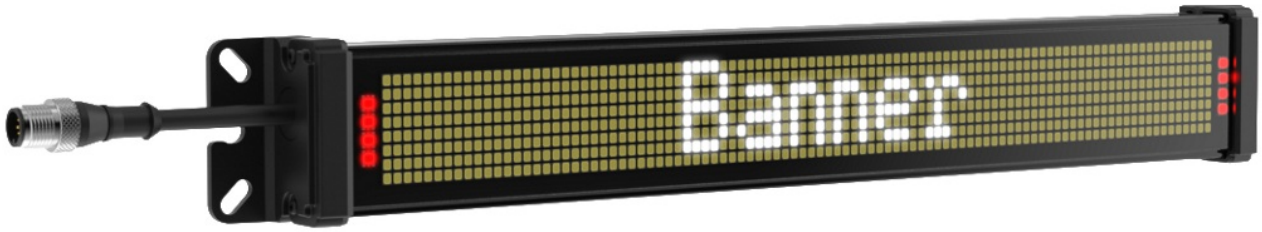
BANNER SD50 LED Status Display Owner's Manual

Contents

BANNER SD50 LED Status Display



FAQs

- **How can I get support for my SD50 Status Display?**
  - For product support and maintenance, refer to Chapter 6 of the product manual for detailed instructions on troubleshooting and maintenance procedures. You can also contact our customer support team for further assistance.

Features

- Easily configurable, versatile display can be installed nearly anywhere, making it a simple yet powerful alternative to complex HMIs and other displays
- Great for displaying takt time, equipment status, assembly sequences, counts, and measurements where they are most useful
- Discrete and IO-Link models integrate into many different systems and applications, especially Banner sensing, safety, and monitoring solutions
- Quick and easy configuration—simply define the desired text and call it via discrete control or process data
- Bright white LED display and multicolored status LEDs legible from 10 meters away inform operators about exactly what is going on so they can respond quickly and accurately
- IP65-rated polycarbonate housing resists impact and condensation to provide clear communication in challenging and changing environmental conditions

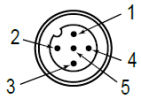
Models

Model Key

Series	**Height**	**Style**	**Display Length**	**Display Text Color**	**Control**	**Connector**(1)
SD	**50**	**P**	**300**	**W**	**D15**	**QP**
Status Display	50 mm height	P = Pro	300 = 300 mm	W = White	D15 = Discrete 15 states	QP = 150 mm (6 in) PVC-jacketed cable with a 5-pin M12 male quick-disconnect connector

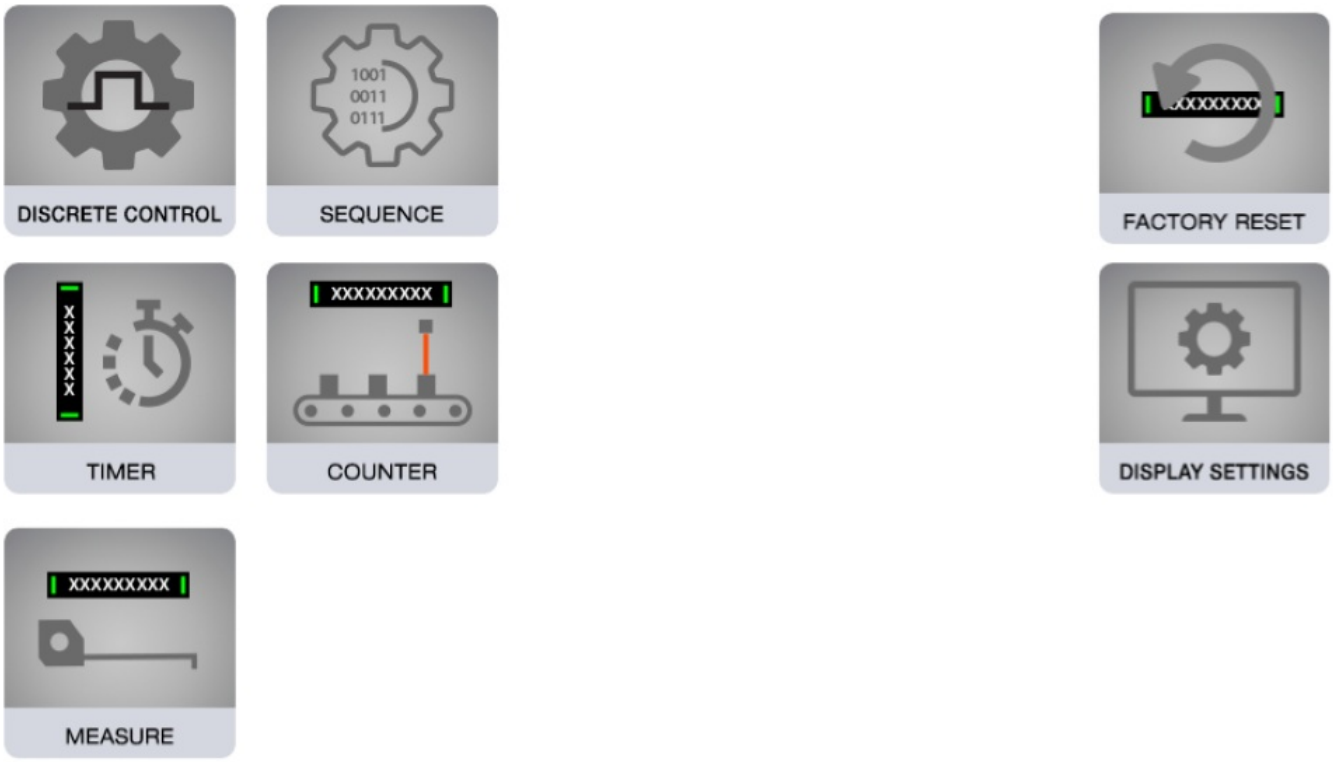
Wiring

SD50 Wiring

5-Pin Male M12 Pinout	Pinout Key and Wiring
	1. Brown - Input 1 2. White - Input 3 3. Blue - DC Common 4. Black - Input 2 5. Gray - Input 4

Pro Editor Configuration

Pro Editor Configuration for the SD50 Pro LED Status Display

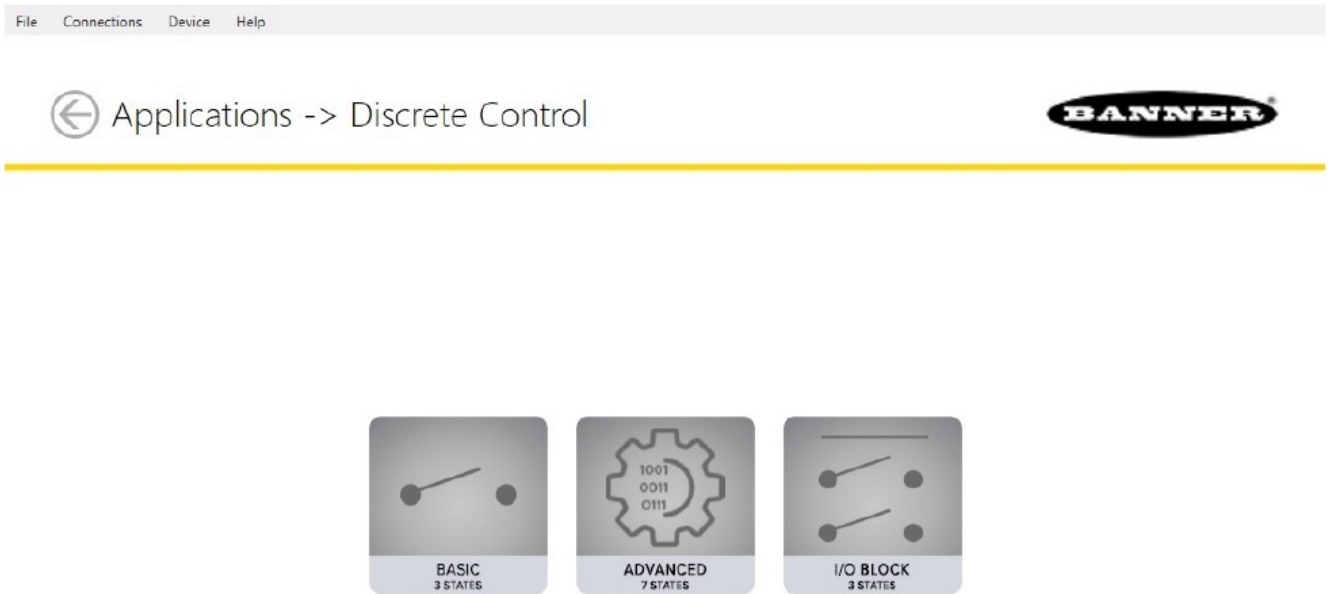


Banner's Pro Editor software offers an easy way to configure Pro Series-enabled indication, touch, and illumination devices, allowing users full control of device states and device logic modes. The easy-to-use configuration software provides a variety of tools and capabilities to solve a wide range of applications such as indicating machine status or warm-up time, indicating unique steps in an assembly process, or incorporating status information into touch buttons. Setup any Pro Series-enabled device using the free Pro Editor software, available for download at www.bannerengineering.com/proeditor.

Discrete Control

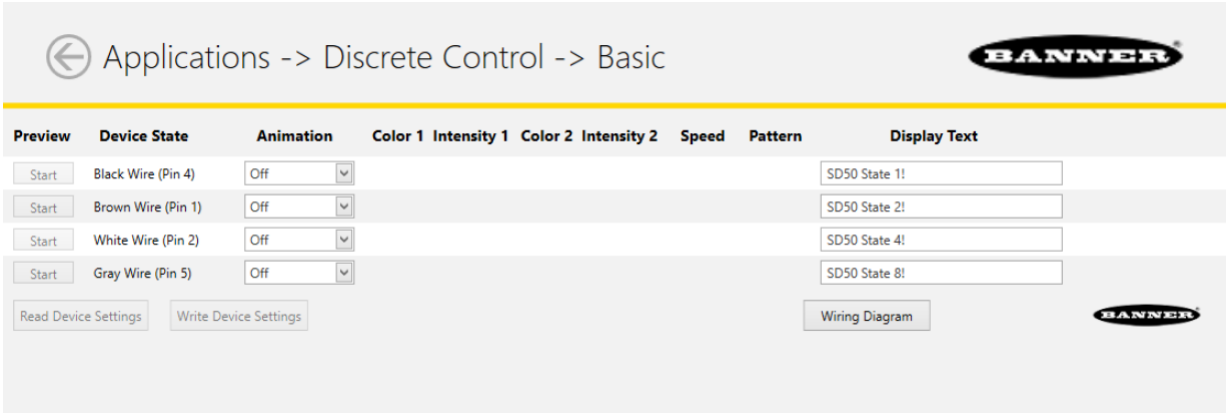
Selecting the Discrete Control tile displays three I/O State tiles:

- Basic
- Advanced
- I/O Block



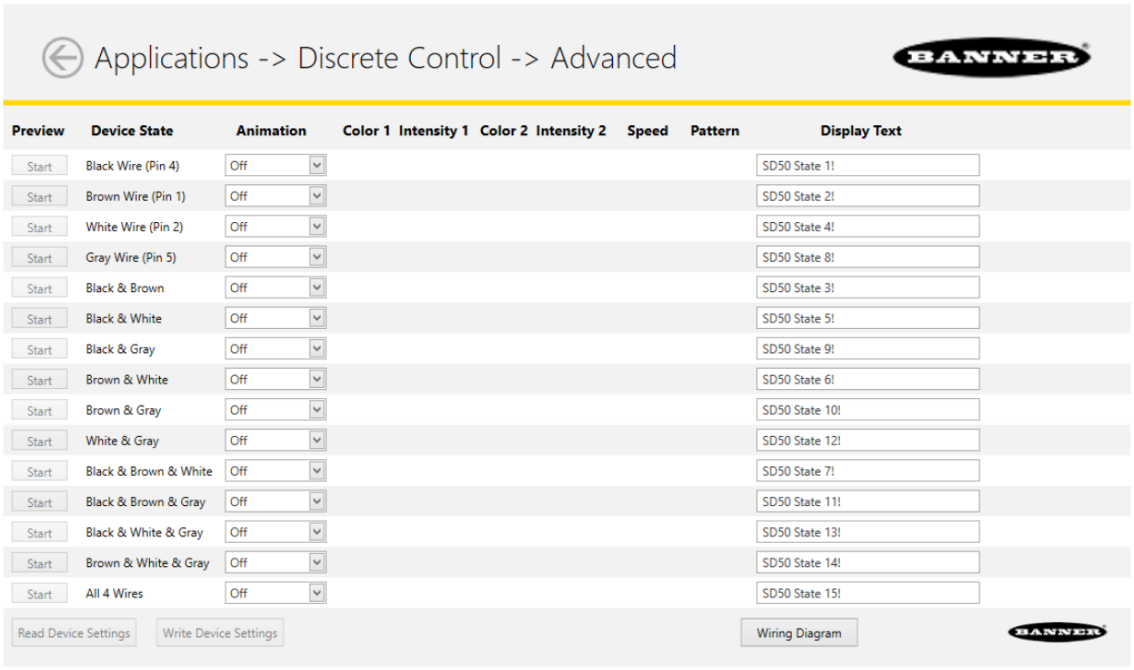
Basic I/O State

- Basic four-state control. Configurations made in Basic I/O State assign one wire to one state, with the following override control:
  - Pin 1 (Brown) overrides Pin 4 (Black)
  - Pin 2 (White) overrides Pins 1 and 4 (Brown and Black)
  - Pin 5 (Gray) overrides Pins 1, 2, and 4 (Brown, White, and Black)



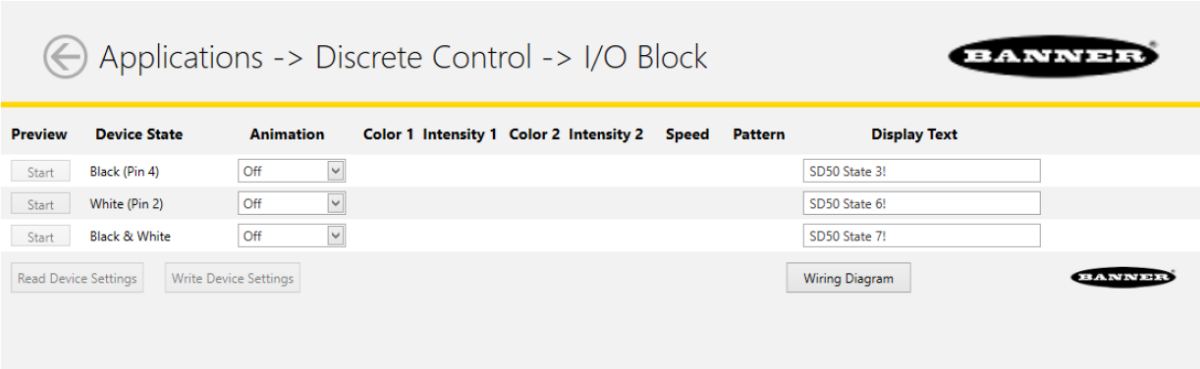
Advanced I/O State

- Advanced, default I/O state, with fifteen state options for maximum configuration ability. Configurations made in Advanced I/O State assign binary wiring combinations of all valid inputs to each state. Both the indication LEDs and the display text can be programmed for each of the states.



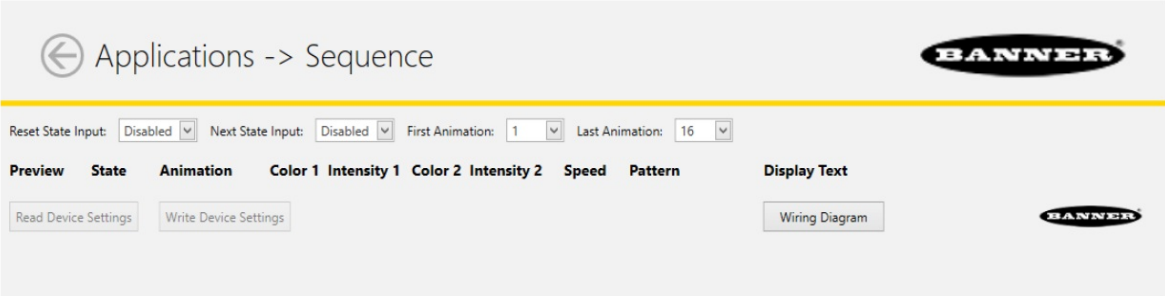
I/O Block I/O State

- Three-state control for use with I/O block. Configurations made in I/O Block assign state to the black, white, and combination of black and white wires for use with the I/O blocks, for which power (brown) and common (blue) are always on for five-pin connections.



Sequence Mode

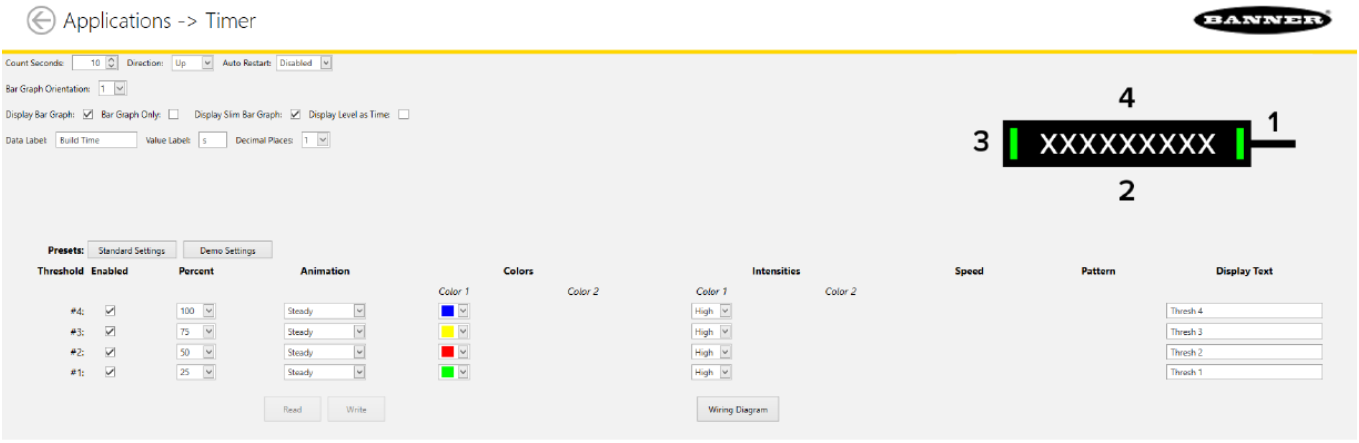
- Sequence Mode allows up to sixteen states that a single input can control. A pulse on the input wire moves the SD50 to the next state.



Reset State Input	Choose the desired input wire to restart the SD50 to the First Animation as chose n in the dropdown menu.
Next State Input	Choose the desired input wire to move SD50 to the next state in the series until th e Last Animation is reached.
First Animation	Choose the initial state to display as the sequence is initiated.
Last Animation	Choose the final state to include in the sequence..

Timer Mode

Set a total time and up to four thresholds. Start and stop the timer counting up or down with discrete control. Colors change across threshold values. Timer Mode uses the SD50 as a timer, counting up or down.

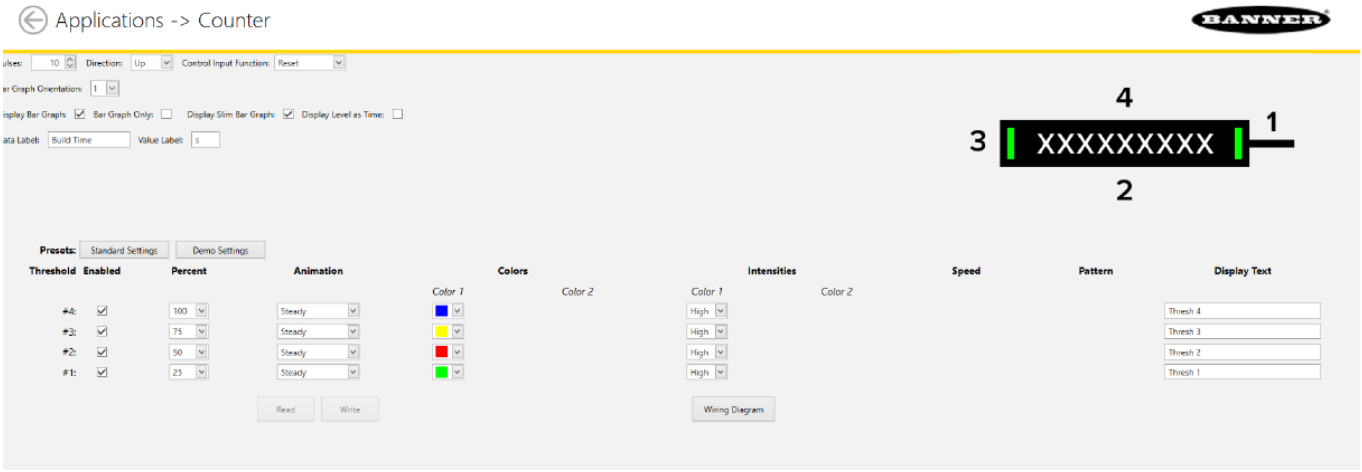


Count Seconds	The total time of the timer.
Direction	Up: Counts up from zero to Count Seconds. Down: Counts down from Count Seconds to zero.
Reset Input	Enable or disable the input wire to reset the timer to the initial value.
Auto Restart	The timer loops back to the original value automatically when it reaches its final value.

Bar Graph Orientation	Determine the starting side of the bar graph. The direction of the graph is determined by the direction of the timer.
Decimal Places	Determine the number of decimal places displayed on the Count Value.
Display Graph Only	Only display the bar graph, and not the numerical Count Value.
Display Bar Graph	Display the bar graph across the full display.
Display Slim Bar Graph	Display the bar graph as a single line of LEDs.
Display Level as Time	Display the time in HH:MM:SS format without data labels.
Data Label	Text that displays before the Count Value.
Value Label	Text that displays after the Count Value to indicate the units displayed. This can be up to three characters.
Standard Settings	Reset the SD50 to predetermined settings.

Counter Mode

Set a total count and up to four thresholds. Discrete, rising edge pulses count up or down. Colors change across threshold values. Counter Mode uses the SD50 as a counter.

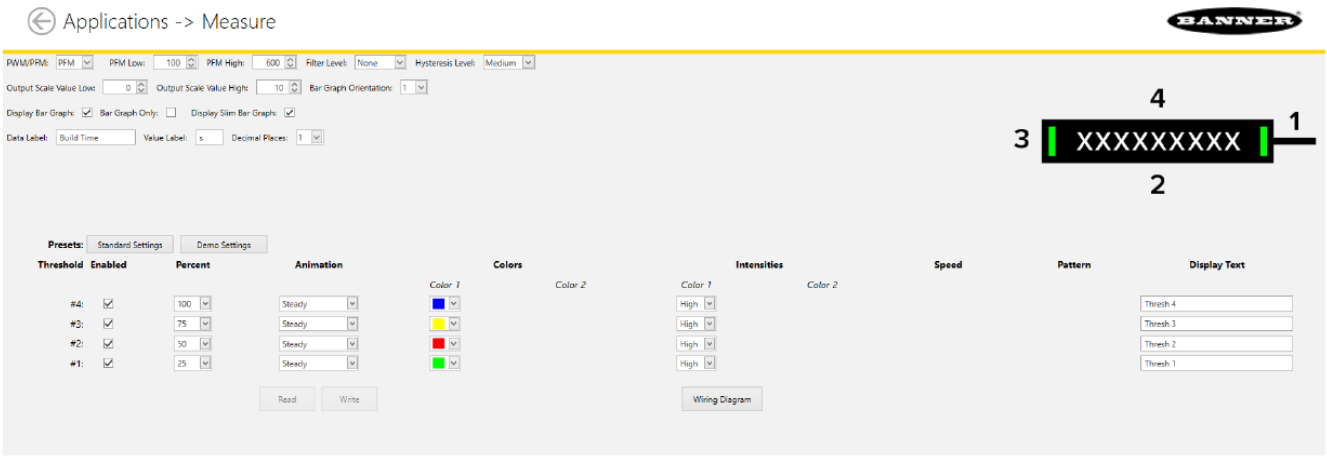


Pulses	Determine the number of counts that are either counted up to or counted down fro m, depending on the chosen direction.
Direction	Up: Counts from zero to Pulses. Down: Counts from Pulses to zero.
Reset Input	Enable or disable the input wire to reset the count to the initial value.

Bar Graph Orientation	Determine the starting side of the bar graph. The direction of the graph is determin ed by the direction of the timer.
Decimal Places	Determine the number of decimal places displayed on the Count Value.
Display Graph Only	Only display the bar graph, and not the numerical Count Value.
Display Bar Graph	Display the bar graph across the full display.
Display Slim Bar Graph	Display the bar graph as a single line of LEDs.
Data Label	Text that displays before the Count Value.
Value Label	Text that displays after the Count Value to indicate the units displayed. This can be up to three characters.
Standard Settings	Reset the SD50 to predetermined settings.

Measure Mode

Measure Mode uses the SD50 to display a measurement as either PWM control or PFM control.



PWM/PFM	PWM: Pulse-Width Modulation. PFM: Pulse-Frequency Modulation.
PWM/PFM Low	The lowest frequency of the input range.
PWM/PFM High	The highest frequency of the input range.
Filter Level	The level of filtering used to minimize the effects of noise on the output.

Hysteresis Level	The level of lag between the measurement thresholds to minimize the flickering at s witch points.
Output Scale Value Low	The low-end value of the output translated from the input frequency.
Output Scale Value High	The high-end value of the output translated from the input frequency.

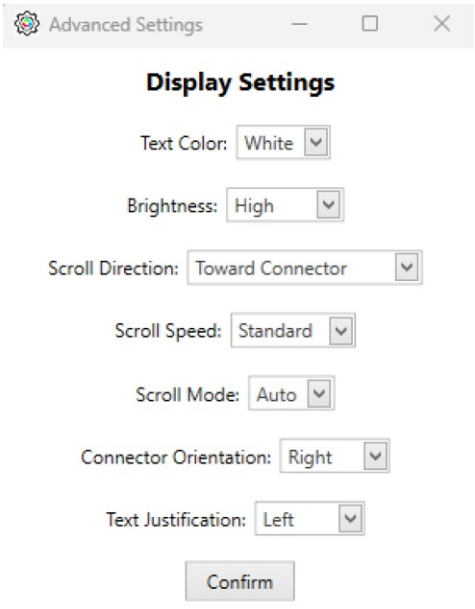
Bar Graph Orientation	Determine the starting side of the bar graph. The direction of the graph is determin ed by the direction of the timer.
Decimal Places	Determine the number of decimal places displayed on the Count Value.
Display Graph Only	Only display the bar graph, and not the numerical Count Value.
Display Bar Graph	Display the bar graph across the full display.
Display Slim Bar Graph	Display the bar graph as a single line of LEDs.
Display Level as Time	Display the time in HH:MM:SS format without data labels.
Data Label	Text that displays before the Count Value.
Value Label	Text that displays after the Count Value to indicate the units displayed. This can be up to three characters.
Standard Settings	Reset the SD50 to predetermined settings.

Factory Reset

Restore the SD50 to default settings.

Display Settings

Display Settings are a type of advanced settings that are accessible across all Applications.



Text Color	Configure the primary text color as either white or black.
Brightness	Control the brightness of the display text.
Scroll Direction	Scroll the display text either toward or away from the connector.
Scroll Speed	Control the speed the display text scrolls.
Scroll Mode	Auto: Scrolls if the number of characters is greater than sixteen. Off: Does not scroll the display text. On: Scrolls the display text regardless of the number of characters.
Connector Orientation	Determine the orientation of the connector when installed. The display text automatically adjusts to the correct orientation.
Text Justification	Control the alignment of the display text: left, right, or center.

Specifications

- **Supply Voltage**
  - 12 V DC to 30 V DC
  - Use only with a suitable Class 2 power supply (UL) or SELV power supply (CE)
- **Supply Current**
  - 550 mA max. at 12 V DC
  - 260 mA max. at 24 V DC
  - 210 mA max. at 30 V DC
- **Connections**
  - 150 mm (6 in) PVC-jacketed cable with a 5-pin M12 male quick-disconnect connector
  - Models with a quick-disconnect connector require a mating cord set
  - Do not spray cable with a high-pressure sprayer or cable damage will result
- **Operating Temperature**
  - –20 °C to +50 °C (–4 °F to +122 °F)
- **Storage Temperature**
  - 40 °C to +70 °C (–40 °F to +158 °F)
- **Environmental Rating**
  - Rated IP65
  - Suitable for damp locations per UL 2108
- **Vibration and Mechanical Shock**
  - Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55
  - Hz, 1.0 mm amplitude, 5 minutes sweep, 30 minutes dwell)
  - Meets IEC 60068-2-27 requirements (Shock: 15G 11 ms duration, half sine wave)
- **Construction**
  - Black polycarbonate housing and end caps
  - Internal silicone-encapsulated LEDs
  - Smoky polycarbonate window

Animations

Animation	Description
Off	Light is off
Steady	Color 1 is solid on at a defined intensity
Flash	Color 1 flashes at a defined speed, color intensity, and pattern (Normal, Strobe, Three Pulse, SOS, or Random)
Two Color Flash	Color 1 and Color 2 flash alternately at defined speed, color intensities, and pattern (Normal, Strobe, Three Pulse, SOS, or Random)
50/50	Color 1 and Color 2 are solid at a defined intensity
50/50 Flash	Color 1 and Color 2 flash at a defined speed, color intensity, and pattern (Normal, Strobe, Three Pulse, SOS, or Random)
Intensity Sweep	Color 1 repeatedly increases and decreases intensity between 0% to 100% at defined speed and color intensity
Two Color Sweep	Color 1 and Color 2 define the end values of a line across the color gamut. The light continuously displays a color by moving along the line at the defined speed and color intensities

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

Mounting

M5 and 1/4-20 compatible end caps (not included) Clip brackets for mounting are available

FCC

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.

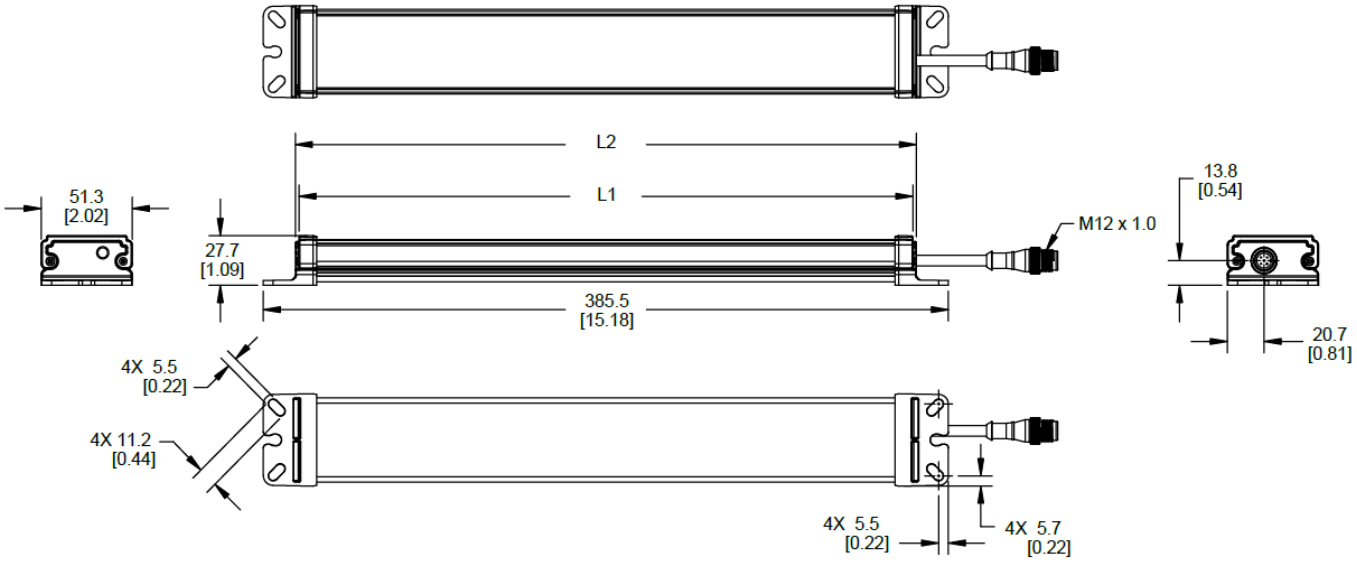
(Part 15.21) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

Dimensions

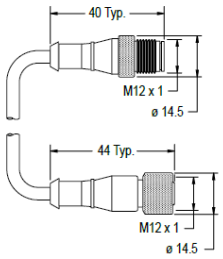
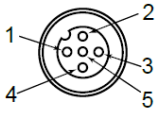
All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.



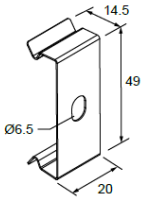
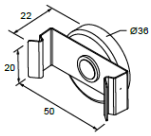
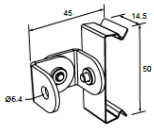
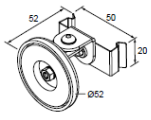
Models	L1	L2
SD50..300..	300 mm (11.81 in)	325 mm (12.8 in)

Accessories

Cordsets

5-Pin Double-Ended M12 Female to M12 Male Cordsets					
Model	Length	Style	Dimensions	Pinout (Male)	Pinout (Female)
MQDEC-501SS	0.31 m (1.02 ft)	Male Straight/ Female Straight			
MQDEC-503SS	0.91 m (2.99 ft)			1 = Brown 2 = White 3 = Blue	4 = Black 5 = Gray
MQDEC-506SS	1.83 m (6 ft)				
MQDEC-512SS	3.66 m (12 ft)				
MQDEC-515SS	5 m (16.4 ft)				
MQDEC-530SS	9 m (29.5 ft)				
MQDEC-550SS	15 m (49.2 ft)				

Mounting Brackets

LMBSD50 • Metal mounting bracket kit • Hardware included	
LMBSD50MAG • Magnetic mounting bracket kit • Up to 7.26 kg (16 lb) pull • Hardware included	
LMBSD50-180S • Metal mounting bracket kit with 180-degree rotation • Stainless steel • Hardware included	
LMBSD50-180SMAG • Magnetic mounting bracket kit with 180-degree rotation • Stainless steel • Up to 7.26 kg (16 lb) pull • Hardware included	

Product Support and Maintenance

UTF-8 Encoding Table and Unicode Characters

Unicode Code Point	Character	UTF-8 (hex.)	Name
U+0020		20	SPACE
U+0021	!	21	EXCLAMATION MARK
U+0022	“	22	QUOTATION MARK
U+0023	#	23	NUMBER SIGN
U+0024	$	24	DOLLAR SIGN
U+0025	%	25	PERCENT SIGN
U+0026	&	26	AMPERSAND
U+0027	‘	27	APOSTROPHE
U+0028	(	28	LEFT PARENTHESIS
U+0029	)	29	RIGHT PARENTHESIS
U+002A	*	2a	ASTERISK
U+002B	+	2b	PLUS SIGN
U+002C	,	2c	COMMA
U+002D	–	2d	HYPHEN-MINUS
U+002E	.	2e	FULL STOP
U+002F	/	2f	SOLIDUS
U+0030	0	30	DIGIT ZERO
U+0031	1	31	DIGIT ONE
U+0032	2	32	DIGIT TWO
U+0033	3	33	DIGIT THREE
U+0034	4	34	DIGIT FOUR
U+0035	5	35	DIGIT FIVE
U+0036	6	36	DIGIT SIX
U+0037	7	37	DIGIT SEVEN
U+0038	8	38	DIGIT EIGHT
U+0039	9	39	DIGIT NINE
U+003A	:	3a	COLON
U+003B	;	3b	SEMICOLON
U+003C	<	3c	LESS-THAN SIGN
U+003D	=	3d	EQUALS SIGN
U+003E	>	3e	GREATER-THAN SIGN

Unicode Code Point	Character	UTF-8 (hex.)	Name
U+003F	?	3f	QUESTION MARK
U+0040	@	40	COMMERCIAL AT
U+0041	A	41	LATIN CAPITAL LETTER A
U+0042	B	42	LATIN CAPITAL LETTER B
U+0043	C	43	LATIN CAPITAL LETTER C
U+0044	D	44	LATIN CAPITAL LETTER D
U+0045	E	45	LATIN CAPITAL LETTER E
U+0046	F	46	LATIN CAPITAL LETTER F
U+0047	G	47	LATIN CAPITAL LETTER G
U+0048	H	48	LATIN CAPITAL LETTER H
U+0049	I	49	LATIN CAPITAL LETTER I
U+004A	J	4a	LATIN CAPITAL LETTER J
U+004B	K	4b	LATIN CAPITAL LETTER K
U+004C	L	4c	LATIN CAPITAL LETTER L
U+004D	M	4d	LATIN CAPITAL LETTER M
U+004E	N	4e	LATIN CAPITAL LETTER N
U+004F	O	4f	LATIN CAPITAL LETTER O
U+0050	P	50	LATIN CAPITAL LETTER P
U+0051	Q	51	LATIN CAPITAL LETTER Q
U+0052	R	52	LATIN CAPITAL LETTER R
U+0053	S	53	LATIN CAPITAL LETTER S
U+0054	T	54	LATIN CAPITAL LETTER T
U+0055	U	55	LATIN CAPITAL LETTER U
U+0056	V	56	LATIN CAPITAL LETTER V
U+0057	W	57	LATIN CAPITAL LETTER W
U+0058	X	58	LATIN CAPITAL LETTER X
U+0059	Y	59	LATIN CAPITAL LETTER Y
U+005A	Z	5a	LATIN CAPITAL LETTER Z
U+005B	[	5b	LEFT SQUARE BRACKET
U+005C	\	5c	REVERSE SOLIDUS
U+005D	]	5d	RIGHT SQUARE BRACKET
U+005E	^	5e	CIRCUMFLEX ACCENT

U+005F	_	5f	LOW LINE
U+0060	`	60	GRAVE ACCENT
U+0061	a	61	LATIN SMALL LETTER A
U+0062	b	62	LATIN SMALL LETTER B
U+0063	c	63	LATIN SMALL LETTER C
U+0064	d	64	LATIN SMALL LETTER D
U+0065	e	65	LATIN SMALL LETTER E
U+0066	f	66	LATIN SMALL LETTER F
U+0067	g	67	LATIN SMALL LETTER G
U+0068	h	68	LATIN SMALL LETTER H

Unicode Code Point	**Character**	**UTF-8 (hex.)**	**Name**
U+0069	i	69	LATIN SMALL LETTER I
U+006A	j	6a	LATIN SMALL LETTER J
U+006B	k	6b	LATIN SMALL LETTER K
U+006C	l	6c	LATIN SMALL LETTER L
U+006D	m	6d	LATIN SMALL LETTER M
U+006E	n	6e	LATIN SMALL LETTER N
U+006F	o	6f	LATIN SMALL LETTER O
U+0070	p	70	LATIN SMALL LETTER P
U+0071	q	71	LATIN SMALL LETTER Q
U+0072	r	72	LATIN SMALL LETTER R
U+0073	s	73	LATIN SMALL LETTER S
U+0074	t	74	LATIN SMALL LETTER T
U+0075	u	75	LATIN SMALL LETTER U
U+0076	v	76	LATIN SMALL LETTER V
U+0077	w	77	LATIN SMALL LETTER W
U+0078	x	78	LATIN SMALL LETTER X
U+0079	y	79	LATIN SMALL LETTER Y
U+007A	z	7a	LATIN SMALL LETTER Z
U+007B	{	7b	LEFT CURLY BRACKET
U+007C	|	7c	VERTICAL LINE
U+007D	}	7d	RIGHT CURLY BRACKET

U+007E	~	7e	TILDE
U+00A0		c2 a0	NO-BREAK SPACE
U+00A1	¡	c2 a1	INVERTED EXCLAMATION MARK
U+00A2	¢	c2 a2	CENT SIGN
U+00A3	£	c2 a3	POUND SIGN
U+00A4	¤	c2 a4	CURRENCY SIGN
U+00A5	¥	c2 a5	YEN SIGN
U+00A6	¦	c2 a6	BROKEN BAR
U+00A7	§	c2 a7	SECTION SIGN
U+00A8	¨	c2 a8	DIAERESIS
U+00A9	©	c2 a9	COPYRIGHT SIGN
U+00AA	ª	c2 aa	FEMININE ORDINAL INDICATOR
U+00AB	«	c2 ab	LEFT-POINTING DOUBLE ANGLE QUOTATION MARK
U+00AC	¬	c2 ac	NOT SIGN
U+00AD		c2 ad	SOFT HYPHEN
U+00AE	®	c2 ae	REGISTERED SIGN
U+00AF	¯	c2 af	MACRON
U+00B0	°	c2 b0	DEGREE SIGN
U+00B1	±	c2 b1	PLUS-MINUS SIGN
U+00B2	²	c2 b2	SUPERSCRIPT TWO
U+00B3	³	c2 b3	SUPERSCRIPT THREE

Unicode Code Point	**Character**	**UTF-8 (hex.)**	**Name**
U+00B4	´	c2 b4	ACUTE ACCENT
U+00B5	µ	c2 b5	MICRO SIGN
U+00B6	¶	c2 b6	PILCROW SIGN
U+00B7	·	c2 b7	MIDDLE DOT
U+00B8	¸	c2 b8	CEDILLA
U+00B9	¹	c2 b9	SUPERSCRIPT ONE
U+00BA	º	c2 ba	MASCULINE ORDINAL INDICATOR
U+00BB	»	c2 bb	RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK
U+00BC	¼	c2 bc	VULGAR FRACTION ONE QUARTER

U+00BD	½	c2 bd	VULGAR FRACTION ONE HALF
U+00BE	¾	c2 be	VULGAR FRACTION THREE QUARTERS
U+00BF	¿	c2 bf	INVERTED QUESTION MARK
U+00C0	À	c3 80	LATIN CAPITAL LETTER A WITH GRAVE
U+00C1	Á	c3 81	LATIN CAPITAL LETTER A WITH ACUTE
U+00C2	Â	c3 82	LATIN CAPITAL LETTER A WITH CIRCUMFLEX
U+00C3	Ã	c3 83	LATIN CAPITAL LETTER A WITH TILDE
U+00C4	Ä	c3 84	LATIN CAPITAL LETTER A WITH DIAERESIS
U+00C5	Å	c3 85	LATIN CAPITAL LETTER A WITH RING ABOVE
U+00C6	Æ	c3 86	LATIN CAPITAL LETTER AE
U+00C7	Ç	c3 87	LATIN CAPITAL LETTER C WITH CEDILLA
U+00C8	È	c3 88	LATIN CAPITAL LETTER E WITH GRAVE
U+00C9	É	c3 89	LATIN CAPITAL LETTER E WITH ACUTE
U+00CA	Ê	c3 8a	LATIN CAPITAL LETTER E WITH CIRCUMFLEX
U+00CB	Ë	c3 8b	LATIN CAPITAL LETTER E WITH DIAERESIS
U+00CC	Ì	c3 8c	LATIN CAPITAL LETTER I WITH GRAVE
U+00CD	Í	c3 8d	LATIN CAPITAL LETTER I WITH ACUTE
U+00CE	Î	c3 8e	LATIN CAPITAL LETTER I WITH CIRCUMFLEX
U+00CF	Ï	c3 8f	LATIN CAPITAL LETTER I WITH DIAERESIS
U+00D0	Ð	c3 90	LATIN CAPITAL LETTER ETH
U+00D1	Ñ	c3 91	LATIN CAPITAL LETTER N WITH TILDE
U+00D2	Ò	c3 92	LATIN CAPITAL LETTER O WITH GRAVE
U+00D3	Ó	c3 93	LATIN CAPITAL LETTER O WITH ACUTE
U+00D4	Ô	c3 94	LATIN CAPITAL LETTER O WITH CIRCUMFLEX
U+00D5	Õ	c3 95	LATIN CAPITAL LETTER O WITH TILDE
U+00D6	Ö	c3 96	LATIN CAPITAL LETTER O WITH DIAERESIS
U+00D7	×	c3 97	MULTIPLICATION SIGN
U+00D8	Ø	c3 98	LATIN CAPITAL LETTER O WITH STROKE

U+00D9	Ù	c3 99	LATIN CAPITAL LETTER U WITH GRAVE
U+00DA	Ú	c3 9a	LATIN CAPITAL LETTER U WITH ACUTE
U+00DB	Û	c3 9b	LATIN CAPITAL LETTER U WITH CIRCUMFLEX
U+00DC	Ü	c3 9c	LATIN CAPITAL LETTER U WITH DIAERESIS
U+00DD	Ý	c3 9d	LATIN CAPITAL LETTER Y WITH ACUTE

Unicode Code Point	**Character**	**UTF-8 (hex.)**	**Name**
U+00DE	Þ	c3 9e	LATIN CAPITAL LETTER THORN
U+00DF	ß	c3 9f	LATIN SMALL LETTER SHARP S
U+00E0	à	c3 a0	LATIN SMALL LETTER A WITH GRAVE
U+00E1	á	c3 a1	LATIN SMALL LETTER A WITH ACUTE
U+00E2	â	c3 a2	LATIN SMALL LETTER A WITH CIRCUMFLEX
U+00E3	ã	c3 a3	LATIN SMALL LETTER A WITH TILDE
U+00E4	ä	c3 a4	LATIN SMALL LETTER A WITH DIAERESIS
U+00E5	å	c3 a5	LATIN SMALL LETTER A WITH RING ABOVE
U+00E6	æ	c3 a6	LATIN SMALL LETTER AE
U+00E7	ç	c3 a7	LATIN SMALL LETTER C WITH CEDILLA
U+00E8	è	c3 a8	LATIN SMALL LETTER E WITH GRAVE
U+00E9	é	c3 a9	LATIN SMALL LETTER E WITH ACUTE
U+00EA	ê	c3 aa	LATIN SMALL LETTER E WITH CIRCUMFLEX
U+00EB	ë	c3 ab	LATIN SMALL LETTER E WITH DIAERESIS
U+00EC	ì	c3 ac	LATIN SMALL LETTER I WITH GRAVE
U+00ED	í	c3 ad	LATIN SMALL LETTER I WITH ACUTE
U+00EE	î	c3 ae	LATIN SMALL LETTER I WITH CIRCUMFLEX
U+00EF	ï	c3 af	LATIN SMALL LETTER I WITH DIAERESIS
U+00F0	ð	c3 b0	LATIN SMALL LETTER ETH
U+00F1	ñ	c3 b1	LATIN SMALL LETTER N WITH TILDE
U+00F2	ò	c3 b2	LATIN SMALL LETTER O WITH GRAVE
U+00F3	ó	c3 b3	LATIN SMALL LETTER O WITH ACUTE

U+00F4	ô	c3 b4	LATIN SMALL LETTER O WITH CIRCUMFLEX
U+00F5	õ	c3 b5	LATIN SMALL LETTER O WITH TILDE
U+00F6	ö	c3 b6	LATIN SMALL LETTER O WITH DIAERESIS
U+00F7	÷	c3 b7	DIVISION SIGN
U+00F8	ø	c3 b8	LATIN SMALL LETTER O WITH STROKE
U+00F9	ù	c3 b9	LATIN SMALL LETTER U WITH GRAVE
U+00FA	ú	c3 ba	LATIN SMALL LETTER U WITH ACUTE
U+00FB	û	c3 bb	LATIN SMALL LETTER U WITH CIRCUMFLEX
U+00FC	ü	c3 bc	LATIN SMALL LETTER U WITH DIAERESIS
U+00FD	ý	c3 bd	LATIN SMALL LETTER Y WITH ACUTE
U+00FE	þ	c3 be	LATIN SMALL LETTER THORN
U+00FF	ÿ	c3 bf	LATIN SMALL LETTER Y WITH DIAERESIS

Clean with Mild Detergent and Water

Wipe down the enclosure and the display with a soft cloth that has been dampened with a mild detergent and warm water solution.

Repairs

Contact Banner Engineering for troubleshooting of this device. Do not attempt any repairs to this Banner device; it contains no field-replaceable parts or components. If the device, device part, or device component is determined to be defective by a Banner Applications Engineer, they will advise you of Banner's RMA (Return Merchandise Authorization) procedure.

IMPORTANT: If instructed to return the device, pack it with care. Damage that occurs in return shipping is not covered by warranty.

Contact Us

- Banner Engineering Corp. headquarters is located at: 9714 Tenth Avenue North | Plymouth, MN 55441, USA
- Phone: + 1 888 373 6767
- For worldwide locations and local representatives, visit **www.bannerengineering.com**.

Warranty

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 improper application or installation of the Banner product.

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- **LinkedIn**
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Documents / Resources

	**BANNER SD50 LED Status Display** [pdf] Owner's Manual SD50, SD50 LED Status Display, LED Status Display, Status Display, Display

References

- **Banner Engineering | Smarter Automation. Better Solutions.**

- Banner Engineering | Smarter Automation. Better Solutions.
- User Manual

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