

# HF Long Distance ISO/IEC 15693 Protocol 12-Port Reader



**Model: RR9299TZF-FZ12**

**Size: 207 ×185×38 mm**

## GENERAL DESCRIPTION

RR9299TZF-FZ12 is a high performance ISO/IEC 15693 protocol HF reader. It is designed upon fully self-intellectual property. Based on Aquilaware platform with full Digital-Signal-Processing (DSP) architecture and proprietary efficient DSP algorithm, it supports fast tag read/write operation with high identification rate. It can be widely applied in many RFID application systems such as smart book shelf, intelligent library management, new retail machine, logistics, access control, anti-counterfeit and industrial production process control system.

## FEATURES

- Self-intellectual property;
- Aquilaware full digital signal processing architecture without manual adjustment;
- Support ISO/IEC 15693 compatible protocol;
- RF output power adjustable from 0.5~5W (7W);
- Advanced anti-collision algorithm with high identification rate up to 80pcs/s\*;
- Support 12 standard 50ohm RFID antennae with effective distance up to 90cm\*;
- Support antenna quality and status check;
- Support RS232 and TCPIP interface;
- Provide DLL and demonstration software to facilitate development;
- Support on-the-site firmware upgrading.

\*Effective reading distance and tag interrogation speed are directly related to the antenna, tags, and the working environment.

## CHARACTERISTICS

### ● Absolute Maximum Ratings

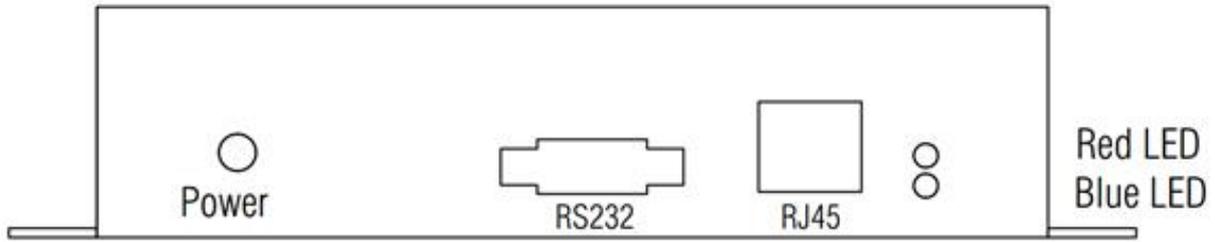
| ITEM           | SYMBOL           | VALUE     | UNIT |
|----------------|------------------|-----------|------|
| Power Supply   | VCC              | 28        | V    |
| Operating Temp | T <sub>OPR</sub> | -25 ~ +65 | °C   |
| Storage Temp   | T <sub>STR</sub> | -40 ~ +85 | °C   |

### ● Electrical and Mechanical Specification

Under T<sub>A</sub>=25°C, VCC=+24V unless specified

| ITEM                | SYMBOL            | MIN               | TYP                | MAX                           | UNIT |
|---------------------|-------------------|-------------------|--------------------|-------------------------------|------|
| Power Supply        | VCC               | 12                | 24                 | 26                            | V    |
| Current Dissipation | I <sub>C</sub>    | 0.3(0.5W)         | 0.6(5W)<br>0.7(7W) | 1                             | A    |
| Frequency           | F <sub>REQ</sub>  |                   | 13.56              |                               | MHz  |
| Effective Distance* | DIS               |                   | 90                 | 100                           | mm   |
| GPI Input           | V <sub>IH</sub>   | 2.4               | -                  | 3.3                           | V    |
|                     | V <sub>IL</sub>   | 0                 |                    | 0.9                           |      |
| Relay               | Rated Load        |                   |                    | 0.5A at 125VAC<br>1A at 24VDC | V    |
|                     | Operating Voltage | C <sub>LOAD</sub> |                    | 125VAC<br>60VDC               |      |
|                     | Operating Current |                   |                    | 1                             | A    |

**INTERFACE**



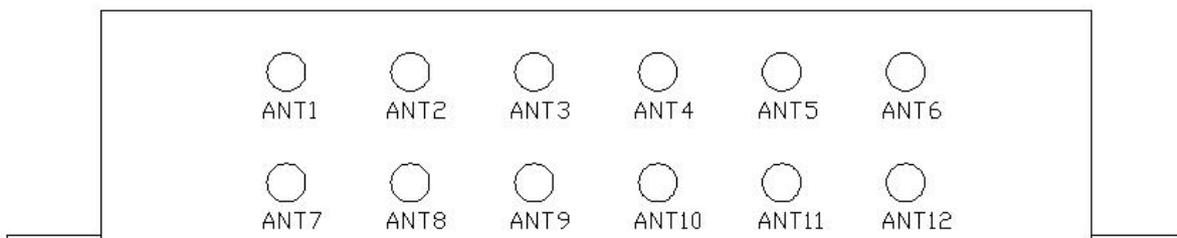
Red: ON for normal work and BLINKING for abnormal warning such as antenna broken.  
 Blue: ON for command executing and OFF for idle state.

**UART (RS232 DB9 Female)**

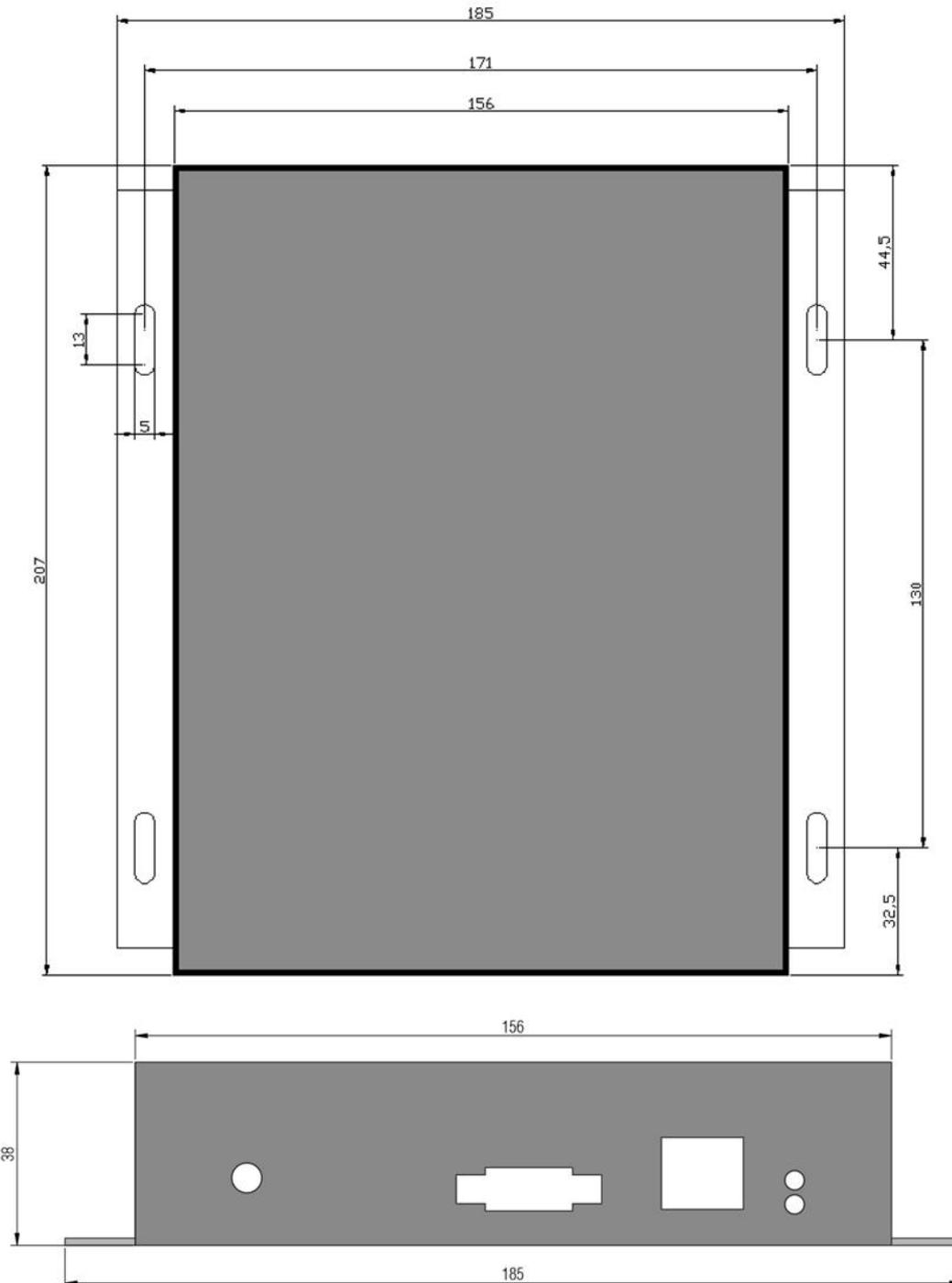
| No. | Symbol | Comment  |
|-----|--------|--|
| 1   | GPI    | General Input with TTL level and internal 40k resistor pulled up to 3.3V |
| 2   | TXD    | RS232 data output  |
| 3   | RXD    | RS232 data input   |
| 4   | NC     | Reserved   |
| 5   | GND    | Ground   |
| 6   | NC     | Reserved   |
| 7   | CM     | Relay common node  |
| 8   | NC     | Relay normal-close node  |
| 9   | NO     | Relay normal-open node   |

**TCP/IP network (RJ45)**

**SMA antenna port (ANT1~ANT12)**



**MECHANICAL DATA (UNIT:mm)**



**Remark:**

1. Specifications are subject to change, please pay attention to our latest version.
2. Shenzhen RoyalRay Science and Technology Co., Ltd. reserves the right to the final interpretation of the above terms.