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RANGE SENSOR

QUICK START GUIDE



DATALOGIC

Image Based Focusing Sensor

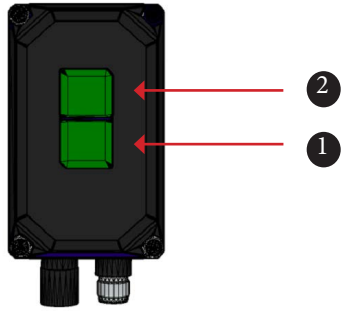
For additional information, warranty and instructions refer to the M830/M930 Camera Product Reference Guide (PRG) available on our website. Scan below to access the PRG.

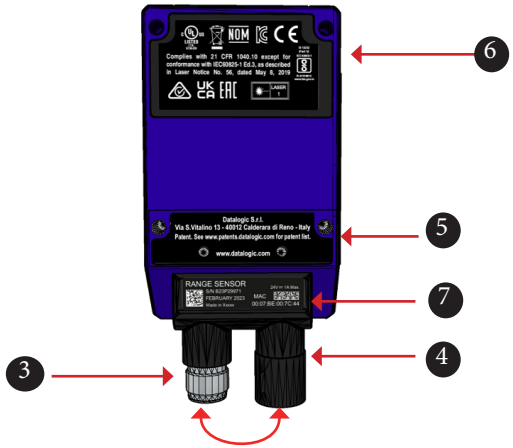
www.datalogic.com

821012911 (Rev. B) May 2026

OVERVIEW

The Range Sensor is an image-based focusing accessory designed for use with the Matrix 830 and Matrix 930 image-based barcode readers. When connected to a barcode reader, the Range Sensor provides precise distance data that enables the reader to automatically adjust its dynamic focus. This ensures optimal image quality for accurate and efficient barcode reading.





1	Laser
2	Sensor
3	Power - COM - I/O Connector
4	Ethernet Connector
5	Manufacturing Label
6	Device Class and Warning Labels
7	Serial Label

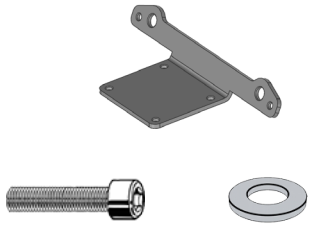
NOTE: Sample labels are shown here only to illustrate their location. Please view the labels on your product for actual details.

OUT OF THE BOX

This guide explains how to mount and connect your Range Sensor to the camera.

The sensor will come with the following:

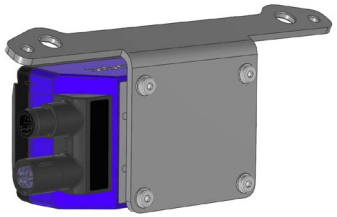
- 1 Bracket
- 6 screws 4X10 UNI5931 INOX (01993019)
- 6 washers 4,3 X9 UNI 6592 WZ (016038003)



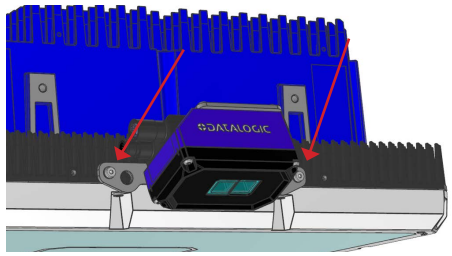
MOUNT THE RANGE SENSOR TO THE CAMERA

Follow these steps to mount the Range Sensor to your camera:

1. Attach the Bracket to the Range Sensor with four of the provided screws and washers as shown.



2. Attach Bracket and Range Sensor to the Camera with two of the provided screws and washers as shown.

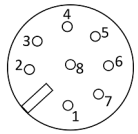


NOTE: The Range Sensor can also be mounted as a stand-alone. See M830/ M930 PRG for details.

CONNECTING THE RANGE SENSOR

The Range Sensor connects to the camera via a single Power, IO and com connector.
The recommended cables for connection are:

- CABLE M12M TO M12F 0,75M (93A050133)
- CABLE M12M TO M12F 3M (93A050079)

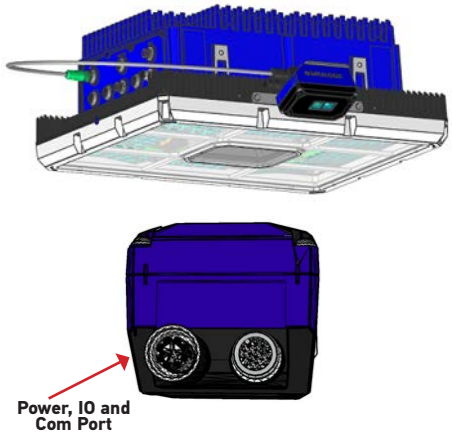


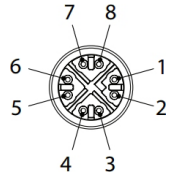
M12 8-pole male power, COM and I/O connector

Pin	Name	Description
1	RX-	RS485 RX- signal
2	TX-	RS485 TX- signal
3	TX+	RS485 TX+ signal
4	PE	CHASSIS GROUND
5	VS	Power supply +
6	IN1	Digital Input
7	RX+	RS485 RX+ signal
8	GND	Power supply -

NOTE: The images provided are for illustration purposes only and may differ from the actual product.

NOTE: While the M830/930 camera can be rotated to optimize the cable positioning, the Range Sensor cables must exit on the left side of the conveyor.





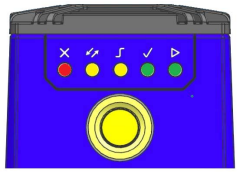
M12 8-pole X-Coded female Ethernet Network connector

Pin	Description
1	MDI0+
2	MDI0-
3	MDI1+
4	MDI1-
5	MDI3+
6	MDI3-
7	MDI2-
8	MDI2+

NOTE: The Ethernet connector is intended for service use only. Do not connect any external devices.

RANGE SENSOR LEDS

Normal operating mode the colors and meaning of the five LEDs are illustrated in the following table:



LED	Description
READY (Green)	indicates the device is ready to operate.
GOOD (Green)	confirms successful detection of the parcel profile.
TRIGGER (Yellow)	shows the status of the input signal.
COM (Yellow)	indicates active communication on main serial port.
STATUS	RED in case of severe errors YELLOW for warnings, OFF otherwise.

NOTE: Long pressure (3 seconds) of the button restores the default configuration.

TECHNICAL SPECIFICATIONS

ELECTRICAL FEATURES	
Power	
Supply Voltage	24 VDC +/- 10%
Peak Supply Current	1 A max.
Communication interfaces	
Main: RS485 Full-Duplex	115200 bit/s
Ethernet (Built-in) supported application protocols	10/100/1000 Mbit/s SSH
Inputs	
Input 1	Max Voltage: +5V Max Input Current: 0.39 mA
ENVIRONMENTAL FEATURES	
Operating Temperature	0° to 50° C [32° to 113° F]
Storage Temperature	-20° to 70° C [-4° to 158° F]
Humidity	90% non condensing
Vibration resistance EN 60068-2-6	14 mm @ 2 to 10 Hz; 1.5 mm @ 13 to 55 Hz; 2 g @ 70 to 500 Hz; 2 hours on each axis
PHYSICAL FEATURES	
Dimensions (with lens cover, connectors at 0°)	H x W x L 108.7 x 54 x 55.5 mm (4.3 x 2.1 x 2.2 in)
Weight	260 g
Material	Aluminum and plastic
OPTICAL FEATURES	
Image Sensor	CMOS
Image Format	512 X 512 pixels
View Angle	75° x 75°

EULA

See www.datalogic.com/eula.

COMPLIANCE

Laser Safety

This product conforms to the following standards:
- IEC60825-1 Ed.3 (2014)
- EN 60825-1:2014 + A11:2021
- 21 CFR 1040.1 except for deviation pusuant to Laser Notice N.56, date May 8, 2019

This product is Classified Class 1 laser product



CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in exposure to hazardous visible laser light.

Disconnect the power supply during installation or during the cleaning of the window.

Electrical Safety

Compliant to EN/IEC 62368-1.

Compliant to CSA 62368-1 (ANSI/UL 62368-1).

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FCC Compliance

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

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测距传感器

《快速入门指南》



DATALOGIC

基于图像的调焦传感器

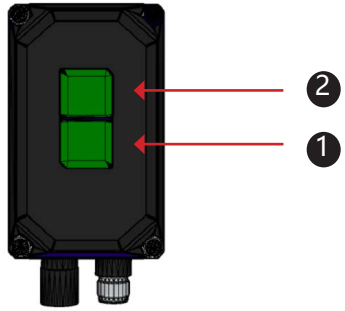
更多信息、质保及操作说明，请访问我们的网站查阅《M830/M930 相机产品参考指南》（简称 PRG）。扫描下方二维码访问 PRG。

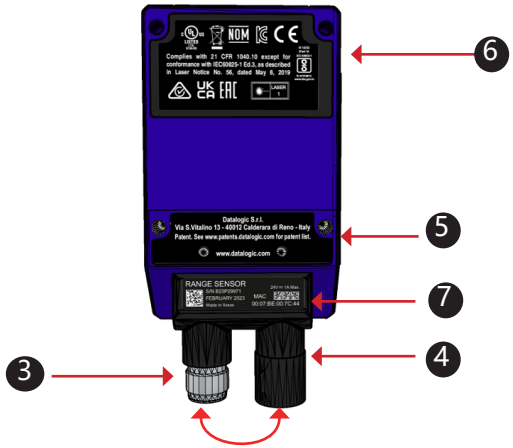
www.datalogic.com

821012911 （版本 B） 2026 五 月

概览

测距传感器是一款基于图像的调焦配件，专为 Matrix 830 和 Matrix 930 基于图像的条码读取器而设计。当连接至条码读取器时，测距传感器可提供精确的距离数据，使读取器能够自动调整动态对焦。这确保了最佳图像质量，从而实现准确、高效的条码读取。





连接器块旋转到 0° 和 90° 位置

1	激光器
2	传感器
3	电源 - 通讯- I/O 接头
4	以太网连接器
5	制造标签
6	设备分类和报警标签
7	序列号标签

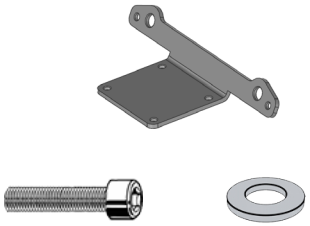
注释：此处示例标签仅用于示意其位置。实际详情请查看产品上的标签。

出厂配件

本指南说明如何将测距传感器安装并连接至相机

传感器随附以下物品

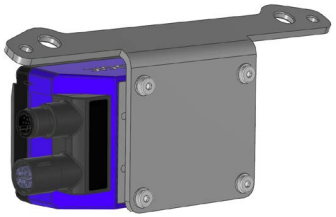
- 1 个支架
- 6 颗 4X10 UNI5931 INOX 螺钉 (01993019)
- 6 个 4.3 X9 UNI 6592 WZ 垫圈 (016038003)



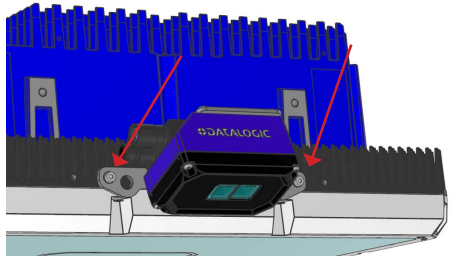
将测距传感器安装到相机

请按以下步骤将测距传感器安装到相机：

1. 使用随附的四颗螺钉和垫圈将支架固定到测距传感器，如图所示。



2. 使用随附的两颗螺钉和垫圈将支架及测距传感器固定到相机，如图所示。

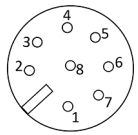


连接测距传感器

测距传感器通过单个电源、I/O 和通信接头连接至相机。

推荐的连接线缆为：

- 线缆 M12M TO M12F 0.75M (93A050133)
- 线缆 M12M TO M12F 3M (93A050079)

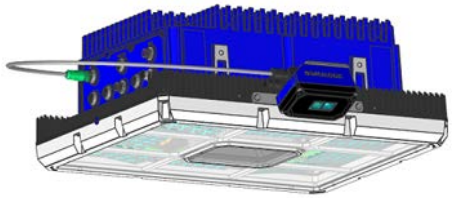


M12 8 针公头电源、通信及 I/O 接头

引脚	名称	描述
1	RX-	RS485 RX- 信号
2	TX-	RS485 TX- 信号
3	TX+	RS485 TX+ 信号
4	PE	底盘接地
5	VS	电源输入电压 +
6	IN1	数字输入
7	RX+	RS485 RX+ 信号
8	接地	电源输入电压 -

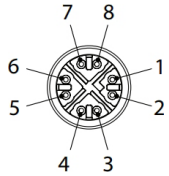
注释：提供的图像仅供示意，可能与实际产品有所不同。

注释：虽然 M830/930 相机可以旋转以优化电缆布线，但测距传感器电缆必须从传送带的左侧引出。





电源、I/O 与通信端口



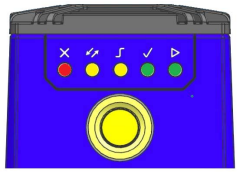
M12 X 编码母头以太网连接器

引脚	描述
1	MDIO+
2	MDIO-
3	MDI1+
4	MDI1-
5	MDI3+
6	MDI3-
7	MDI2-
8	MDI2+

注释：以太网连接器仅用于维修。请勿连接任何外部设备。

测距传感器 LED 指示灯

下表列出了正常运行模式下五个 LED 指示灯的颜色与含义：



LED	描述
就绪（绿色）	表示装置已准备好运行。
正常（绿色）	确认成功检测到包裹轮廓。
触发（黄色）	显示输入信号状态。
通信（黄色）	表示主串行端口正在通讯。
状态	严重错误时为红色，警告时为黄色，其余情况熄灭。

注释：长按按钮（3 秒）可恢复默认配置。

技术规格

电气特征	
电源	
电源电压	24 VDC +/- 10%
峰值电源电流	最大 1 A。
通信接口	
主接口：RS485 全双工	115200 位/秒
以太网（内置）支持的应用程序协议	10/100/1000 兆位/秒 SSH
输入	
输入 1	最大电压：+5V 最大输入电流：0.39 mA
环境特征	
工作温度	0° C 至 50° C [32° F 至 113° F]
存储温度	-20° C 至 70° C [-4° F 至 158° F]
湿度	90%（无冷凝）
抗振性能 EN 60068-2-6	14 mm（2 至 10 Hz）；1.5 mm（13 至 55 Hz）；2 g（70 至 500 Hz）；每轴 2 小时
物理特征	
尺寸（带镜头盖、连接器在 0° 方向）	高 x 宽 x 长 108.7 x 54 x 55.5 mm (4.3 x 2.1 x 2.2 in)
重量	260 g
材料	铝材与塑料
光学特征	
图像传感器	CMOS
图像格式	512 X 512 像素
可视角度	75° x 75°

EULA

请参阅 www.datalogic.com/eula。

合规性

激光安全

本产品符合以下标准：

- IEC60825-1 Ed.3 (2014)
- EN 60825-1:2014 + A11:2021
- 21 CFR 1040.1，但 Laser Notice N.56（2019 年 5 月 8 日）中所述的偏差除外

本产品为 1 类激光产品



注意：进行非本文指定的控制使用或调整及流程执行可能会导致有害可见激光暴露的危险。

安装或清洁窗口时请断开电源。

电气安全

符合 EN/IEC 62368-1 标准。
符合 CSA 62368-1（ANSI/UL 62368-1）标准。

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FCC 符合性

根据 FCC 规则的第 15 部分，该设备已经过检测，并发现其符合 A 类数字装置的限制。这些限制专用于在设备于商业环境中操作时提供合理保护，以防受到有害干扰。此设备将产生、使用并可放射无线电频率能量，如果不按照说明书加以安装和使用，则可能会对无线电通信造成有害干扰。此设备在居民区运行时可能造成有害干扰，在这种情况下，用户必须自费校正干扰。