

HID® Amico™ 7

Install Guide

PLT-08313, Rev. A.1



125 kHz / 13.56 MHz / 2.4 GHz Contactless Biometric Reader

SRD Model: VL70LF

Supplied parts

- HID Amico VL70LF reader (1)
- Install Guide (1)
- External Access Module (1)
- Mounting plate (1)
- Set of accessories:
 - Cable adapters (7)
 - Connector cover with seal (1)
 - Connector cover screws (3)
 - USB connector dust cover (1)
 - Screw to attach the reader to the mounting plate (1)
 - Screwdriver (1)
 - Protection diode (1, for use with an electronic lock)

Recommended parts (not supplied)

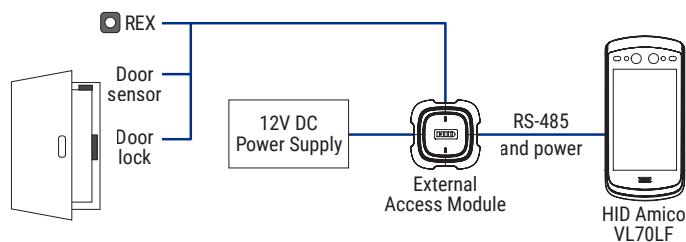
- Screws and wall plugs for mounting the device
- 12V DC / 2A power supply or a PoE switch/injector (IEEE 802.3af compliant)
- Cables

Installation notes

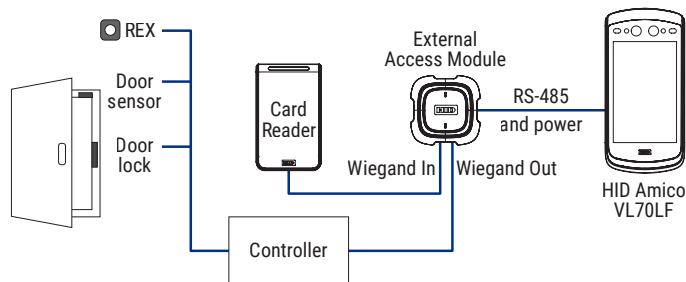
- The HID Amico VL70LF can be powered by either:
 - 12V DC power supply (power can be supplied either directly, or via the External Access Module (EAM)).
 - Power over Ethernet (PoE) LAN switch or injector (the PoE device can also supply power to the connected EAM, if used).
- For security reasons, it is recommended to install the EAM in a secure area, behind the controlled door.
- The Push Button and Door Sensor inputs can be configured either as NO (Normally Open) or NC (Normally Closed). The peripherals connected must be of dry contact type, short-circuiting GND to the respective input.
- Switching capacity of the EAM relay is 30V DC or AC, 5A.
- It is recommended to use a dedicated power supply to power a connected electric door lock.

Wiring examples

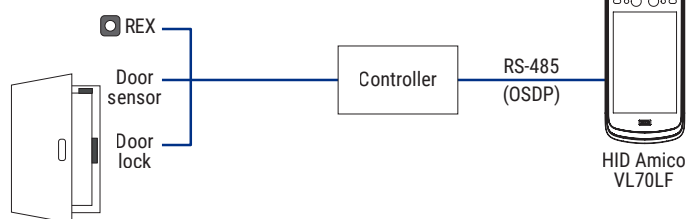
Direct door control



Wiegand controller and additional reader



OSDP controller



1. Select location

- **IMPORTANT:** Install the reader in a location that is not exposed to direct sunlight.
- To ensure good readability of the screen and to avoid reflections, select a location without windows in front of, or next to the reader.
- Run all cables required for installation (mains cable, power cables, and cables from the lock) before attaching the reader to the wall.
- If the device is powered from a DC power supply, make sure that a 12 VDC supply with a minimum current capacity of 2A is available for connection to the supplied power cable. The supply must be for the exclusive use of the HID Amico reader.
- When connecting the power supply to the mains, confirm that it is stabilized and regulated, and that there is no equipment near the reader that can cause interference or noise, such as electric motors.

2. Mount the mounting plate

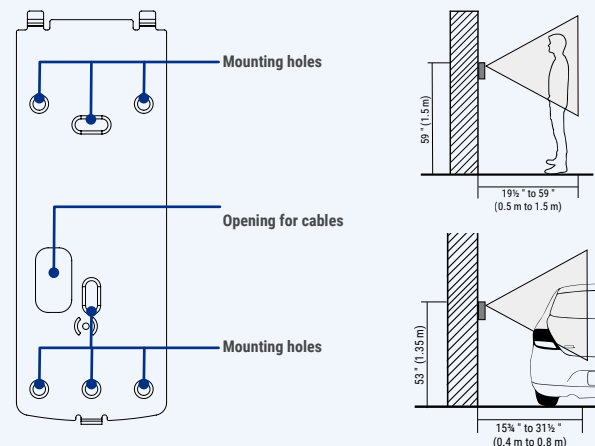


ATTENTION

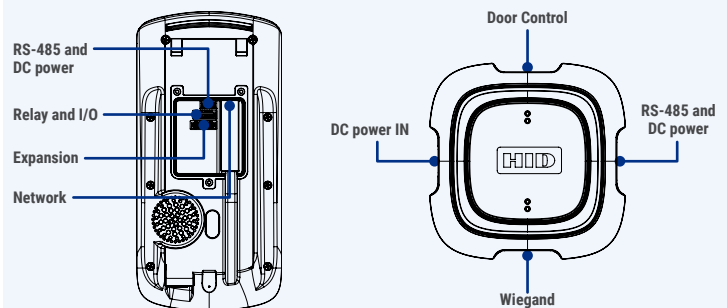
Observe precautions for handling
ELECTROSTATIC SENSITIVE DEVICES

Notes:

- Screws and wall plugs are not included.
- The top edge of the mounting plate should be installed at a height of 59" (1.5 m) from the ground for identifying a standing person, or at 53" (1.35 m) for recognizing a person inside a car or sitting in a wheelchair.



3. Wire the reader and External Access Module



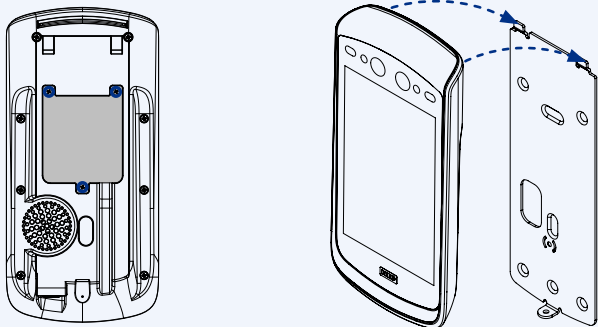
Reader

Connection Type	Connector/cable Adapter	Wire Color	Function	Maximum Length
Network	RJ-45 socket	-	100 Mbit Ethernet (with 802.3af PoE)	328 ft (100 m) (Cat 5 / 5e / 6)
RS-485 and DC power	4-wire cable adapter	Black	Power Ground	4,000 ft (1,219 m) (shielded twisted pair cable, Belden 3107A or equivalent)
		Blue/White	RS-485 B	
		Blue	RS-485 A	
		Red	Power +12V DC	
Relay and I/O	7-wire cable adapter	Yellow	GPIO 1	-
		Yellow	GPIO 2	-
		Yellow	GPIO 3	-
		Black	Ground (common)	-
		Green	Relay (NC)	-
		Orange	Relay (COM)	-
		Blue	Relay (NO)	-
		NC	Not connected	-
Expansion	8-wire cable adapter	NC	Not connected	-
		NC	Not connected	-
		NC	Not connected	-
		Black	Ground (common)	-
		Purple	Aux RS-485 A	4,000 ft (1,219 m)
		Purple/White	Aux RS-485 B	4,000 ft (1,219 m)
		White	Audio Line Out	-
		Brown	Audio Ground	-
USB	USB-A	-	Data backup/restore	-

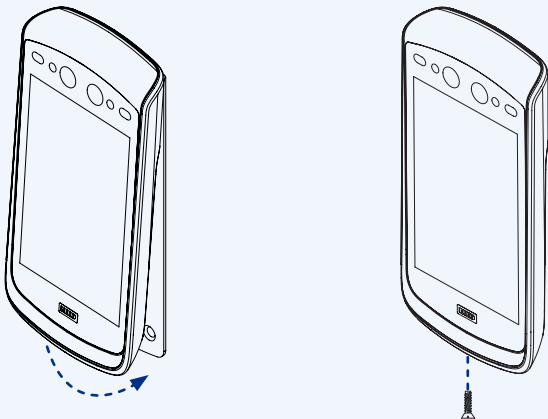
External Access Module

Connection Type	Connector/cable Adapter	Wire Color	Function	Maximum Length
RS-485 and DC power	4-wire cable adapter	Black	Power Ground	4,000 ft (1,219 m) (shielded twisted pair cable, Belden 3107A or equivalent)
		Blue/White	RS-485 B	
		Blue	RS-485 A	
		Red	Power +12V DC	
Wiegand	5-wire cable adapter	Yellow/White	Wiegand Out - D0	500 ft (152 m)
		Yellow	Wiegand Out - D1	
		Black	Ground (common)	
		Green/White	Wiegand In - D0	
		Green	Wiegand In - D1	
		NC	Not connected	
DC power IN	2-wire cable adapter	Red	Power +12V DC	-
		Black	Power Ground	
Door Control	6-wire cable adapter	Purple	Door sensor input	-
		Black	Ground (common)	
		Yellow	Push Button input	
		Green	Relay (NC)	
		Orange	Relay (COM)	
		Blue	Relay (NO)	

4. Secure the reader to the mounting plate

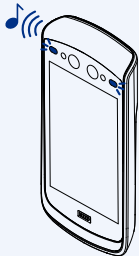


1. Install the connector cover over the connector area and secure it with the three supplied connector cover screws.
2. Insert the reader into the mounting plate.



3. Latch the reader.
4. Secure the reader to the mounting plate using the supplied screw.

5. Power and test the reader



1. Power the reader. The reader will beep and start booting, with progress displayed on the screen.



2. Follow the on-screen instructions to complete the set up and enroll the first user

6. Set up the reader

All settings of the HID Amico VL70LF reader can be configured using the touchscreen to access the administration menu. Alternatively, if the reader is connected to a network or directly to a PC via Ethernet, it can be configured using a web browser. For more information, see the *HID Amico Biometric Reader User Guide* (PLT-07752).

To access the on-screen administration menu

Tap **Menu** on the touchscreen. Authentication is not initially required to access the administration menu. Once a user is enrolled with admin privileges, access to the administration menu is restricted to only users with admin privileges.

To change the default IP address

The default IP address of the device is 192.168.0.129. To change this default setting:

1. Navigate to **Menu > Settings > Network > Network Properties**.
2. Set a static or dynamic IP address, as required:
 - Dynamic IP address assignment (DHCP)** - select the **DHCP** option. If the device is connected to a network with a DHCP server, the server sets the network parameters automatically. The IP address and other network parameters the reader received will be shown on this screen.
 - Static IP address** – set the required IP address and other network parameters.

Note: Tap **Next** to display additional screens with further information.

To access the web interface

1. Use a web browser to navigate to the default web interface at <http://192.168.0.129> (or the custom address if you have changed it).
2. Log in using the credentials you set during the initial device set up.

To load Elite (ICE) and MOB keys

The OMNIKEY Reader Manager app (Microsoft Windows only) is required to load Elite (ICE) and MOB keys. Search the Microsoft Store for "OMNIKEY Reader Manager". See the *HID Amico Biometric Reader User Guide* (PLT-07752) for information on using OMNIKEY Reader Manager to load keys on a HID Amico VL70LF.

Note: ICE and MOB keys can only be loaded using a Bluetooth LE connection.

7. Enrollment

The quality and reliability of a facial recognition system is strongly dependent on the quality of the images acquired during the enrollment stage. Please take extra care of this critically important process and follow these basic rules:

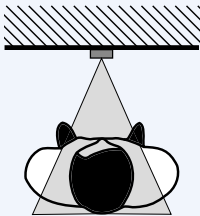
- Do not wear clothes or accessories that hide the important regions of the face, for example sunglasses, masks, caps, or scarves.
- Use neutral facial expressions.
- Position yourself approximately 50cm (20") in front of the device, in the center of camera field of view and allow the camera to capture a frontal view of your face.

To trigger the enrollment from the on-screen administration menu, navigate to **Menu > Enroll > Users** and tap **Add**. Enter the user information and tap the **face** icon in the **Credentials** section. The device will guide you to the right position and perform the scanning. Once completed, tap **OK** to save the newly enrolled biometric template to the database.

8. User identification

In idle mode, the reader automatically detects a person in front of the device and performs the identification. The identification result is displayed on the screen.

The recommended distance between the device and user during identification is 19¼ " to 55 " (0.5m to 1.4m).



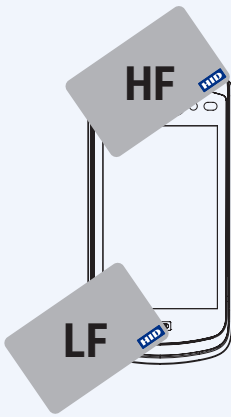
9. Presenting credentials

LF (125 kHz) cards (for example, HID Prox, EM, Indala)
Present at the bottom left corner

HF (13.56 MHz) cards (for example HID iCLASS, Seos, MIFARE DESFire)
Present at the top, in front of the cameras

Mobile credentials using NFC
Present at the top, in front of the cameras

Mobile credentials using Bluetooth Low Energy
No specific positioning needed (works at a distance)



Specifications

Input Voltage (V DC)	12V DC
Standby Current AVG¹	600 mA
Max Current AVG²	800 mA
Operating Temperature	-4° F to 122° F (-20° C to 50° C)
Cable Length	Communication Lines Wiegand = 500 ft - 18 AWG (152 m), 300 ft - 20 AWG (91 m) RS-485 = Max bus length: 4,000 ft - 24 AWG (1,219 m) Max length between nodes: 1,640 ft - 24 AWG (500 m)
Regulatory Ref Number	VL70LF
Frequency	BLE: 2.4–2.480 GHz, HF: 13.56 MHz, LF: 125 kHz
FCC IDS	2AKJ4-VL70LF
IC IDS	22235-VL35LF

¹ Standby AVG - When device is in idle state and no identification is being performed.

² Maximum AVG - During biometric identification.