

R50C-L-MDR-MQ 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 Modbus communication
- Simplify installation of multiple R50Cs on a conveyor using M12 connectors and motor power connections in series
- Compact bimodal to Modbus® 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 register settings on a Modbus RTU server
- 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-MQ	L-Code ports with bimodal function: 2 inputs, 2 outputs, and an analog voltage output	Modbus®	(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-MQ 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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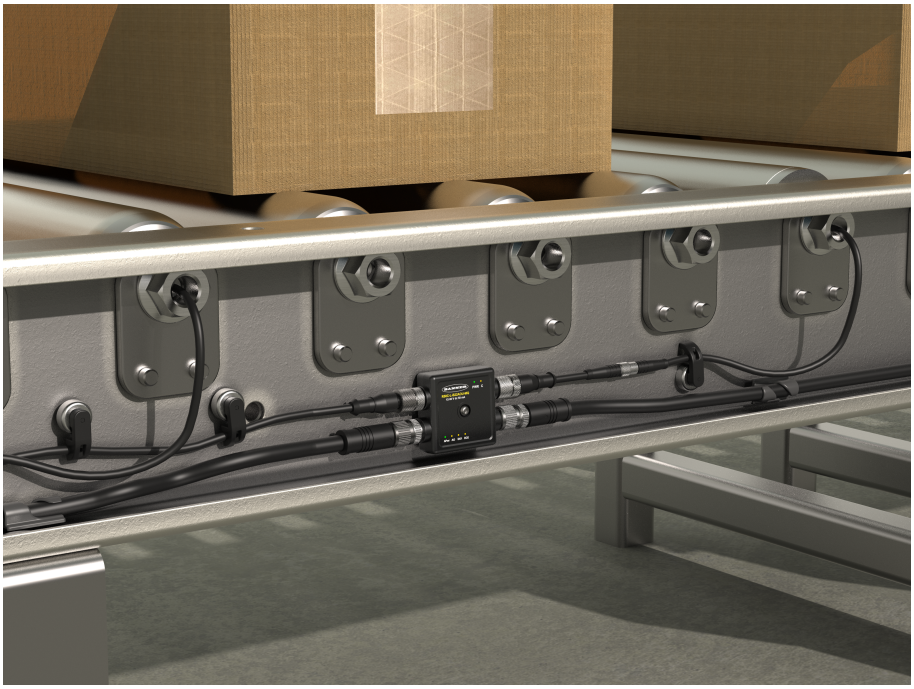
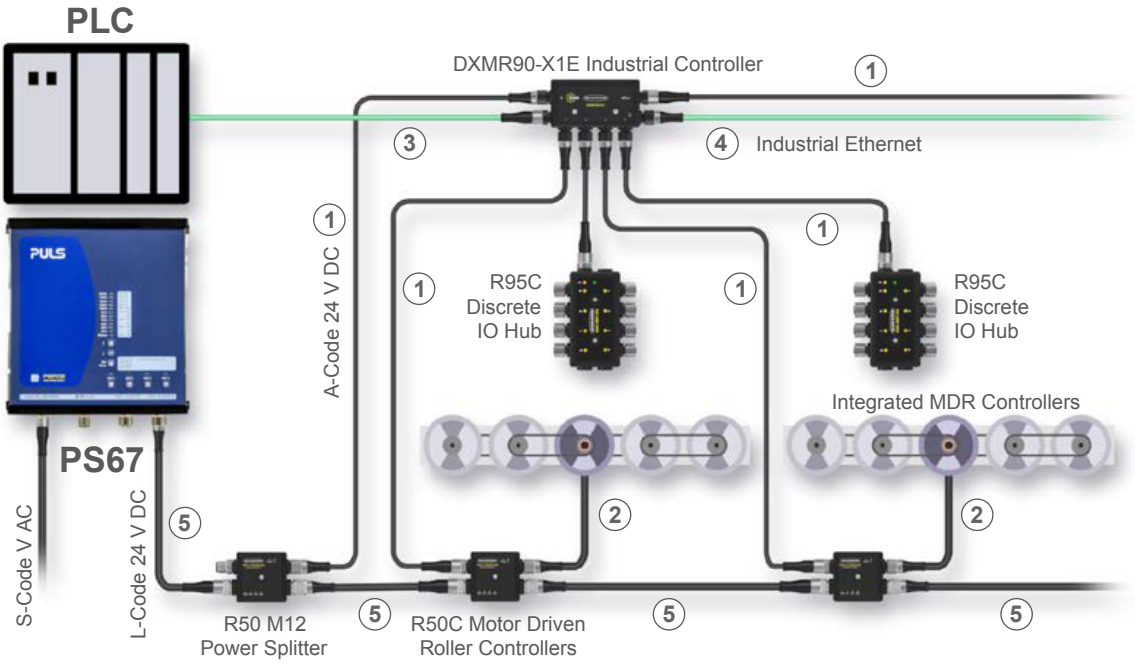


Example Setup

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-X1E Industrial Controller

- Allows PLC communication with MDR controller via common industrial protocols Modbus TCP, Ethernet/IP™ and PROFINET®
- Four dedicated Modbus 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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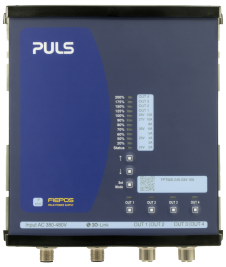

Features	PS67K-1S-24L-150: 1-Phase IP67 Power Supply	PS67K-3S-24L-250: 3-Phase IP67 Power Supply
Input Voltage	100 V AC to 240 V AC	380 V AC to 480 V AC
Output Voltage	24 V DC	24 V DC
Output Current	15 A	25 A
Input Connector	M12 S-Code	M12 S-Code
Output Connectors	2x M12 L-Code	2x M12 L-Code

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 Configuration Instructions

SNAP SIGNAL® Configuration Software

The SNAP SIGNAL® Configuration Software offers an easy way to manage converter Modbus® settings, retrieve data, and visually show converter data. The SNAP SIGNAL Configuration Software runs on any Windows machine and uses an adapter cable (BWA-UCT-900, p/n 19970) to connect the converter to the computer.

Download the most recent version of the SNAP SIGNAL Configuration Software from the Banner Engineering website: https://www.bannerengineering.com/sg/en/products/software/snap-signal-configuration-software.html.

Modbus Configuration

Device Port States

Modbus Register Address	Description	I/O range	Comments	Default	Access	Notes
40001	Pin 4 Active State	0..1	0 = Inactive, 1 = Active		RO	0 = Inactive, 1 = Active
40002	Pin 2 Active State	0..1	0 = Inactive, 1 = Active		RO	0 = Inactive, 1 = Active
40003	Pin 4 / Black Output	0..1	Black wire discrete output	0	RW	0 = Inactive, 1 = Active
40004	Pin 2 / White Output	0..1	White wire discrete output	0	RW	0 = Inactive, 1 = Active

Analog Out Value

Modbus Register Address	Description	I/O range	Comments	Default	Access	Notes
40005	Pin 5 / Gray Output	0..18200	Voltage = mV	0	RW	Max. Voltage = Maximum Analog Setting

Status / Monitoring

Modbus Register Address	Description	I/O range	Comments	Default	Access	Notes
40006	Aux Power and Port specific alarms	0..65535	Bit Mapped 16 bits: 0 = Aux Power 1 = Temp Alarm 2 = Undervoltage Alarm 3 = Overvoltage Alarm 4 = MDR overcurrent alarm 5 = MDR short circuit alarm 6..15 = 0		RO	0_b[0|0|0|0|0|0|0|0|0|0|MDRSC|MDROC|OVolt|UVolt|Temp|Aux]
40007	Thermostat Reading °F	0..65535	Divide by 100		RO	Temperature in Fahrenheit
40008	Thermostat Reading °C	0..65535	Divide by 100		RO	Temperature in Celsius
40009	Voltage Reading	0, 10000..30000	0 = no reading Divide by 1000, as the value is in millivolts		RO	
40010	Current Reading	0..20000	Divide by 1000		RO	

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Block Configuration

Modbus Register Address	Description	I/O range	Comments	Default	Access	Notes
40101	Temperature High Setpoint	0..65535	Divide by 100	20000	RW	Temperature alarm setpoint
40102	Temperature Scale	0..1	0 = °F, 1 = °C	0	RW	Temperature unit select Looks at 40015 or 40016, depending on the setting
40103	Undervoltage Alarm Setpoint	0..30000	Divide by 1000, as the value is in millivolts	18000	RW	Undervoltage alarm setpoint
40104	Overvoltage Alarm Setpoint	0..30000	Divide by 1000, as the value is in millivolts	28000	RW	Overvoltage alarm setpoint
40105	Motor Current Fault Reset	0..1	0 = No action, 1 = Reset	0	RW	When set to 1, it resets and toggles back to 0

Modbus Configuration

Modbus Register Address	Description	I/O range	Comments	Default	Access
40601	Baud Rate	0 = 9.6k 1 = 19.2k 2 = 38.4k	0 = 9.600 1 = 19200 2 = 38400	1	RW
40602	Parity	0 = None 1 = Odd 2 = Even	0 = None 1 = Odd 2 = Even	0	RW
40603	Address	1-254	-	1	RW
40604	Reserved (cannot be read or written)	None	-	-	-
40605	Restore Factory Configuration	0 = No Operation, 1 = Restore	-	-	WO

Device Information

Modbus Register Address	Description	I/O range	Comments	Default	Access	Notes
40606-40615	Banner Name	0..65535	-	Banner Engineering	RO	(9 words/18 Characters)
40616-40631	Product Name	0..65535	-	R50C-L-MDR-MQ	RO	(16 words/32 Characters)
40632	Item H	0..65535	818581 split into two 16-bit registers	12	RO	Banner Item Number
40633	Item L	0..65535	-	30475	RO	-
40634	Serial Number H	0..65535	-	-	RO	Serial Number is split into (4) 16-bit registers
40635	Serial Number	0..65535	-	-	RO	
40636	Serial Number	0..65535	-	-	RO	-
40637	Serial Number L	0..65535	-	-	RO	-
40644-40659	User Define Tag	0..65535	User Writable Space	More Sensors. More Solutions.	RW	(16 words/32 Characters)
40680	Discovery	0..1	0 = Disabled, 1 = Enabled	-	RW	Flash all LEDs to find hub
40681	All-Time Run Time H	0..65535	-	-	RO	Upper 16 of 32 bits
40682	All-Time Run Time L	0..65535	-	-	RO	Lower 16 of 32 bits

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Modbus Register Address	Description	I/O range	Comments	Default	Access	Notes
40683	Resettable Run Time H	0..65535	-	-	RW	Upper 16 of 32 bits
40684	Resettable Run Time L	0..65535	-	-	RW	Lower 16 of 32 bits

Pin 4 Port Configuration (Black - Female, Discrete 1)

Modbus Register Address	Description	I/O Range	Comments	Default	Access	Notes
41001	Pin 4 IO Selection	0..5	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	PNP input
41002	Pin 4 Mode	0..3	0 = Disabled 1 = On off Delay 2 = On One-shot 3 = Off One-shot	0	RW	-
41003	Pin 4 Delay Timer 1 Upper	0..65535	Pin 4 On Delay, One-shot	0	RW	Upper 16 of 32 Bits: Mode 1, 2, 3, 4, 5, 7, 8 = Milliseconds Mode 6 = Count
41004	Pin 4 Delay Timer 1 Lower	0..65535	Pin 4 On Delay, One-shot	0	RW	Lower 16 of 32 Bits: Mode 1, 2, 3, 4, 5, 7, 8 = Milliseconds Mode 6 = Count
41005	Pin 4 Delay Timer 2 Upper	0..65535	Pin 4 Off Delay	0	RW	Upper 16 of 32 Bits = Milliseconds
41006	Pin 4 Delay Timer 2 Lower	0..65535	Pin 4 Off Delay	0	RW	Lower 16 of 32 Bits = Milliseconds

Pin 2 Port Configuration (White - Female, Discrete 2)

Modbus Register Address	Description	I/O Range	Comments	Default	Access	Notes
41007	Pin 2 IO Selection	0..5	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	PNP output
41008	Pin 2 Mode	0..6	0 = Disabled 1 = On off Delay 2 = On One-shot 3 = Off One-shot	0	RW	-

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Modbus Register Address	Description	I/O Range	Comments	Default	Access	Notes
41009	Pin 2 Delay Timer 1 Upper	0..65535	Pin 2 On Delay, One-shot	0	RW	Upper 16 of 32 Bits: Mode 1, 2, 3, 4, 5, 7, 8 = Milliseconds Mode 6 = Count
41010	Pin 2 Delay Timer 1 Lower	0..65535	Pin 2 On Delay, One-shot	0	RW	Lower 16 of 32 Bits: Mode 1, 2, 3, 4, 5, 7, 8 = Milliseconds Mode 6 = Count
41011	Pin 2 Delay Timer 2 Upper	0..65535	Pin 2 Off Delay	0	RW	Upper 16 of 32 Bits = Milliseconds
41012	Pin 2 Delay Timer 2 Lower	0..65535	Pin 2 Off Delay	0	RW	Lower 16 of 32 Bits = Milliseconds

Pin 5 Port Configuration (Gray - Female, Analog / Voltage)

Modbus Register Address	Description	I/O Range	Comments	Default	Access	Notes
41013	Analog Channel Enable	0..1	0 = Off, 1 = On	1	RW	Enable or disable analog output on Pin 5
41014	Maximum Analog Setting	0..18200	Millivolts	10200	RW	Maximum analog output voltage allowed
41015	Maximum Current Setting	0..4000	Milliamps	4000	RW	Maximum continuous current setting before shutdown or motor switch is disabled
41016	Current In-Rush Delay Setting	0..1000	Milliseconds	20	RW	Time delay after detection of Maximum Current Setting to account for in-rush current
41017	Ramp On Delay	0..65535	Milliseconds	0	RW	Ramp the analog voltage output up to the setting over a programmable period of time for motor start up
41018	Ramp Off Delay	0..65535	Milliseconds	0	RW	Ramp the analog voltage output off over a programmable period of time for motor power down

Measurement Reads

Modbus Register Address	Description	I/O Range	Comments	Default	Access	Notes
41019	Motor Current ON Setting	0..4000	Milliamps	50	RW	On current for activating the motor run timer
41020	Resettable Motor Run Time H	0..65535	Upper 16 of 32 bits		RW	Tracks the time that the motor driven roller is running based on the monitored current greater than or equal to the motor current on the setting
41021	Resettable Motor Run Time L	0..65535	Lower16 of 32 bits		RW	15 minute increments
41022	Pin 4 Count H	0..65535	Pin 4 Count Value Upper	-	RO	Upper 16 of 32 bits = Running count of the received input pulses

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Modbus Register Address	Description	I/O Range	Comments	Default	Access	Notes
41023	Pin 4 Count L	0..65535	Pin 4 Count Value Lower	-	RO	Lower 16 of 32 bits = Running count of the received input pulses
41024	Pin 4 Duration H	0..65535	Pin 4 Duration Value Upper	-	RO	Upper 16 of 32 bits = Duration of the last input pulse in µs with 50 µs granularity
41025	Pin 4 Duration L	0..65535	Pin 4 Duration Value Lower	-	RO	Lower 16 of 32 bits = Duration of the last input pulse in µs with 50 µs granularity
41026	Pin 4 Events Per Minute H	0..65535	Pin 4 Events Per Minute Value Upper	-	RO	Upper 16 of 32 bits = Running count of the number of pulses received averaged over one minute. Range 1 to 37,500
41027	Pin 4 Events Per Minute L	0..65535	Pin 4 Events Per Minute Value Lower	-	RO	Lower 16 of 32 bits = Running count of the number of pulses received averaged over one minute. Range 1 to 37,500
41028	Pin 2 Count H	0..65535	Pin 2 Count Value Upper	-	RO	Upper 16 of 32 bits = Running count of the received input pulses
41029	Pin 2 Count L	0..65535	Pin 2 Count Value Lower	-	RO	Lower 16 of 32 bits = Running count of the received input pulses
41030	Pin 2 Duration H	0..65535	Pin 2 Duration Value Upper	-	RO	Upper 16 of 32 bits = Duration of the last input pulse in µs with 50 µs granularity
41031	Pin 2 Duration L	0..65535	Pin 2 Duration Value Lower	-	RO	Lower 16 of 32 bits = Duration of the last input pulse in µs with 50 µs granularity
41032	Pin 2 Events Per Minute H	0..65535	Pin 2 Events Per Minute Value Upper	-	RO	Upper 16 of 32 bits = Running count of the number of pulses received averaged over one minute. Range 1 to 37,500
41033	Pin 2 Events Per Minute L	0..65535	Pin 2 Events Per Minute Value Lower	-	RO	Lower 16 of 32 bits = Running count of the number of pulses received averaged over one minute. Range 1 to 37,500

Metric Count Presets

Modbus Register Address	Description	I/O Range	Comments	Default	Access	Notes
41034	Pin 4 Count H	0..65535	Pin 4 Count Value Upper	-	RW	Upper 16 of 32 bits
41035	Pin 4 Count L	0..65535	Pin 4 Count Value Lower	-	RW	Lower 16 of 32 bits
41036	Pin 2 Count H	0..65535	Pin 2 Count Value Upper	-	RW	Upper 16 of 32 bits
41037	Pin 2 Count L	0..65535	Pin 2 Count Value Lower	-	RW	Lower 16 of 32 bits

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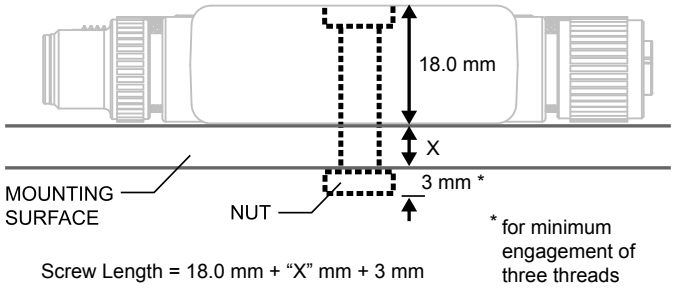
Chapter 3 Mechanical Installation

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.

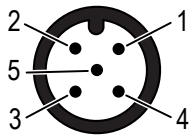
See the figure below to help in determining the minimum screw length.

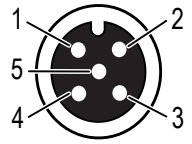


CAUTION: Do not overtighten the R50C's mounting screw during installation. Overtightening can affect the performance of the R50C.

Wiring

A-Code Male and Female Pinouts

Modbus - Male	Pin	Signal Description
	1	12 V DC to 30 V DC
	2	RS485/D0/A-
	3	GND
	4	RS485/D1/B+
	5	BannerBus

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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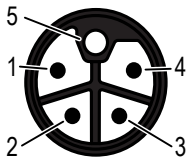
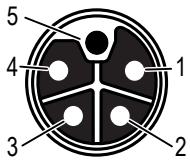
L-Code Male and Female Pinouts (16A)

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

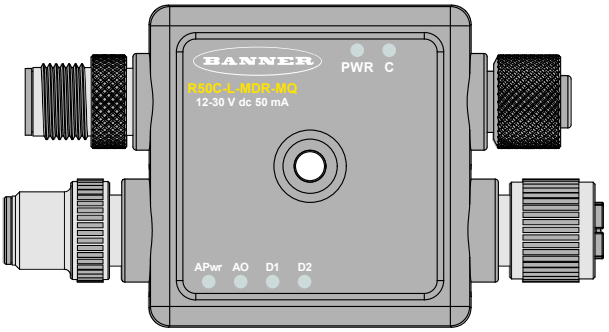
The R50C has matching LED indicators on both sides of the converter to allow for installation needs, while still providing adequate indication visibility.

There are two pairs of green LEDS:

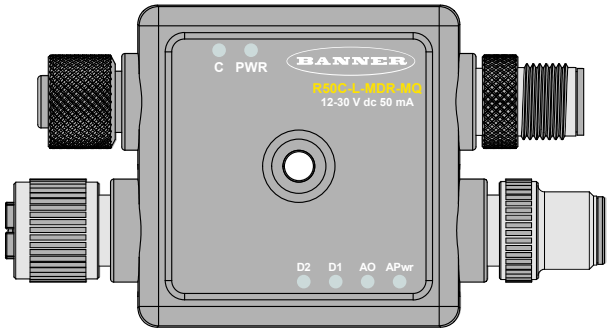
- PWR: A-Code power indication
- APwr: L-Code power indication

Additionally, there are four pairs of amber LEDs:

- C: Modbus 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

Modbus Communications Amber LEDs

Indication	Status
Off	Modbus communications are not present
Flashing Amber (4 Hz)	Modbus communications are active
Solid Amber for 2 seconds, then off	Modbus communications are lost after connection
Solid Amber for 2 seconds, then to flashing amber (4 Hz)	Modbus communications are momentarily lost, but then communication is reestablished

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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)

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
12 V DC to 30 V DC at 400 mA maximum

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" on page 14

Connections
(1) Integral 5-pin M12 A-Code female quick-disconnect connector
(1) Integral 5-pin M12 A-Code male quick-disconnect connector
(1) Integral 5-pin M12 L-Code female quick-disconnect connector
(1) Integral 5-pin M12 L-Code 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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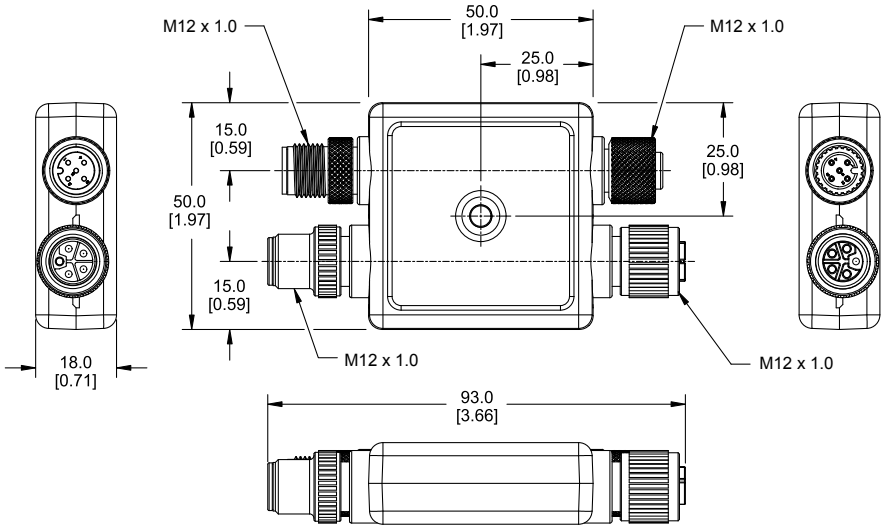
Industry Canada ICES-003(B)

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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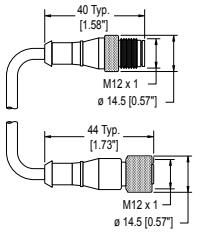
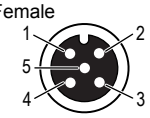
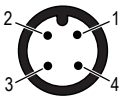
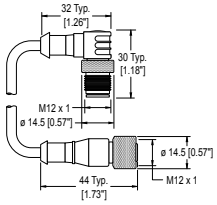
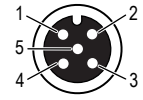
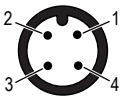
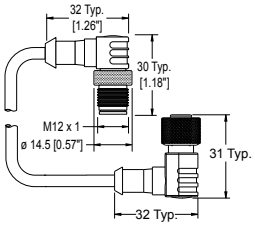
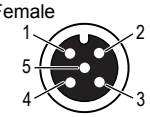
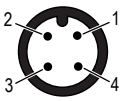
Chapter 6 Accessories

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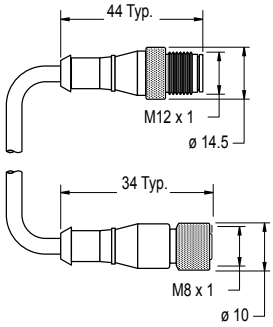
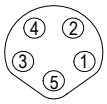
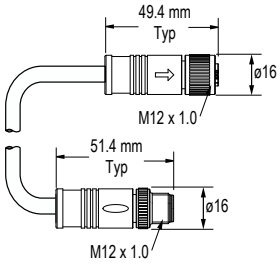
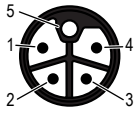
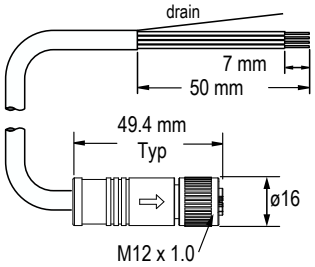
5-Pin Double-Ended M8 B-Code Female to M12 A-Code Male Cordset (datasheet p/n 242461)				
Model	**Length**	**Dimensions (mm)**	**Pinout (M8 Female B-Code)**	**Pinout (M12 Male A-Code)**
BC-M8F5B-M12M5-24-0.5	0.5 m (1.64 ft)		 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray	 1 = Brown 2 = White 3 = Blue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

4-Pin M12 Female RS-485 to USB Adapter Cordset, with Wall Plug (datasheet p/n 140377)			
Model	**Length**		**Pinout (Female)**
BWA-UCT-900	1 m (3.28 ft)		 1 = Brown 2 = White 3 = Blue 4 = Black

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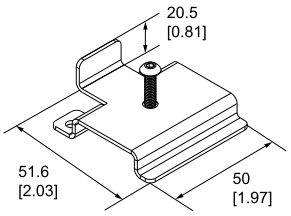
Brackets

SMBR50

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



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.

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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.

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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.

Türkçe

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Contact Us

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