

WATTSTOPPER®

# DIGITAL LIGHTING MANAGEMENT

SIMPLICITY | FLEXIBILITY | SCALABILITY

PRODUCT GUIDE

designed to be better.™



# The Ultimate Solution...Today and Tomorrow

Evolving energy codes, transformative lighting technology, and high performance buildings require powerful and robust energy savings solutions. The adaptable Digital Lighting Management (DLM) technology platform and suite of lighting control services provide control infrastructure at every switch, outlet, and lighting load for optimal energy performance.



**SIMPLICITY...** Intuitive user interfaces, convenient remote diagnostic support, and Plug n' Go™ automatic configuration make DLM simple to use and install. Optimizing energy performance with DLM makes it easy to meet the latest code requirements.

**FLEXIBILITY...** Adaptable to meet current occupant needs and easily expandable to transform your future lighting control systems with our building block architecture and easy integration with other building systems. Control of simple to complex sequences of operation via Push n' Learn™ personalization or LMCS software, an advanced PC-based software programming tool, providing easy system management.

**SCALABILITY...** Support the drive towards a net zero future. DLM scales up to accommodate whole buildings or campuses designed for the highest levels of energy performance.

## Occupancy Sensors

### FEATURE LEGEND

	RJ45 - # OF RJ45 PORTS
	LCD - LCD DISPLAY

MODEL #	DESCRIPTION	VOLTAGE	COVERAGE	FEATURES	
				RJ45	LCD
<b>OCCUPANCY SENSORS</b>					
	<b>LMPW-101</b> 1-Button PIR Wall Switch Occupancy Sensor	24VDC; 8mA	Up to 40 ft. (major motion) Up to 25 ft. (minor motion)	2	●
	<b>LMPW-102</b> 2-Button PIR Wall Switch Occupancy Sensor	24VDC; 8mA	Up to 40 ft. (major motion) Up to 25 ft. (minor motion)	2	●
	<b>LMDW-101</b> 1-Button Dual Technology Wall Switch Occupancy Sensor	24VDC; 20mA	Up to 40 ft. (major motion) Up to 25 ft. (minor motion)	2	●
	<b>LMDW-102</b> 2-Button Dual Technology Wall Switch Occupancy Sensor	24VDC; 20mA	Up to 40 ft. (major motion) Up to 25 ft. (minor motion)	2	●
	<b>LMPC-100</b> Ceiling Mount PIR Occupancy Sensor	24VDC; 7mA	LMPC-100: extended range lens, up to 1,200 ft <sup>2</sup> LMPC-100-1: high density lens, up to 500 ft <sup>2</sup> LMPC-100-5: extended height lens, up to 3,800 ft <sup>2</sup>	2	●
	<b>LMPX-100</b> Corner Mount PIR Occupancy Sensor	24VDC; 7mA	LMPX-100: high density lens, up to 1,000 ft <sup>2</sup> LMPX-100-1: long range lens, up to 90 ft. LMPX-100-3: 2-sided aisle lens, up to 60 ft. LMPX-100-4: 1-sided aisle lens, up to 60 ft.	1	●
	<b>LMUC-100</b> Ceiling Mount Ultrasonic Occupancy Sensor	24VDC; 20mA	LMUC-100-2: up to 1,000 ft <sup>2</sup>	2	●
	<b>LMDC-100</b> Ceiling Mount Dual Technology Occupancy Sensor	24VDC; 20mA	Up to 1,000 ft <sup>2</sup>	2	●
	<b>LMDX-100</b> Corner Mount Dual Technology Occupancy Sensor	24VDC; 20mA	Up to 2,000 ft <sup>2</sup> (walking) , up to 1,000 ft <sup>2</sup> (desktop)	1	●

# Load Controllers

## FEATURE LEGEND







	ON/OFF - ON/OFF SWITCHING		FP DIM - FORWARD PHASE DIM
	NOR - # OF RELAYS		CM - CURRENT MONITORING
	0-10V DIM - 0-10V DIMMING OUTPUT		RJ45 - # OF RJ45 PORTS

MODEL #	DESCRIPTION	VOLTAGE (SINGLE PHASE)	LOAD RATINGS	FEATURES						
				ON/OFF	NOR	0-10V DIM	FP DIM	CM	RJ45	
<b>ROOM CONTROLLERS</b>										
	<b>LMRC-101</b>	1-Relay On/Off Room Controller, provides 150mA	120/230/240/277VAC	Ballast: 20A Incan: 20A Motor: 1Hp	●	1				3
	<b>LMRC-102</b>	2-Relay On/Off Room Controller, provides 150mA	120/230/240/277VAC	Ballast: 20A Incan: 20A Motor: 1Hp	●	2				3
	<b>LMRC-111</b>	1-Relay Room Controller, 0-10V Dimming with Calculated Metering, provides 150mA	120/277VAC	Ballast: 10A Incan: 10A	●	1	●		●**	2
	<b>LMRC-111-M</b>	1-Relay Room Controller, 0-10V Dimming with Real Time Metering, provides 150mA								
	<b>LMRC-112</b>	2-Relay Room Controller, 0-10V Dimming with Calculated Metering, provides 150mA	120/277VAC	Ballast: 10A Incan: 10A	●	2	●		●**	2
	<b>LMRC-112-M</b>	2-Relay Room Controller, 0-10V Dimming with Real Time Metering, provides 150mA								
	<b>LMRC-211</b>	1-Relay Room Controller, 0-10V Dimming with Calculated Plus Metering, provides 24VDC; 250mA	120/230/240/277VAC	Ballast: 20A Incan: 20A Motor: 1Hp	●	1	●		●	4
	<b>LMRC-211-347*</b>		347VAC							
	<b>LMRC-212</b>	2-Relay Room Controller, 0-10V Dimming with Calculated Plus Metering, provides 24VDC; 250mA	120/230/240/277VAC	Ballast: 20A Incan: 20A Motor: 1Hp	●	2	●		●	4
	<b>LMRC-212-347*</b>		347VAC							
	<b>LMRC-213</b>	3-Relay Room Controller, 0-10V Dimming with Calculated Plus Metering, provides 24VDC; 250mA	120/230/240/277VAC	Ballast: 20A Incan: 20A Motor: 1Hp	●	3	●		●	4
	<b>LMRC-213-347*</b>		347VAC							
	<b>LMRC-221</b>	1-Relay Room Controller, Forward Phase Dimming with Calculated Plus Metering, provides 24VDC; 250mA	120/277VAC	Incandescent, MLV, ELV, LED (FP compatible): 2-wire or 3-wire ballast: 16A	●	1	●		●	4
	<b>LMRC-222</b>	2-Relay Room Controller, Forward Phase Dimming with Calculated Plus Metering, provides 24VDC; 250mA	120/277VAC	Incandescent, MLV, ELV, LED (FP compatible): 2-wire or 3-wire ballast: 16A	●	2	●		●	4
	<b>LMPB-100</b>	Provides local network power for LMFC controllers plus any other DLM devices, provides 150mA	120/277VAC	N/A		0				3
<b>PLUG LOAD/RECEPTACLE CONTROLLERS</b>										
	<b>LMPL-101</b>	Plug Load Room Controller, provides 24VDC; 150mA	120VAC	Ballast: 20A Incan: 20A Motor: 1Hp	●	1				3
	<b>LMPL-201</b>	Plug Load Room Controller with Current Monitoring, provides 24VDC; 250mA	120VAC	Ballast: 20A Incan: 20A Motor: 1Hp	●	1			●	4
	<b>WRC-15-1</b> <b>WRC-15-2</b> <b>WRC-20-1</b> <b>WRC-20-2</b>	15A Plug Load Half/Dual Controlled Receptacle or 20A Plug Load Half/Dual Controlled Receptacle	120VAC	15A or 20A Plug Load Rating	●	1				
	<b>WRC-TX-LM</b>	Plug Load RF Transmitter	24VDC; 3mA	N/A	●					1
MODEL #	DESCRIPTION	FUNCTION								
<b>LIGHTING CONTROL PANELS</b>										
	<b>LMCP8</b> <b>LMCP24</b> <b>LMCP48</b>	LMCP Series Relay Panel Interiors and Enclosures	Switches lighting and plug loads in areas not suitable for room controllers							
		All provide 2 channels of 24VDC; 250mA	Can be scheduled by LMCT-100, LMCS-100, Segment Manager, or BAS							
		<b>LMZC-301</b>	Zone Controller, provides 2 channels of 24VDC; 250mA	Provides local network power for LMFCs plus any other DLM devices, Extends local network, acts as a power source for LMFC's or other accessories, and has an integral network time clock						

\* 15A Ballast Only  
\*\* Current and Voltage

# Personal Controls

## FEATURE LEGEND

 LS - LOAD SWITCHING	 CCT - CORRELATED COLOR TEMP (TUNABLE WHITE)
 LD - LOAD DIMMING	 RJ45 - # OF RJ45 PORTS
 SC - SCENE CONTROL	 CP - CONFIGURATION PROFILES




















MODEL #	DESCRIPTION	VOLTAGE	FEATURES							
			LS	LD	SC	CCT	RJ45	CP		
<b>HUMAN CENTRIC LIGHTING PERSONAL CONTROLS</b>										
	LMSW-105-CCT	5-Button Manual CCT Control Preset Switch for tunable Blanco/araya <sup>5</sup> -enabled fixtures	24VDC; 5mA							
	LMTS-101-CCT	Automatic CCT Control Time Switch of tunable Blanco/araya <sup>5</sup> -enabled fixtures	24VDC; 15mA							
<b>PERSONAL CONTROLS</b>										
	LMSW-100 Series*	1-Button Digital Wall Switch: LMSW-101	24VDC; 5mA					2		
		2-Button Digital Wall Switch: LMSW-102								
		3-Button Digital Wall Switch: LMSW-103								
		4-Button Digital Wall Switch: LMSW-104								
		8-Button Digital Wall Switch: LMSW-108								
	LMDM-101	1-Button Dimming Wall Switch	24VDC; 5mA						2	
	LMSW-105	5-Button Scene Switch	24VDC; 5mA						2	
	LMPS-104	4-Button Partition Switch	24VDC; 5mA						2	16
	LMRH-102 LMRH-101 LMRH-105	IR Remotes: 2-Button On/Off, 1-Button Dimming, and 5-Button Scene Control versions	3 AAA batteries	102	101	105				

\* Available Colors: White [-W], Light Almond [-LA], Ivory [-I], Grey [-G], Black [-B], Red [-R]  
 \*\* Via On Only or Off Only Setting













# Daylight Sensors

## FEATURE LEGEND












 ON/OFF - ON/OFF SWITCHING	 RJ45 - # OF RJ45 PORTS
 DIM - DIMMING	 PNG - PLUG N' GO
 NOZ - # OF ZONES	 AC - AUTOMATIC CALIBRATION

MODEL #	DESCRIPTION	VOLTAGE	FEATURES						
			ON/OFF	DIM	NOZ	RJ45	PNG	AC	
<b>DAYLIGHTING SENSORS</b>									
	LMLS-400	Single-zone Switching (on/off, bi-level, tri-level) and Dimming Closed Loop Photosensor (Tube Length 0" - 5/8")	24VDC; 7mA			1	1		
	LMLS-400-L	Single-zone Switching (on/off, bi-level, tri-level) and Dimming Closed Loop Photosensor with Extended Tube (Tube Length 5/8" - 1 1/4")	24VDC; 7mA			1	1		
	LMLS-500	Multi-zone Switching (on/off, bi-level, tri-level) and Dimming Open Loop Photosensor (Tube Length 0" - 5/8")	24VDC; 7mA			3	1		
	LMLS-500-L	Multi-zone Switching (on/off, bi-level, tri-level) and Dimming Open Loop Photosensor with Extended Tube (Tube Length 5/8" - 1 1/4")	24VDC; 7mA			3	1		
	LMLS-600	Single-zone Dual Loop Switching and Dimming Photosensor	24VDC; 7mA			1	1		

## Interface Devices





MODEL #	DESCRIPTION	VOLTAGE	FUNCTION
<b>INTERFACES</b>			
	<b>LMOR-102</b> Low Voltage Dual Relay Interface	24VDC; 20mA	Accessory interface device with two low voltage mechanically held relays
	<b>LMIN-104</b> Input Interface	24VDC; 20mA	Accessory Input Interface that accepts 4 2-wire inputs, 2 3-wire inputs, or can function as a LMIO-301 photocell module
	<b>LMRL-100</b> Isolated Relay Interface	24VDC; 7mA	Single-pole, double throw relay communicates room occupancy status
	<b>LMIO-101</b> Input/Output Interface	24VDC; 20mA	Single-pole, double throw relay communicates occupancy status of room or maximum 12 selected sensor(s) Accepts inputs from either 2 or 3 contacts (depending on setting)
	<b>LMIO-102</b> Partition Interface	24VDC; 20mA	Accepts inputs from 3rd party contact closures from up to 4 moveable walls
	<b>LMIO-301</b> Photocell Input Module	24VDC; 20mA	Reads input from analog photocells such as LMPO-200 and LMPS-6000
	<b>LMDI-100</b> Serial Data Interface	24VDC; 20mA	Communicates with 3rd party control system via RS-232 signals
	<b>LMIR-100</b> Digital IR Ceiling Mount Receiver	24VDC; 5mA	Infrared transceiver accepts commands from DLM IR remote controls and transmits them over DLM local network
	<b>LMIO-201</b> Analog Sensor Input Module	24VDC; 20mA	Single channel low-voltage sensor to DLM interface
<b>CONFIGURATION TOOLS</b>			
	<b>LMCT-100-2</b> Wireless Configuration Tool with USB	3 AAA batteries	Enables convenient system and device modifications via push button. New functionality includes USB port for firmware upgrades and expanded memory support. Stores up to nine sensor profiles
	<b>LMCI</b> Computer Interface Tool	N/A	Enables PC connection to DLM local network in order to modify or document device and system settings in LMCS software
	<b>LMCS</b> Configuration Software	N/A	Advanced programming tool, for a DLM system, used for documentation, real-time monitoring, and diagnostics information.

# Network System Components





MODEL #	DESCRIPTION	VOLTAGE	FUNCTION
<b>WIRELESS NETWORK COMPONENTS</b>			
	<b>LMBC-600</b> Wireless Network Bridge	24VDC; 20mA	Provides a network connection for a group of local network room level devices
	<b>LMBR-600</b> Wireless Border Router	24VDC; 65mA power from receptacle using included adapter or an isolated LMPB-100	Manages the formation and configuration of the 6LoWPAN wireless network and provides network connectivity via wired Ethernet to a local area network (LAN)
<b>NETWORK COMPONENTS</b>			
	<b>LMBC-300</b> Wired Network Bridge	24VDC; 30mA	Provides MS/TP BACnet segment wire connectivity to one DLM local network
	<b>LMSM-3E</b> Segment Manager, up to 3 MS/TP Segment Networks	15VDC via 120V plug adapter	Provides browser based remote control and management for DLM devices connected to a segment network
	<b>LMSM-6E</b> Segment Manager for use with NB-Router(s)	15VDC via 120V plug adapter	
	<b>LM-Supervisor (Installed on LMSM)</b> Segment Manager/ Supervisor for entire campus applications	N/A	Ideal software solutions for managing lighting and plug load energy use and provides remote access to DLM local networks
	<b>NB-Switch NB-Switch-8 NB-Switch-16</b> Global Network Switches	24VDC via 120V plug adapter	Provides high speed connectivity for DLM networked devices
	<b>NB-Router</b> Segment Network to IP Router	24VDC via 120V plug adapter	Provides a connection point between a single DLM segment wire and a BACnet/IP Ethernet LAN
	<b>LMSM-ENC1</b> Enclosure for LMSM Segment Manager	Single 120VAC Circuit	Surface-mount NEMA-1 rated enclosure with a DIN rail for mounting one LMSM Segment Manager, conduit knockouts for line and low-voltage connections and a removable cover
	<b>LMNC-MT LMNC-3 LMNC-4 LMNC-5 LMNC-6 LMNC-7 LMNC-8 LMNC-9</b> DLM Network Component Enclosure	Single 120VAC Circuit	Surface-mount NEMA-1 rated enclosure with DIN rails for mounting DLM network components Comes with hinged cover and provided empty (LMNC-MT) or with 3-9 installed routers (LMNC-3 to -9)
<b>CABLES</b>			
	<b>LMRJ</b> Pre-terminated cables for DLM local network available in a variety of pre-terminated lengths in plenum and non-plenum varieties in green or white	N/A	Connect DLM components without the need for tools or point-to-point discrete wiring
	<b>LM-MSTP</b> MS/TP wire for segment networks available in green, black, or white; plenum rated Green spools also available	N/A	Provides MS/TP (RS-485) signal between Segment Manager and all network bridges



## Fixture Integrated Controls

MODEL #	DESCRIPTION	VOLTAGE	FUNCTION	
INTEGRATED FIXTURE CONTROL				
	BLM1-DLM BLM2-DLM BLM3-DLM ALM5-DLM	Logic Module with Control Card	24VDC; 2mA	Blanco and araya logic modules with LMLM-101 DLM interface
	LMFC-011	1-Relay 0-10V Dimming Fixture Controller	24VDC; 7mA	Enables DLM individual fixture control: 3 Amps
	LMFC-2RJ	Dual Port Fixture Mounted Cable Whip	N/A	Provides DLM network control between multiple fixtures
	LMFC-RJ-50-24	Single Port Fixture Mounted Cable Whip	N/A	Provides DLM network control to a single LMFC

## RJ45 Couplers, Splitters & Adapters

MODEL #	DESCRIPTION	VOLTAGE	FUNCTION	
ACCESSORIES				
	LMRJ-C8	2 Port End-to-End Cable Coupler Non-Plenum	N/A	Ability to connect two LMRJ cables to extend length
	LMRJ-S8	3 Port Cable Splitter Non-Plenum	N/A	Ability to connect three LMRJ cables or devices
	LMRJ-CS8	3 Port Coupler/Splitter Plenum rated	N/A	Ability to connect three LMRJ cables or devices
	LMRJ-WA-5PK	20 Gauge Control wire to RJ45 Adapter, 5 Pack	N/A	Adapts 20/4 control wire for use with DLM devices with RJ45 ports

## Services

The Wattstopper Service offering includes a broad portfolio of lighting control services. Extended warranties and service contracts are available - check with your local Wattstopper representative for more information.

SERVICE	DESCRIPTION
PROJECT SERVICES	
SPROGSYS	Custom factory programming
SDRAWSYS	Factory project engineering services
SDRAWDTL	Factory project engineering services including enhanced point-to-point details
PRESTARTUP	1-day, on-site consultation to prepare for install/startup
POSTSTARTUP	1-day, on-site consultation for post-occupancy adjustments and calibration
SCOM	On-site startup/training for all Wattstopper products
VCOM	On-site startup for the Wattstopper Architectural Dimming Platform
SPROGSYS	Custom programming of Supervisor or Segment Manager or special applications
RACCESS-6	Remote diagnostic support with First-Year Enhanced Warranty. Includes 4G LTE modem, first-year cellular service data plan, and external antenna for use with a new Segment Manager LMSM-6E
RACCESS-3	Remote diagnostic support with First-Year Enhanced Warranty. Includes 4G LTE modem, first-year cellular service data plan, and external antenna for use with a new Segment Manager LMSM-3E
STRAIN	Day(s) on-site training for Wattstopper control products
SERVICE	Post-warranty, on-site support for system optimization, troubleshooting, and repair
HWARRANTY-1	Year(s) extended warranty for hardware



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**Wattstopper®**

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**Technical Support**  
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