R50C-L-MDR-KQ IO-Link Motor Driven Roller Controller Product Manual

Original Instructions
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ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

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Chapter 1 Features



- Efficiently control motor-driven rollers from a PLC using IO-Link communication
- Simplify installation of multiple R50Cs on a conveyor using M12 connectors and motor power connections in series
- Compact bimodal to IO-Link device converter that reports and controls two channels of discrete inputs/outputs, and an analog output voltage value (0 V DC to 18 V DC) via IO-Link process data
- User-configurable alarms for undervoltage, overvoltage, motor current, motor short circuit, R50C board temperature, and motor run time
- Enabled Delay Modes: Ramp On, Ramp Off, ON/OFF Delay, ON/OFF One-shot, ON/OFF/Retriggerable One-shot, ON/OFF Pulse-stretcher and Totalizer
- Measurement Metrics: Motor Run Time, Count, Counts Per Minute (CPM), and Duration
- Discrete input/output can be independently configured as NPN or PNP
- M12 L-Code power pass-through
- Rugged over-molded design meets IP65, IP67, and IP68

Model

Model Name	Function	Control	Connectors
R50C-L-MDR-KQ	L-Code ports with bimodal function: 2 inputs, 2 outputs, and an analog voltage output	IO-Link	(1) Pair of integral 5-pin M12 A-Code male/female quick-disconnect connectors and (1) Pair of integral 5-pin M12 L-Code male/female quick-disconnect connectors

Overview

Motor Driven Rollers (MDR) are used to control product flow through a conveyor line. They are normally connected to multiple idler rollers to make up a zone of conveyance. This design creates a modular and controllable conveyor system, often used in material handling applications.

With two discrete channels that can be configured as inputs or outputs, the R50C-L-MDR-KQ allows for precise control over start/stop functions, direction, and error conditions in motor-driven roller systems. The 0–18 volt analog output ensures accurate speed control for both standard and high-speed motor-driven roller systems. LED indicators provide clear status monitoring and facilitate troubleshooting, ensuring smooth and efficient operation.

The use of compact sealed M12 connectors and motor power connections in series simplifies the installation process, making it easy to set up multiple R50Cs on a conveyor. The M12 L-coded connections support higher current demands and share up to 16 amps of power, delivering more power while occupying less space than traditional connectors.

The IP67-rated fully-sealed housing and -40° C to 70° C operating range make the R50C suitable for use in challenging environments without the need for additional protective enclosures. This robustness ensures reliability and longevity in harsh conditions.

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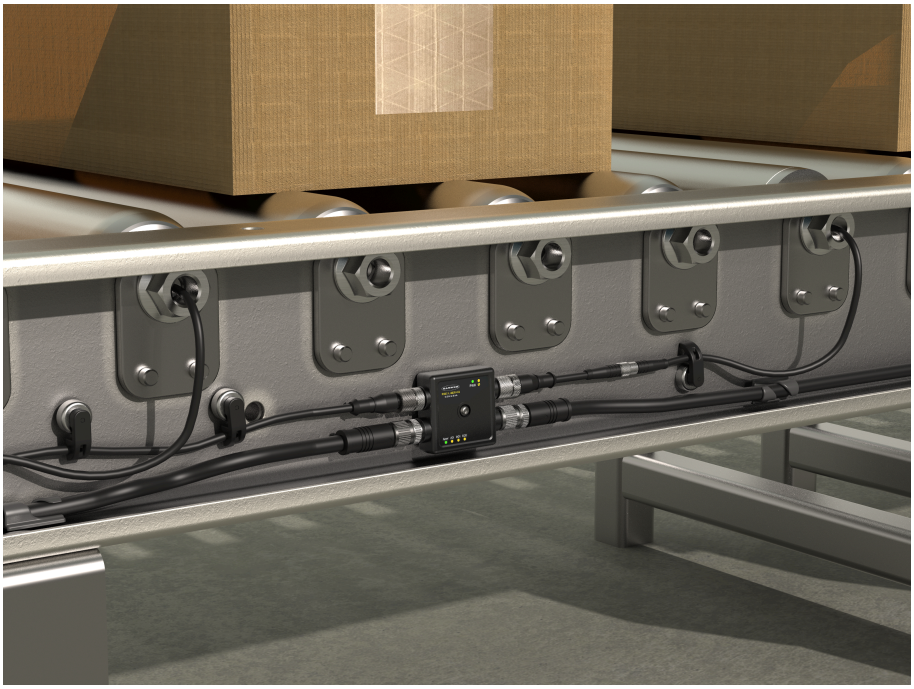
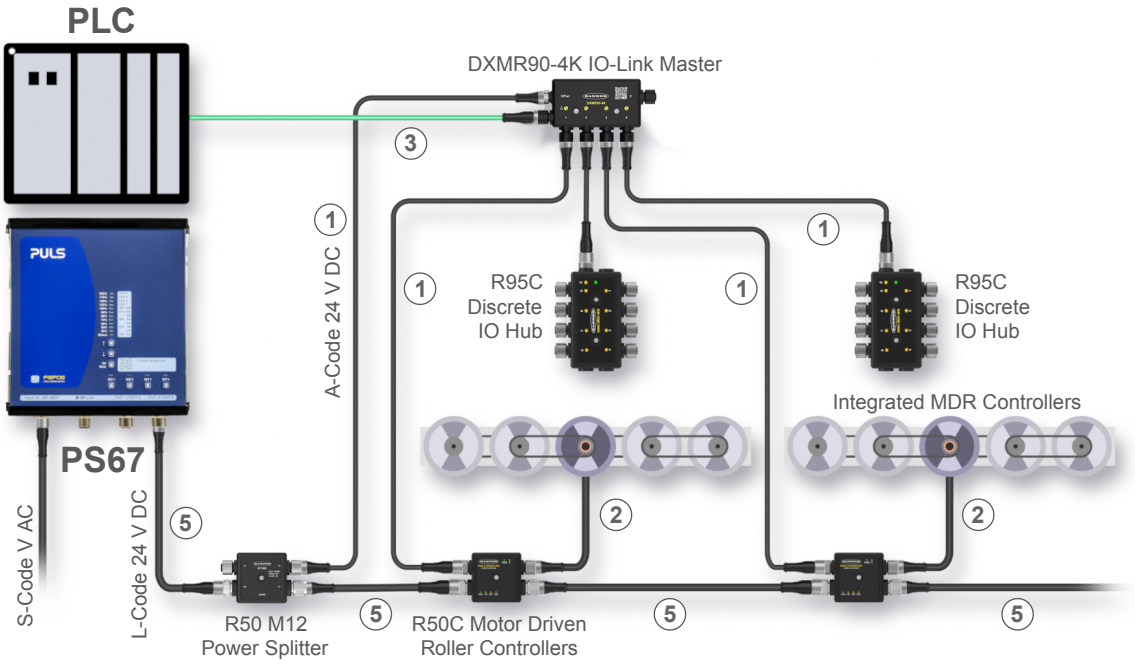


Example Setup

The following is a diagram of an example setup for the R50C, along with a list of devices used in the setup.



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DXMR90-4K IO-Link Master

- Allows PLC communication with MDR controller via IO-Link process data
- Four dedicated IO-Link client ports allow communication with multiple motor driver roller controllers



R50-2M125L-M125-P
M12 Power Junction Block



R50-M12LM5-M12LF5- 2M12F5-P13
R50 M12 Power Splitter

L-Code Pass-Through with A-Code Power Drops



R50T-2M125L-M125-P
M12 Tee Power Junction Block



4-Pin M12 Double-Ended (1)
Straight connector models for device power and communications

- **BC-M12F4-M12M4-22-2**: 2 m (6.5 ft)
- **BC-M12F4-M12M4-22-5**: 5 m (16.4 ft)
- **BC-M12F4-M12M4-22-10**: 10 m (32.8 ft)



5-Pin M12 to M8 Double-Ended (2)
Straight connector models for connection between R50C MDR controller and motor driven roller

- **BC-M8F5B-M12M5-24-0.5**: 0.5 m (1.6 ft)
- **BC-M8F5B-M12M5-24-1**: 1 m (3.2 ft)
- **BC-M8F5B-M12M5-24-2**: 2 m (6.5 ft)



4-Pin D-Code M12 to RJ45 Double-ended (3)
Straight connector models for Ethernet connection on DXMR90-X1E

- **STP-M12D-403**: 0.9 m (2.9 ft)
- **STP-M12D-406**: 1.83 m (6 ft)
- **STP-M12D-415**: 4.57 m (15 ft)
- **STP-M12D-430**: 9.14 m (30 ft)



4-Pin M12 D-Code Double-Ended (4)
Straight connector models for Ethernet connections between DXMR90-X1E controllers

- **BCD-M12DM-M12DM-2M**: 2 m (6.5 ft)
- **BCD-M12DM-M12DM-5M**: 5 m (16.4 ft)
- **BCD-M12DM-M12DM-10M**: 10 m (32.8 ft)



5-Pin M12 L-Code Double-Ended (5)
Straight connector models for high amp power connections between R50C MDR controllers

- **BCP-M12LF5-M12LM5-14-2**: 2 m (6.5 ft)
- **BCP-M12LF5-M12LM5-14-10**: 10 m (32.8 ft)
- **BCP-M12LF5-M12LM5-14-15**: 15 m (49.2 ft)



5-Pin M12 L-Code Single-Ended
Straight connector models for high amp power connections to R50C MDR controllers

- **BCP-M12LF5-14-2**: 2 m (6.5 ft)
- **BCP-M12LF5-14-5**: 5 m (16.4 ft)
- **BCP-M12LF5-14-10**: 10 m (32.8 ft)

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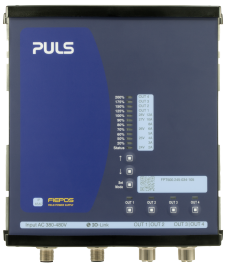

Features	PS67K-1S-24L-150: 1-Phase IP67 Power Supply	PS67K-3S-24L-250: 3-Phase IP67 Power Supply
Input Voltage	100 V AC to 240 V AC	380 V AC to 480 V AC
Output Voltage	24 V DC	24 V DC
Output Current	15 A	25 A
Input Connector	M12 S-Code	M12 S-Code
Output Connectors	2x M12 L-Code	2x M12 L-Code

For more information on product accessories, see "Accessories" on page 18.

Motor-Driven Rollers with Supported I/O Interfaces

Based on published electrical and interface specifications, the R50C can provide the control signals required by the motor-driven roller families listed below. This indicates I/O interface compatibility only and does not constitute validation of roller or conveyor performance in a specific application.

- Itoh Denki PM- XE, XP
- Itoh Denki PM- XC
- Interoll EC310
- Interoll EC5000
- PulseRoller Senergy IDC
- Lenze MDR o450
- Rulmeca BL3
- Johnson Controls True Drive

Application Validation Required: Motor current and operating characteristics may vary by roller model, configuration, mechanical load, acceleration and deceleration settings, duty cycle, installation, and other application conditions, and may differ from the roller manufacturer’s published specifications. The system designer or end user must test the selected motor-driven roller with the R50C under all expected operating conditions and verify that actual electrical requirements remain within the R50C specifications. Banner does not warrant or guarantee the performance, suitability, or application compatibility of third-party motor-driven rollers.

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Chapter 2 IO-Link®

IO-Link® is a point-to-point communication link between a master device and a sensor and/or light. It can be used to automatically parameterize sensors or lights and to transmit process data. For the latest IO-Link protocol and specifications, please visit www.io-link.com.

For the latest IODD files, please refer to the Banner Engineering Corp website at: www.bannerengineering.com.

IO-Link Data Map

This document refers to the following IODD file: Banner_Engineering-R50C-MDR-KQ-20250131-IODD1.1-en.xml.

The IODD file and support files can be found on www.bannerengineering.com under the download section of the product family page.

Communication Parameters

The following communication parameters are used.

Parameter	Value
IO-Link revision	V1.1.4
Process Data In length	32-bits
Process Data Out length	32-bits
Bit Rate	38400 bps
Minimum cycle time	4 ms
Port class	A
SIO mode	Yes
Smart sensor profile	No
Block parameterization	Yes
Data Storage	Yes
Device ID	659479 (0x0a1017)

IO-Link Process Data In (Device to Master)

Subindex	Name	Number of Bits	Data Values
1	MDR Short Circuit	1	false = Inactive, true = Active
2	MDR Overcurrent	1	false = Current below limit, true = Current above limit
3	MDR Overvoltage	1	false = Voltage within Range, true = Voltage above Range
4	MDR Undervoltage	1	false = Voltage within Range, true = Voltage below Range
5	Block Temperature	1	false = Temp below limit, true = Temp above limit
6	Aux Power	1	false = No Aux Power, true = Aux Power Present
7	Pin 2 - Channel 2	1	false = Inactive, true = Active
8	Pin 4 - Channel 1	1	false = Inactive, true = Active
9	Pin 5 - Analog Value	16	

Octet 0								
Subindex	31	30	29	28	27	26	25	24
Bit Offset	-	-	1	2	3	4	5	6

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Octet 1								
Subindex	23	22	21	20	19	18	17	16
Bit Offset	-	-	-	-	-	-	7	8

Octet 2								
Subindex	15	14	13	12	11	10	9	8
Bit Offset	9	9	9	9	9	9	9	9

Octet 3								
Subindex	7	6	5	4	3	2	1	0
Bit Offset	9	9	9	9	9	9	9	9

IO-Link Process Data Out (Master to Device)

Subindex	Name	Number of Bits	Data Values
1	Motor Current Fault Reset	1	false = No action, true = Reset
2	Pin 2 - Channel 2 Control	1	false = Inactive, true = Active
3	Pin 4 - Channel 1 Control	1	false = Inactive, true = Active
4	Pin 5 - Analog Output Control (mV)	16	

Octet 0								
Subindex	31	30	29	28	27	26	25	24
Bit Offset	-	-	-	-	-	-	-	1

Octet 1								
Subindex	23	22	21	20	19	18	17	16
Bit Offset	-	-	-	-	-	-	2	3

Octet 2								
Subindex	15	14	13	12	11	10	9	8
Bit Offset	4	4	4	4	4	4	4	4

Octet 3								
Subindex	7	6	5	4	3	2	1	0
Bit Offset	4	4	4	4	4	4	4	4

Parameters Set Using IO-Link

These parameters can be read from and/or written to an R50C-L-MDR-KQ device. Also included is information about whether the variable in question is saved during Data Storage and whether the variable came from the IO-Link Smart Sensor Profile. Unlike Process Data In, which is transmitted from the IO-Link device to the IO-Link master cyclically, these parameters are read or written acyclically as needed.

Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
0	1-16	Direct Parameter Page 1 (incl. Vendor ID & Device ID)				ro	

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Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
2		System Command		126 = Locator Start 127 = Locator Stop 129 = Application Reset 131 = Back-to-box 164 = Reset All Metrics		wo	
3-15		*reserved by IO-Link Specification*					
16		Vendor Name string		Banner Engineering Corporation		ro	
17		Vendor Text string		More Sensors. More Solutions.		ro	
18		Product Name string		R50C-MDR-KQ		ro	
19		Product ID string		R50C-MDR-KQ		ro	
20		Product Text string		R50C-MDR-KQ		ro	
21		Serial Number				ro	
23		Firmware Version				ro	
24		App Specific Tag (user-defined)				rw	y
25		Function Tag					
26		Location Tag					
32		Error Count	16-bit integer			ro	
36		Device Status	8-bit integer	0 = Device is OK, 1 = Maintenance required 2 = Out of specification 3 = Functional check 4 = Failure 5..255 Reserved		ro	
37		Detailed Device Status	Array[6] of 3-octet	List of all currently pending events in the device		ro	
38-39		*reserved*					
40		Process Data Input		see Process Data In		ro	
41		Process Data Output		see Process Data Out		ro	
42-57		*unused/reserved*					
69		**All-Time Run Time**					
69	1	Run counter	32-bit Uinteger	0..2147483647		ro	y
70		**Resettable Run Time**					
70	1	Run counter	32-bit Uinteger	0..2147483647	0	rw	
81		Input Configuration	8-bit integer	0 = BannerBus, 1 = Discrete Output	0	rw	y
82		**Port1 Configuration**					
82	1	Discrete1 IO Selection	8-bit integer	0 = NPN Input 1 = PNP Input 2 = NPN Output with Pull Up 3 = PNP Output with Pull Down 4 = NPN Output Push Pull 5 = PNP Output Push Pull	1	rw	y

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Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
82	2	Discrete1 Delay Mode	8-bit integer	0 = Disabled 1 = On Off Delay 2 = On One-shot 3 = Off One-shot	0	rw	y
82	3	Discrete1 Delay Timer 1	32-bit Integer		0	rw	y
82	4	Discrete1 Delay Timer 2	32-bit Integer		0	rw	y
82	5	Discrete2 IO Selection	8-bit integer	0 = NPN Input 1 = PNP Input 2 = NPN Output with Pull Up 3 = PNP Output with Pull Down 4 = NPN Output Push Pull 5 = PNP Output Push Pull	3	rw	y
82	6	Discrete2 Delay Mode	8-bit integer	0 = Disabled 1 = On Off Delay 2 = On One-shot 3 = Off One-shot	0	rw	y
82	7	Discrete2 Delay Timer 1	32-bit Integer		0	rw	y
82	8	Discrete2 Delay Timer 2	32-bit Integer		0	rw	y
83		**Block Configuration**					
83	1	Temperature High Setpoint	16-bit Integer		20000	rw	y
83	2	Temperature Scale	8-bit UInteger	0 = °F, 1 = °C	0	rw	y
83	3	Undervoltage Alarm Setpoint	16-bit Integer		18000	rw	y
83	4	Overvoltage Alarm Setpoint	16-bit Integer		28000	rw	y
83	5	Analog Fix Speed Setting	16-bit Integer		0	rw	y
84		**Motor Control Configuration**					
84	1	Motor Power Enable	8-bit UInteger	0 = Disabled, 1 = Enabled	1	rw	y
84	2	Maximum Analog Setting	16-bit Integer		10200	rw	y
84	3	Maximum Current Setting	16-bit Integer		4000	rw	y
84	4	Current In-Rush Delay Setting	16-bit Integer		20	rw	y
84	5	Ramp On Delay	16-bit Integer		0	rw	y
84	6	Ramp Off Delay	16-bit Integer		0	rw	y
85		**Monitoring**					
85	1	Temperature Fahrenheit Reading	Float32			ro	
85	2	Temperature Celsius Reading	Float32			ro	
85	3	Block Voltage Reading	Float32			ro	
85	4	Current Reading	Float32			ro	
86		**Selectable Metric Reset**					
86	1	Port1 Discrete1	Boolean	false = Do Not Reset, true = Reset	FALSE	rw	
86	2	Port1 Discrete2	Boolean	false = Do Not Reset, true = Rese	FALSE	rw	
86	3	Port1 Discrete1 Reset Count	32-bit Integer	0..2147483647	0	rw	
86	4	Port1 Discrete2 Reset Count	32-bit Integer	0..2147483647	0	rw	
87		**IO Metrics Port 1**					
87	1	Port1 Discrete 1 Count	32-bit Uinteger			ro	
87	2	Port1 Discrete 1 Duration	32-bit Uinteger			ro	

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Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
87	3	Port1 Discrete 1 Events per Minute	32-bit Uinteger			ro	
87	4	Port1 Discrete 1 Totalizer Counter	32-bit Uinteger			ro	
87	5	Port1 Discrete 2 Count	32-bit Uinteger			ro	
87	6	Port1 Discrete 2 Duration	32-bit Uinteger			ro	
87	7	Port1 Discrete 2 Events per Minute	32-bit Uinteger			ro	
87	8	Port1 Discrete 2 Totalizer Counter	32-bit Uinteger			ro	
88		**Motor Run Time Configuration**					
88	1	Motor Current ON Setting	16-bit Uinteger		50	ro	
88	2	Resettable Motor Run Time	32-bit Uinteger	0..2147483647	0	ro	

IO-Link Events

Events are acyclic transmissions from the IO-Link device to the IO-Link master. Events can be error messages and/or warning or maintenance data.

Code	Type	Name	Description
0 (0x0000)	Notification	No malfunction	
20480 (0x5000)	Error	Device hardware fault	Exchange device

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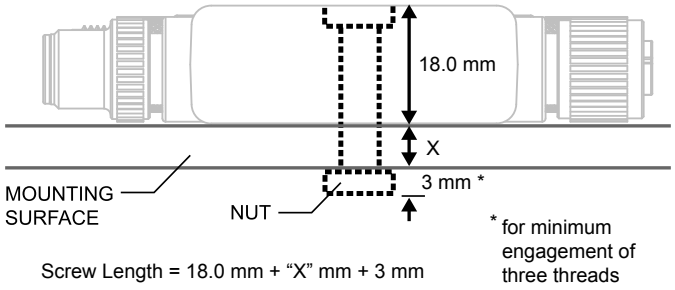
Chapter 3 Mechanical Installation

Install the R50C to allow access for functional checks, maintenance, and service or replacement. Do not install the R50C in such a way to allow for intentional defeat.

Fasteners must be of sufficient strength to guard against breakage. The use of permanent fasteners or locking hardware is recommended to prevent the loosening or displacement of the device. The mounting hole (4.5 mm) in the R50C accepts M4 (#8) hardware.

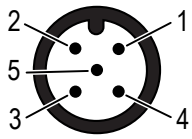
See the figure below to help in determining the minimum screw length.

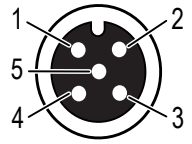


CAUTION: Do not overtighten the R50C's mounting screw during installation. Overtightening can affect the performance of the R50C.

Wiring

A-Code Male and Female Pinouts

IO-Link - Male	Pin	Signal Description
	1	18 V DC to 30 V DC
	2	Not used
	3	GND
	4	IO-Link
	5	Not used

Motor Driven Roller (MDR) - Female	Pin	Signal Description
	1	12 V DC to 30 V DC (supplied from Aux L-Code M12 Power)
	2	Discrete Channel 2
	3	GND
	4	Discrete Channel 1
	5	Analog Out

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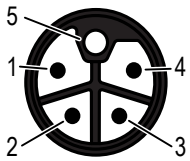
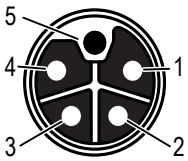
L-Code Male and Female Pinouts (16A)

Male Pinout	Female Pinout	Pin	Wire Color	Signal Description
		1	Brown	+24 V DC
		2	White	GND
		3	Blue	GND
		4	Black	+24 V DC
		5	Gray	FE

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Chapter 4 Status Indicators

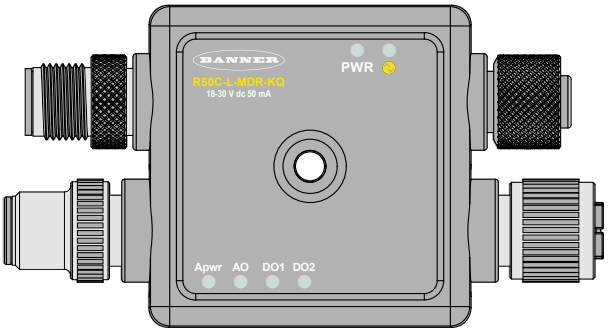
The R50C has matching LED indicators on both sides of the converter to allow for installation needs, while still providing adequate indication visibility.

There are two pairs of green LEDS:

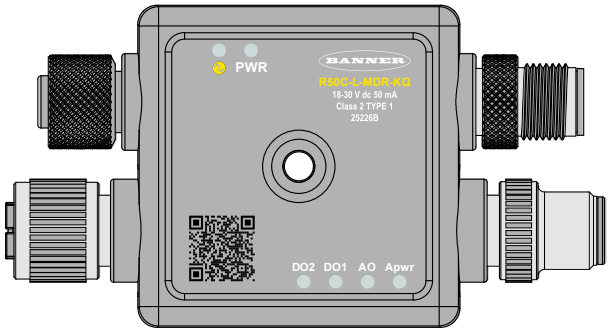
- PWR: A-Code power indication
- APwr: L-Code power indication

Additionally, there are four pairs of amber LEDs:

- : IO-Link communications
- AO: Analog Out
- D1: Discrete Channel 1 (Pin 4)
- D2: Discrete Channel 2 (Pin 2)



front



back

A-Code Power Indicator Green LEDs

Indication	Status
Off	Power off
Solid Green	Power on

L-Code Power Indicator Green LEDs

Indication	Status
Off	L-Code power is off or not attached
Solid Green	L-Code power is on or active

IO-Link Communications Amber LEDs

Indication	Status
Off	IO-Link communications are not present
Flashing Amber (900 ms ON, 100 ms OFF)	IO-Link communications are active

Analog Out Amber LEDs

Indication	Status
Off	Analog output value is outside the allowable output range (0 V DC to 18 V DC)
Solid Amber	Analog output value is inside the allowable output range (0 V DC to 18 V DC)

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Discrete Channel 1 and Discrete Channel 2 Amber LEDs

Indication	Status
Off	Discrete is inactive
Solid Amber	Discrete is active

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Chapter 5 Specifications

Supply Voltage: A-Code M12 male connector
18 V DC to 30 V DC at 400 mA maximum

Aux Supply Voltage: L-Code M12 male connector
12 V DC to 30 V DC

Power Pass-Through Current
16 A maximum

Discrete Output Load Rating
185 mA

Analog Output Load Requirements
Resistance > 1000 Ω

Supply Protection Circuitry
Protected against reverse polarity and transient voltages

Leakage Current Immunity
400 µA

Indicators
See Status Indicators

Connections
(1) Integral 5-pin A-Code M12 female quick-disconnect connector

(1) Integral 5-pin A-Code M12 male quick-disconnect connector

(1) Integral 5-pin L-Code M12 female quick-disconnect connector

(1) Integral 5-pin L-Code M12 male quick-disconnect connector

Construction
Coupling Material: Nickel-plated brass

Connector Body: PVC translucent black

Vibration and Mechanical Shock
Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55 Hz, 0.5 mm amplitude, 5 minutes sweep, 30 minutes dwell)

Meets IEC 60068-2-27 requirements (Shock: 15G 11 ms duration, half sine wave)

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

Product Identification

SNAP SIGNAL®

Environmental Rating
IP65, IP67, IP68

Operating Conditions
Temperature: –40 °C to +70 °C (–40 °F to +158 °F)

90% at +70 °C maximum relative humidity (non-condensing)

Storage Temperature: –40 °C to +80 °C (–40 °F to +176 °F)

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

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.

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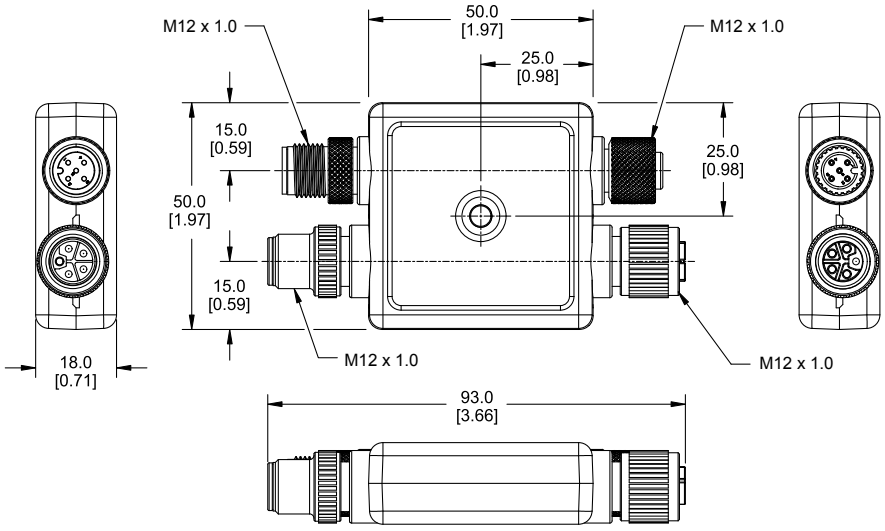
Industry Canada ICES-003(B)

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.



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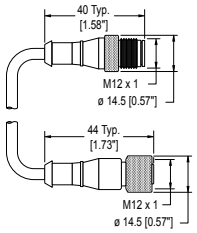
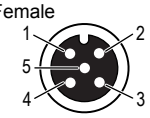
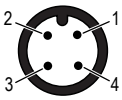
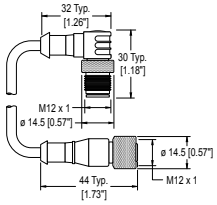
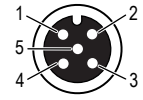
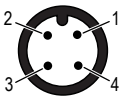
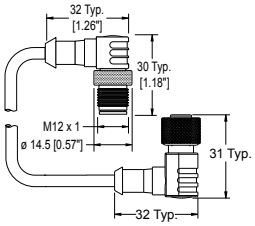
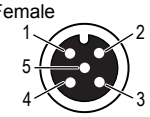
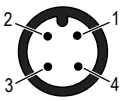
Chapter 6 Accessories

Cordsets

4-Pin A-Code Double-Ended M12 Female to M12 Male Cordsets (datasheet p/n 236186)				
Model	**Length**	**Dimensions (mm)**	**Pinouts**	
BC-M12F4-M12M4-22-1	1 m (3.28 ft)		Female  Male 	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Unused cULus LISTED
BC-M12F4-M12M4-22-2	2 m (6.56 ft)			
BC-M12F4-M12M4-22-3	3 m (9.84 ft)			
BC-M12F4-M12M4-22-4	4 m (13.12 ft)			
BC-M12F4-M12M4-22-5	5 m (16.4 ft)			
BC-M12F4-M12M4-22-10	10 m (30.81 ft)			
BC-M12F4-M12M4-22-15	15 m (49.2 ft)			

4-Pin A-Code Double-Ended M12 Female to M12 Male Right-Angle Cordsets (datasheet p/n 236186)				
Model	**Length**	**Dimensions (mm)**	**Pinouts**	
BC-M12F4-M12M4A-22-1	1 m (3.28 ft)		Female  Male 	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Unused cULus LISTED
BC-M12F4-M12M4A-22-2	2 m (6.56 ft)			
BC-M12F4-M12M4A-22-5	5 m (16.4 ft)			
BC-M12F4-M12M4A-22-8	8 m (26.25 ft)			
BC-M12F4-M12M4A-22-10	10 m (30.81 ft)			
BC-M12F4-M12M4A-22-15	15 m (49.2 ft)			

4-Pin A-Code Double-Ended M12 Female Right-Angle to M12 Male Right-Angle Cordsets (datasheet p/n 236186)				
Model	**Length**	**Dimensions (mm)**	**Pinouts**	
BC-M12F4A-M12M4A-22-0.3	0.3 m (1 ft)		Female  Male 	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Unused cULus LISTED
BC-M12F4A-M12M4A-22-1	1 m (3.28 ft)			
BC-M12F4A-M12M4A-22-2	2 m (6.56 ft)			
BC-M12F4A-M12M4A-22-5	5 m (16.4 ft)			
BC-M12F4A-M12M4A-22-8	8 m (26.25 ft)			
BC-M12F4A-M12M4A-22-10	10 m (30.81 ft)			
BC-M12F4A-M12M4A-22-15	15 m (49.2 ft)			

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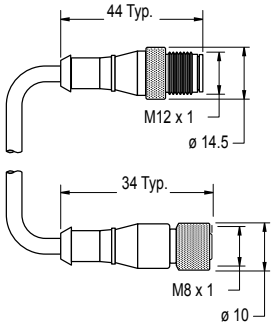
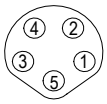
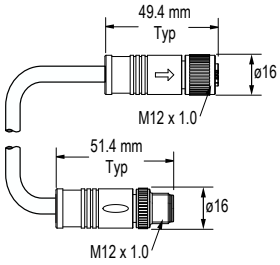
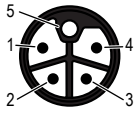
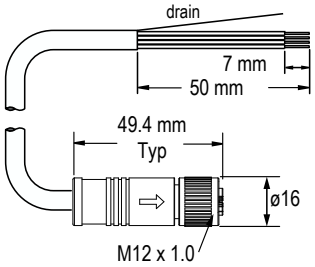
5-Pin Double-Ended M8 B-Code Female to M12 A-Code Male Cordset (datasheet p/n 242461)				
Model	**Length**	**Dimensions (mm)**	**Pinout (M8 Female B-Code)**	**Pinout (M12 Male A-Code)**
BC-M8F5B-M12M5-24-0.5	0.5 m (1.64 ft)		 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray	 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
BC-M8F5B-M12M5-24-1	1 m (3.28 ft)			
BC-M8F5B-M12M5-24-2	2 m (6.56 ft)			

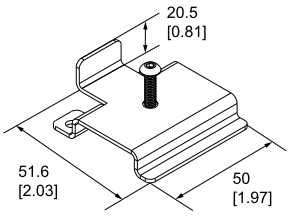
5-Pin L-Code Double-Ended M12 Female to M12 Male Cordsets (datasheet p/n 242456)				
Model	**Length**	**Dimensions (mm)**	**Pinout (Female)**	**Pinout (Male)**
BCP-M12LF5-M12LM5-14-1	1 m (3.28 ft)		 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Yellow/Green Shell = Braid	 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Yellow/Green Shell = Braid
BCP-M12LF5-M12LM5-14-2	2 m (6.56 ft)			
BCP-M12LF5-M12LM5-14-5	5 m (16.4 ft)			
BCP-M12LF5-M12LM5-14-10	10 m (32.8 ft)			
BCP-M12LF5-M12LM5-14-15	15 m (49.2 ft)			
BCP-M12LF5-M12LM5-14-20	20 m (65.6 ft)			

5-Pin L-Code Single-Ended M12 Female Cordsets (datasheet p/n 242454)				
Model	**Length**	**Dimensions (mm)**	**Pinout (Female)**	
BCP-M12LF5-14-1	1 m (3.28 ft)			1 = Brown 2 = White 3 = Blue 4 = Black 5 = Yellow/Green Shell = Braid
BCP-M12LF5-14-2	2 m (6.56 ft)			
BCP-M12LF5-14-5	5 m (16.4 ft)			
BCP-M12LF5-14-10	10 m (32.8 ft)			
BCP-M12LF5-14-15	15 m (49.2 ft)			
BCP-M12LF5-14-20	20 m (65.6 ft)			

Brackets

SMBR50

- R50 flat mount bracket
- M4 x 0.7 mm
- CAD Files: DXF, PDF, IGS, STP



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Splitters

Model	Housing	Power Connections	Power Drops	Wiring
R50-M12LM5-M12LF5-2M12F5-P13	4-Port Molded Junction Box	1 x L-code male M12 1 x L-code female M12	2 x A-code female M12	V+, V- power distribution

Model	Female Ports	Male Input Port	Wiring
R50-2M125L-M125-P	Two 5-pin L-code M12 female quick-disconnect connectors, oriented in-line	One 5-pin M12 L-Code male quick-disconnect connector	Parallel
R50T-2M125L-M125-P	Two 5-pin L-code M12 female quick-disconnect connectors, oriented in a tee		

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Chapter 7 Product Support and Maintenance

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.

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

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.

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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.

제품 수리에 대한 지원은 지역 Banner Engineering Corp 대리점에 문의하거나 Banner에 직접 (763) 544-3164로 문의하실 수 있습니다. 사용자의 모국어로 번역된 자료는 Banner 웹사이트 www.bannerengineering.com에서 액세스하거나 Banner에 직접 (763) 544-3164로 문의하실 수 있습니다.

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.

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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.

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