BioSmart PV-WM

Installation Guide

Contents

Safety Instructions

Safety instructions must be followed in addition to **International Standards (ISO/IEC)***, and other safety regulations.

Caution

Caution indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

Note

Note indicates an important remark, which should be taken into attention.

Caution

General requirements:

Read, follow and retain instructions – All safety and operating instructions must be read and followed properly before putting the unit into operation.

Do not turn on the power supply until all installation procedures are finished – this may lead to injury or equipment damage.

Do not disconnect or connect cables while unit is powered on – this may lead to unit malfunction and software errors.

Do not expose unit to heat or fire – high temperature impact may lead to case deformation and circuit board damage.

Make sure that all cables and screws are fastened properly - otherwise case damage or circuit shortcut may happen**.**

Note

Additional requirements:

Use a clean, dry cloth to remove any dirt or dust from the unit.

*IEC 60204-1: Safety of machinery – Electrical equipment of machines. (Part 1: General requirements)

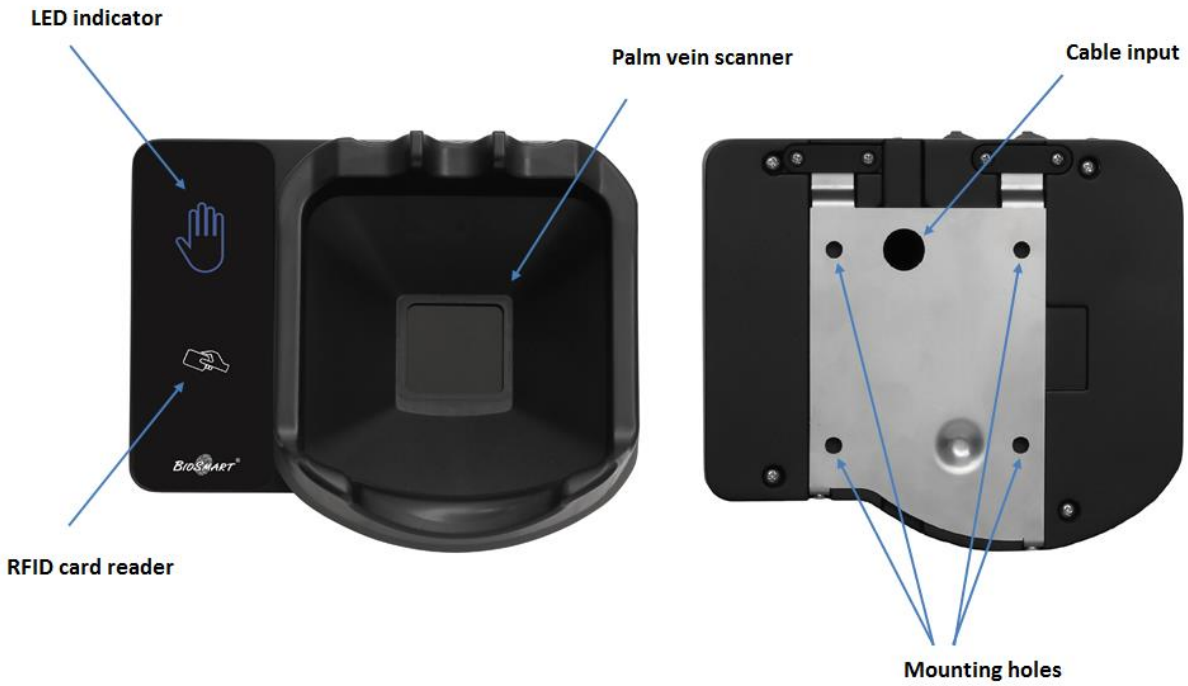
1. Overview

The **BioSmart PV-WM Reader** is a wall-mounted device, designed to capture a palm-vein template or RFID card code and send it to **BioSmart UniPass** controller. Reader is not suited for stand-alone application.

1.1. Specifications

Scanner type	Infrared
Scanning range	40-60 mm
Integrated RFID card reader	EM-Marine, HID, Legic, Mifare,
Card scanning range, mm	Up to 50 mm
Communication interface	Ethernet (IEEE 802.3,100BASE-T)
Case opening sensor	Yes
Power supply	12VDC±15%, 0,4 A, PoE IEEE802.3af class 3
Operating temperature	-40 to +50 °C
Design	Laid-on plastic
Installation	Wall mount
Dimensions (H x W x D)	175 x 150 x 140 mm
Weight	Net: 650 g; gross: 675 g
Warranty	5 years

1.2. Part names and functions



Name	Description
LED indicator	Blue – waiting mode Green – identification successful Red – identification failed
RFID card reader	RFID card identification
Palm vein scanner	Palm vein identification
Mounting holes	Suited for fixing screws
Cable inputs	Detachable panels, suited for cable inputs

1.3. Package contents

Item	Number, pcs
BioSmart PV-WM Reader	1
Mounting kit (four 6x35 dowels, four 3.5x38 self-tapping screws)	1

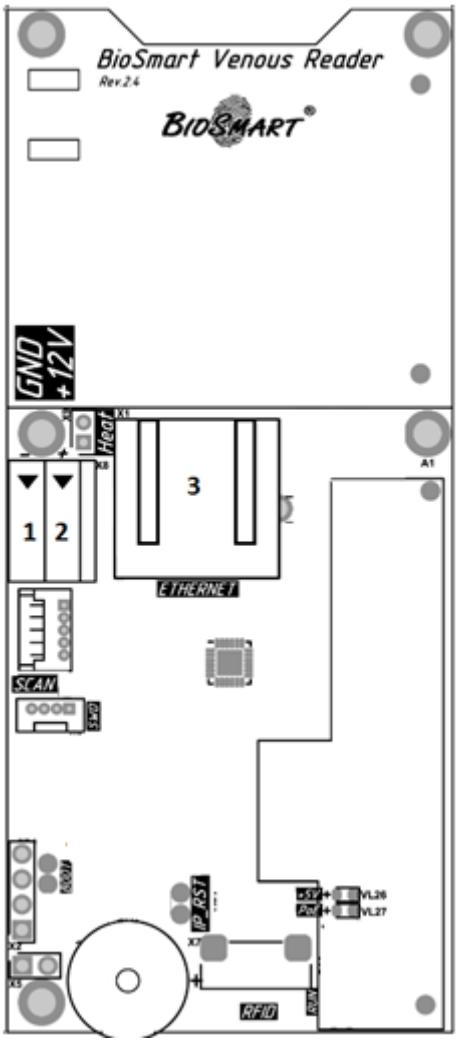
1.4. Opening the case

1) Remove two mounting screws on bottom and detach the steel plate;

2) Remove four mounting screws on back cover;

2) Detach the cover from the front part of the case to access the circuit board.

1.5. Circuit board



1.6. Circuit board LEDs and jumpers

Name	Type	Description
VL26	LED	Indicates if board is powered up
VL27	LED	Indicates if PoE supply is on
IP RST	Jumper	IP settings reset
BOOT	Jumper	Boot mode

1.7. Connector names and description

№	Name	Description	Used for
1	GND	Power supply -ground	Power supply
2	+12V	+12VDC Power supply	Power supply
3	Ethernet	Ethernet interface connection	UniPass controller connection, PoE supply

2. Installation

2.1. Cable types

№	Cable connection	Max. length	Type
1	Ethernet (IEEE 802.3)	100 m.	Four twisted pair cables of no lower than category five with a wire size of no less than 0.2 mm^2
2	Power source	50 m.	Duplex cable with a wire size of no less than 0.75 mm^2 (for example, 3192Y)

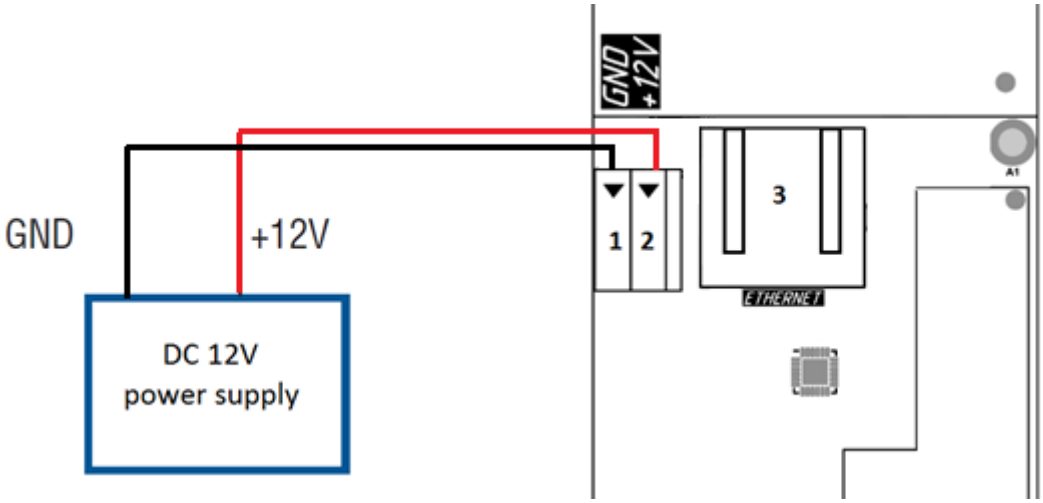
2.2. General installation notes

- Install the reader on vertical surface;
- Cables must be installed in accordance with the operational code for electrical installations;
- Do not lay cables within 30 cm of sources of electromagnetic interference;
- All cables must only intersect power cables at a right angle;
- All cable extensions must be soldered.
- Carefully check for mechanical damage on the surface of the reader circuit board and case;
- In order to avoid short circuits, the protected ends of cables used to connect the reader must not exceed 5 mm.

2.3. Mounting on wall

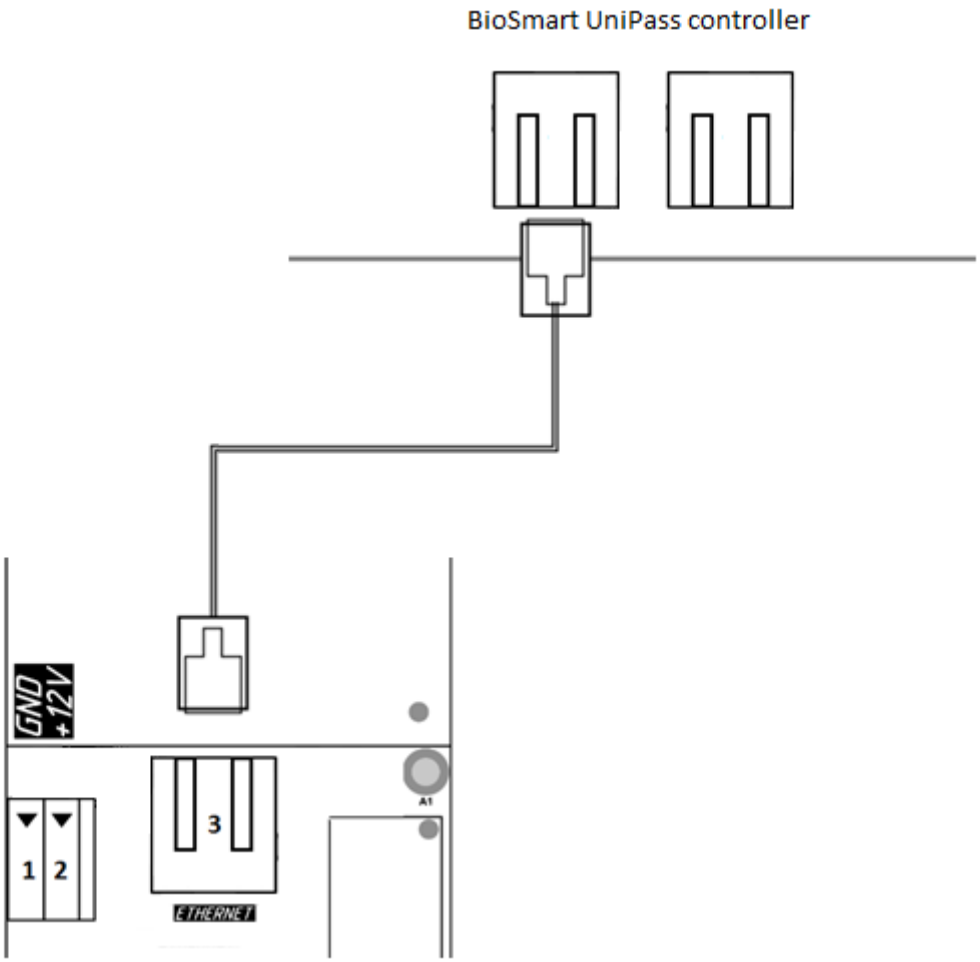
1. Decide where to install reader, using a mounting template.
2. Drill holes, according to a mounting template and insert dowels inside the holes.
3. Place metal plate on wall and fix it with self-tapping screws.
4. Put cables through back cover cable input.
5. Attach the cover to reader and fix it with four mounting screws.
6. Connect cables according to p.2.4-2.5.
7. Attach reader to the plate and fix the retaining screws.

2.4. **Power supply connection**



- Use a DC 12 V power supply adaptor with a minimum of 1,000 mA, which has obtained the approval of IEC/EN 60950-1;
- See recommended cable type and maximum length of the cable in **Cable types** table;
- Power supply can also be provided via PoE from UniPass (see 2.5);

2.5. **UniPass connection**



- UniPass Ethernet connection ports are equipped with PoE sources;
- See recommended cable type in **Cable types** table;
- The order of connections in the cable's modular connector must correspond to the TIA/EIA-568-B standard.

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