S100 Multi-Touch Display Product Manual

Original Instructions
p/n: 254777 Rev. C
10-Jul-26

Contents

Chapter 1 Product Overview

The S100 Multi-Touch Display closes the gap between a traditional HMI and a panel full of push buttons for routine point-of-use operator interaction. Combining up to five touch zones with haptic feedback, audible alerts, an alphanumeric display, and a ring of 16 RGB LEDs in one low-profile housing, it gives machine builders and system integrators a compact, configurable way to build an interface that fits the task without the overhead of a traditional HMI.

- Provide direct on-device instruction and status with a configurable alphanumeric display
- Support at-a-glance awareness of machine state and progress with configurable colors and animations on a ring of 16 RGB LEDs
- Improve input accuracy with haptic feedback that confirms operator input
- Increase status awareness and input accuracy with audible alerts
- Streamline deployment out-of-the-box with prepared modes like takt timer, counter, measurement, pick-to-light, and more
- Reduce operator-station complexity and touchpoints with a single drop-in discrete I/O interface configured in Pro Editor
- Enable point-of-use operator interaction directly in washdown environments with a low-profile, IP69K-rated interface

IMPORTANT: Read the following instructions before operating the light. Please download the complete S100 Multi-Touch Display 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 S100 Multi-Touch Display, 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 S100 Multi-Touch Display sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

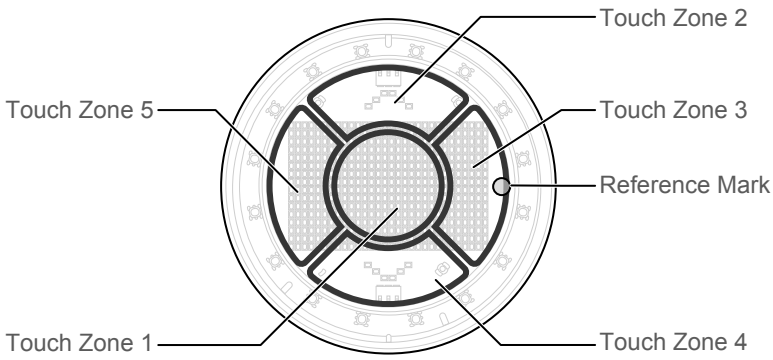
Models

Model Key

Series	Style	Touch	Display	Display Text Color	Audible	Control	Window Color	Connector[1]
S100	**P**	**TV**	**D2**	**W**	**A**	**D2**		**Q**
S100 = Status, 100 mm diameter	P = Pro	TV = Touch with Vibration	D2 = Two-row display	W = White	A = Audible	D2 = Discrete (two states)	Blank = Smoky	Q = Integral 5-pin M12 male quick-disconnect connector

[1] Models with a quick-disconnect connector require a mating cordset.

Touch Zone Locations



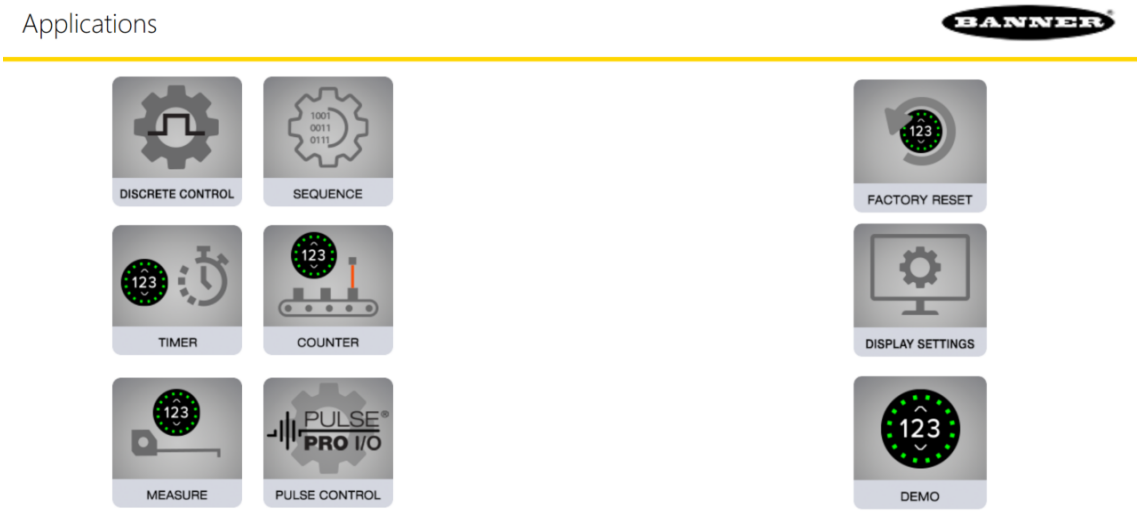
The Reference Mark should be on the right side of the device by default. Additional orientation options can be found in Display Settings.

Chapter 2 Wiring

Wiring

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

Chapter 3 Pro Editor Configuration for the S100 Multi-Touch Display

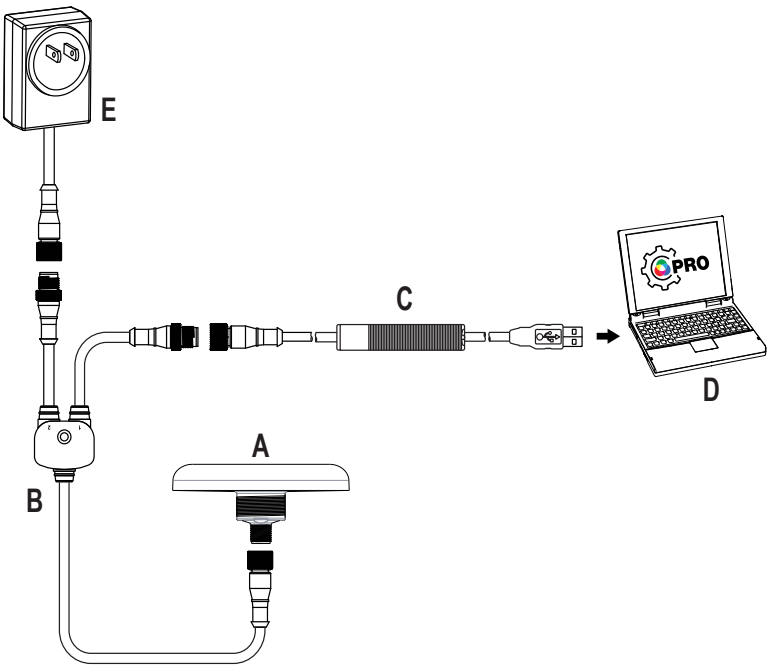


Banner's Pro Editor software offers an easy way to configure Pro Series-enabled indication, touch, and illumination devices, allowing users full control of device states and device logic modes. The easy-to-use configuration software provides a variety of tools and capabilities to solve a wide range of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

Set up any Pro Series-enabled device using the free Pro Editor software, available for download at www.bannerengineering.com/proeditor.

Full Preview Connection (Required)

The full preview connection must be used for the S100 Multi-Touch Display.

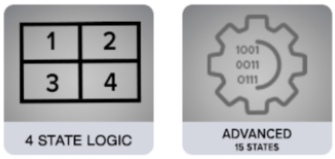


A = S100 Pro Editor-enabled device
B = Splitter (CSB-M1251FM1251M)
C = Pro Converter Cable (MQDC-506-USB)
D = PC running Pro Editor software
E = Power Supply (PSW-24-1, PSW-24-2, or PSD-24-4)

Discrete Control

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

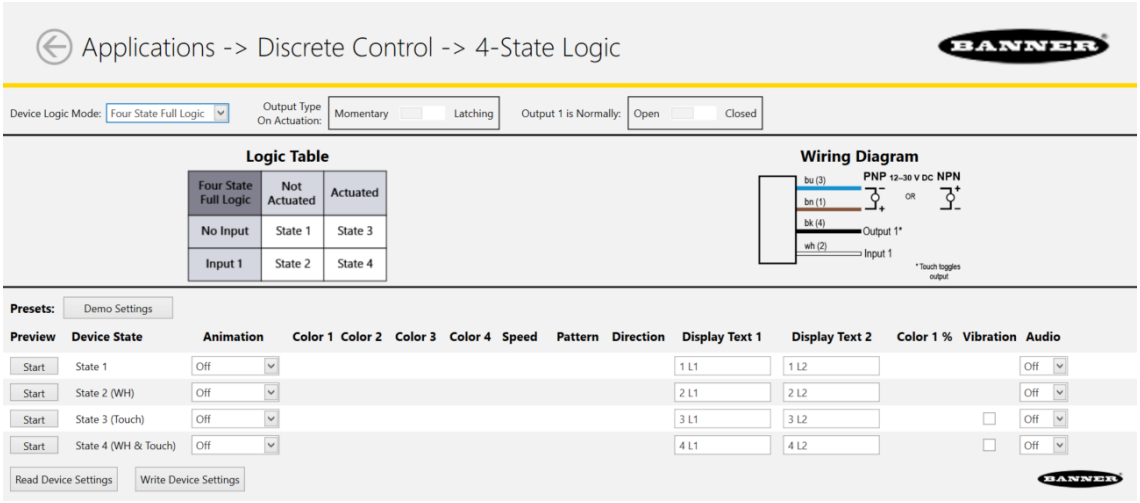
- 4-State Logic
- Advanced



4-State Logic

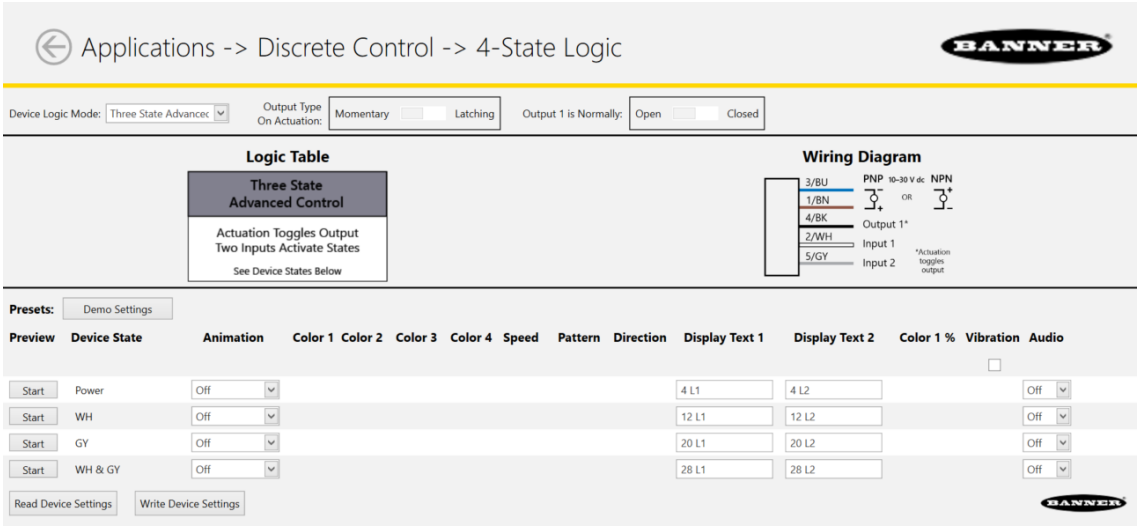
4-State logic can be configured to change text, color, and animation based on system input or user touch, and generate a discrete output when touched - ideal for interactive tasks like part picking and confirmation.

Device Logic Mode › Four State Full Logic. When using Four State Full Logic, four device states are activated by one input wire and the touch button. The touch button also toggles the output(s).



Device Logic Mode	Choose the logic mode and configuration options for the S100. It also displays the currently selected mode.
Output Type On Actuation	Choose the output type for when the touch button is pressed. Momentary: The state is active only while pressing the touch button Latching: The state is maintained after pressing the touch button
Output 1 is Normally	Choose the typical behavior for Output 1. Open: Output 1 is triggered when the touch button is active Closed: Output 1 is removed when the touch button is active

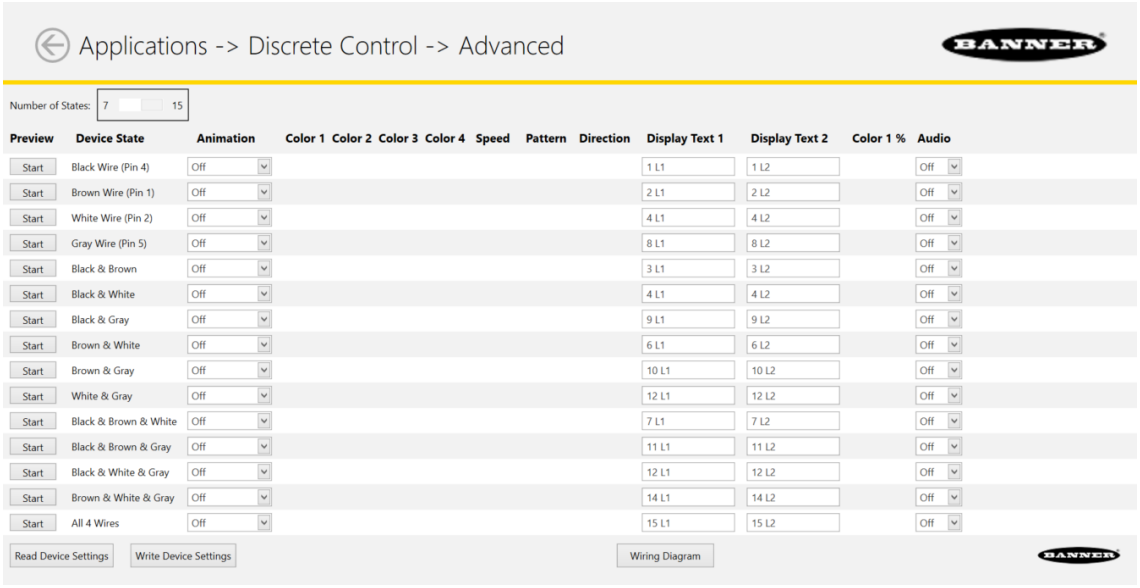
Device Logic Mode › Three State Advanced Control. When using Three State Advanced Control, four device states are activated by two input wires. The touch button toggles the output(s) with no device state change.



Device Logic Mode	Choose the logic mode and configuration options for the S100. It also displays the currently selected mode.
Output Type On Actuation	Choose the output type for when the touch button is pressed. Momentary: The state is active only while pressing the touch button Latching: The state is maintained after pressing the touch button
Output 1 is Normally	Choose the typical behavior for Output 1. Open: Output 1 is triggered when the touch button is active Closed: Output 1 is removed when the touch button is active

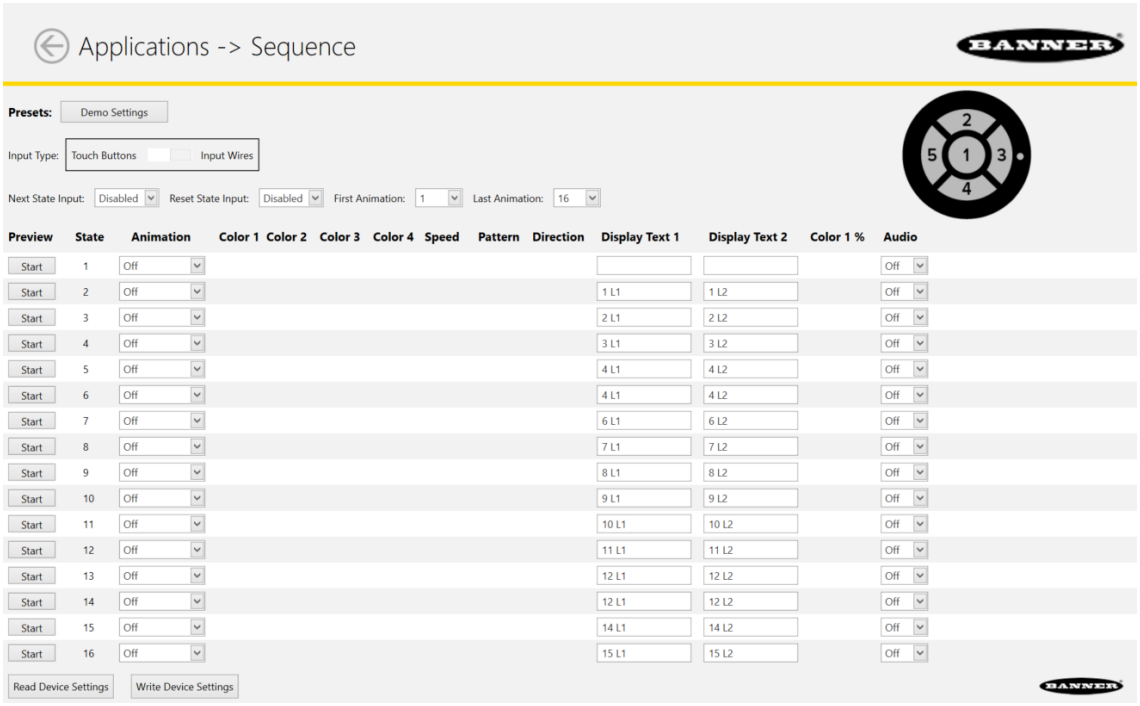
Advanced I/O State

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. When the number of states is set to seven, each state has an output on the black wire, which is activated by touch.



Sequence Mode

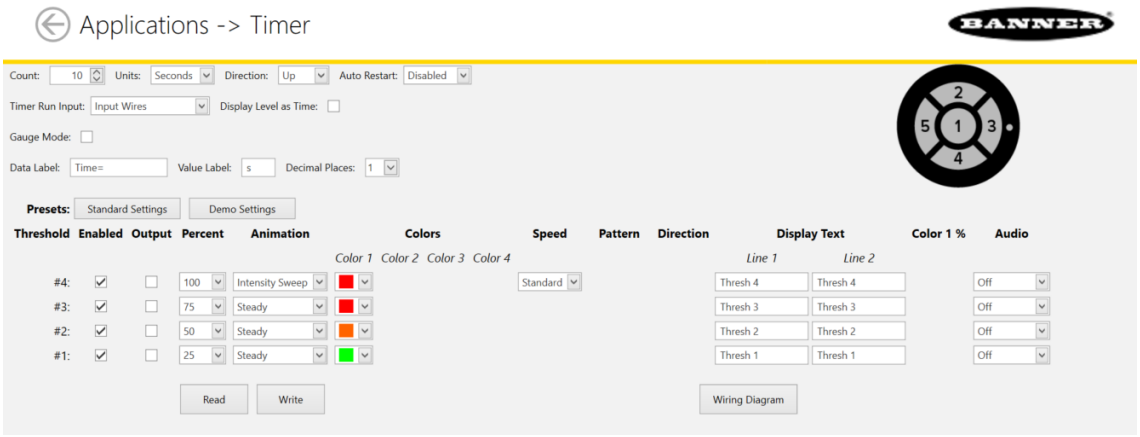
Sequence Mode allows up to sixteen states that a single input can control. A pulse on the input wire moves the S100 to the next state.



Input Type	Choose if the sequence will progress with touch or input wires
Next State Input	Choose the desired touch zone or input wire to move S100 to the next state in the series until the Last Animation is reached.
Reset State Input	Choose the desired touch zone or input wire to restart the S100 to the First Animation as chosen in the dropdown menu.
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.

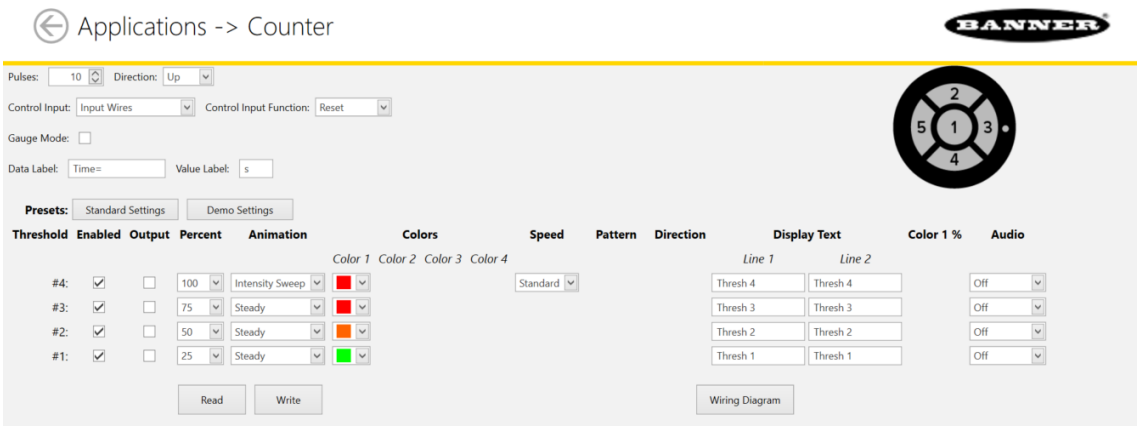


Count	The total time of the timer.
Units	Choose the units of the Count.
Direction	Up: Counts up from zero to the Count value. Down: Counts down from the Count value to zero.
Auto Restart	The timer loops back to the original value automatically when it reaches its final value.
Timer Run Input	Determine if the timer is controlled by touch, input wires, or a combination of both. Start / Stop for the first option and Reset for the second.
Display Level as Time	Display the time in HH:MM:SS format without data labels.

Gauge Mode	Determine if the indicator LEDs will fill proportional to the time. When Gauge Mode is checked, the Background Color and Background Intensity settings are shown and can be configured for Gauge Mode. Threshold colors carry over from below.
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.
Decimal Places	Determine the number of decimal places displayed on the Count value.
Standard Settings	Reset the S100 to predetermined settings.
Demo Settings	Set the S100 to the Timer Mode settings used in the Demo sequence

Counter Mode

Set a total count and up to four thresholds. Discrete, rising edge pulses or touch inputs count up or down. Colors change across threshold values.

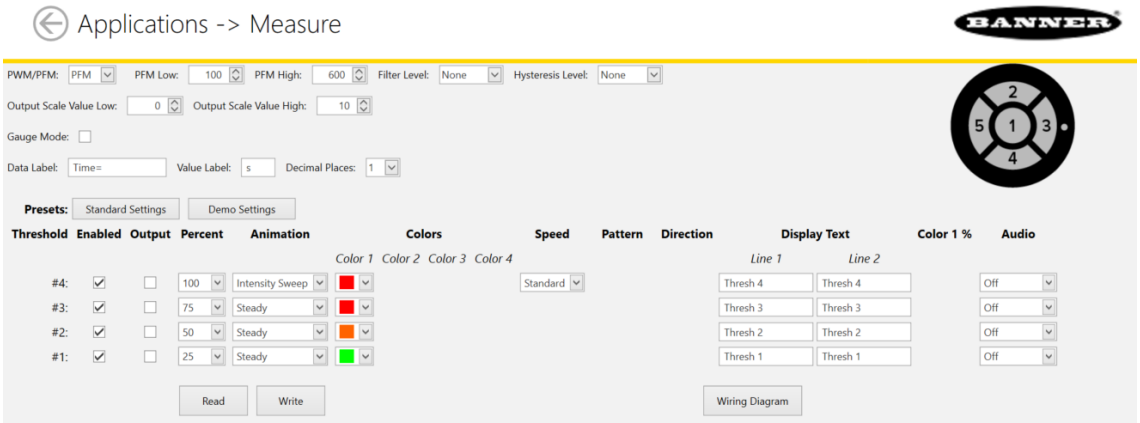


Pulses	Determine the number of counts that are either counted up to or counted down from, depending on the chosen direction.
Direction	Up: Counts from zero to Pulses. Down: Counts from Pulses to zero.
Control Input	Determine how the count changes with touch, input wires, or a combination.
Control Input Function	Determine the function of the second portion of the Control Input. This can either be a decrease or a reset.

Gauge Mode	Determine if the indicator LEDs will fill proportional to the time. When Gauge Mode is checked, the Background Color and Background Intensity settings are shown and can be configured for Gauge Mode. Threshold colors carry over from below.
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 S100 to predetermined settings.
Demo Settings	Set the S100 to the Counter Mode settings used in the Demo sequence

Measure Mode

Measure Mode uses the S100 to display a measurement as either PWM control or PFM control.

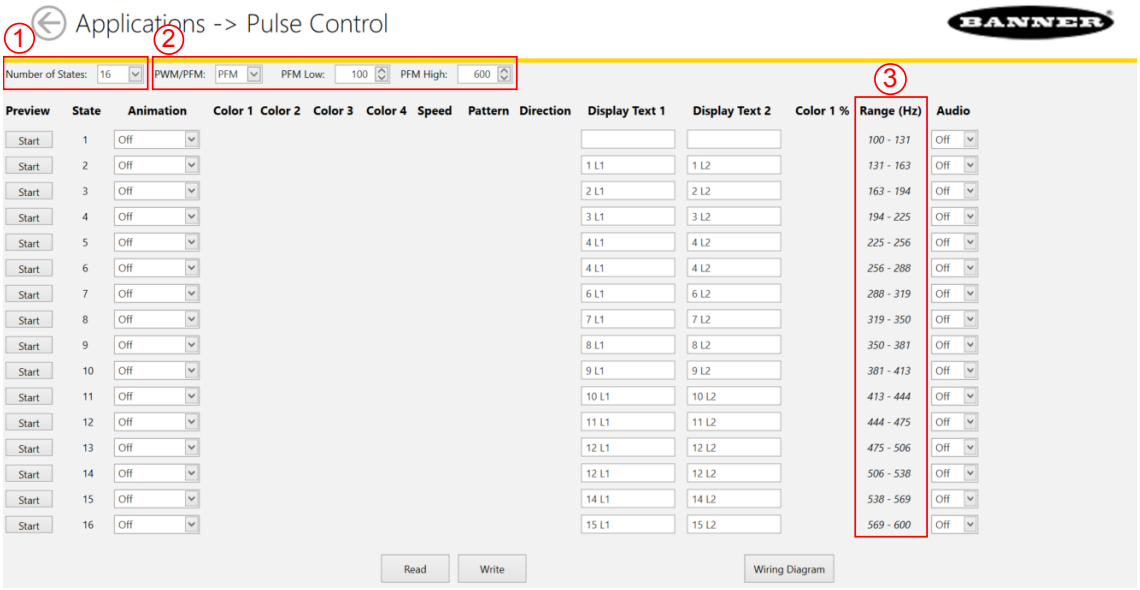


PWM/PFM	PWM: Pulse-Width Modulation. PFM: Pulse-Frequency Modulation.
PWM/PFM Low	The lowest frequency of the input range.
PWM/PFM High	The highest frequency of the input range.
Filter Level	The level of filtering used to minimize the effects of noise on the output.
Hysteresis Level	The level of lag between the measurement thresholds to minimize the flickering at switch 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.

Gauge Mode	Determine if the indicator LEDs will fill proportional to the time. When Gauge Mode is checked, the Background Color and Background Intensity settings are shown and can be configured for Gauge Mode. Threshold colors carry over from below.
Data Label	Text that displays before the Measure value.
Value Label	Text that displays after the Measure value to indicate the units displayed. This can be up to three characters.
Decimal Places	Determine the number of decimal places displayed on the Measure value.
Standard Settings	Reset the S100 to predetermined settings.
Demo Settings	Set the S100 to the Measure Mode settings used in the Demo sequence

Pulse Control

Selecting the Pulse Control tile displays up to sixteen states that correspond to input frequencies on the white wire. The number of states (1) and input characteristics (2) are user-defined. Ranges are calculated (3).



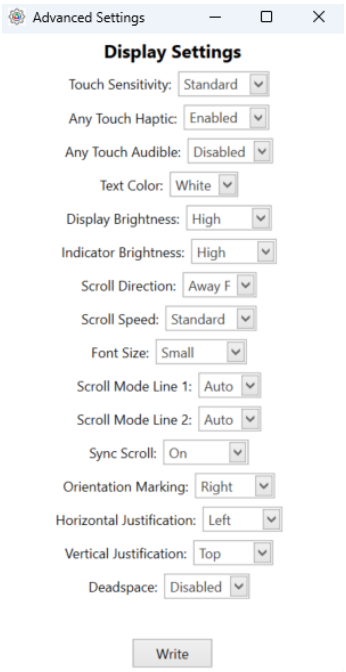
Number of States	Determine the number of states from 1 to 16.
PWM/PFM	Select either PWM (Pulse Width Modulation) or PFM (Pulse Frequency Modulation) as the device's input.
PWM/PFM Low	Determine the low end of the input signal range.
PWM/PFM High	Determine the high end of the input signal range.

Factory Reset

Restore the S100 to default settings.

Display Settings

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



Touch Sensitivity	Control the sensitivity of the touch zones, from Low, Standard, or High.
Any Touch Haptic	Enable haptic feedback for any touch across all modes.
Any Touch Audible	Enable audible feedback for any touch across all modes.
Text Color	Configure the primary text color as either white or black.
Display Brightness	Control the brightness of the display text.
Indicator Brightness	Control the brightness of the indicator LED ring across all modes.
Scroll Direction	Scroll the display text either toward or away from the orientation marking.
Scroll Speed	Control the speed the display text scrolls.
Font Size	Set the size and positioning of the display text. Small: Text is smaller and spread across two stacked lines on the display Large: Text is larger and fills the display on one single line
Scroll Mode Line 1	Auto: Scrolls if the number of characters is greater thansixteen. Off: Does not scroll the display text. On: Scrolls the display text regardless of the number of characters.
Scroll Mode Line 2	
Sync Scroll	Align the first character in both lines of the display as both lines scroll.
Orientation Marking	Determine the position of the orientation marking when installed. The display text automatically adjusts to the correct orientation.
Horizontal Justification	Control the horizontal alignment of the display text: left, right, or center.
Vertical Justification	Control the vertical alignment of the display text: top, bottom, or center.
Deadspace	Enable this setting to add a blank space at the end of the display to separate scrolling text.

Demo Mode

Selecting the Demo tile writes the S100 into Demo Mode, which highlights the various modes available to the device.

Chapter 4 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)

See the electrical characteristics on the product label.

Supply Current

415 mA max. at 12 V DC

210 mA max. at 24 V DC

165 mA max. at 30 V DC

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Maximum Output Current

150 mA

Touch Response Time

300 ms maximum

Connections

Integral 5-pin M12 male quick-disconnect connector

Models require a mating cordset

Operating Temperature

–40 °C to +50 °C (–40 °F to +122 °F)

Storage Temperature

–40 °C to +70 °C (–40 °F to +158 °F)

Environmental Rating

IP66, IP69K per ISO 20653

UL Type 4X

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

Internal silicone-encapsulated LEDs

Smoky polycarbonate window

Character Limit

Small Font: 13 characters per line (26 characters total)

Large Font: 13 characters total

Certifications

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

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	2.0	30	0.5

Mounting

M30 x 1.5 threaded base, maximum torque 4.5 N·m (40 in·lbf)

FCC Part 15 Class B for Unintentional Radiators

(Part 15.105(b)) This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

(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.

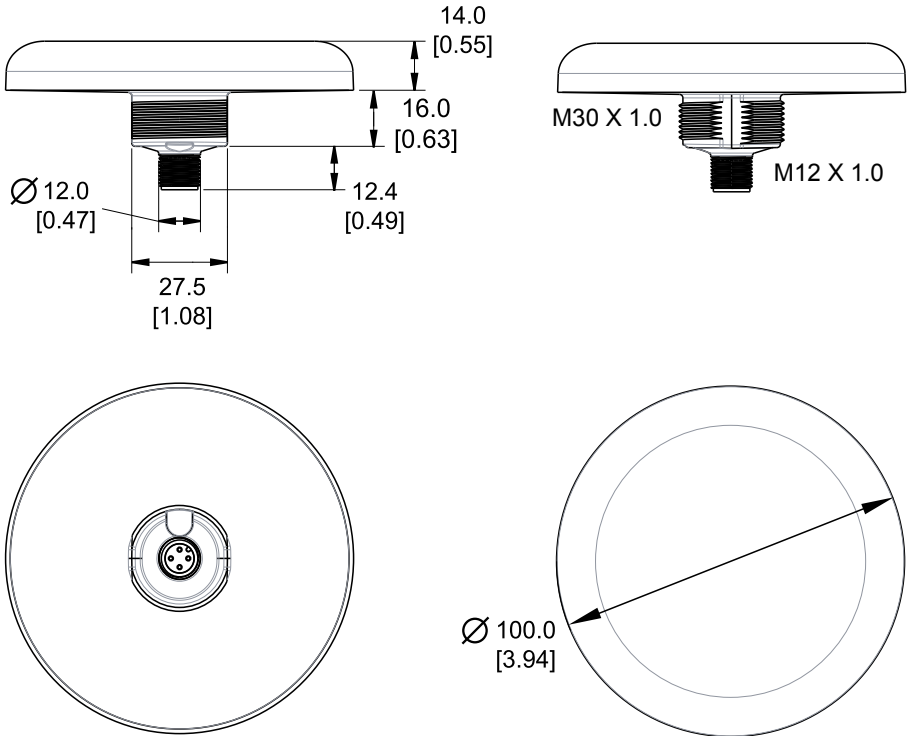
Industry Canada ICES-003(B)

This device complies with CAN ICES-3 (B)/NMB-3(B). 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(B). 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.

Dimensions

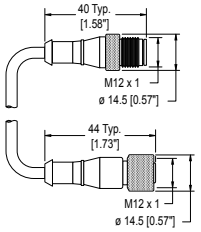
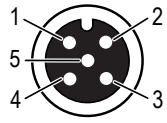
All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

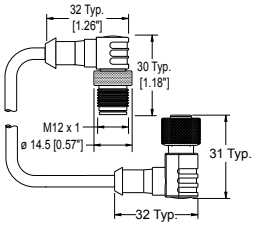
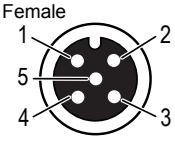


Chapter 5 Accessories

Cordsets

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

5-pin A-Code Double-Ended M12 Female to M12 Male Cordsets (datasheet p/n 236183)				
Model	**Length**	**Dimensions (mm)**	**Pinouts**	
BC-M12F5-M12M5-22-1	1 m (3.28 ft)		Female  Male 	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
BC-M12F5-M12M5-22-2	2 m (6.56 ft)			
BC-M12F5-M12M5-22-5	5 m (16.4 ft)			
BC-M12F5-M12M5-22-8	8 m (26.25 ft)			
BC-M12F5-M12M5-22-10	10 m (30.81 ft)			
BC-M12F5-M12M5-22-15	15 m (49.2 ft)			

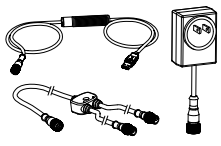
5-pin A-Code Double-Ended M12 Female Right-Angle to M12 Male Right-Angle Cordsets (datasheet p/n 236183)				
Model	**Length**	**Dimensions (mm)**	**Pinouts**	
BC-M12F5A-M12M5A-22-1	1 m (3.28 ft)		Female  Male 	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
BC-M12F5A-M12M5A-22-2	2 m (6.56 ft)			
BC-M12F5A-M12M5A-22-5	5 m (16.4 ft)			
BC-M12F5A-M12M5A-22-8	8 m (26.25 ft)			
BC-M12F5A-M12M5A-22-10	10 m (30.81 ft)			
BC-M12F5A-M12M5A-22-15	15 m (49.2 ft)			

Pro Editor Hardware

PRO-KIT

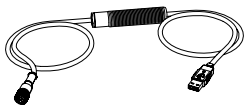
Includes:

- Pro Converter Cable (MQDC-506-USB)
- Splitter (CSB-M1251FM1251M)
- Power Supply (PSW-24-1)



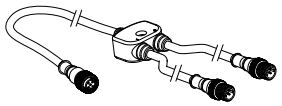
MQDC-506-USB

- Pro Converter Cable
- 1.83 m (6 ft) length 5-pin M12 quick disconnect to Device and USB to PC
- Required for connection to the configuration software



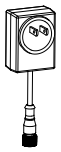
CSB-M1251FM1251M

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



PSW-24-1

- 24 V DC, 1 A power supply
- 2 m (6.5 ft) PVC cable with M12 quick disconnect
- Provides external power with splitter cable, sold separately



Mounting Brackets

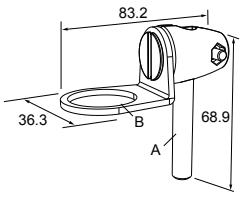
LMB30RAS

- Right-angle bracket for indicator light mounting
- Fits M30 × 2 base
- Stainless steel
- CAD Files: DXF, PDF, IGS, STP

SMB30FA

- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-gauge 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric- and inch-size bolt available
- CAD Files: DXF, PDF, IGS, STP

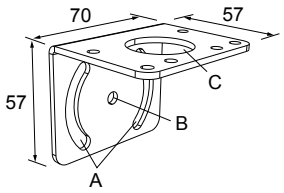
Bolt thread: SMB30FA, A=3/8 - 16 × 2 in; SMB30FAL, A=3/8 - 16 × 4 in; SMB30FAM10, A=M10 - 1.5 × 50
Hole size: B=ø 30.1



SMB30MM

- 12-gauge stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- CAD Files: DXF, PDF, IGS, STP

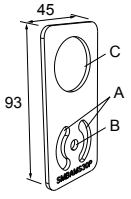
Hole center spacing: A=51, A to B=25.4
Hole size: A=42.6 × 7, B=ø 6.4, C=ø 30.1



SMBAMS30P

- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-gauge 300 series stainless steel
- CAD Files: DXF, PDF, IGS, STP

Hole center spacing: A=26.0, A to B=13.0
Hole size: A=26.8 × 7.0, B=ø 6.5, C=ø 31.0



Chapter 6 Product Support and Maintenance

Encoding Table and Unicode Characters

Unicode Code Point	Character	Name
U+0020		SPACE
U+0021	!	EXCLAMATION MARK
U+0022	"	QUOTATION MARK
U+0023	#	NUMBER SIGN
U+0024	$	DOLLAR SIGN
U+0025	%	PERCENT SIGN
U+0026	&	AMPERSAND
U+0027	'	APOSTROPHE
U+0028	(	LEFT PARENTHESIS
U+0029	)	RIGHT PARENTHESIS
U+002A	*	ASTERISK
U+002B	+	PLUS SIGN
U+002C	,	COMMA
U+002D	-	HYPHEN-MINUS
U+002E	.	FULL STOP
U+002F	/	SOLIDUS
U+0030	0	DIGIT ZERO
U+0031	1	DIGIT ONE
U+0032	2	DIGIT TWO
U+0033	3	DIGIT THREE
U+0034	4	DIGIT FOUR
U+0035	5	DIGIT FIVE
U+0036	6	DIGIT SIX
U+0037	7	DIGIT SEVEN
U+0038	8	DIGIT EIGHT
U+0039	9	DIGIT NINE
U+003A	:	COLON
U+003B	;	SEMICOLON
U+003C	<	LESS-THAN SIGN
U+003D	=	EQUALS SIGN
U+003E	>	GREATER-THAN SIGN
U+003F	?	QUESTION MARK
U+0040	@	COMMERCIAL AT
U+0041	A	LATIN CAPITAL LETTER A
U+0042	B	LATIN CAPITAL LETTER B
U+0043	C	LATIN CAPITAL LETTER C
U+0044	D	LATIN CAPITAL LETTER D

Continued on page 19

Continued from page 18

Unicode Code Point	Character	Name
U+0045	E	LATIN CAPITAL LETTER E
U+0046	F	LATIN CAPITAL LETTER F
U+0047	G	LATIN CAPITAL LETTER G
U+0048	H	LATIN CAPITAL LETTER H
U+0049	I	LATIN CAPITAL LETTER I
U+004A	J	LATIN CAPITAL LETTER J
U+004B	K	LATIN CAPITAL LETTER K
U+004C	L	LATIN CAPITAL LETTER L
U+004D	M	LATIN CAPITAL LETTER M
U+004E	N	LATIN CAPITAL LETTER N
U+004F	O	LATIN CAPITAL LETTER O
U+0050	P	LATIN CAPITAL LETTER P
U+0051	Q	LATIN CAPITAL LETTER Q
U+0052	R	LATIN CAPITAL LETTER R
U+0053	S	LATIN CAPITAL LETTER S
U+0054	T	LATIN CAPITAL LETTER T
U+0055	U	LATIN CAPITAL LETTER U
U+0056	V	LATIN CAPITAL LETTER V
U+0057	W	LATIN CAPITAL LETTER W
U+0058	X	LATIN CAPITAL LETTER X
U+0059	Y	LATIN CAPITAL LETTER Y
U+005A	Z	LATIN CAPITAL LETTER Z
U+005B	[	LEFT SQUARE BRACKET
U+005C	\	REVERSE SOLIDUS
U+005D	]	RIGHT SQUARE BRACKET
U+005E	^	CIRCUMFLEX ACCENT
U+005F	_	LOW LINE
U+0060	`	GRAVE ACCENT
U+0061	a	LATIN SMALL LETTER A
U+0062	b	LATIN SMALL LETTER B
U+0063	c	LATIN SMALL LETTER C
U+0064	d	LATIN SMALL LETTER D
U+0065	e	LATIN SMALL LETTER E
U+0066	f	LATIN SMALL LETTER F
U+0067	g	LATIN SMALL LETTER G
U+0068	h	LATIN SMALL LETTER H
U+0069	i	LATIN SMALL LETTER I
U+006A	j	LATIN SMALL LETTER J
U+006B	k	LATIN SMALL LETTER K
U+006C	l	LATIN SMALL LETTER L
U+006D	m	LATIN SMALL LETTER M
U+006E	n	LATIN SMALL LETTER N

Continued on page 20

Continued from page 19

Unicode Code Point	Character	Name
U+006F	o	LATIN SMALL LETTER O
U+0070	p	LATIN SMALL LETTER P
U+0071	q	LATIN SMALL LETTER Q
U+0072	r	LATIN SMALL LETTER R
U+0073	s	LATIN SMALL LETTER S
U+0074	t	LATIN SMALL LETTER T
U+0075	u	LATIN SMALL LETTER U
U+0076	v	LATIN SMALL LETTER V
U+0077	w	LATIN SMALL LETTER W
U+0078	x	LATIN SMALL LETTER X
U+0079	y	LATIN SMALL LETTER Y
U+007A	z	LATIN SMALL LETTER Z
U+007B	{	LEFT CURLY BRACKET
U+007C	|	VERTICAL LINE
U+007D	}	RIGHT CURLY BRACKET
U+007E	~	TILDE
U+00A0		NO-BREAK SPACE
U+00A1	¡	INVERTED EXCLAMATION MARK
U+00A2	¢	CENT SIGN
U+00A3	£	POUND SIGN
U+00A4	¤	CURRENCY SIGN
U+00A5	¥	YEN SIGN
U+00A6	¦	BROKEN BAR
U+00A7	§	SECTION SIGN
U+00A8	¨	DIAERESIS
U+00A9	©	COPYRIGHT SIGN
U+00AA	ª	FEMININE ORDINAL INDICATOR
U+00AB	«	LEFT-POINTING DOUBLE ANGLE QUOTATION MARK
U+00AC	¬	NOT SIGN
U+00AD		SOFT HYPHEN
U+00AE	®	REGISTERED SIGN
U+00AF	¯	MACRON
U+00B0	°	DEGREE SIGN
U+00B1	±	PLUS-MINUS SIGN
U+00B2	²	SUPERSCRIPT TWO
U+00B3	³	SUPERSCRIPT THREE
U+00B4	´	ACUTE ACCENT
U+00B5	µ	MICRO SIGN
U+00B6	¶	PILCROW SIGN
U+00B7	·	MIDDLE DOT
U+00B8	¸	CEDILLA
U+00B9	¹	SUPERSCRIPT ONE

Continued on page 21

Continued from page 20

Unicode Code Point	Character	Name
U+00BA	º	MASCULINE ORDINAL INDICATOR
U+00BB	»	RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK
U+00BC	¼	VULGAR FRACTION ONE QUARTER
U+00BD	½	VULGAR FRACTION ONE HALF
U+00BE	¾	VULGAR FRACTION THREE QUARTERS
U+00BF	¿	INVERTED QUESTION MARK
U+00C0	À	LATIN CAPITAL LETTER A WITH GRAVE
U+00C1	Á	LATIN CAPITAL LETTER A WITH ACUTE
U+00C2	Â	LATIN CAPITAL LETTER A WITH CIRCUMFLEX
U+00C3	Ã	LATIN CAPITAL LETTER A WITH TILDE
U+00C4	Ä	LATIN CAPITAL LETTER A WITH DIAERESIS
U+00C5	Å	LATIN CAPITAL LETTER A WITH RING ABOVE
U+00C6	Æ	LATIN CAPITAL LETTER AE
U+00C7	Ç	LATIN CAPITAL LETTER C WITH CEDILLA
U+00C8	È	LATIN CAPITAL LETTER E WITH GRAVE
U+00C9	É	LATIN CAPITAL LETTER E WITH ACUTE
U+00CA	Ê	LATIN CAPITAL LETTER E WITH CIRCUMFLEX
U+00CB	Ë	LATIN CAPITAL LETTER E WITH DIAERESIS
U+00CC	Ì	LATIN CAPITAL LETTER I WITH GRAVE
U+00CD	Í	LATIN CAPITAL LETTER I WITH ACUTE
U+00CE	Î	LATIN CAPITAL LETTER I WITH CIRCUMFLEX
U+00CF	Ï	LATIN CAPITAL LETTER I WITH DIAERESIS
U+00D0	Ð	LATIN CAPITAL LETTER ETH
U+00D1	Ñ	LATIN CAPITAL LETTER N WITH TILDE
U+00D2	Ò	LATIN CAPITAL LETTER O WITH GRAVE
U+00D3	Ó	LATIN CAPITAL LETTER O WITH ACUTE
U+00D4	Ô	LATIN CAPITAL LETTER O WITH CIRCUMFLEX
U+00D5	Õ	LATIN CAPITAL LETTER O WITH TILDE
U+00D6	Ö	LATIN CAPITAL LETTER O WITH DIAERESIS
U+00D7	×	MULTIPLICATION SIGN
U+00D8	Ø	LATIN CAPITAL LETTER O WITH STROKE
U+00D9	Ù	LATIN CAPITAL LETTER U WITH GRAVE
U+00DA	Ú	LATIN CAPITAL LETTER U WITH ACUTE
U+00DB	Û	LATIN CAPITAL LETTER U WITH CIRCUMFLEX
U+00DC	Ü	LATIN CAPITAL LETTER U WITH DIAERESIS
U+00DD	Ý	LATIN CAPITAL LETTER Y WITH ACUTE
U+00DE	Þ	LATIN CAPITAL LETTER THORN
U+00DF	ß	LATIN SMALL LETTER SHARP S
U+00E0	à	LATIN SMALL LETTER A WITH GRAVE
U+00E1	á	LATIN SMALL LETTER A WITH ACUTE
U+00E2	â	LATIN SMALL LETTER A WITH CIRCUMFLEX
U+00E3	ã	LATIN SMALL LETTER A WITH TILDE

Continued on page 22

Continued from page 21

Unicode Code Point	Character	Name
U+00E4	ä	LATIN SMALL LETTER A WITH DIAERESIS
U+00E5	å	LATIN SMALL LETTER A WITH RING ABOVE
U+00E6	æ	LATIN SMALL LETTER AE
U+00E7	ç	LATIN SMALL LETTER C WITH CEDILLA
U+00E8	è	LATIN SMALL LETTER E WITH GRAVE
U+00E9	é	LATIN SMALL LETTER E WITH ACUTE
U+00EA	ê	LATIN SMALL LETTER E WITH CIRCUMFLEX
U+00EB	ë	LATIN SMALL LETTER E WITH DIAERESIS
U+00EC	ì	LATIN SMALL LETTER I WITH GRAVE
U+00ED	í	LATIN SMALL LETTER I WITH ACUTE
U+00EE	î	LATIN SMALL LETTER I WITH CIRCUMFLEX
U+00EF	ï	LATIN SMALL LETTER I WITH DIAERESIS
U+00F0	ð	LATIN SMALL LETTER ETH
U+00F1	ñ	LATIN SMALL LETTER N WITH TILDE
U+00F2	ò	LATIN SMALL LETTER O WITH GRAVE
U+00F3	ó	LATIN SMALL LETTER O WITH ACUTE
U+00F4	ô	LATIN SMALL LETTER O WITH CIRCUMFLEX
U+00F5	õ	LATIN SMALL LETTER O WITH TILDE
U+00F6	ö	LATIN SMALL LETTER O WITH DIAERESIS
U+00F7	÷	DIVISION SIGN
U+00F8	ø	LATIN SMALL LETTER O WITH STROKE
U+00F9	ù	LATIN SMALL LETTER U WITH GRAVE
U+00FA	ú	LATIN SMALL LETTER U WITH ACUTE
U+00FB	û	LATIN SMALL LETTER U WITH CIRCUMFLEX
U+00FC	ü	LATIN SMALL LETTER U WITH DIAERESIS
U+00FD	ý	LATIN SMALL LETTER Y WITH ACUTE
U+00FE	þ	LATIN SMALL LETTER THORN
U+00FF	ÿ	LATIN SMALL LETTER Y WITH DIAERESIS

Clean with Mild Detergent and Warm Water

Wipe down the device with a soft cloth dampened with a mild detergent and warm water solution. Do not use any other chemicals for cleaning.

Repairs and Translations (No Field-Replaceable Parts)

English

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.

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IMPORTANT: If instructed to return the device, pack it with care. Damage that occurs in return
shipping is not covered by warranty.
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Obtain assistance with product repairs by contacting your local Banner Engineering Corp distributor or by calling Banner directly at (763) 544-3164. Access literature translated into your native language on the Banner website at www.bannerengineering.com or contact Banner directly at (763) 544-3164.

Deutsch

Wenden Sie sich zur Fehlerbehebung dieses Geräts an Banner Engineering. **Versuchen Sie nicht, Reparaturen an diesem Banner-Gerät vorzunehmen. Das Gerät enthält keine am Einsatzort auszuwechselnden Teile oder Komponenten.** Wenn ein Banner-Anwendungstechniker zu dem Schluss kommt, dass dieses Gerät, ein Teil oder eine Komponente davon defekt ist, erhalten Sie von dem Techniker Erläuterungen zu Banners RMA-Verfahren (Return Merchandise Authorization) für die Warenrückgabe.

WICHTIG: Wenn Sie der Techniker anweist, das Gerät zurückzusenden, verpacken Sie es bitte sorgfältig. Transportschäden bei der Rücksendung werden von der Garantie nicht abgedeckt.

Unterstützung bei Produktreparaturen erhalten Sie von Ihrem örtlichen Banner Engineering Corp Händler oder direkt von Banner unter Tel. (763) 544-3164. Die in Ihre Muttersprache übersetzte Literatur finden Sie auf der Banner-Website unter www.bannerengineering.com oder kontaktieren Sie Banner direkt unter Tel. (763) 544-3164.

Français

Pour plus d'informations sur le dépannage du produit, contactez Banner Engineering. **Ne tentez pas de réparer ce dispositif Banner. Il ne contient aucun composant ou pièce qui puisse être remplacé sur place.** Si un ingénieur de Banner conclut que le dispositif ou l'une de ses pièces ou composants est défectueux, il vous informera de la procédure à suivre pour le retour des produits (RMA).

Important : Si vous devez retourner le dispositif, emballez-le avec soin. Les dégâts occasionnés pendant le transport de retour ne sont pas couverts par la garantie.

Pour vous aider lors de la réparation de produits, contactez votre distributeur Banner local our appelez directement Banner au (763) 544-3164. La documentation traduite dans votre langue est disponible sur le site internet de Banner www.bannerengineering.com ou contactez directement Banner au (763) 544-3164.

Italiano

Per le procedure di individuazione e riparazione dei guasti di questo dispositivo, contattare Banner Engineering. **Non tentare di riparare questo dispositivo Banner, in quanto non contiene parti o componenti sostituibili dall'utente.** Se il dispositivo, una parte del dispositivo o un componente del dispositivo viene riscontrato difettoso da un tecnico Banner, il nostro personale vi comunicherà la procedura da seguire per ottenere l'autorizzazione al reso.

Importante: Se si ricevono istruzioni di rispedire il dispositivo al produttore, imballarlo con cura. I danni dovuti al trasporto non sono coperti dalla garanzia.

Per assistenza nelle riparazioni dei prodotti, contattare il distributore locale Banner Engineering Corp o contattare direttamente Banner al numero (763) 544-3164. È possibile accedere alla documentazione tradotta nella propria lingua madre sul sito Web Banner all'indirizzo www.bannerengineering.com o contattare direttamente Banner al numero (763) 544-3164.

Español

Comuníquese con Banner Engineering para solucionar de problemas de este dispositivo. **No intente ninguna reparación a este dispositivo de Banner, contiene piezas o componente que no se pueden cambiar en terreno.** Si algún ingeniero de aplicaciones de Banner determina que el dispositivo, alguna de las piezas o alguno de los componentes del dispositivo está defectuoso, le informará el procedimiento de autorización de devolución de mercancía (RMA, por sus siglas en inglés) de Banner.

Importante: Si se le solicita devolver el dispositivo, empáquelo con cuidado. Puede haber daños durante el envío de devolución que no estén cubiertos por la garantía.

Para reparaciones de productos, por favor contacte a su distribuidor local de Banner Engineering o llame a Banner directamente al 00 1 (763) 544-3164. Vea la literatura traducida en su idioma en el sitio web Banner en www.bannerengineering.com o comuníquese con Banner directamente al 00 1 (763) 544-3164.

中国人

如需对本装置进行故障排查，请联系邦纳。**请勿尝试自行维修该邦纳装置；本装置不包含任何可在现场更换的部件或组件。** 若经邦纳应用工程师确认设备、设备部件或组件存在缺陷，他们将告知您邦纳退货授权 (RMA) 流程。

重要注意事项： 如被要求退回装置，请妥善包装后寄回。退货运输过程中发生的损坏不在保修范围内。

请联系当地的 Banner Engineering Corp 经销商或直接致电 Banner +1 (763) 544-3164，以获得产品维修帮助。请访问邦纳网站 www.bannerengineering.com 或直接拨打 +1 (763) 544-3164 联系邦纳，获取翻译成您母语的资料。

한국인

이 장치의 문제를 해결하려면 Banner Engineering에 문의하십시오. **이 Banner 장치에는 현장에서 교체할 수 있는 부품 또는 구성품이 없으므로 수리를 시도하지 마십시오.** Banner 애플리케이션 엔지니어가 장치, 장치 부품 또는 장치 구성품에 결함이 있는 것으로 판정하면, Banner의 RMA(제품 반송 승인)절차에 대해 안내해 드립니다.

> **중요:** 제품을 반송하도록 안내 받으셨다면 잘 포장해주십시오. 반송 도중에 발생한 손상은 보증 서비스가 적용되지 않습니다.

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日本語

この装置のトラブルシューティングについては、バナーエンジニアリングにお問い合わせください。**このバナー装置には、現場では交換できない部品またはコンポーネントが含まれているため、修理を試みてはいけません。** バナーのアプリケーションエンジニアが装置、装置の部品、または装置のコンポーネントに欠陥があると判断した場合、バナーのRMA（返品承認）手続きについてお知らせします。

> **重要 ：** 返品を指示された場合は、装置を丁寧に梱包してください。返品時に発生した破損は保証の対象外となります。

製品の修理については、最寄りのBanner Engineering Corp代理店にお問い合わせいただくか、米国+1 (763) 544-3164まで直接お電話でお問い合わせください。バナーのウェブサイト（www.bannerengineering.com）でお客様の言語に翻訳された資料にアクセスするか、米国+1 (763) 544-3164まで直接お電話でお問い合わせください。

čeština

Pro řešení problémů se zařízením kontaktujte společnost Banner Engineering. **Neprovádějte žádné opravy zařízení Banner. Neobsahují žádné komponenty nebo části, které by byly vyměnitelné.** Pokud je zařízení, jeho část nebo díl označen technikem společnosti Banner jako poškozený, bude Vám doporučeno vyplnit reklamační RMA protokol.

> **Důležité:** Pokud byl vydán požadavek na vrácení zařízení, pečlivě ho zabalte. Poškození vzniklé při dopravě není považováno za záruční opravu.

Pokud produkt potřebuje opravu, vyžádejte si pomoc od místního distributora společnosti Banner Engineering Corp nebo přímo na telefonním čísle (763) 544-3164. Dokumentaci přeloženou do vašeho jazyka si vyhledejte na webových stránkách společnosti Banner na adrese www.bannerengineering.com nebo se obraťte přímo na společnost Banner na telefonním čísle (763) 544-3164.

Polski

W celu rozwiązania problemów z urządzeniem należy skontaktować się z działem technicznym firmy Banner Engineering. **Pod żadnym pozorem nie próbuj naprawiać tego urządzenia firmy Banner; nie zawiera ono części ani elementów, które można wymieniać samodzielnie.** Jeśli urządzenie, jego część lub element zostaną uznane za wadliwe przez inżyniera technicznego Banner, poinformuje on użytkownika o firmowej procedurze zwrotu towaru (RMA) firmy Banner.

> **Ważne:** Jeśli urządzenie ma zostać zwrócone, należy je starannie zapakować. Uszkodzenia powstałe podczas odsyłki nie są objęte gwarancją.

Aby uzyskać pomoc w zakresie naprawy produktu, należy skontaktować się z lokalnym dystrybutorem Banner Engineering Corp lub zadzwonić bezpośrednio do firmy Banner pod numer (763) 544-3164. Dostęp do literatury przetłumaczonej na swój język ojczysty można uzyskać na stronie internetowej firmy Banner pod adresem www.bannerengineering.com lub kontaktując się bezpośrednio z firmą Banner pod numerem (763) 544-3164.

Português

Entre em contato com a Engenharia da Banner para a solução de problemas deste dispositivo. **Não tente fazer nenhum reparo neste dispositivo Banner; ele não contém peças ou componentes substituíveis em campo.** Se um técnico de aplicações da Banner determinar que o dispositivo, peça ou componente do dispositivo está com defeito, ele o informará sobre o procedimento de RMA (Autorização de Devolução de Mercadoria) da Banner.

> **Importante:** Se for instruído a devolver o dispositivo, embale-o com cuidado. Os danos ocorridos no transporte de devolução não são cobertos pela garantia.

Obtenha assistência para reparos do produto entrando em contato com o distribuidor local da Banner Engineering Corp ou ligando diretamente para a Banner no telefone (763) 544-3164. Acesse a literatura traduzida para seu idioma nativo no site da Banner em www.bannerengineering.com ou entre em contato diretamente com a Banner pelo telefone (763) 544-3164.

Türkçe

Bu cihazda sorun giderme işlemleri için Banner Engineering ile iletişime geçin. **Bu Banner cihazını onarmaya çalışmayın; cihaz sahada değiştirilebilir parça veya bileşen içermez.** Bir Banner Uygulama Mühendisi tarafından cihazın, cihazın bir parçasının veya bir cihaz bileşeninin kusurlu olduğu tespit edilirse, Banner RMA (İade Mal Yetkilendirme) prosedürü hakkında bilgilendirilirsiniz.

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ÖNEMLİ: İade etmeniz istenirse, cihazı dikkatli bir şekilde paketleyin. İade nakliyesinde
meydana gelecek hasarlar garanti kapsamında değildir.
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Yerel Banner Engineering Corp distribütörünüzle iletişime geçerek veya doğrudan (763) 544-3164 numaralı telefondan Banner'ı arayarak ürün onarımlarıyla ilgili yardım alın. Ana dilinize çevrilmiş dokümanlara www.bannerengineering.com adresindeki Banner web sitesinden erişebilir veya (763) 544-3164 numaralı telefondan doğrudan Banner ile iletişime geçebilirsiniz.

Contact Us

Banner Engineering Corp. | 9714 Tenth Avenue North | Plymouth, MN 55441, USA | Phone: + 1 888 373 6767

For worldwide locations and local representatives, visit www.bannerengineering.com.

Banner Engineering Corp Limited Warranty

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