

**F8** “Fingerprint Template on Card” Reader is a user-friendly and high-security physical access control reader. Its Wiegand output means the reader can directly connect to any Wiegand door access controller, while the OSDP and the ACX scramble RS485 output ensure the data cannot be snooped by external devices. This effectively resolves the Wiegand signal transmission issue.

Match-on-Card is the concept of matching and storing fingerprints in a smart card. This establishes the physical presence of a cardholder, thereby facilitating a secure proof of identity. The matching takes only a split second to complete.

Smart cards are known for their tamper-proof environment. By matching and storing a biometric fingerprint template in a smart card, the fingerprint acts as a PIN replacement and becomes an integral part of the smart card. The secure environment of the chip can thus be made use of.



## FEATURES

- Fingerprint template on card in 512 bytes
- Support NXP Mifare, Mifare Plus S / X, Mifare DESFire EV1 / EV2
- Waterproof design, using high-quality materials to enhance reliability and longevity
- Infrared light tamper design, overcoming the mechanical defects
- Use configuration card to change the device in reader or enroller mode
- Fingerprint enrollment on device, no PC software and database required
- Red / Green / Blue or mixed color LED bar, user-defined LED ON / OFF time interval
- Internal buzzer, user-defined buzzer ON / OFF time interval
- Wiegand or OSDP or ACX Scramble RS485 dual output



## CARD TECHNOLOGY

| Item Number | Card Type                       | Max. Template |
|-------------|---------------------------------|---------------|
| F8A1        | HID iCLASS 4K                   | 2             |
| F8A4        | NXP Mifare 1K / 4K              | 1 / 2         |
| F8A6        | NXP Mifare Plus S / X ; 2K / 4K | 1 / 2         |
| F8A7        | NXP DESFire EV1 / EV2 ; 4K / 8K | 1 / 2         |
| F8A8        | LEGIC Advant 4K                 | 2             |

## SPECIFICATIONS

| <b>F8 (91HF08) Fingerprint Reader Enroller (Template on Card)</b> |   |
|---|---|
| Fingerprint Sensor  | Optical, 20mm x 15mm  |
| Water Proof   | IP65  |
| Card Number   | AES128 encrypted, card number in any format, maximum length is 64 bits, CSN or sector number selectable   |
| Response Time   | Less than 1 second  |
| False Acceptance Rate   | Less than 0.001% (Operation level = 3)  |
| False Reject Rate   | Less than 1.0% (Operation level = 3)  |
| Reader Output   | Wiegand format or OSDP or ACX scramble RS485  |
| Reader Wires  | Power, Ground, Wiegand D0, Wiegand D1, RS485(A), RS485(B), Green LED / ACK, Buzzer, Hold and shield wires (Pigtial) LAN Port for fingerprint template download                      |
| Installation  | Wall switch size, designed to mount and cover single-gang switch boxes primarily used in the Americas. It includes a slotted mounting plate for European and Asian back box spacing |
| Visual Indicator  | LED bar in Red, Green, and Blue; user-defined LED ON / OFF time interval  |
| Audio Indicator   | Internal buzzer, user-defined beep sound ON / OFF time interval (ms)  |
| Color   | Black or White  |
| Dimension   | 130mm(L) x 85mm(W) x 36mm(D)  |
| Product Weight  | 250g  |
| Operating Voltage   | 9-16 VDC  |
| Operating Current   | Average 80mA DC, peak 150mA DC  |
| Operating Temperature   | -20° C to +60° C  |
| Operating Humidity  | 10% to 90% relative humidity non-condensing   |
| Housing Material  | Polycarbonate   |
| Cable Distance  | Wiegand interface: 500 feet (150 m), RS485 interface: 4000 feet (1200 m)<br>Recommended cable is ALPHA 1295 (22 AWG) 5 conductor minimum stranded with overall shield or equivalent |
| Reader Installation Height  | It is recommended that the center of the card reader be 1.35 meters above the ground  |