

Star LX007 **IDTECK** LX007SR

Fingerprint Identification (Proximity / PIN)
Access Controller



Table of Contents

1. IMPORTANT SAFETY INSTRUCTIONS	5
2. GENERAL	6
3. FEATURES	6
4. SPECIFICATION	7
5. IDENTIFYING SUPPLIED PARTS	9
6. PRODUCT OVERVIEW	10
6.1 FEATURES.....	10
6.2 PRODUCT EXPLANATION.....	12
6.2.1 Panel Description.....	12
6.2.2 Connection Layout.....	12
6.2.3 Color Coded & Wring Table	13
7. INSTALLATION TIPS & CHECK POINT	14
7.1 CHECK POINTS BEFORE INSTALLATION.....	14
7.1.1 Selection of Cable	14
7.1.2 Recommended Cable Type and Permissible Length	15
7.2 CHECK POINT DURING INSTALLATION	15
7.2.1 Termination Resistor	15
7.2.2 How to Connect Termination Resistors	16
7.2.3 Grounding System for Communication Cable	16
7.2.4 Reverse Diode Connection	17
8. INSTALLATION OF PRODUCT	17
8.1 WALL MOUNT (UNIT: MM).....	17
8.2 SYSTEM INITIALIZATION (EXTERNAL READER PORT).....	18
8.3 WALL MOUNT INSTALLATION	18
8.4 WIRING.....	18
8.4.1 Power Connection	18
8.4.2 Input Connection	18
8.4.3 Output Connection	20
8.4.4 External Reader Connection	20
9. COMMUNICATION	21
9.1 RS232 COMMUNICATION PORT CONNECTION	21
9.2 RS485 COMMUNICATION PORT CONNECTION	22
9.2.1 RS485 Connection (Standalone Unit)	22
9.2.2 RS485 Connection (Multiple Units)	23
9.3 TCP/IP COMMUNICATION PORT CONNECTION (OPTIONAL)	24
9.4 SERIAL PRINTER CONNECTION	24
10. BASIC SETTING	25
10.1 INITIALIZATION OF LX007	25
10.2 HOW TO ENTER THE SETUP MENU	26
10.3 LANGUAGE SETTING	26

10.4 DATE /TIME SETTING.....	27
10.5 ID REGISTRATION	27
11. OPERATIONS.....	30
11.1 NORMAL OPERATION	30
11.2 DEFAULT SETTING.....	30
12. SETTING CHANGES	31
12.1 F1 SETUP MENU	32
12.1.1 Language.....	33
12.1.2 Date and Time Setting.....	33
12.1.3 Reader #1 Mode.....	33
12.1.4 Reader #2 Mode.....	34
12.1.5 Reader #1 PIN Input.....	34
12.1.6 Reader #2 PIN Input.....	34
12.1.7 Communication Address Setting.....	34
12.1.8 Baud Rate Setting.....	35
12.2 F2 SETUP MENU	36
12.2.1 Event Memory.....	37
12.2.2 ID Display	37
12.2.3 Time Unit Setting	37
12.2.4 Output T/S + ID	38
12.2.5 Anti-pass Back Mode	38
12.2.6 Duress Mode.....	39
12.2.7 Wiegand Output	39
12.2.8 Door Open Alarm Time Setting.....	40
12.3 F3 SETUP MENU	41
12.3.1 Print Output.....	41
12.3.2 Voice Volume.....	42
12.3.3 Arm/Disarm	42
12.3.4 Two Men Mode	43
12.3.5 One Time Read.....	43
12.3.6 Max. User Setup	43
12.3.7 Name Display	44
12.4 F4 SETUP MENU	45
12.4.1 Time Schedule	45
12.4.2 Holiday.....	46
12.4.3 Holiday Code	47
12.4.4 Reader#1 Mode Time Schedule	47
12.4.5 Reader#2 Mode Time Schedule	47
12.4.6 Voice Time Schedule.....	48
12.5 F5 SETUP MENU	49
12.5.1 Exit Button Output Setting.....	50
12.5.2 Door Contact Output Setting.....	51
12.5.3 Aux Input#1 Output Setting.....	51
12.5.4 Aux Input#2 Output Setting.....	51
12.5.5 Tamper Alarm Output Setting	51
12.5.6 Cut Off Alarm Output Setting.....	51
12.5.7 Duress Alarm Output Setting	51
12.5.8 Arm/Disarm Output Setting.....	51
12.5.9 DR Time Output Setting	51
12.5.10 Output Time Schedule Setting.....	51
12.5.11 Input Time Schedule Setting	52
12.5.12 Cut Off Check Setting	52
12.5.13 Input Type Setting	52

12.6 F6 SETUP MENU	53
12.6.1 Output Setting for Reader#1 ID OK Level 1	54
12.6.2 Output Setting for Reader#1 ID OK Level 2	55
12.6.3 Output Setting for Reader#1 ID OK Level 3	55
12.6.4 Output Setting for Reader#1 ID OK Level 4	55
12.6.5 Output Setting for Reader#1 ID Error	55
12.6.6 Output Setting for Reader#1 T/S Error	55
12.6.7 Output Setting for Reader#1 APB Error	55
12.6.8 Output Setting for Reader#2 ID OK Level 1	55
12.6.9 Output Setting for Reader#2 ID OK Level 2	55
12.6.10 Output Setting for Reader#2 ID OK Level 3.....	55
12.6.11 Output Setting for Reader#2 ID OK Level 4.....	56
12.6.12 Output Setting for Reader#2 ID Error	56
12.6.13 Output Setting for Reader#2 T/S Error.....	56
12.6.14 Output Setting for Reader#2 APB Error	56
12.7 F7 SETUP MENU	57
12.7.1 ID Registration	57
12.7.2 ID Deletion.....	60
12.7.3 ID List	60
12.7.4 Master ID Registration.....	60
12.7.5 ID Count.....	61
12.7.6 Event Count.....	62
12.8 F8 SETUP MENU	62
12.8.1 System Initialize	63
12.8.2 Event Clear	63
12.8.3 ID Clear	63
12.8.4 Master ID Clear	64
12.8.5 Time Schedule Clear	64
12.8.6 Default Setting	64
12.9 F9 SETUP MENU	65
12.9.1 Version Check.....	65
12.9.2 Input Test.....	66
12.9.3 Output Test	66
12.9.4 LCD Test	66
12.9.5 Keypad Test	67
12.9.6 Reader Test	67
12.9.7 Memory Test	67
12.9.8 Communication Test	68
12.10 F10 SETUP MENU.....	69
12.10.1 Dual Fingerprint Mode	69
12.10.2 Adaptive Mode.....	70
12.10.3 Identification Mode	70
12.10.4 FP Reg. Count	70
12.10.5 Module Version	71

1. Important Safety Instructions

When using Fingerprint Identification (Proximity / PIN) Access Controller, you are recommended to follow the basic safety precautions below to reduce the risk of fire, electrical shock, and injury to persons.

1. **Fully** read and understand all instructions and follow them completely.
2. **Follow** all warnings and instructions marked on the product.
3. **Do not** use liquid or aerosol cleaners. Use a damp cloth for cleaning. If necessary, use mild soap.
4. **Do not** use this product near water.
5. **Only** operate this product using the type of power source indicated. If you are not sure of the type of power supplied to your installation site, consult the personnel of local power company.
6. **Never** insert objects of any kind into the product or through the cabinet slots as they may touch voltage points and/or short circuit parts possibly resulting in fire or electric shock.
7. **Never** spill liquid of any kind on the product.
8. **Never** disassemble this product by yourself; take the unit to a qualified service center whenever service or repair is required. Opening or removing the covers may expose you to dangerous voltages or other risks. Also, incorrect reassembly can cause electric shock when the unit is subsequently used.
9. **Unplug** this product from the Direct Current (DC) power source and refer to qualified service personnel under these conditions:
 - a. When the power supply cord or plug is damaged or frayed.
 - b. If liquid has been spilled on the product.
 - c. If the product does not operate normally after following the operating instructions in this manual, adjust only those controls that are covered by the operating instructions in this manual. Improper adjustment of other controls that are not covered by this manual may damage the unit and will often require extensive work by a qualified technician to restore normal operation.
 - d. If the product exhibits a distinct change in performance.

2. General

The **Star LX007 / IDTECK LX007SR** is ideal to use for Single Door Access Control and Time & Attendance. The **Star LX007 / IDTECK LX007SR** has 4 input ports, 2 Form-C relay outputs, 2 TTL outputs, an RS232/RS485 communication port and an optional TCP/IP communication port to meet various customer requirements.

This user-friendly device allows you to register up to 1,000 Fingerprint Users (Optional 2,000/4,000 Fingerprint Users) and can store up to 10,000 IDs and 20,000 event transactions. All events can be uploaded and saved to the database of the host PC and the software can create a report to MS-Excel, HTML and Text files for the Time & Attendance management purpose.

The **Star LX007 / IDTECK LX007SR** has a built-in Fingerprint Module, a proximity card reader with IDC 26bit Wiegand format and a 24-key keypad (10 numeric keys, 2 control keys and 12 function keys) for a wide range of applications. The **Star LX007 / IDTECK LX007SR** allows access to the door with any combination of a fingerprint, Proximity Card/PIN and/or password. The **Star LX007 / IDTECK LX007SR** has 4 external input ports to be connected to an exit button, a motion detector, a door contact sensor and an existing alarm system to prevent unauthorized access.

The **Star LX007 / IDTECK LX007SR** has 2 relay outputs to control a door lock and an alarm relay that is used to warn any error. The graphic LCD supports multiple languages so that the unit can be operated anywhere in the world.

All system settings can be configured using the front keypad or via the Windows-based software. The **Star LX007 / IDTECK LX007SR** is a cost-effective biometrics system to be used stand-alone or networked. The dual tamper switches prevent unauthorized access.

3. Features

- 125KHz(default) Proximity/13.56MHz(optional) Contactless Smart Card, PIN and Fingerprint Recognition
- Dual function for Access Control and Time & Attendance
- 1:1 Verification and 1:N Identification storable 2 Fingerprint Templates
- Auto Touch Sensor for Fingerprint only Identification
- Fingerprint quality display
- 1,000 / 2,000 / 4,000 Fingerprint Users
- 10,000/20,000 ID Users / 20,000/10,000 Event Buffers (Selectable)
- Registration of up to 10 Fingerprint Master IDs
- Operating Mode selectable by Individual ID
- 4-Level Door Open Time Setting by Individual ID
- Time Schedule Setting by Individual ID and for Input Port, Output Port, Voice Message and Reader Mode

- Network Communication via RS232, RS485 and built-in TCP/IP
- 26bit Wiegand Output
- Serial Printer Port for event ticket issuing
- Supervised Input Ports
- User Name & Function Key Definition Display on LCD
- ARM/DISARM Function for Alarm Panel
- 2 Men Operation Mode
- Duress Alarm Function
- Graphic LCD of Multi Languages Display
- Voice Guide Programmable for Other Language
- Voice announcement Programmable by user via serial communication
- Door Phone Function (Optional)
- Software Selection: STARWATCH TIME PRO 2006, LX ACCESS PRO II

4. Specification

Model		LX007	
CPU		32bit ARM9, 8bit and 16bit Microprocessor	
Memory	Fingerprint Module	Program Memory	128KByte ROM
		Data Memory	128KByte / 256KByte / 512KByte Flash Memory
	Controller	Program Memory	256KByte ROM
		Data Memory	512KByte Flash Memory
Fingerprint User		1,000 / 2,000 / 4,000 Fingerprint Users	
Fingerprint Templates Size		800 Bytes for 2 Fingerprint Templates	
ID User		10,000 / 20,000 Users (Selectable)	
Event Buffer		20,000 / 10,000 Event Buffers (Selectable)	
Read Range	Passive Type	IDK50 / IMC125 : Up to 2 inches (5cm) IDC80 / IDC170: Up to 4 inches (10cm)	
	Active Type	IDA150 / IDA200 compatible	
Reading Time (Card)		30ms	
Verification Time		Less than 1sec.	
Identification Time		Less than 2sec.	
Power / Current		DC 12V / Max.650mA	
External Reader Port		1ea (26bit Wiegand, 4 / 8bit Burst for PIN) for Anti-Pass Back	
Communication		RS232 / RS485 (Max.32ch) TCP/IP (Internal LAN Converter Required/Optional)	

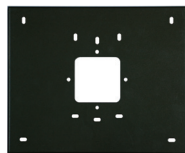
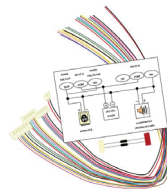
Baud Rate		19,200bps (recommended) / 9,600bps / 38,400bps / 57,600bps (selectable)
Input Port		4ea (Exit Button, Door Sensor, Aux# 1, Aux#2)
Output Port		2ea (2 FORM-C Relay Output (COM, NO, NC) / DC12V~18V, Rating Max.2A)
		2ea (TTL Output / DC5V, Rating Max.20mA)
LCD		Graphic LCD (128 x 64 dots) 72.5mm x 39.5mm (2.85" x 1.56") Screen
Keypad		24-key Keypad with Back Lighting (12 Function Keys included)
Language	LCD Display	English, Spanish, Portuguese (Selectable) Arabic, Chinese, Korean, Japanese (Optional)
	Voice Output	English, Spanish, Portuguese, Arabic, Chinese, Korean, Japanese (Programmable)
LED Indicator		3 Array LED Indicators (Red, Green and Yellow)
Beeper		Piezo Buzzer
Operating Temperature	Fingerprint Module	-15° to +40°C (+5° to +104°F)
	LCD	0° to +50°C (+32° to +122°F)
	Controller	-15° to +70°C (+5° to +158°F)
	RF Reader	-35° to + 65°C (-31° to +149°F)
Operating Humidity		10% to 90% relative humidity (non-condensing)
Color / Material		Black, Red, Gray, Silver, Dark Gray, Gold, Black & Gold Combo / Polycarbonate
Dimension (W x H xT)		192mm x 160mm x 45mm (7.56"x6.29"x1.77mm)
Weight		800g(1.76lbs)
Certification		FCC, CE, MIC

Fingerprint Module Specifications

Resolution	500dpi
Capture Image Size	412 X 302 pixels
Extraction Image Size	260 X 300 pixels
Sensing Area	13mm X 15.2mm
Scanner	High Quality Optical Sensor
FAR(False Acceptance Ratio)	0.001%
FRR(False Reject Ratio)	0.1%
ESD(Electro Static Discharge)	15KV
Verification Time	Less than 1 sec.
Identification Time	Less than 2 sec.

5. Identifying Supplied Parts

Please unpack and check the contents of the box. If any of these parts are missing, please contact a near-by distributor or IDTECK as soon as possible.

**Main Unit****(1ea)****Wall Mount****(1ea)****CD-ROM****(1ea)****Screws****(4ea)****Cable &
Diode &
Resistor****(4 & 2ea)****User's
Manual****(1 copy)**

6. Product Overview

6.1 Features

Standalone Operation

The **Star LX007 / IDTECK LX007SR** is capable of having an external reader (for 1 Door Control). This biometrics access controller reads card ID numbers and determines whether to allow or deny access to the door. When an input signal is received, for example from a sensor activated or an exit button pressed, the controller generates and logs an appropriate response. All events are stored into the memory buffers. The access controller is a true standalone device that, in the event of malfunction, will not affect other units when used in conjunction with one another.

Operation with Host PC

All event transactions can be managed via the host PC. The data transmitted from the controller can be displayed and stored on the host PC.

Keypad

If the **Star LX007 / IDTECK LX007SR** is not connected to the host PC, the built-in keypad and LCD module can be used for the entire operations and configuration process.

Input / Output

The **Star LX007 / IDTECK LX007SR** has 4 built-in input ports and 4 output ports (2 relay outputs and 2 TTL outputs) which can be used to manipulate a wide variety of controls.

Time Schedule Setup

You can program up to 10 time schedules and assign one time schedule to each user. Each time schedule has 8 different time zones from Monday-Sunday (7 time zones) and one holiday. Each time zone has 5 different time codes so you can program 5 different time codes for each day. You can also program time schedules for individual inputs and outputs. That is, if a time schedule for an input device is activated, that input device will be working only during the time assigned by that time code. Each time schedule is linked to one holiday schedule.

Holiday Schedule Setup

Excepting Sunday, you can program 100 holidays to one holiday schedule. Each holiday schedule is linked to one time schedule which has a time code for holidays. You can program all holidays to a holiday schedule and the time code for holidays is programmed to be the holiday time zone of time schedule.

- Example:**
- A.** Holiday schedule 01 linked to time schedule 01,
Holiday schedule 02 linked to time schedule 02
 - B.** Holiday schedule 02 linked to time schedule 01,
Holiday schedule 01 linked to time schedule 03