

RC-S490B/X2 RC-S462B RC-S462C

FeliCa technology compatible Contactless IC Card Reader/Writer is an intelligent, high-performance Reader/Writer unit. By taking advantage of the contactless technology, the wear and dirt happens on the Reader/Writer is reduced and minimized. The Reader/Writer can be kept in a manner of high maintainability as a result.

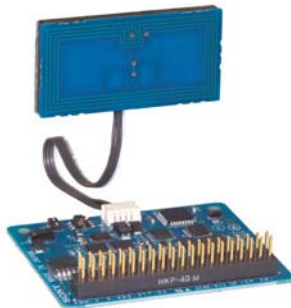
Sophisticated functions & high-speed processing

Flexible system settings

424kbps high-speed communication

Antenna

Control board



RC-S490B/X2



RC-S462B



RC-S462C

OVERVIEW




- The Reader/Writer consists of a control board, an antenna and an antenna cable connecting to the control board. The Reader/Writer communicates with the IC card or device after receiving a command from the controller. FeliCa adopts an ISO/IEC18092 compliant communication method. The communication distance between the Reader/Writer and the IC card or device depends on the antenna.
- Higher security is promised by using the ASIC chip that actualizes data processing and functions necessary of an encryption and encoding/decoding circuit on one chip.
- New applications on the controller can be developed using the Reader/Writer commands. A software development kit "SDK for FeliCa"(optional) is available as an application development tool. (for Windows only)

FEATURES

- **Sophisticated functions & high-speed processing**
Besides command conversion and authentication between a controller and a IC card or a device, and high-speed encryption/decryption of data communication, the Reader/Writer also has a self-diagnosis function.
- **Flexible system settings**
System settings and/or changes can be made in the program, such as the mutual authentication method, authentication keys, data transfer speed with the controller, and ON/OFF of encryption during data transfer.
- **High-speed communication (424kbps)**
It is capable of high speed communications as the RC-S462B/S462C supports double data transfer rate of 424kbps*, in addition to the conventional data transfer rate of 212kbps.

* Available only when the card or device to be used is adaptable to the 424kbps transfer mode.

PRODUCT SPECIFICATIONS

	RC-S490B/X2	RC-S462B	RC-S462C
External appearance			
Communication distance (*1)	30mm (1 3/16 inches)(when using RC-S860 series/RC-S833) 20mm(13/16 inches)(when using RC-S890)	30mm (1 3/16 inches)(when using RC-S860series/RC-S880) 20mm(13/16 inches)(when using RC-S890)	100mm (4 inches)(when using RC-S860 series/RC-S880) 80mm (3 1/4 inches)(when using RC-S890) (*2)
Communication method	Compliant with ISO/IEC 18092 (212kbps Passive mode)	Compliant with ISO/IEC 18092 (212kbps,424kbps Passive mode)	
Communication speed	212kbps	212kbps,424kbps (*3)	
Carrier frequency	13.56MHz		
Modulation system	Reception : ASK Transmission : ASK (modulation ratio:11 ± 3%)		
Bit coding	Reception : Manchester coding system Transmission : Manchester coding system		
Modulation bandwidth	±300kHz (at -30dB carrier level)		
Electric field strength	300 μV/m or less (at 10m distance)		4500 μV/m or less (at 10m distance)
Operating temperature/humidity (Non condensation or icing)	-10 ~ +40 (14 ~ 104)/20%RH ~ 90%RH 40 ~ 60 (104 ~ 140)/50%RH or less		
Storage temperature/humidity (Non condensation or icing)	-30 ~ +70 (-22 ~ +158)/60%RH or less		
External interface	Serial (CMOS 5V)	RS-232C or RS-485A (Cannot use both at same time) DF1E-10P-2.5SDS(0.5) (right-angle, tin-plated) 10-pin interface connector manufactured by Hirose Electric Co., Ltd.	
Communication speed(with controller)	7.20k ~ 1228.8kbps (RS-232C is up to 115.2kbps)		
Mass	Approx. 40g (1.41 oz.avdp)	Approx. 50g (1.76 oz.avdp)	Approx. 150g (5.29 oz.avdp)
Dimensions (W × H × D)	Control board Approx. 60 × 15 × 50mm (2 3/8 × 19/32 × 2 inches)	Antenna Approx. 104 × 10 × 67mm (4 1/8 × 12/32 × 2 3/4 inches)	
Antenna cable length	Approx. 50 × 6 × 25mm (2 × 1/4 × 1 inches)		Approx. 104 × 6.15 × 67mm (4 1/8 × 1/4 × 2 3/4 inches)
Power voltage, current (typical)	DC5V,100mA and DC12V,60mA	DC12V,140mA	DC12V,320mA

*1 Communication distance depends on the peripheral environment. This value is under ideal conditions not affected by electromagnetic wave or metallic substances.

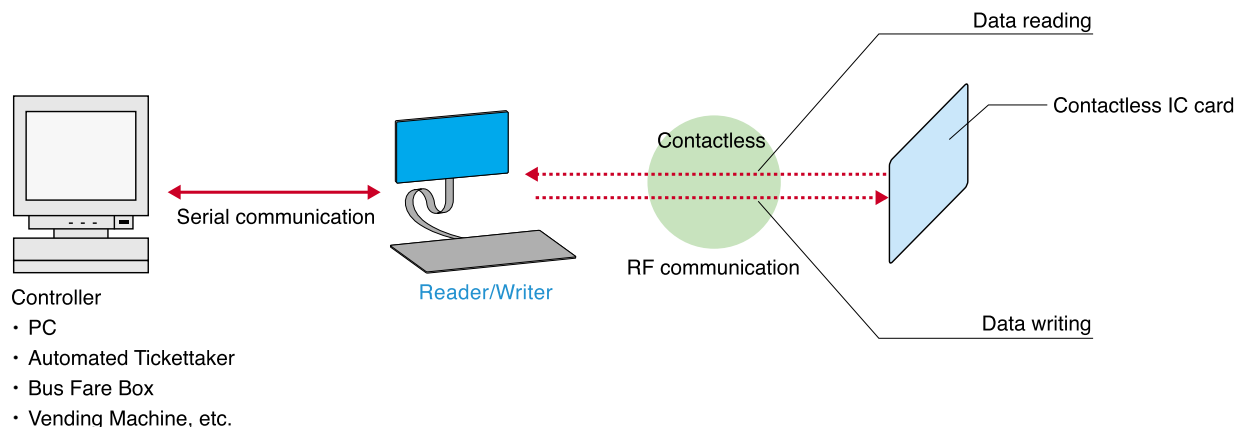
*2 Depending on the usage environment, the polling success rate may deteriorate even in the vicinity (approx.7mm) of the antenna.(RC-S462C series only)

*3 Available only when the card or device to be used is adaptable to the 424kbps transfer mode.

This product complies only with the radio laws in Japan as it was designed for the usage in the Japanese market.

Customers should ensure that the finished product incorporating this reader/writer product complies with the radio laws of the country where the product is to be used.

TYPICAL SYSTEM LAYOUT



• Specifications and external appearance are subject to change without prior notice.

• FeliCa is a trademark of Sony Corporation.

• FeliCa is a contactless IC card technology developed by Sony Corporation.

• All system and product names are registered trademarks or trademarks belonging to their respective development manufacturers.

Note that TM and ® indications have been purposely eliminated in this text.



• Halogenated flame retardants are not used in printed wiring boards.

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