

Product Overview

The SR113 is a multi-protocol Ultra High Frequency RFID reader specifically design for a wide variety of RFID applications. It comes with standard 4-port antenna to facilitate maximum antenna deployment configurations to optimize operating performance. Flexible interface options through Ethernet, RS232, RS485, Wiegand and general I/O ports are available to ensure convenient connectivity. The SR113 also supports field firmware upgrades for application enhancement and to protect hardware investments. Listen Before Talk (LBT) and Dense Reader Mode (DRM) features are also supported.

Semi or full customization of the reader to fit application requirement is possible upon request. SmartID offers quick design turn around time as all key design functional blocks are readily available in the design libraries.

Features

- . 860MHz to 960MHz freq range
- . Multi-protocol
- . Multi-regional
- . Dense Reader Mode (DRM)
- . Listen Before Talk (LBT)
- . 1 watt max output power
- . 4-port antenna output
- . Field upgradeable Firmware
- . LED for status reporting

Range

- . Read 4 to 10 m (tag dependent)
- . Write is 70% of Read range

Protocols

- . ISO18000-6C
- . ISO18000-6B
- . EPC C1G2
- . EM Microelectronic (EM4122)

Ordering Information:

Model No	Region
SR113-NA	North America
SR113-EU	Europe
SR113-CN	China
SR113-SK	South Korea
SR113-TW	Taiwan
SR113-SG	Singapore
SR113-HK	Hong Kong
SR113-MY	Malaysia
SR113-IN	India

Electrical and RF Specifications

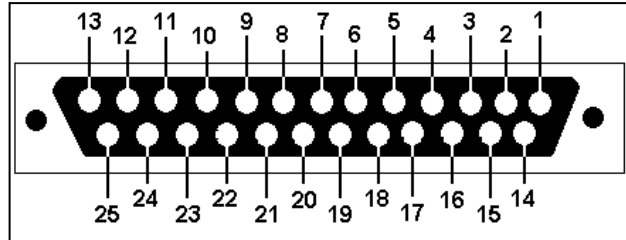
Parameter	Min	Typ	Max	Unit
RF Specifications				
Frequency	860		960	MHz
Channel Bandwidth	200		500	KHz
Carrier Frequency Shift		+/-5		ppm
Transmit Power	15		30	dBm
Transmit Power step control		1.0		dBm
Antenna output impedance		50		ohm
Receiver Sensitivity	-93	-95	-97	dBm
Power				
Supply Voltage	11	12	13	Vdc
Current		2		Amp
Current (Idle)		0.18		Amp
Data Interface				
RS232 (DB9)	9.6		115.2	kbps
Ethernet (RJ45)		10/100		Base-T
RS485 (DB25) - optional				
Weigand (DB25) - optional				
Relay				
Header 2-way		2		Amp
		60		Watt

Environmental Specifications

Parameter	Min	Typ	Max	Units
Temperature				
Operating	-20		60	d celsius
Storage	-35		85	d celsius
Humidity	0%		90%	

Mechanical Specifications

Size	Values
LxBxH	263x185x36 mm
Weight	2.0 Kg
Case Material	Aluminum
Antenna connector	SMA Female



DB25 Pinout Indication

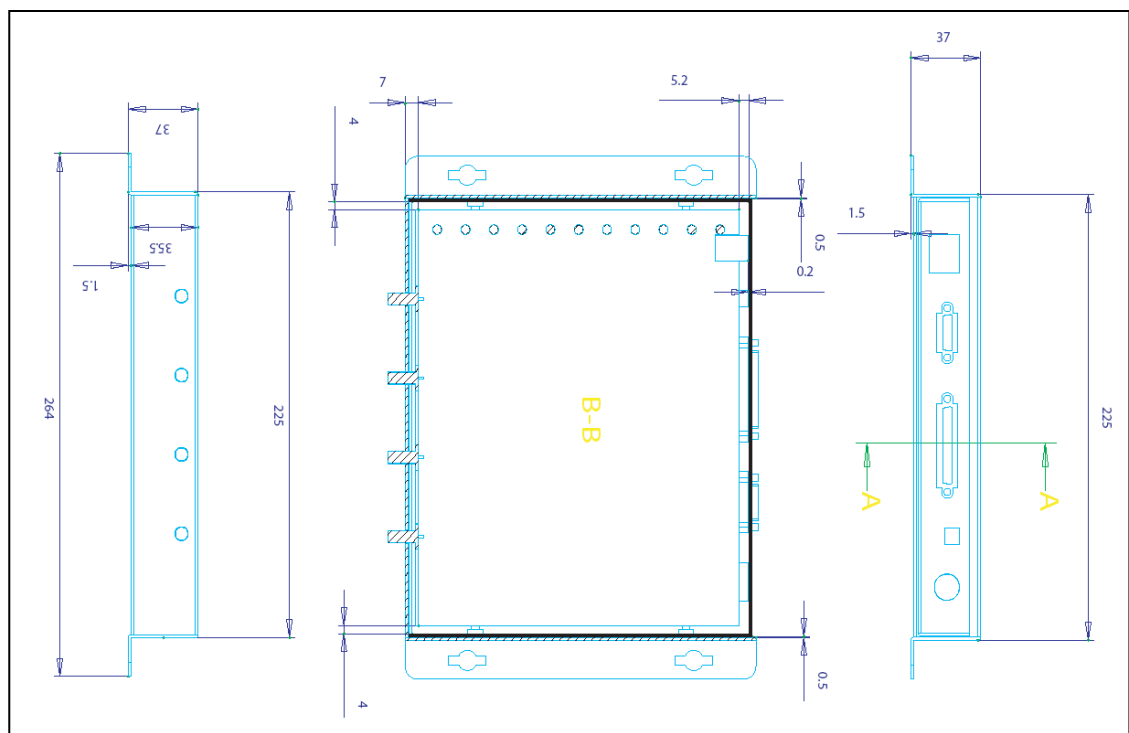
DB25 Connector	Description
Pin 1	RS485 +Tx
Pin 2	RS485 -TX
Pin 3	RS485 -Rx
Pin 4	RS485 +Rx
Pin 5	I/O IN1
Pin 6	I/O IN2
Pin 7	I/O Out1
Pin 8	I/O Out2
Pin 9	Weigand 1
Pin 10	Weigand 2
Pin 11	NC
Pin 12	NC
Pin 13	GND
Pin 14	GND
Pin 15	Power LED
Pin 16	RF On LED
Pin 17	Sense LED
Pin 18	Listening LED
Pin 19	Ant 1 LED
Pin 20	Ant 2 LED
Pin 21	Ant 3 LED
Pin 22	Ant 4 LED
Pin 23	Normal Mode LED
Pin 24	Dense Mode LED
Pin 25	LBT Mode LED

SR113

Preliminary Data Sheet

LED	When lighted
Ant 1	Ant 1 in operation
Ant 2	Ant 2 in operation
Ant 3	Ant 3 in operation
Ant 4	Ant 4 in operation

LED	When lighted
Listening	Reader listening before tx
Sense	Reader detection of tags
RF on	RF transmission is on
LBT Mode	LBT mode is activated
Dense Mode	DRM is activated
Normal Mode	Normal mode is activated
Power On	Reader power on (+12V)



Precaution - Electrostatic Discharge (ESD) Sensitive Device

Electrostatic charges as high as 4000 Volts can easily accumulate on the human body and test equipments. ESD discharge to the reader module can result in permanent damage. To protect against ESD damage, proper ESD protection such as grounded wrist straps and work surfaces must be used.

Note: Other localized frequencies available upon request.

Note: Specifications subject to change without notice.