

LC25 LED Controller with Modbus® Product Manual



Original Instructions

p/n: 234630 Rev. A

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Contents

Chapter 1 LC25 LED Controller Features

1.1 LC25 LED Controller Models	3
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Chapter 2 LC25 LED Controller with WLF12 Wiring 4

Chapter 3 Holding Registers

3.1 MODD Registers	5
3.2 Device Information	5
3.3 Modbus Communication	5
3.4 Restore Factory Defaults	6
3.5 Device Specific Configuration	6
3.6 Segment Mode Configuration	6
3.6.1 General Segment Mode Configuration	8
3.6.2 Segment Mode Segment Settings	9
3.7 Run Mode Configuration	13
3.8 Level Mode Configuration	15
3.8.1 General Level Mode Configuration	16
3.8.2 Level Mode Base Configuration	17
3.8.3 Level Mode Threshold Configuration	19
3.9 Dim and Blend Mode Configuration	22
3.9.1 General Dim and Blend Mode Configuration	22
3.10 Gauge Mode Configuration	24
3.10.1 Gauge Mode Input	24
3.10.2 Gauge Mode Base Configuration	25
3.10.3 Gauge Mode Threshold Configuration	29
3.11 LED Mode Configuration	35
3.12 Custom Animation Configuration	35
3.13 Miscellaneous Registers	36

Chapter 4 LC25 LED Controller Specifications

4.1 FCC Part 15 Class A for Unintentional Radiators	37
4.2 Industry Canada ICES-003(A)	38
4.3 LC25 LED Controller Dimensions	38

Chapter 5 LC25 LED Controller Accessories 39

Chapter 6 Banner Engineering Corp Limited Warranty 43

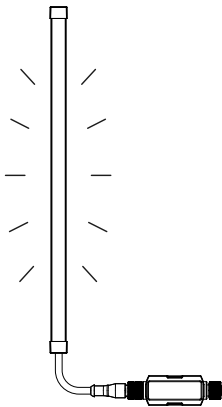
Chapter Contents

1.1 LC25 LED Controller Models..... 3

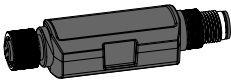
Chapter 1

LC25 LED Controller Features

Banner's LC25 LED Controller is designed to work with the WLF12 Pro Flexible Multicolor Strip Light product family. It has a low profile, rugged, water-resistant design, making the LC25 ideal for indoor and outdoor applications.



- In-line controller with M12 connectors
- Industrial controller between the WLF12 Pro and a Modbus master
- IP65, IP67, and IP68 housing simplifies installation in any location by eliminating the need for a control cabinet
- Rugged waterproof and dustproof overmolded design



IMPORTANT: Read the following instructions before operating the light. Please download the complete LC25 LED Controller technical documentation, available in multiple languages, from www.bannerengineering.com for details on the proper use, applications, Warnings, and installation instructions of this device.

IMPORTANT: Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los LC25 LED Controller, disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

IMPORTANT: Lisez les instructions suivantes avant d'utiliser le luminaire. Veuillez télécharger la documentation technique complète des LC25 LED Controller sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

1.1 LC25 LED Controller Models

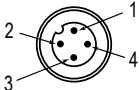
Model	For Use With
LC25C-WLF12-SQ	WLF12 Pro Flexible Multicolor Strip Light

Chapter Contents

Chapter 2

LC25 LED Controller with WLF12
Wiring

Table 1. LED Controller with Modbus Wiring

4-pin Male M12 Pinout	Pinout Key and Wiring
	1. Brown - 12 V DC to 30 V DC 2. White - RS-485 (+) 3. Blue - DC Common 4. Black - RS-485 (-)

Chapter Contents

3.1 MODD Registers	5
3.2 Device Information	5
3.3 Modbus Communication	5
3.4 Restore Factory Defaults	6
3.5 Device Specific Configuration	6
3.6 Segment Mode Configuration	6
3.7 Run Mode Configuration	13
3.8 Level Mode Configuration	15
3.9 Dim and Blend Mode Configuration	22
3.10 Gauge Mode Configuration	24
3.11 LED Mode Configuration	35
3.12 Custom Animation Configuration	35
3.13 Miscellaneous Registers	36

Chapter 3 Holding Registers

3.1 MODD Registers

Address without Offset	Address with Offset	Description	Holding Register Representation
0605	0606	Banner Name	Banner Engineering
0615	0616	Product Name	LC25C WLF12 Pro Modbus
0631	0632	Item Number	
0633	0634	Serial Number	
0637	0637	Firmware Part Number	
0639	0639	Firmware Version	
0641	0641	Firmware Build Number	

3.2 Device Information

Address without Offset	Address with Offset	Description	Holding Register Representation
1000	1001	Low word model number	Example: 0x0002A734 (hex) = 173876 (dec) High word = 0x0002 Low word = 0xA734
1001	1002	High word model number	
1002	1003	Model version (BCD)	
1003-1018	1004-1019	Model name, string	
1019	1020	Low word configuration number	Example: 0x00016D43 (hex) = 93507 (dec) High word = 0x0001 Low word = 0x6D43
1020	1021	High word configuration number	
1021	1022	Configuration version (BCD)	
1022-1037	1023-1038	Serial number/date code, string	
1038-1053	1039-1054	Serial number, string	

3.3 Modbus Communication

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
6100	6101	Device ID: the Modbus individual node ID	1–247	1	Yes

Continued on page 6

Continued from page 5

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
6101	6102	Baud rate	12 = 1200 24 = 2400 48 = 4800 96 = 9600 192 = 19200 384 = 38400	192	Yes
6102	6103	Parity	0 = None 1 = Odd 2 = Even	0	Yes
6103	6104	Stop Bits	1 = 1 2 = 2 3 = 1.5	1	Yes

3.4 Restore Factory Defaults

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
6600	6601	Restore factory defaults	0 = Disabled, 1 - 65535 = Enable	0	No
6601	6602	Restore factory defaults key 1	43690(0xAAAA) = Enable	0	No
6602	6603	Restore factory defaults key 2	21845(0x5555) = Enable	0	No

3.5 Device Specific Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2200	2201	Operating Mode Selection	0 = Segment Mode 1 = Run Mode 2 = Level Mode 3 = Dim and Blend Mode 4 = Gauge Mode 5 = LED Mode 6 = Demo	1	Yes

3.6 Segment Mode Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2000	2001	Segment 1	0 = Off 1 = On 2 = Flash 3 = Animation	0	No

Continued on page 7

Continued from page 6

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2001	2002	Segment 2	0 = Off 1 = On 2 = Flash 3 = Animation	0	No
2002	2003	Segment 3	0 = Off 1 = On 2 = Flash 3 = Animation	0	No
2003	2004	Segment 4	0 = Off 1 = On 2 = Flash 3 = Animation	0	No
2004	2005	Segment 5	0 = Off 1 = On 2 = Flash 3 = Animation	0	No
2005	2006	Segment 6	0 = Off 1 = On 2 = Flash 3 = Animation	0	No
2006	2007	Segment 7	0 = Off 1 = On 2 = Flash 3 = Animation	0	No
2007	2008	Segment 8	0 = Off 1 = On 2 = Flash 3 = Animation	0	No
2008	2009	Segment 9	0 = Off 1 = On 2 = Flash 3 = Animation	0	No
2009	2010	Segment 10	0 = Off 1 = On 2 = Flash 3 = Animation	0	No

3.6.1 General Segment Mode Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2300	2301	Segment Mode Number of Segments	0 = Manual 1 = 1 Segment 2 = 2 Segment 3 = 3 Segment 4 = 4 Segment 5 = 5 Segment 6 = 6 Segment 7 = 7 Segment 8 = 8 Segment 9 = 9 Segment 10 = 10 Segment	3	Yes
2301	2302	Segment Mode Background Color	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	13	Yes
2302	2303	Segment Mode Background Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	3	Yes
2303	2304	Segment Mode Animation Sync	0 = Disabled, 1 = Enabled	1	Yes

3.6.2 Segment Mode Segment Settings

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2310	2311	Segment Mode Segment 1 Basic Color	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	1	Yes
2311	2312	Segment Mode Segment 1 Basic Flash Rate	0 = Medium 1 = Fast 2 = Slow 3 = Custom Flash Rate	0	Yes

Continued on page 9

Continued from page 9

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2312	2313	Segment Mode Segment 1 Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Two Color Shift 5 = Ends Steady 6 = Ends Flash 7 = Scroll 8 = Center Scroll 9 = Bounce 10 = Center Bounce 11 = Intensity Sweep 12 = Two Color Sweep 13 = Spectrum 14 = Single End Steady 15 = Single End Flash	0	Yes
2313	2314	Segment Mode Segment 1 Color 1	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	0	Yes

Continued on page 11

Continued from page 10

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2314	2315	Segment Mode Segment 1 Color 1 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes
2315	2316	Segment Mode Segment 1 Speed	0 = Medium 1 = Fast 2 = Slow 3 = Custom Flash Rate	0	Yes
2316	2317	Segment Mode Segment 1 Pattern	0 = Normal 1 = Strobe 2 = Three Pulse 3 = SOS 4 = Random	0	Yes
2317	2318	Segment Mode Segment 1 Color 2	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	1	Yes
2318	2319	Segment Mode Segment 1 Color 2 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes

Continued on page 12

Continued from page 11

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2319	2320	Segment Mode Segment 1 Scroll/Bounce Style	0 = Solid 1 = Tail 2 = Ripple	0	Yes
2320	2321	Segment Mode Segment 1 Color 1 Percent	1-100 = Percent Width of Color 1	50	Yes
2321	2322	Segment Mode Segment 1 Direction	0 = Up, 1 = Down	0	Yes
2322	2323	Segment Mode Segment 1 Offset/ Threshold Marker Offset	0-63	0	Yes
2323	2324	Segment Mode Segment 1 Width/ Threshold Marker Width	0-63	0	Yes
2324	2325	Segment Mode Segment 2 Basic Color	Same as Segment 1	4	Same as Segment 1
2325	2326	Segment Mode Segment 2 Basic Flash Rate		Same as Segment 1	
2326	2327	Segment Mode Segment 2 Animation			
...	...	...			
2337	2338	Segment Mode Segment 2 Width/ Threshold Marker Width	Same as Segment 1	0	Same as Segment 1
2338	2339	Segment Mode Segment 3 Basic Color			
2339	2340	Segment Mode Segment 3 Basic Flash Rate			
2340	2341	Segment Mode Segment 3 Animation			
...	...	...	Same as Segment 1	Same as Segment 1	Same as Segment 1
2351	2352	Segment Mode Segment 3 Width/ Threshold Marker Width			
2352	2353	Segment Mode Segment 4 Basic Color			
2353	2354	Segment Mode Segment 4 Basic Flash Rate			
2354	2355	Segment Mode Segment 4 Animation	Same as Segment 1	9	Same as Segment 1
...	...	...			
2365	2366	Segment Mode Segment 4 Width/ Threshold Marker Width			
2366	2367	Segment Mode Segment 5 Basic Color			
2367	2368	Segment Mode Segment 5 Basic Flash Rate	Same as Segment 1	13	Same as Segment 1
2368	2369	Segment Mode Segment 5 Animation			
...	...	...			
2379	2380	Segment Mode Segment 5 Width/ Threshold Marker Width			
2380	2381	Segment Mode Segment 6 Basic Color	Same as Segment 1	2	Same as Segment 1
2381	2382	Segment Mode Segment 6 Basic Flash Rate			
2382	2383	Segment Mode Segment 6 Animation			
...	...	...			
2393	2394	Segment Mode Segment 6 Width/ Threshold Marker Width	Same as Segment 1	11	Same as Segment 1
2394	2395	Segment Mode Segment 7 Basic Color			
2395	2396	Segment Mode Segment 7 Basic Flash Rate			
2396	2397	Segment Mode Segment 7 Animation			
...	...	...	Same as Segment 1	Same as Segment 1	Same as Segment 1
2407	2408	Segment Mode Segment 7 Width/ Threshold Marker Width			
2408	2409	Segment Mode Segment 8 Basic Color			
2409	2410	Segment Mode Segment 8 Basic Flash Rate			

Continued on page 13

Continued from page 12

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2410	2411	Segment Mode Segment 8 Animation			
...	...	...			
2421	2422	Segment Mode Segment 8 Width/ Threshold Marker Width			
2422	2423	Segment Mode Segment 9 Basic Color	Same as Segment 1	3	Same as Segment 1
2423	2424	Segment Mode Segment 9 Basic Flash Rate		Same as Segment 1	
2424	2425	Segment Mode Segment 9 Animation			
...	...	...			
2435	2436	Segment Mode Segment 9 Width/ Threshold Marker Width			
2436	2437	Segment Mode Segment 10 Basic Color	Same as Segment 1	10	Same as Segment 1
2437	2438	Segment Mode Segment 10 Basic Flash Rate		Same as Segment 1	
2438	2439	Segment Mode Segment 10 Animation			
...	...	...			
2450	2451	Segment Mode Segment 10 Width/ Threshold Marker Width			

3.7 Run Mode Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2000	2001	Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Two Color Shift 5 = Ends Steady 6 = Ends Flash 7 = Scroll 8 = Center Scroll 9 = Bounce 10 = Center Bounce 11 = Intensity Sweep 12 = Two Color Sweep 13 = Spectrum 14 = Single End Steady 15 = Single End Flash	0	No

Continued on page 14

Continued from page 13

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2001	2002	Color 1	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	0	No
2002	2003	Color 1 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	No
2003	2004	Speed	0 = Medium 1 = Fast 2 = Slow 3 = Custom Flash Rate	0	No
2004	2005	Pulse Pattern	0 = Normal 1 = Strobe 2 = Three Pulse 3 = SOS 4 = Random	0	No

Continued on page 15

Continued from page 14

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2005	2006	Color 2	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	0	No
2006	2007	Color 2 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	No
2007	2008	Scroll/Bounce Style	0 = Solid 1 = Tail 2 = Ripple	0	No
2008	2009	Percent Width of Color 1	1-100 = Percent Width of Color 1	0	No
2009	2010	Direction	0 = Up, 1 = Down	0	No

3.8 Level Mode Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2000	2001	Level Value	0-65535	0	No

3.8.1 General Level Mode Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2500	2501	Level Mode Background Color	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	13	Yes
2501	2502	Level Mode Background Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	3	Yes
2502	2503	Level Mode Dominance	0 = Non-Dominant, 1 = Dominant	0	Yes
2503	2504	Level Mode Subsegment Style	0 = Steady, 1 = Analog	1	Yes
2504	2505	Level Mode Filter Level	0 = None 1 = Low 2 = Medium 3 = High	0	Yes
2505	2506	Level Mode Hysteresis	0 = None 1 = Low 2 = Medium 3 = High	0	Yes
2506	2507	Level Mode Fullscale Value	1-65535	100	Yes
2507	2508	Level Mode Threshold Markers Type (Define Parameters in Segment Configuration)	0 = Off 1 = Non-Dominant 2 = Dominant	0	Yes

3.8.2 Level Mode Base Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2510	2511	Level Mode Base Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Two Color Shift 5 = Ends Steady 6 = Ends Flash 7 = Scroll 8 = Center Scroll 9 = Bounce 10 = Center Bounce 11 = Intensity Sweep 12 = Two Color Sweep 13 = Spectrum 14 = Single End Steady 15 = Single End Flash	1	Yes
2511	2512	Level Mode Base Color 1	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	0	Yes

Continued on page 17

Continued from page 17

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2512	2513	Level Mode Base Color 1 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes
2513	2514	Level Mode Base Speed	0 = Medium 1 = Fast 2 = Slow 3 = Custom Flash Rate	0	Yes
2514	2515	Level Mode Base Pattern	0 = Normal 1 = Strobe 2 = Three Pulse 3 = SOS 4 = Random	0	Yes
2515	2516	Level Mode Base Color 2	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	1	Yes
2516	2517	Level Mode Base Color 2 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes

Continued on page 19

Continued from page 18

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2517	2518	Level Mode Base Scroll/Bounce Style	0 = Solid 1 = Tail 2 = Ripple	0	Yes
2518	2519	Level Mode Base Color 1 Percent	0-100 = Percent Width of Color 1	50	Yes
2519	2520	Level Mode Base Direction	0 = Up, 1 = Down	0	Yes

3.8.3 Level Mode Threshold Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2520	2521	Level Mode Threshold 1 is Enable	0 = Threshold Disabled, Non-0 = Threshold Enabled	0	Yes
2521	2522	Level Mode Threshold 1 Percent Value	0-100	20	Yes
2522	2523	Level Mode Threshold 1 Type	0 = Less Than, 1 = Greater Than	0	Yes
2523	2524	Level Mode Threshold 1 Is Override	0 = Non-Override Mode, Non-0 = Override Mode	0	Yes
2524	2525	Level Mode Threshold 1 Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Two Color Shift 5 = Ends Steady 6 = Ends Flash 7 = Scroll 8 = Center Scroll 9 = Bounce 10 = Center Bounce 11 = Intensity Sweep 12 = Two Color Sweep 13 = Spectrum 14 = Single End Steady 15 = Single End Flash	0	Yes

Continued on page 20

Continued from page 19

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2525	2526	Level Mode Threshold 1 Color 1	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	0	Yes
2526	2527	Level Mode Threshold 1 Color 1 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes
2527	2528	Level Mode Threshold 1 Speed	0 = Medium 1 = Fast 2 = Slow 3 = Custom Flash Rate	0	Yes
2528	2529	Level Mode Threshold 1 Pattern	0 = Normal 1 = Strobe 2 = Three Pulse 3 = SOS 4 = Random	0	Yes

Continued on page 21

Continued from page 20

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2529	2530	Level Mode Threshold 1 Color 2	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	1	Yes
2530	2531	Level Mode Threshold 1 Color 2 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes
2531	2532	Level Mode Threshold 1 Scroll/Bounce Style	0 = Solid 1 = Tail 2 = Ripple	0	Yes
2532	2533	Level Mode Threshold 1 Color 1 Percent	0-100 = Percent Width of Color 1	50	Yes
2533	2534	Level Mode Threshold 1 Direction	0 = Up, 1 = Down	0	Yes
2534	2535	Level Mode Threshold 2 is Enable	Same as Threshold 1	Same as Threshold 1	Same as Threshold 1
2535	2536	Level Mode Threshold 2 Percent Value			
2536	2537	Level Mode Threshold 2 Type			
...	...	...			
2547	2548	Level Mode Threshold 2 Direction	Same as Threshold 1	Same as Threshold 1	Same as Threshold 1
2548	2549	Level Mode Threshold 3 is Enable			
2549	2550	Level Mode Threshold 3 Percent Value			
2550	2551	Level Mode Threshold 3 Type			
...	...	...	Same as Threshold 1	Same as Threshold 1	Same as Threshold 1
2561	2562	Level Mode Threshold 3 Direction			
2562	2563	Level Mode Threshold 4 is Enable			
2563	2564	Level Mode Threshold 4 Percent Value			
2564	2565	Level Mode Threshold 4 Type			

Continued on page 22

Continued from page 21

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
...	...	...			
2575	2576	Level Mode Threshold 4 Direction			

3.9 Dim and Blend Mode Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2000	2001	Dim and Blend Mode Value	0-65535	0	No

3.9.1 General Dim and Blend Mode Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2600	2601	Dim and Blend Mode Number of Colors	0 = 1 Color 1 = 2 Color 2 = 3 Color	0	Yes
2601	2602	Dim and Blend Mode Full Scale	1-65535	100	Yes
2602	2603	Dim and Blend Mode Color 1	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	13	Yes
2603	2604	Dim and Blend Mode Color 1 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes

Continued on page 23

Continued from page 22

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2604	2605	Dim and Blend Mode Color 2	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	0	Yes
2605	2606	Dim and Blend Mode Color 2 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes

Continued on page 24

Continued from page 23

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2606	2607	Dim and Blend Mode Color 3	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	0	Yes
2607	2608	Dim and Blend Mode Color 3 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes

3.10 Gauge Mode Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2700	2701	Gauge Mode Fullscale Value	1-65535	100	Yes
2701	2702	Gauge Mode Threshold Markers Type (Define Parameters in Segment Configuration)	0 = Off 1 = Non-Dominant 2 = Dominant	0	Yes

3.10.1 Gauge Mode Input

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2000	2001	Gauge Value	0-65535	0	No

3.10.2 Gauge Mode Base Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2710	2711	Gauge Mode Base Main Percent Width	0-100	20	Yes
			0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Two Color Shift 5 = Ends Steady 6 = Ends Flash 7 = Scroll 8 = Center Scroll 9 = Bounce 10 = Center Bounce 11 = Intensity Sweep 12 = Two Color Sweep 13 = Spectrum 14 = Single End Steady 15 = Single End Flash		
2711	2712	Gauge Mode Base Main Animation		1	Yes
			0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)		
2712	2713	Gauge Mode Base Main Color 1		0	Yes

Continued on page 26

Continued from page 25

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2713	2714	Gauge Mode Base Main Color 1 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes
2714	2715	Gauge Mode Base Main Speed	0 = Medium 1 = Fast 2 = Slow 3 = Custom Flash Rate	0	Yes
2715	2716	Gauge Mode Base Main Pattern	0 = Normal 1 = Strobe 2 = Three Pulse 3 = SOS 4 = Random	0	Yes
2716	2717	Gauge Mode Base Main Color 2	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	1	Yes
2717	2718	Gauge Mode Base Main Color 2 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes

Continued on page 27

Continued from page 26

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2718	2719	Gauge Mode Base Main Scroll/Bounce Style	0 = Solid 1 = Tail 2 = Ripple	0	Yes
2719	2720	Gauge Mode Base Main Color 1 Percent	0-100 = Percent Width of Color 1	50	Yes
2720	2721	Gauge Mode Base Main Direction	0 = Up, 1 = Down	0	Yes
2721	2722	Gauge Mode Base Background Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Two Color Shift 5 = Ends Steady 6 = Ends Flash 7 = Scroll 8 = Center Scroll 9 = Bounce 10 = Center Bounce 11 = Intensity Sweep 12 = Two Color Sweep 13 = Spectrum 14 = Single End Steady 15 = Single End Flash	1	Yes
2722	2723	Gauge Mode Base Background Color 1	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	13	Yes

Continued on page 28

Continued from page 27

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2723	2724	Gauge Mode Base Background Color 1 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	1	Yes
2724	2725	Gauge Mode Base Background Speed	0 = Medium 1 = Fast 2 = Slow 3 = Custom Flash Rate	0	Yes
2725	2726	Gauge Mode Base Background Pattern	0 = Normal 1 = Strobe 2 = Three Pulse 3 = SOS 4 = Random	0	Yes
2726	2727	Gauge Mode Base Background Color 2	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	9	Yes
2727	2728	Gauge Mode Base Background Color 2 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	1	Yes

Continued on page 29

Continued from page 28

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2728	2729	Gauge Mode Base Background Scroll/Bounce Style	0 = Solid 1 = Tail 2 = Ripple	0	Yes
2729	2730	Gauge Mode Base Background Color 1 Percent	0-100 = Percent Width of Color 1	50	Yes
2730	2731	Gauge Mode Base Background Direction	0 = Up, 1 = Down	0	Yes

3.10.3 Gauge Mode Threshold Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2740	2741	Gauge Mode Threshold 1 is Enable	0 = Threshold Disabled, Non-0 = Threshold Enabled	1	Yes
2741	2742	Gauge Mode Threshold 1 Percent Value	0-100	20	Yes
2742	2743	Gauge Mode Threshold 1 Type	0 = Less Than, 1 = Greater Than	0	Yes
2743	2744	Gauge Mode Threshold 1 Percent Width	0-100	20	Yes
2744	2745	Gauge Mode Threshold 1 Main Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Two Color Shift 5 = Ends Steady 6 = Ends Flash 7 = Scroll 8 = Center Scroll 9 = Bounce 10 = Center Bounce 11 = Intensity Sweep 12 = Two Color Sweep 13 = Spectrum 14 = Single End Steady 15 = Single End Flash	1	Yes

Continued on page 30

Continued from page 29

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2745	2746	Gauge Mode Threshold 1 Main Color 1	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	1	Yes
2746	2747	Gauge Mode Threshold 1 Main Color 1 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes
2747	2748	Gauge Mode Threshold 1 Main Speed	0 = Medium 1 = Fast 2 = Slow 3 = Custom Flash Rate	0	Yes
2748	2749	Gauge Mode Threshold 1 Main Pattern	0 = Normal 1 = Strobe 2 = Three Pulse 3 = SOS 4 = Random	0	Yes

Continued on page 31

Continued from page 30

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2749	2750	Gauge Mode Threshold 1 Main Color 2	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	4	Yes
2750	2751	Gauge Mode Threshold 1 Main Color 2 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes
2751	2752	Gauge Mode Threshold 1 Main Scroll/Bounce Style	0 = Solid 1 = Tail 2 = Ripple	0	Yes
2752	2753	Gauge Mode Threshold 1 Main Color 1 Percent	0-100 = Percent Width of Color 1	50	Yes
2753	2754	Gauge Mode Threshold 1 Main Direction	0 = Up, 1 = Down	0	Yes

Continued on page 32

Continued from page 31

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2754	2755	Gauge Mode Threshold 1 Background Animation	0 = Off 1 = Steady 2 = Flash 3 = Two Color Flash 4 = Two Color Shift 5 = Ends Steady 6 = Ends Flash 7 = Scroll 8 = Center Scroll 9 = Bounce 10 = Center Bounce 11 = Intensity Sweep 12 = Two Color Sweep 13 = Spectrum 14 = Single End Steady 15 = Single End Flash	1	Yes
2755	2756	Gauge Mode Threshold 1 Background Color 1	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	13	Yes

Continued on page 33

Continued from page 32

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2756	2757	Gauge Mode Threshold 1 Background Color 1 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	1	Yes
2757	2758	Gauge Mode Threshold 1 Background Speed	0 = Medium 1 = Fast 2 = Slow 3 = Custom Flash Rate	0	Yes
2758	2759	Gauge Mode Threshold 1 Background Pattern	0 = Normal 1 = Strobe 2 = Three Pulse 3 = SOS 4 = Random	0	Yes
2759	2760	Gauge Mode Threshold 1 Background Color 2	0 = Green 1 = Red 2 = Orange 3 = Amber 4 = Yellow 5 = Lime Green 6 = Spring Green 7 = Cyan 8 = Sky Blue 9 = Blue 10 = Violet 11 = Magenta 12 = Rose 13 = Daylight White (5000K) 14 = Custom 1 15 = Custom 2 16 = Incandescent White (2700K) 17 = Warm White (3000K) 18 = Fluorescent White (4100K) 19 = Neutral White (5700K) 20 = Cool White (6500K)	9	Yes
2760	2761	Gauge Mode Threshold 1 Background Color 2 Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes

Continued on page 34

Continued from page 33

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2761	2762	Gauge Mode Threshold 1 Background Scroll/Bounce Style	0 = Solid 1 = Tail 2 = Ripple	0	Yes
2762	2763	Gauge Mode Threshold 1 Background Color 1 Percent	0-100 = Percent Width of Color 1	50	Yes
2763	2764	Gauge Mode Threshold 1 Background Direction	0 = Up, 1 = Down	0	Yes
2770	2771	Gauge Mode Threshold 2 is Enable	Same as Threshold 1	1	Yes
2771	2772	Gauge Mode Threshold 2 Percent Value		80	Yes
2772	2773	Gauge Mode Threshold 2 Type		1	Yes
2773	2774	Gauge Mode Threshold 2 Percent Width		20	Yes
2774	2775	Gauge Mode Threshold 2 Main Animation		1	Yes
2775	2776	Gauge Mode Threshold 2 Main Color 1		1	Yes
2776	2777	Gauge Mode Threshold 2 Main Color 1 Intensity		0	Yes
2777	2778	Gauge Mode Threshold 2 Main Speed		0	Yes
2778	2779	Gauge Mode Threshold 2 Main Pattern		0	Yes
2779	2780	Gauge Mode Threshold 2 Main Color 2		4	Yes
2780	2781	Gauge Mode Threshold 2 Main Color 2 Intensity		0	Yes
2781	2782	Gauge Mode Threshold 2 Main Scroll/Bounce Style		0	Yes
2782	2783	Gauge Mode Threshold 2 Main Color 1 Percent		50	Yes
2783	2784	Gauge Mode Threshold 2 Main Direction		0	Yes
2784	2785	Gauge Mode Threshold 2 Background Animation		1	Yes
2785	2786	Gauge Mode Threshold 2 Background Color 1		13	Yes
2786	2787	Gauge Mode Threshold 2 Background Color 1 Intensity		0	Yes
2787	2788	Gauge Mode Threshold 2 Background Speed		0	Yes
2788	2789	Gauge Mode Threshold 2 Background Pattern		0	Yes
2789	2790	Gauge Mode Threshold 2 Background Color 2		9	Yes
2790	2791	Gauge Mode Threshold 2 Background Color 2 Intensity		0	Yes
2791	2792	Gauge Mode Threshold 2 Background Scroll/Bounce Style		0	Yes
2792	2793	Gauge Mode Threshold 2 Background Color 1 Percent		50	Yes
2793	2794	Gauge Mode Threshold 2 Background Direction		0	Yes

3.11 LED Mode Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2000	2001	LED 1 Color, LED 2 Color, LED 3 Color, LED 4 Color	0 = Off	0	No
2001	2002	LED 5 Color, LED 6 Color, LED 7 Color, LED 8 Color	1 = Green 2 = Red		No
2002	2003	LED 9 Color, LED 10 Color, LED 11 Color, LED 12 Color	3 = Orange		No
...	...	...	4 = Amber		...
2015	2016	LED 61 Color, LED 62 Color, LED 63 Color, LED 64 Color	5 = Yellow 6 = Lime Green 7 = Spring Green 8 = Cyan 9 = Sky Blue 10 = Blue 11 = Violet 12 = Magenta 13 = Rose 14 = Daylight White (5000K) 15 = Custom 1		No

3.12 Custom Animation Configuration

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2800	2801	LED Mode Intensity	0 = High 1 = Low 2 = Medium 3 = Off 4 = Custom	0	Yes
2801	2802	Orientation	0 = Right Side Up, 1 = Upside Down	0	Yes
2802	2803	Custom Intensity	0-100	100	Yes
2803	2804	Custom Speed	1-255	10	Yes
2804	2805	Custom Color 1 Red	0-255	255	Yes
2805	2806	Custom Color 1 Green	0-255	255	Yes
2806	2807	Custom Color 1 Blue	0-255	255	Yes
2807	2808	Custom Color 2 Red	0-255	255	Yes
2808	2809	Custom Color 2 Green	0-255	255	Yes
2809	2810	Custom Color 2 Blue	0-255	255	Yes

3.13 Miscellaneous Registers

Address without Offset	Address with Offset	Description	Holding Register Representation	Default Value	Saved
2696	2697	Enable Teach Mode	0 = False, 1 = True	0	Yes
2692	2693	LED Section Count	0-100	40	Yes

Chapter Contents

4.1 FCC Part 15 Class A for Unintentional Radiators.....	37
4.2 Industry Canada ICES-003(A).....	38
4.3 LC25 LED Controller Dimensions	38

Chapter 4 LC25 LED Controller Specifications

Supply Voltage

12 V DC to 30 V DC at 30 mA maximum

Use only with a suitable Class 2 power supply (UL) or a SELV power supply (CE)

See the WLF12 Pro Flexible Multicolor Strip Light Instruction Manual for the WLF12 supply voltage and current.

NOTICE: The WLF12 is designed to be used with an LC25 and must be no more than 3.05 m (10 ft) apart. Contact the factory for instructions on how to use a WLF12 without an LC25.



WARNING: The WLF12 will be permanently damaged if a supply voltage of greater than 12 V DC is applied directly to the light.

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Connections

Integral 4-pin M12 male and female quick-disconnect connectors

Mounting

A strip of double-sided very high bonding strength tape is supplied

Multiple bracket options available

Secure cables within 150 mm (5.9 in) of the light

Environmental Rating

LC25 Controller: IP65, IP67, IP68

LC25 Controller + WLF12 Light: IP66, IP67, IP69

Suitable for wet locations per UL 2108

Do not spray cable with a high-pressure sprayer or cable damage will result.

Construction

Connector Body: PVC translucent black

Coupling Material: Nickel-plated brass

Indicators

Green: Power

Vibration and Mechanical Shock

Vibration: 10 Hz to 55 Hz, 0.5 mm peak-to-peak amplitude per IEC 60068-2-6

Shock: 15G 11 ms duration, half sine wave per IEC 60068-2-27

Operating Temperature

−40 °C to +50 °C (−40 °F to +122 °F)

Storage Temperature: −40 °C to +70 °C (−40 °F to +158 °F)

Certifications



Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM



Turck Banner LTD Blenheim House
Blenheim Court
Wickford, Essex SS11 8YT
GREAT BRITAIN



Required Overcurrent Protection



WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.

Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.

For additional product support, go to www.bannerengineering.com.

Supply Wiring (AWG)	Required Overcurrent Protection (A)	Supply Wiring (AWG)	Required Overcurrent Protection (A)
20	5.0	26	1.0
22	3.0	28	0.8
24	1.0	30	0.5

4.1 FCC Part 15 Class A for Unintentional Radiators

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

(Part 15.21) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

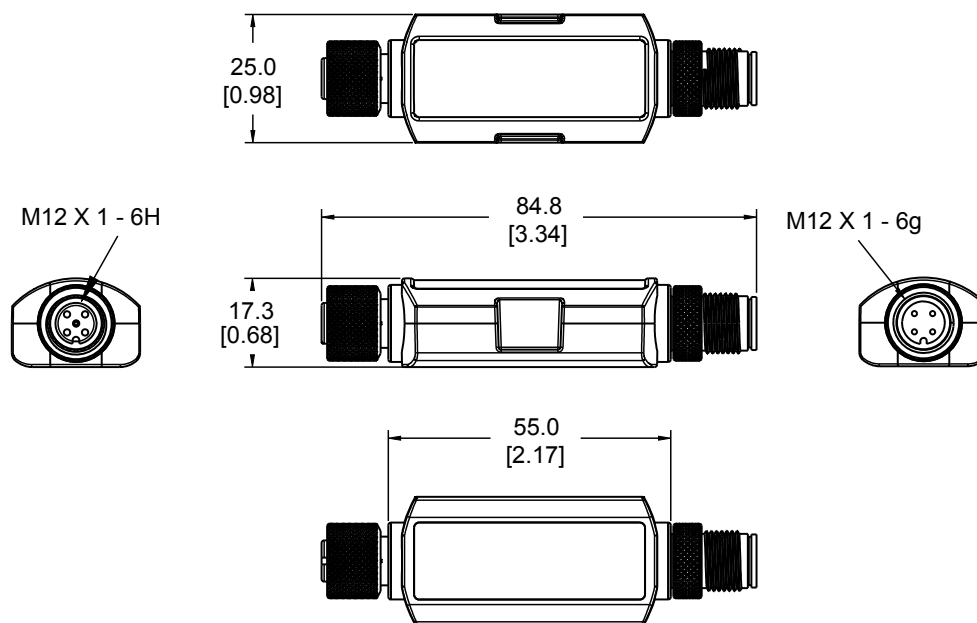
4.2 Industry Canada ICES-003(A)

This device complies with CAN ICES-3 (A)/NMB-3(A). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la norme NMB-3(A). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.

4.3 LC25 LED Controller Dimensions

Figure 1. LC25 dimensions

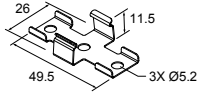


Chapter Contents

Chapter 5 LC25 LED Controller Accessories

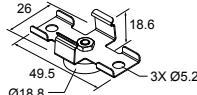
LMBLC25T

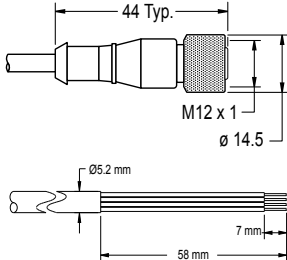
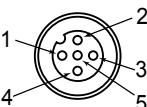
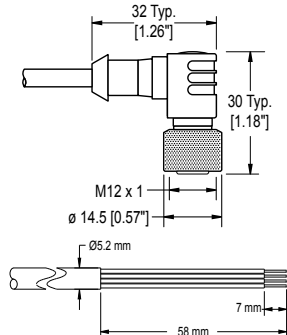
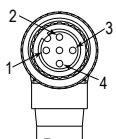
- Stainless steel clip bracket
- Includes 1 clip bracket and 2 plastic spacers
- Clearance hole for M5 hardware



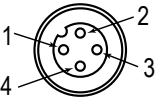
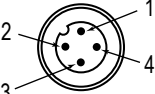
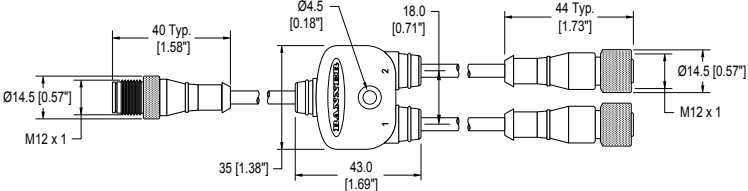
LMBLC25TMAG

- Magnetic mounting bracket for attachment to steel and iron surfaces



4-Pin Single-Ended M12 Female Cordsets					
Model	Length	Style	Dimensions	Pinout (Female)	
MQDC-406	2 m (6.56 ft)	Straight			1 = Brown 2 = White 3 = Blue 4 = Black 5 = Unused 
MQDC-415	5 m (16.4 ft)				
MQDC-430	9 m (29.5 ft)				
MQDC-450	15 m (49.2 ft)				
MQDC-406RA	2 m (6.56 ft)	Right-Angle			
MQDC-415RA	5 m (16.4 ft)				
MQDC-430RA	9 m (29.5 ft)				
MQDC-450RA	15 m (49.2 ft)				

4-Pin Double-Ended M12 Female to M12 Male Cordsets				
Model	Length	Style	Dimensions	Pinout
MQDEC-401SS	0.31 m (1 ft)	Male Straight / Female Straight		Female
MQDEC-403SS	0.91 m (2.99 ft)			
MQDEC-406SS	1.83 m (6 ft)			
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-415SS	4.58 m (15 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30.2 ft)			
MQDEC-450SS	15.2 m (49.9 ft)			
MQDEC-403RS	0.91 m (2.99 ft)	Male Right-Angle / Female Straight		Male 1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-406RS	1.83 m (6 ft)			
MQDEC-412RS	3.66 m (12 ft)			
MQDEC-420RS	6.10 m (20 ft)			
MQDEC-430RS	9.14 m (30.2 ft)			
MQDEC-450RS	15.2 m (49.9 ft)			
MQDEC-403RR	0.9 m (2.9 ft)	Male Right-Angle / Female Right-Angle		
MQDEC-406RR	1.8 m (5.9 ft)			
MQDEC-412RR	3.6 m (11.8 ft)			
MQDEC-420RR	6.1 m (20 ft)			

4-Pin Flat Junction M12 Female Branch to M12 Male Trunk Splitter Cordsets			
Model	Branches (Female)	Trunk (Male)	Pinout
CSB-M1240M1240	No branch	No trunk	Female 
CSB-M1240M1241	2 × 0.3 m (1 ft)	No trunk	
CSB-M1241M1241		0.31 m (1 ft)	
CSB-M1248M1241		2.44 m (8 ft)	
CSB-M12415M1241		4.57 m (15 ft)	
CSB-M12425M1241		7.60 m (25 ft)	
CSB-UNT425M1241		7.60 m (25 ft) Unterminated	
CSB-M1243M1243	2 × 1 m (3.28 ft)	1 m (3.28 ft)	Male  1 = Brown 2 = White 3 = Blue 4 = Black
			

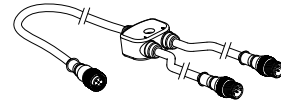
4-Pin M12 Male to 5-Pin M12 Female Splitter Cordset		
Model	Branches (Female)	Wiring
S15YB-M124-M124-0.2M	L1, L2 2 × 0.2 m (7.9 in)	

Model		Pinout (Male)	Pinout (Female)
R50-4M125-M125Q-P Molded Junction Block - Four integral 5-pin M12 female quick-disconnect connectors - One integral 5-pin M12 male quick-disconnect connector - Parallel wiring - Product documentation (p/n 227974)			
R95-8M125-M125Q-P Molded Junction Block - Eight integral 5-pin M12 female quick-disconnect connectors - One integral 5-pin M12 male quick-disconnect connector - Parallel wiring - Product documentation (p/n 227974)			

5-Pin Double-Ended M12 Female to M12 Male Flat Junction Cordsets			
Model	Description	Pinout (Male)	Pinout (Female)
CSB4-M1251M1250	Four (no cable) 5-pin M12 female quick-disconnect connectors		
	One 0.3 m (0.98 ft) cable with a 5-pin M12 male quick-disconnect connector		
	Parallel wiring		
		1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray	

CSB-M1251FM1251M

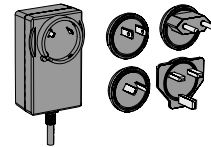
- 5-pin parallel Y splitter (Male-Male-Female)
- For full Pro Editor preview capability
- Requires external power supply, sold separately

**PSD-24-4**

- 90 to 264 V AC 50/60 Hz input
- Includes a 1.8 m (6 ft) US-style 5-15P input plug
- 24 V DC UL Listed Class 2 M12 connector output
- 4 A total current

**PSW-24-2**

- 24 V DC, 2 A Class 2 UL Listed power supply
- 100 V AC to 240 V AC 50/60 Hz input
- 3.5 m (11.5 ft) PVC cable with M12 quick disconnect
- Includes Type A (US, Canada, Japan, Puerto Rico, Taiwan), Type C (Germany, France, South Korea, Netherlands, Poland, Spain, Turkey), Type G (United Kingdom, Ireland, Singapore, Vietnam), and Type I (China, Australia, New Zealand) AC detachable input plugs

**PSW-24-1**

- 24 V DC, 1 A Class 2 UL Listed power supply
- 100 V AC to 240 V AC 50/60 Hz input
- 2 m (6.5 ft) PVC cable with M12 quick disconnect
- Includes Type A (US, Canada, Japan, Puerto Rico, Taiwan), Type C (Germany, France, South Korea, Netherlands, Poland, Spain, Turkey), Type G (United Kingdom, Ireland, Singapore, Vietnam), and Type I (China, Australia, New Zealand) AC detachable input plugs



Chapter Contents

Chapter 6 Banner Engineering Corp Limited Warranty

Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

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