacks for adjustment are eliminated. Time delay and sensitivity settings are continually adjusted to occupant patterns of use in auto adapt mode.
- Exclusive Walk-through Feature provides increased energy savings by not leaving the lights ON for an extended period after only momentary occupancy.
- Vacancy Confirmation: When the time out expires and the relays turn OFF, a 30 second (OSSMT-G) or 40 second (OSSMT-M) vacancy confirmation exists to turn the relays back on.
- False detection circuitry.
- Small Motion Sensitivity (U/S): Ultrasonic technology provides excellent minor motion sensitivity.
- Ability to disable U/S (OSSMT-M). For added flexbility, OSSMT-G has the ability to disable both PIR and U/S.
- Presentation Mode feature: For slide or film presentations, allows pushbuttons to turn lights OFF and keep them OFF while the room is occupied.
- Exclusive Leviton H.I.S. Circuitry. Specifically designed to handle today's high inrush electronic ballast loads and offer unmatched durability and service.
- True Zero-Cross Relay switches at the zero crossing point of the AC power curve to ensure maximum contactor life and compatibility with electronic ballasts.

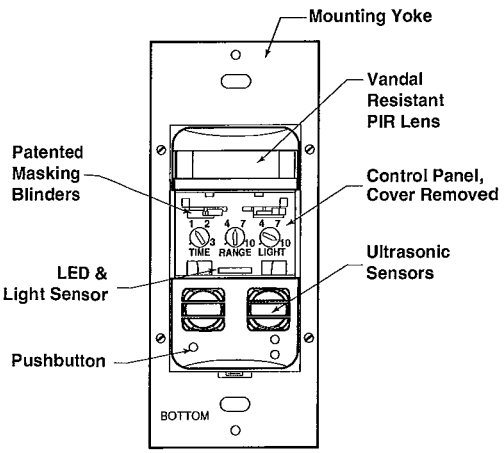
FIELD-OF-VIEW

The OSSMT provides a 180° field-of-view with a maximum coverage area of approximately 2400 square feet. The maximum sensing distance in front of the sensor is 40 feet, and side to side is 30 feet. The "minor motion" zone detects relatively small body movements and allows the lights to stay ON even though a person may not be moving or walking around the room. The remainder of the field-of-view, the "major motion" zone, exhibits a lesser degree of sensitivity and requires larger movements.



DIMENSIONAL DIAGRAMS





INSTALLATION

The OSSMT is preset to deliver optimum performance in a wide variety of applications without requiring any adjustments during installation. Exclusive self-adjusting operating features will automatically compensate for real-time occupancy patterns to provide maximum convenience and energy savings. The unit may replace a single-pole wall switch mounted in a standard wall box. The OSSMT-MD must have a neutral and be properly grounded in order to operate. The OSSMT-GD does not require a neutral for installation. The unit's integral blinders may be used to restrict the field of view to prevent unwanted detection of traffic. It should be positioned at least 6 feet away from HVAC registers. Note that whenever the unit is powered up, it will take approximately 1 minute to begin normal operation.

SPECIFICATIONS

ELECTRICAL			
Line Voltage	120-230-277/347 VAC		
Power Consumption		**U/S & PIR**	**PIR only**
OSSMT-MD	120V 277V 347V	390mW 480mW 500mW	190mW 270mW 350mW
OSSMT-GD	120V 277V	110mW 340mW	70mW 310mW
Operational Frequency	50/60Hz		
Ultrasonic Operating Frequency	40kHz		
Wire Designation	Line-Black Neutral-White Load-Blue Ground-Green		
Load Rating	Incandescent/Tungsten: 800W @ 120V Fluorescent: 1200VA @ 120V 2700VA @ 277V , 1500VA @ 347V Motor: 1/4 HP @ 120V,		

ENVIRONMENTAL	
Operating Temperature Range	32°F to 104°F (0°C to 40°C)
Storage Temperature Range	14°F to 185°F (-10°C to 85°C)
Relative Humidity	20% to 90% non-condensing

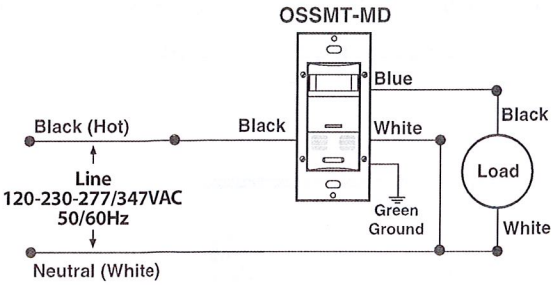
OTHER	
Listings	OSSMT-MD = UL/cUL OSSMT-GD = ETL/cETL Listed, CSA OSSMT-M3 = cETL Listed, CSA CEC Title 24 Compliant, FCC Compliant
Warranty	Limited Five-Year Warranty

ORDERING INFORMATION

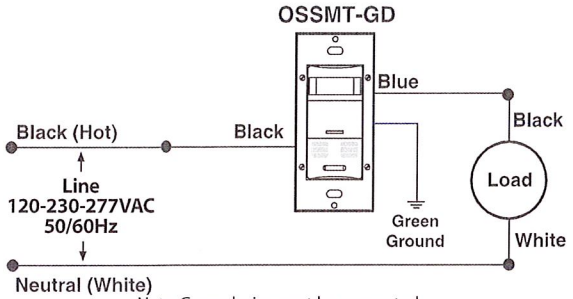
CAT. NO. *	DESCRIPTION
OSSMT-MDx	Multi-Technology Wall Switch Occupancy Sensor
OSSMT-GDx	No Neutral, Multi-Technology Wall Switch Occupancy Sensor
OSSMT-M3x	Multi-Technology Wall Switch Occupancy Sensor 347V

* Replace x with (W) White, (I) Ivory, (T) Light Almond, (G) Gray, Ebony (-E), or Red (-R)
NOTE: OSSMT-M3x model available in (W) White and (I) Ivory only.
* NAFTA compliant and Made in USA models available.

WIRING DIAGRAM

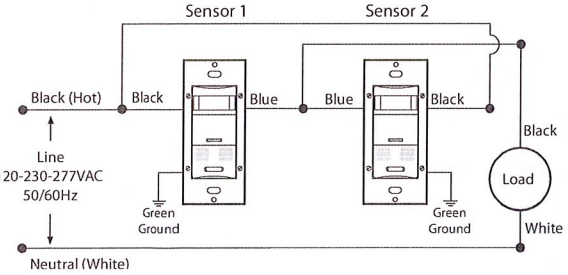


OSSMT-MD Wall Switch Occupancy Sensor Wiring Diagram, Single Location Control



Note: Ground wire must be connected.

OSSMT-GD Wall Switch Occupancy Sensor Wiring Diagram, Single Location Control



Note: Ground wire must be connected.

OSSMT-GD Wall Switch Occupancy Sensor Wiring Diagram, Two Location Control

OSSMT

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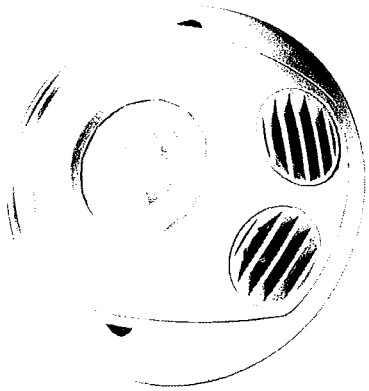
LEVITON®

Multi-Technology Ceiling Occupancy Sensor



BASIC OPERATION

Occupancy sensors have two tasks: 1) Keeping the lights ON while the room is occupied, and 2) Saving energy by keeping the lights OFF while the room is unoccupied.

Passive Infrared (PIR) is an excellent and precise technology for initially turning the lights ON, but lacks sensitivity for minor motion at distances. Ultrasonic (U/S) technology provides maximum sensitivity with continuous reflective high frequeny waves. This is opitmal for keeping the lights ON.

Leviton's multi-technology sensor combines the benefits of both PIR and U/S technologies for unrivaled performance and reliability.

APPLICATIONS

- Cafeterias
- Computer rooms
- Day care centers
- Workspaces
- Offices with cubicles
- Restrooms
- Storage rooms
- Classrooms
- Conference rooms
- Filing rooms
- Open warehouses
- Open areas
- Stairwells
- Executive, open, and private offices

FEATURES

- Self-Adjusting: Internal microprocessor continually analyzes, evaluates and adjusts the sensitivity and time delay. Performance is kept at a maximum and user complaints are eliminated.
- Custom off-white color matched for shaded ceilings.
- Fast, Simple Installation: Easy ceiling mount, three wire connection (low voltage) and twist-lock sensor attachment for 360° rotation and flexibility.
- Maximum Reliability, Low Cost: digital circuitry uses a minimum of components.
- Small Motion Sensitivity: The ultrasonic technology provides excellent small motion sensitivity.
- Timer Setting Feature: Automatic - 30sec - 30min. Test mode - 6sec with auto exit programming.
- Non-Volatile Memory: Learned and adjusted settings saved in protected memory are not lost during power outages.
- Walk-Through: Provides increased energy savings by decreasing the time delay to 2.5min when someone momentarily walks through the monitored space.
- Wide Coverage: Units from 500 to 2000 sq. ft. available.
- Power base (OPB 15) available for line voltage applications
- Ambient Light Recognition: A Light Sensor prevents lights from turning on when the room is adequately lit by natural light.
- Ultrasonic (U/S) Components: One or two U/S transducers and one or two narrow bandwidth receivers each 16mm in diameter. Frequency -- Crystal controlled to ±.005%.
- Device: Rugged, high-impact, injection molded plastic, off -white. Color coded leads 6" (16.24 cm).

HOW THE OSCxx-M AUTOMATICALLY ADAPTS

Condition	Example	Self-Adaptive Reaction
Timer Left In Test Mode - The sensor remains in an 6 sec. test mode.	An installer accidentally leaves the sensor in the 6 sec. timer test mode and the lights may go off or on every 6 sec.	The sensor automatically resets the timer to 10 min after 15 min of test mode.
False-On - The sensor incorrectly turns the lights on.	The sensor detects movement in the corridor or hall way and the room lights turn on.	After an initial movement is sensed, if another mov ement is not sensed within the timer setting then the delayed off time setting is automatically reduced.
False-Off - The sensor incorrectly turns the lights off.	The sensor does not detect movement because an occupant sits virtually motionless at a desk and the lights turn off.	If motion is sensed within a short period after the lights go off, then the current delayed off-time setting is increased.

OSCxx-MoW

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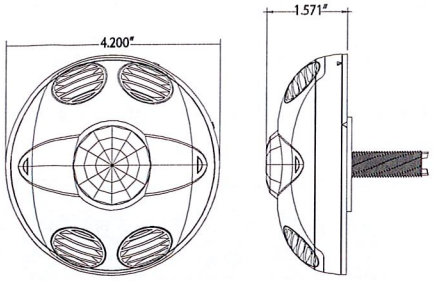
PRODUCT DATA

DIP SWITCH SETTINGS			
SWITCH		**SWITCH FUNCTIONS**	**SWITCH SETTINGS**
	BANK A	**OFF**	**ON**
A1	N/A	**Multi-Tech**	Single Tech
A2	N/A	PIR	Ultrasonic
A3	Manual Mode	**Auto Adapting Enabled**	Auto Adapting Disabled
A4	Walk-Thru Disable	**Walk-Thru Enabled**	Walk-Thru Disabled
	BANK B		
B1	Override to On	**Auto Mode**	Lights forced On
B2	Override to Off	**Auto Mode**	Lights forced Off
B3	Test Mode	**OFF'ON'OFF**	Enter/Exit Test Mode
B4	LED Disable	**LEDs Enabled**	LEDs Disabled

*Bold items are factory defaults

DIMENSIONS



SPECIFICATIONS

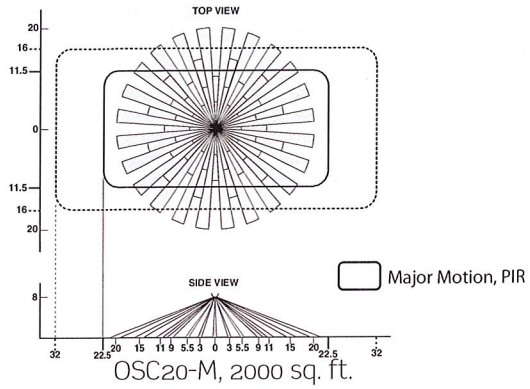
ELECTRICAL	
Power Requirements	24 VDC, from OSPxx Power Pack or OPB15 Power Base
Power Consumption	OSC05: 25mA, OSC10: 35mA, OSC20: 30mA
Output	24 VDC active high logic control signal with short circuit protection
CONTROLS	
Ultrasonic Sensitivity	0-100%; green knob (factory setting: 50%)
Infrared Sensitivity	0-100%; red knob; (factory setting: 75%)
Light Sensor	20 to 3,000 Lux; blue knob; factory set at 100% (*grey wire required)
Time Delay	30sec-30min; black knob (factory setting: 10min)
INDICATORS	
Green LED	U/S motion technology
Red LED	Infrared motion technology
ENVIRONMENTAL	
Operating Temperature Range	32°F to 104°F (0°C to 40°C)
Relative Humidity	0% to 95% non-condensing, for indoor use only
OTHER	
Mouting Height	8-12 feet
Listings	CUL/US Certified, meets ASHRAE Standard 90.1 and CEC Title 24 requirements
Warranty	Limited Five-Year Warranty

ORDERING INFORMATION

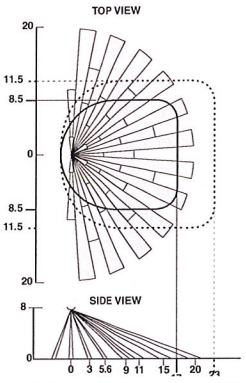
CAT NO.	DESCRIPTION
OSC05-MoW	Multi-Technology Ceiling Sensor, 500 sq. feet of coverage
OSC10-MoW	Multi-Technology Ceiling Sensor, 1000 sq. feet of coverage
OSC20-MoW	Multi-Technology Ceiling Sensor, 2000 sq feet of coverage

NAFTA compliant and Made in USA models available

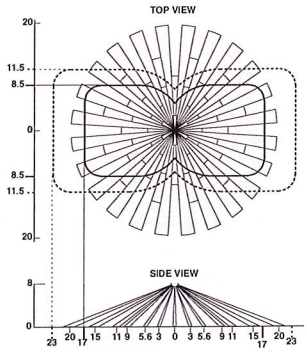
FIELD-OF-VIEW



OSC20-M, 2000 sq. ft.

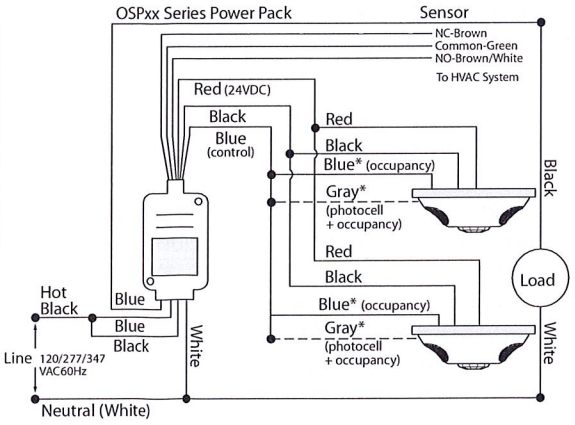


OSC05-M, 500 sq. ft.



OSC10-M, 1000 sq. ft.

PHYSICAL WIRING



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PRODUCT DATA

LEVITON®

OSP/OSA Power Pack Series

Provides low voltage power and line voltage control for Leviton Occupancy Sensors

Containing both a 24VDC supply and a 20A line voltage relay for most models, the Leviton compact Power Pack provides low voltage power and line voltage control for Leviton Occupancy Sensors. Versions include Auto-ON and Manual-ON inputs for occupancy sensors, Hold-ON and Hold-OFF capabilities, and a local input for momentary or maintained dry contact switches.

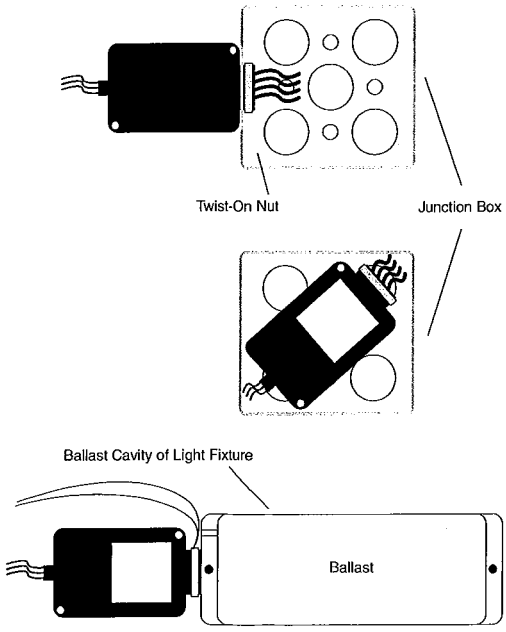
The internal relay can control up to 20A for 120, 230, 277VAC or 347VAC ballast loads and 120VAC incandescent loads. The OSP Power Pack Series is also used to supply power to the OSA Add-A-Relay model. The Power Pack conveniently mounts in a knockout hole of a standard junction box. The unit can be placed inside or outside the junction box with a simple twist-on nut.

APPLICATIONS

Use a Leviton Power Pack with Leviton Occupancy Sensors in the following applications.

- Classrooms
- Conference rooms
- Anywhere optimal lighting and energy savings are desired
- Load shed/Interface hold-OFF applications
- Retail hold-ON/bypass applications
- OSP20
  - Multi-circuit switching
  - Ceiling access lighting and energy management controls
- OSP20-RD
  - Interface to BAS/BMS and HVAC
- OSP20-RDH
  - Bi-Level or A/B lighting
  - Shared emergency lighting
  - Inexpensive 3-Way switching
- OSA20
  - Expanding circuit switching capacity
  - Cost conscious mixed voltage solutions

EASY MOUNTING



OSP/OSA Power Pack Series

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201 N. Service Rd. Melville, NY 11747-3138 Tech Line: 1-800-824-3005 Fax: 1-800-832-9538 www.leviton.com/les

PRODUCT DATA

FEATURES

OSP20-0D0/OSP20-ND0

- Self-contained transformer and relay
- Internal voltage regulator - regulated 24VDC current, 150mA output
- Fast installation - mounts inside or outside junction box, or inside fluorescent ballast cavity with a simple twist-on nut
- Single or multiple luminaire control
- Zero crossing circuitry
- UL 2043 Plenum Rated
- Companion Add-A-Relay provides additional capacity (OSA20-R00)
- NAFTA compliant (OSP20-ND0)
- Made in USA compliant (OSP20-DA0)

OSP20-RD0/OSP15-R30/OSP20-NH0

Includes the same features as the OSP20-0D0, plus:

- Dry contact relay for combined sensor control of lighting and heating/air conditioning
- Dry contact for designing controlled closure
- Form A relay for interface to Building Automation/ Management Systems (BAS/BMS)
- NAFTA compliant (OSP20-NH0)
- Made in USA compliant (OSP20-RAD)

OSP20-RDH/OSP20-RNH

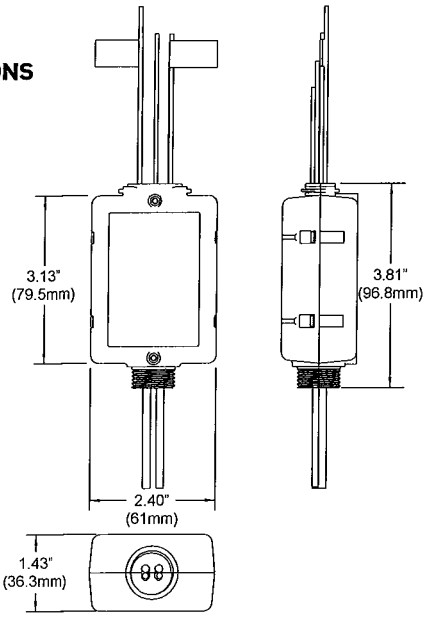
Includes the same features as the OSP20-RD0, plus:

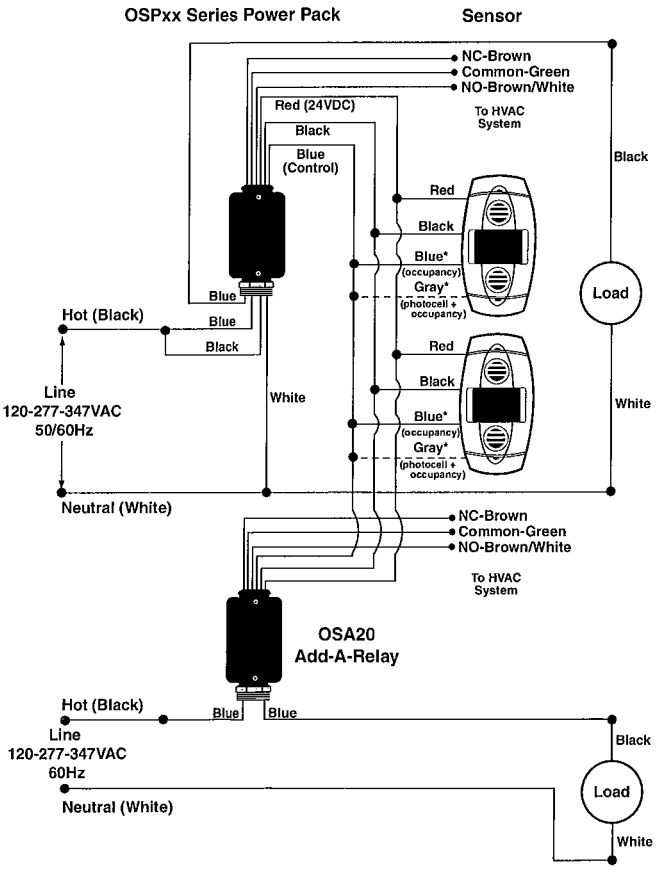
- Auto-ON and Manual-ON inputs for occupancy sensors
- "Hold-ON" input - when activated, unit is always ON regardless of any other input
- "Hold-OFF" input - when activated, unit is always OFF regardless of any other input
- Local inputs for momentary or maintained dry contact low voltage switching
- Robust mechnical batching relay designed to perform as a Form C normally closed device
- Increased power supply output to 255mA
- Upon loss of power, latching relay maintains current state (closed or open)
  - H.I.S. >(High In-rush Stability)
  - Heavy duty zero crossing circuitry
- Robust mechanical latching relay
- NAFTA compliant (OSP20-RNH)
- Made in USA compliant (OSP20-RAH)

OSA20-R00/OSA20-RN0

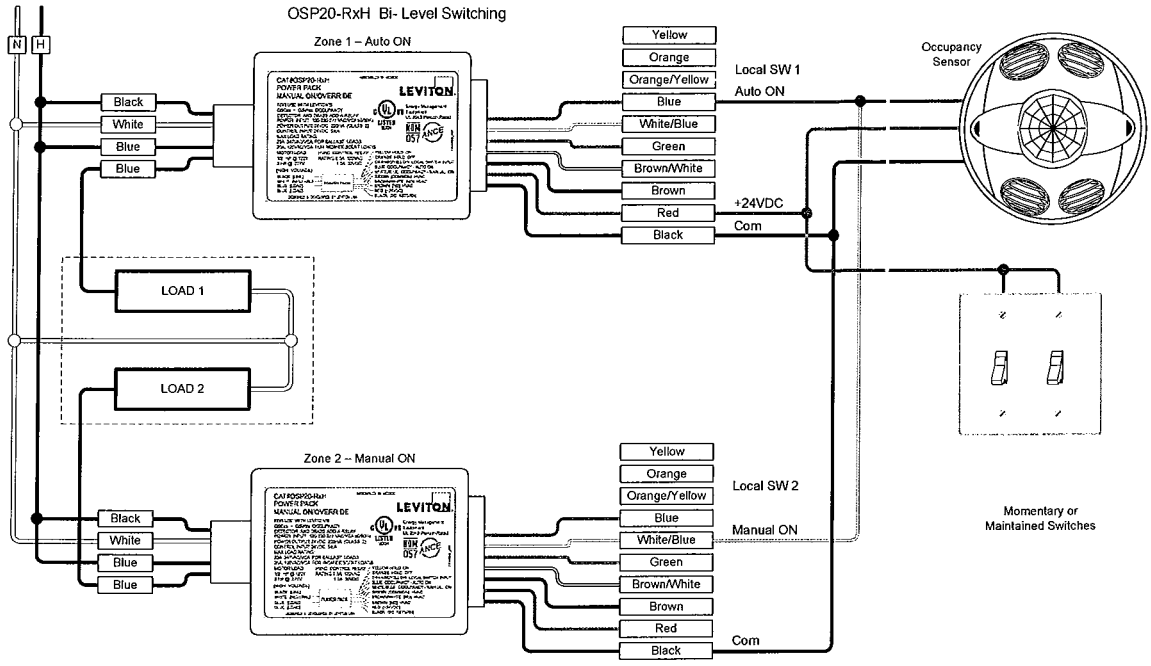
- 15A relay can be added to any OSP20 power pack for flexible design
- For design flexibility when cost conscious
- Inexpensive solution for mixed voltage lighting design
- Used for expanding circuit switching capacity
- Use OSP20 power packs for Emergency Lighting circuits and OSA20 Add-A-Relays for inexpensive control of normal lighting
- NAFTA compliant (OSA20-RN0)
- Made in USA compliant (OSP20-RA0)

DIMENSIONS





OSP20-RxH Bi-Level Switching



WIRING DESIGNATIONS

SIGNAL TYPE	COLOR	GAUGE
LINE VOLTAGE WIRES		
Line 120-230-277VAC (OSP20-RxO)	Black	18AWG
Neutral	White	18AWG
Load	Blue	14AWG
Load	Blue	14AWG
CLASS 2 WIRES		
Power (24VDC)	Red	22AWG
DC Return	Black	22AWG
Occupancy Auto-ON	Blue	22AWG
Occupancy Manual-ON	Blue/White	22AWG
Hold-ON	Yellow	22AWG
Hold-OFF	Orange	22AWG
Local Switch Input	Yellow/Orange	22AWG
SIGNAL TYPE	**COLOR**	**GAUGE**

HVAC WIRES		
Dry Contact Common	Green	22AWG
Dry Contact NO (Normally Open)	Brown/White	22AWG
Dry Contact NC (Normally Closed)	Brown	22AWG

- All wires rated at 105°C, 600V insulation.
- Class 2 wires are Teflon jacketed, for plenum applications.
- Dry Contact wiring is Class 1 and Class 2 rated.

POWER PACK CAPACITY FORMULA

Leviton power packs can be used to provide power to one or more occupancy sensors. Since current consumptions of occupancy sensors may vary, the best way to ensure you order the correct number of power packs and add-a-relays is by using this formula:

# of sensor Model As X Sensor A current consumption rating	+	# of sensor Model Bs X Sensor B current consumption rating	+	# of Add a Relays X 50mA	< 150mA per power pack

DESCRIPTION	CURRENT CONSUMPTION
OSC04-I, OSC15-I, OSWHB-I, OSWLR-I, OSWWV-I	20mA
OSC05-M, OSC05-U, OSW12-M	30mA
OSC10-M, OSC10-U	40mA
OSC20-M, OSC20-U	32mA
OSA20-R00 Add a Relay	50mA

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PRODUCT DATA

LEVITON®

SPECIFICATIONS

ELECTRICAL	
Line Voltage	120-230-277 VAC
Relay Rating	HVAC Relay: 0.5A @ 120VAC, 1.0A @ 30VDC
ENVIRONMENTAL	
Operating Temperature Range	32°F to 104°F (0°C to 40°C)
Relative Humidity	0% to 90% non-condensing, for indoor use only
OTHER	
Construction	Case: high impact, UL rated plastic Relay: class B (130°C) insulating material; silver alloy contacts Wire: 6" leads, 18AWG input; LV connections: 7" leads 22AWG
Dimensions	2.400"H x 3.811"W x 1.432"D (60.96mm x 96.80mm x 36.37mm)
Listings	UL/CUL Listed, FCC Certified, NOM Certified, and meets ASHRAE 90.1 requirements
Color	Black
Warranty	Limited Five-Year Warranty

ORDERING INFORMATION

DESCRIPTION	CAT. NO.	POWER INPUT	RELAY RATING	CONTROL INPUT	POWER SUPPLY OUTPUT
Power Pack	OSP20-0D0	120-230-277VAC, 50/60 Hz	20A fluorescent/incandescent @ 120V, 20A fluorescent @ 230-277V; 1HP @ 120V, 2HP @ 240V	5mA, 24VDC	150mA, 24VDC
Power Pack with Dry Contact Relay	OSP20-RD0	120-230-277VAC, 50/60 Hz	20A fluorescent/incandescent @ 120V, 20A fluorescent @ 277V; 1HP @ 120V, 2HP @ 240V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	150mA, 24VDC
Power Pack with Dry Contact Relay	OSP15-R30	347VAC, 60 Hz	15A fluorescent @ 347V; 1HP @ 120V, 2HP @ 240V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	120mA, 24VDC
Add-A-Relay Unit with Dry Contact Relay	OSA20-R00	—	15A incandescent @ 120V, 20A fluorescent @ 120V, 20A fluorescent @ 277V, 15A fluorescent @ 347V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	—
Power Pack with Dry Contact Relay and Override Inputs for Occupancy Sensors	OSP20-RDH	120-230-277VAC, 50/60Hz	20A fluorescent/incandescent @ 120V; 20A fluorescent@ 277V; 1HP @ 120V, 2HP @ 240V; HVAC; .05A @ 120VAC, 1A @ 20VDC and 15A fluorescent @ 347V; 1HP @ 120V; 2HP @ 240; HVAC: 0.5A @ 120V, 1A @ 30VDC	5mA, 24VDC	225mA, 24VDC

* Consult factory for 208, 220, and 240V models.

LEVITON SPECIFICATION SUBMITTAL	
JOB NAME:	CATALOG NUMBERS:
JOB NUMBER:	

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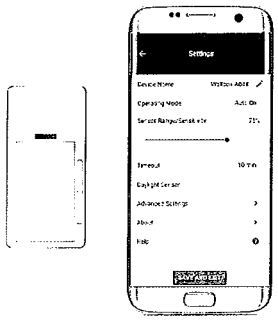
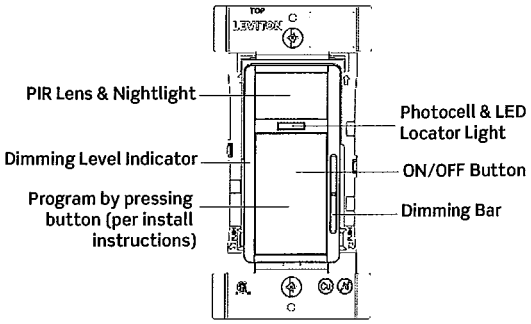
Visit our Website at: www.leviton.com/les

LEVITON

Smart PIR 0-10V Dimming Wallbox Sensor





DESCRIPTION

The Leviton Smart Dimming Wallbox Sensor (ODD10-IDx) is designed for use with 0-10V ballasts. Lighting levels can be adjusted using the dimming bar next to the switch. The ODD10-IDx uses Passive Infrared (PIR) detection technology to monitor a room for occupancy using a segmented, tamper resistant lens. When a person passes in or out of a sensor zone, the sensor detects motion and switches the lights ON. The lights will remain ON as long as an occupant moves through the sensor zones and after the timeout expires. The ODD10-IDx features a vacancy mode for Manual-ON/Auto-OFF operation, ideal for installations where manual-ON switching is required for energy code applications.

A "minor motion" zone detects small body movements. This detection allows the lights to remain ON when individuals in the space are more stationary. The "major motion" zone exhibits a lesser degree of sensitivity requiring larger movements.

Configuration of the ODD10-IDx is made using the Leviton Smart Sensor App on a smartphone or other Bluetooth®-enabled Android or iOS device. Simple configuration can also be applied using pushbutton setup for several common pre-configured options. The ODD10-IDx integrates a photocell for daylighting hold-OFF which can be programmed using the Leviton Smart Sensor App.

APPLICATIONS

- Offices
- Lobbies
- Small Meeting Rooms

FEATURES

- Can be used to comply with IECC, ASHRAE 90.1, and 2019 Title 24, Part 6 occupancy/vacancy sensing and dimming requirements
- Fits in a standard wallbox and gangable with other units
- Controls LED lighting loads up to 8A
- One relay module for single-level switching
- 180° field-of-view provides approximately 1,100 square feet of coverage
- Maximum sensing distance in front of the sensor is 30-40 feet and 15-20 feet on either side
- Advanced configuration can be performed using the Leviton Smart Sensor App on any Bluetooth-enabled Android or iOS device:
  - Set operating mode to Auto-ON/Auto-OFF or Manual-ON/Auto-OFF
  - Adjust the sensitivity of the sensor to increase or decrease coverage area
  - Adjust timeouts
  - Activate the nightlight and select nightlight colors
  - Add daylighting hold-OFF and select target daylighting hold-OFF levels
  - Set a security code to lock configuration settings
  - Configure dimming options such as Partial-ON, Partial-OFF, and Partial-OFF timeouts
- Out-of-the-box configuration default mode:
  - Auto-ON/Auto-OFF with 10-minute timeout
  - Sensitivity set to 75%
  - Nightlight and daylighting disabled
- Convenient pushbutton hold configuration for installers without a smart device*:

PUSHBUTTON HOLD CONFIGURATION

Button (#)	Operating Mode	Sensitivity (%)	Time Out (mins)
1	Auto-ON/ Auto-OFF	75	10
2			20
3		100	10
4			20
5	Manual-ON/ Auto-OFF	75	10
6			20
7		100	
8			10

*Requires removal of front face cover

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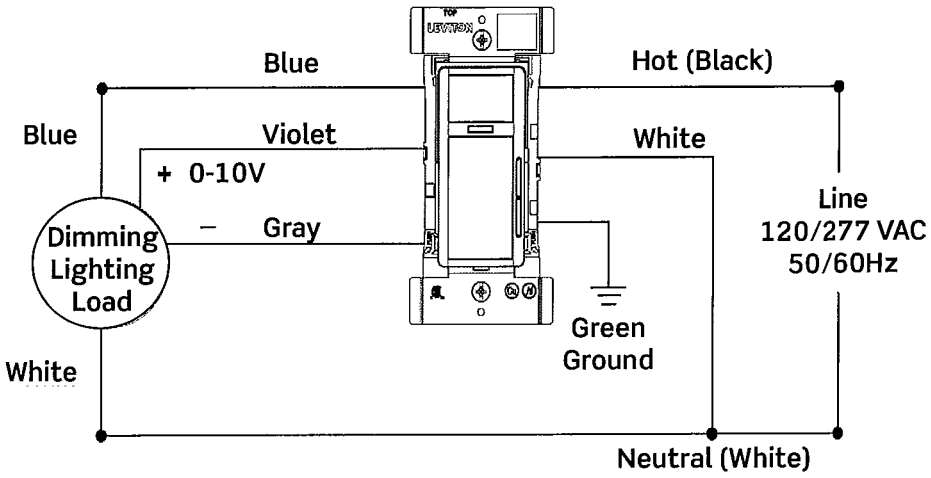
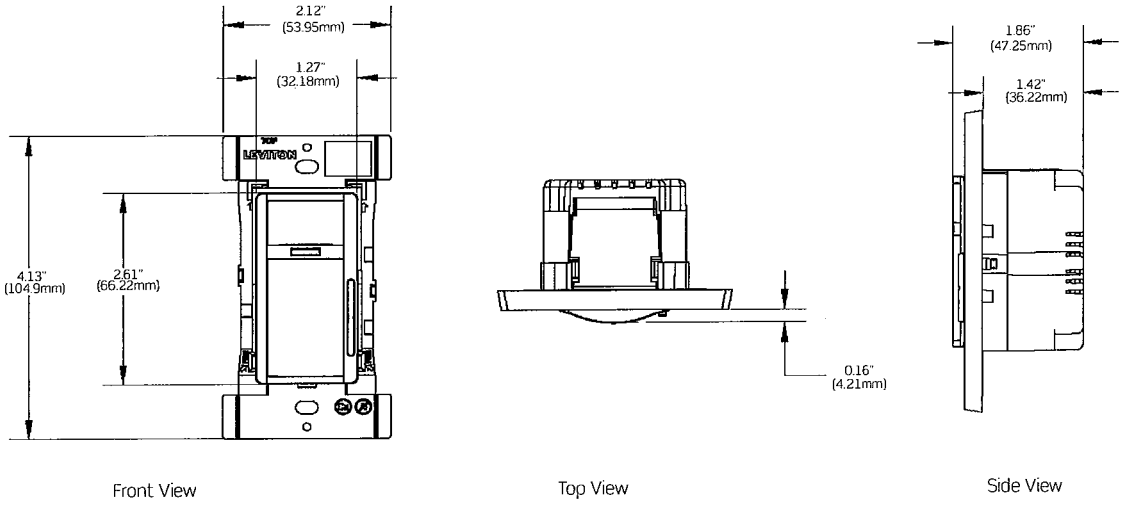
PRODUCT DATA

WIRING DIAGRAM

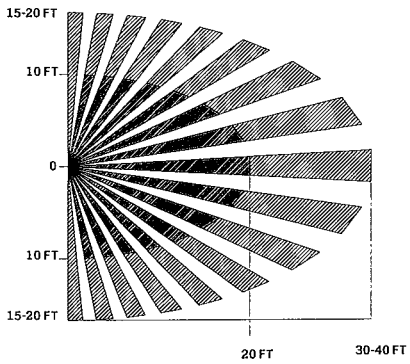


DIMENSIONS

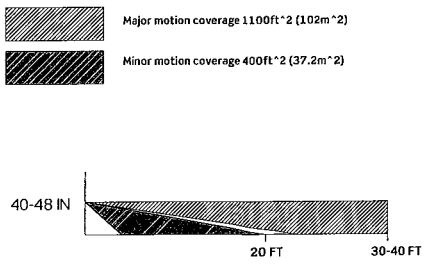


Front View | Top View | Side View

FIELD-OF-VIEW (IN FEET)



Horizontal Beam Diagram



Vertical Beam Diagram

LEVITON®

SPECIFICATIONS

ELECTRICAL	
Input Voltage/Frequency	120-277VAC, 50/60Hz
Input Current	
120V	Standby: 0.2W Max: 0.5W+Load Current
277V	Standby: 0.3W Max: 0.6W+Load Current
Load Ratings	
General Purpose @ 120V	10A
General Purpose @ 277V	
LED/Electronic Ballast @ 120V	8A
LED/Electronic Ballast @ 277V	5A
Standard Ballast @ 120V	10A
Standard Ballast @ 277V	
Tungsten @ 120V	6.67A
Tungsten @ 277V	
Motor @ 120V	1/4HP (FLA 5.8A)
Motor @ 277V	1/3HP (FLA 3.0A)
IP Rating	IP10
Network Connections	BLE 4.2, BLE 5.0
ENVIRONMENTAL	
Operating Temperature	32 to 104°F (0 to 40°C)
Storage Temperature	-40 to 185°F (-40 to 85°C)
PHYSICAL	
Dimensions	2.12" x 1.86" x 4.13" (53.95mm x 47.25mm x 104.90mm)
OTHER	
Energy Codes	Can be used to comply with ASHRAE 90.1, IECC and 2019 Title 24, Part 6 occupancy/vacancy sensing and dimming requirements
Listings	IECC, UL and cUL listed
Certifications	FCC, ICC
Warranty	Limited five-year warranty

Smart PIR 0-10V Dimming Wallbox Sensor

Leviton Manufacturing Co., Inc. Global Headquarters
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LEVITON®

ORDERING INFORMATION

CAT NO.	DESCRIPTION
ODD10-IDW	Smart PIR 0-10V Dimming Wallbox Sensor, App configurable; Auto-ON/Auto-OFF or Manual-ON/Auto-OFF, neutral wire required, 120/208/220/230/240/277VAC, 50/60Hz; White
ODD10-IDI	Smart PIR 0-10V Dimming Wallbox Sensor, App configurable; Auto-ON/Auto-OFF or Manual-ON/Auto-OFF, neutral wire required, 120/208/220/230/240/277VAC, 50/60Hz; Ivory
ODDKT-00B	Smart Dimming Wallbox Sensor Color Change Kit, Black
ODDKT-00R	Smart Dimming Wallbox Sensor Color Change Kit, Red
ODDKT-00G	Smart Dimming Wallbox Sensor Color Change Kit, Gray
ODDKT-00I	Smart Dimming Wallbox Sensor Color Change Kit, Ivory
ODDKT-00A	Smart Dimming Wallbox Sensor Color Change Kit, Light Almond
ODDKT-00W	Smart Dimming Wallbox Sensor Color Change Kit, White

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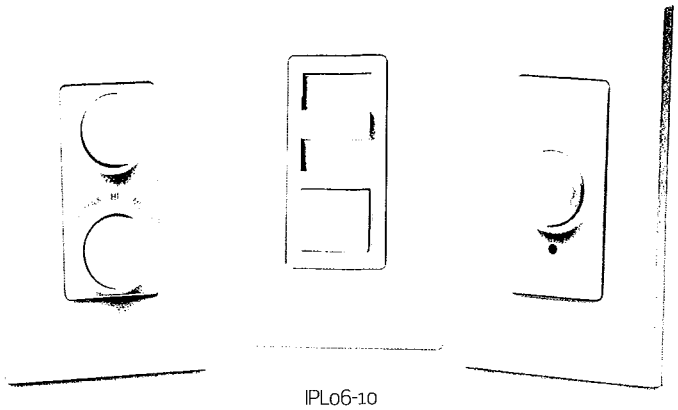
Visit our Website at: www.leviton.com/smartsensors

LEVITON®

decora®

IllumaTech® Preset Slide & Rotary Controls



RTD01-10 IPL06-10 RPI06-1L

APPLICATIONS

To simplify inventory, IllumaTech® Slide and Rotary Controls are designed for both single pole (one location) and 3-way (two location) applications. IllumaTech Preset Slide Controls feature a smooth, captured slide bar for fine adjustment of lighting levels and an easy to use push button that provides preset ON/OFF switching. Color change kits simplify inventory by diminishing the need for stocking separate devices in every color. Additionally, the IPL06 features a future-proof dimming platform that is compatible with incandescent and dimmable LED and CFL lamps.

IllumaTech slide controls include LED, CFL, magnetic low voltage, electronic low voltage and fluorescent lighting dimmers, as well as full range and quiet fan speed controls. IllumaTech Rotary Controls combine the ease of a traditional rotary knob with the contemporary look of Decora®. They are perfect for specifiers, lighting designers and engineers who require reliable performance and a modern rotary look. Rotary controls include push on/push off dimmers in illuminated and non-illuminated versions, as well as quiet fan speed controls and a combination dimmer/fan speed control.

FEATURES AND BENEFITS

- LED Illuminates when load is off (select models)
- Provide single pole (one location) or 3-way (two location) lighting control when used with a 3-way switch
- Attractive styling coordinates perfectly with Leviton's complete line of Decora wiring devices
- Compatible with Decora Plus™ screwless and Decora standard designer wallplates
- Built-in radio/TV interference filter
- Fit easily into a standard wallbox and are suitable for multi-gang installations
- IllumaTech controls come packaged with six product options in each box for superior versatility; 3 changeable color faces and single pole or 3-way control

IllumaTech Preset Slide Controls

- Fluid slide movement allows fine adjustment of light level with minimal effort
- Captive wraparound slide bar remains securely attached
- Compatible with dimmable LED and CFL lamps
- Easy to use push button switch with green LED locator
- Push button switch acts as an air gap switch completely disconnecting power from unit for bulb changing
- Slide controls travel approximately 20mm
- Power failure recovery ensures retention of last setting before power interruption
- Quiet 1.5 amp fan speed controls are ideal for libraries, home offices, bedrooms and any area where ceiling fan noise could become distracting. Full range 5 amp fan speed controls are also available

IllumaTech LED/CFL/Incandescent Dimmer

- IPL06 designed specifically for dimmable LED and CFL lamps as well as incandescent
- Features a built-in starting technology for CFL lamps
- Wider dimming range on LED and CFL lamps than conventional incandescent dimmers
- Optional programming feature allows for users to modify the dimming range to optimize low light level performance when required

IllumaTech 0-10V LED/Fluorescent Dimmer

- IP710-DL designed specifically for Mark-7® 0-10V fluorescent ballast
- IP710-LF designed for use with LED fixtures using 0-10V power supplies
- Dual voltage 120V/277V; 28 mAmps maximum sink current
- No power pack required for switching

IllumaTech Rotary Controls

- Rotary knob with contemporary styling
- Quiet 1.5 amp fan speed controls are perfect for libraries, home offices, bedrooms and any area where ceiling fan noise could become distracting
- Dual fan speed control and dimmer is ideal for ceiling fans with built-in light fixtures

SPECIFICATIONS

- Operating 0°C - 55°C
- Non-operating 10°C - 85°C
- Relative humidity, non-condensing 20% to 90%

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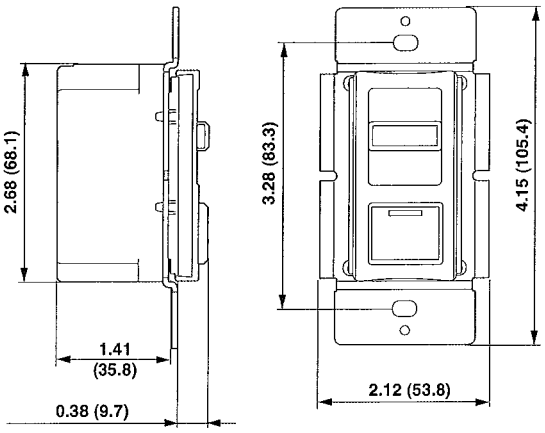
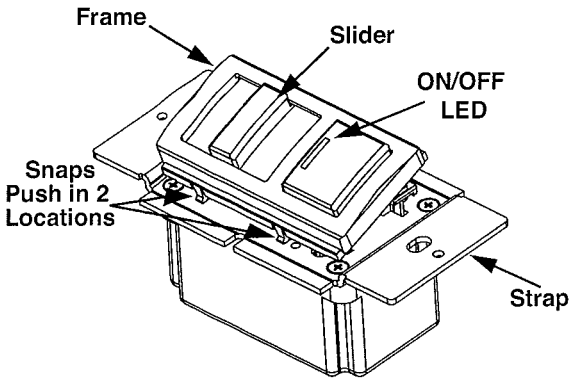
DIMENSIONAL DRAWINGS

IllumaTech Preset Slide Controls

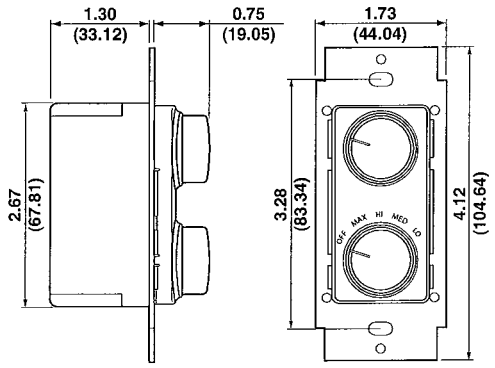


Color Change Kit for IllumaTech Slide Controls

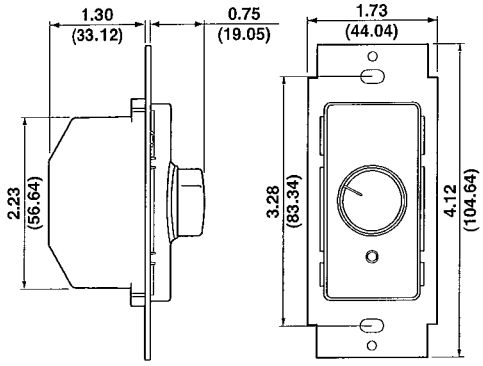
(Preset Kit Shown)



IllumaTech Dual Controls



IllumaTech Rotary Controls



AGENCY STANDARDS AND COMPLIANCE

UL Listed (File #E-31373)
CSA Certified (File #LR-3413)

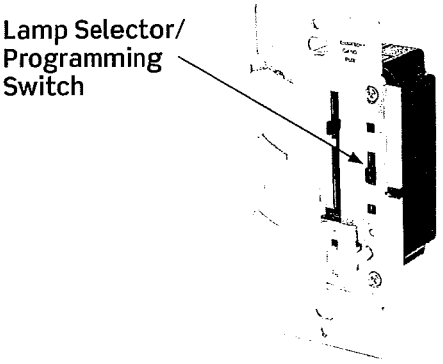
INSTALLATION CONSIDERATIONS

Note: Sharing a neutral wire may cause flickering. Connect all devices to the same phase or run a separate neutral to each phase. Consult Leviton Techline if problems persist.

Warning: When retrofitting Mark 10® *Powerline* dimming ballasts into fixtures that originally had Instant Start ballasts, the sockets MUST be replaced with Rapid Start sockets to allow proper dimmer operation and prevent property damage, injury or death. Refer to the instructions provided with the ballast and the Leviton dimmer.

IPLo6: LED and CFL lamps marked or rated as dimmable can be used with this dimmer. For a complete list of approved LED and CFL lamps visit **www.leviton.com/universal**

Use Leviton Power Extenders to extend the load capacity of box mounted dimmers. Leviton Power Extenders are available for incandescent, magnetic low voltage, electronic low voltage, Mark 10® *Powerline* fluorescent dimming ballasts or equivalents and 0-10 VDC dimmable fluorescent ballasts such as Mark 7® 0-10V, OSRAM Sylvania Quicktronic® Helios™ or equivalent ballasts.



- CFL mode for dimmable CFLs. This feature provides a higher starting voltage that is required for many Compact Fluorescent Lamps.
- LED/Incandescent mode provides optimized dimming for LED lamps and for incandescent operation.
- Switch also enables the programming mode allowing users to change the dimmer low light settings for applications where the user experiences unstable light or flicker.

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Maximum Load for Multi-Gang Applications

In multi-gang applications derating may be required in accordance with the following charts. For controls with side sections fin removal may be required (consult instruction sheets for further details).

CAT. NO.	SINGLE	2-GANG	3-GANG OR MORE
IPI06-1L	600W	500W	400W
IPI10-1L	1000W	800W	700W
IPL06-10	600W Incandescent 150W LED/CFL	500W Incandescent 150W LED/CFL	400W Incandescent 150W LED/CFL
IPE04-1L	400VA (320W)	350VA (280W)	250VA (200W)
IPM06-1L	600VA (450W)	500VA (375W)	400VA (300W)
IPM10-1L	1000VA (800W)	800VA (640W)	700VA (560W)
IP710-DL	1200VA/1500VA	1200VA/1500VA	1200VA/1500VA
IP710-LF	1200VA/1500VA	1200VA/1500VA	1200VA/1500VA
IPX06-10	600VA	500VA	400VA
IPX10-10	1000VA	800VA	700VA
IPX06-70	600VA	600VA	600VA
IPX12-70	1200VA	1200VA	1200VA
IPF01-1L	1.5A	1.5A	1.5A
IPF05-1L	5A	4.1A	3.3A
RP106-IL	600W	500W	400W
RPI06-10	600W	500W	400W
RTF01-10	1.5A	1.5A	1.5A
RTD01-10	300W/1.5A	300W/1.5A	300W/1.5A

WARRANTY INFORMATION

Limited Five-Year Warranty

WIRING DIAGRAMS

DIAGRAM 1
Single Pole Wiring

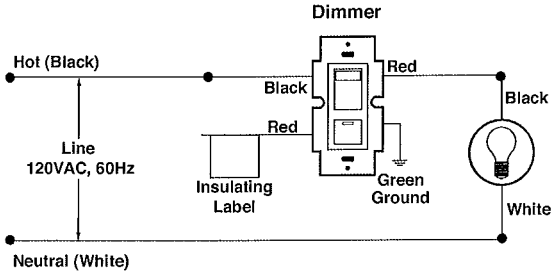
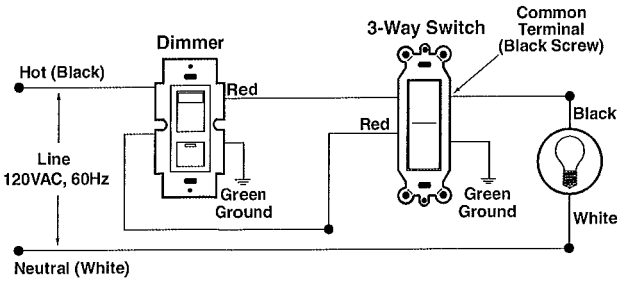


DIAGRAM 2
3-Way Wiring



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ORDERING INFORMATION

All IllumaTech Preset and Rotary Dimmers provide single pole (one location) or 3-way (two location) control when used with a 3-way switch.

DESCRIPTION	CAT. NO.	RATING (For multi-gang installation, see derating chart)	COLOR
Incandescent Dimmer with LED locator	IPI06-1L*	600W-120VAC	Z
Incandescent Dimmer with LED locator	IPI10-1L	1000W-120VAC	Z
LED/CFL/Incandescent Dimmer, no LED	IPL06-10	600W Incandescent 150W LED & CFL 120VAC	Z
Magnetic Low Voltage Dimmer with LED locator	IPM06-1L	600VA (450W)-120VAC	Z
Magnetic Low Voltage Dimmer with LED locator	IPM10-1L	1000VA (800W)-120VAC	Z
Electronic Low Voltage Dimmer with LED locator; neutral required	IPE04-1L*	400VA (320W)-120VAC	Z
Fluorescent Dimmer for Mark 10® Powerline Ballast, no LED locator	IPX06-10	600VA-120VAC	Z
Fluorescent Dimmer for Mark 10® Powerline Ballast, no LED locator	IPX10-10*	1000VA-120VAC	Z
Fluorescent Dimmer for Mark 10® Powerline Ballast, no LED locator	IPX06-70	600VA-277VAC	Z
Fluorescent Dimmer for Mark 10® Powerline Ballast, no LED locator	IPX12-70	1200VA-277VAC	Z
Fluorescent Dimmer for Mark 7® 0-10V Ballast with LED locator	IP710-DL*	1200VA @120VAC 1500VA @ 277VAC	Z
LED Dimmer for 0-10V power supplies, no LED locator	IP710-LFZ*	1200VA @120VAC 1500VA @ 277VAC	Z
Quiet Fan Speed Control with LED locator	IPF01-1L	1.5A-120VAC	Z
Fully Variable Fan Speed Control with LED locator	IPF05-1L	5A-120VAC	Z
Rotary Incandescent Dimmer with LED locator	RPI06-1L	600W-120VAC	Z
Rotary Incandescent Dimmer, no LED locator	RPI06-10	600W-120VAC	Z
Quiet Fan Speed Control, single pole only, no LED locator	RTF01-10	1.5A-120VAC	Z
Rotary Dual Quiet Fan Speed Control and Dimmer, single pole only, no LED locator	RTD01-10	1.5A Fan Control/ 300W Dimmer	Z

* NAFTA Compliant models available. For more information visit www.leviton.com/nafta

Color Change Kits for IllumaTech Slide Controls

DESCRIPTION	CAT. NO.	COLOR*
Color Change Kit	IPKIT-00	W, I, T, G, E, R, B
Color Change Kit for IPL06; no LED	IPKIT-LN	W, I, T, G, E, R, B
Color Change Kit for Fan Speed Control	IPQFK-00	W, I, T, G, E, R, B

IllumaTech controls come packaged with three colors. Products with suffix (-Z) include White, Ivory and Light Almond. Color Change Kits for IllumaTech Preset Slide Controls available in the following colors: White (-W), Ivory (-I), Light Almond (-T), Gray (-G), Black (-E), Red (-R) and Brown (-B).

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Leviton Manufacturing Co., Inc.
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Leviton Lighting & Energy Solutions
Standard Warranty Statement

Leviton Lighting & Energy Solutions, a division of Leviton Manufacturing Corporation Inc warrants its Dimmer, Relay, and Control Systems to be free of material and workmanship defects for a period of two years after system acceptance or 26 months after shipment, whichever comes first. This Warranty is limited to repair or replacement of defective equipment returned Freight PrePaid to Leviton Lighting & Energy Solutions at 20947 Teton Ave. Tualatin, Oregon 97062, USA. User shall call 1-800-959-6004 and request a return authorization number to mark on the outside of the shipping carton, to assure that the returned material will be properly received at Leviton. All equipment shipped back to Leviton must be carefully and properly packaged to avoid shipping damage. Replacements or repaired equipment will be returned to sender freight prepaid, F.O.B. factory. Leviton is not responsible for removing or replacing equipment on the job site, and will not honor charges for such work. Leviton will not be responsible for any loss of use time or subsequent damages should any of the equipment fail during the warranty period, but agree only to repair or replace defective equipment returned to its plant in Tualatin, Oregon. This Warranty is void on any product that has been improperly installed, overloaded, short circuited, abused or altered in any manner, or damaged by natural events such as lightning strike, or flood. Neither the seller nor Leviton Manufacturing shall be liable for any injury, loss or damage, direct or consequential arising out of the use of or liability to use the equipment. This Warranty does not cover lamps, ballasts, and other equipment that is supplied or warranted directly to the user by their manufacturer. Leviton makes no warranty as to the Fitness or Purpose of other implied Warranties.

Warranty & Service Program

Factory ECO

· Leviton factory commissioning included with labor and travel expenses 24 hour / 7 days a week telephone support Expert Leviton Field Service Network Convenient product exchange program. Expedited shipping methods available upon request. **SOME ITEMS MAY BE EXCLUDED FROM ENGINEERING SERVICES / COMMISSIONING. REFER TO THE BILL OF MATERIALS FOR MORE INFORMATION.**

Rep ECO

· Rep agency is responsible for performing commissioning included with labor and travel expenses 24 hours/ 7 days a week, telephone support (factory support available). Agency is responsible for all system support for the warranty period (2 years). Parts and labor included.

No ECO

· Purchaser is responsible for commissioning the equipment including all labor and travel expenses. 24 hour / 7 days a week telephone support (factory support available). Purchaser is responsible for all system support for the warranty period (2 years) as per the Standard Warranty Statement above.