

**Art. Nr. 460180: Fingerprint Reader – Identification mode for 2000 Fingers**



Programmable from a Computer with the Conlan Fingerprint Quick Setup for Windows.

A DB 9 connector to the Com port should be connected inside the connection box.

Programmable from the connection box.

Package includes: one fingerprint unit, one connection box, Quick Setup software, manuals, CDrom.

**Art. Nr. 460181: Keypad as Programmer for Fingerprint Reader**

Plug connector RJ14 in the connection box and follow the programming sheet.

Plug in the keypad, program and then take out the keypad. The Fingerprint Reader will work based on fingerprint only afterwards.

With one Keypad you can program all fingerprint units you have.

If you decide to use this Keypad in verification mode (to work with code and finger) it is very simple: purchase a frame (Art.Nr. 460184), mount it on the wall and switch it to verification mode.

Package includes: one Keypad (w/o frame) with a RJ14 plug connector, QuickSetup software, manuals, CD.



**Art. Nr. 460182: Fingerprint Reader and Keypad - Verification Mode**

The Verification mode is the best solution for increasing security. The User has to key in his/her PIN code and then to show the finger to the Reader. The recognition time is shorter then in the Identification mode, but safety is much higher. All programming will be made through the Keypad. Open Collector is available for different applications like door opening, automation etc.

Package includes: one fingerprint unit, one keypad w/ frame, one connection box, QuickSetup software, manuals, CD.

**Art. Nr. 460183: Fingerprint Reader and Keypad – Unlimited users**

When you choose to work with the combination of codes and fingerprint, you actually increase security, speed and comfort. It is also the solution for unlimited amount of users.

Key in your PIN code (unique in a system) and then show your finger. Practically, you may keep in your system the entire population of the Earth. The system works in connection with a PC under Windows 9X/2000/XP.

Package includes: one fingerprint unit, one keypad w/ frame, one connection box, Conlan Fingerprint Unlimited software, manuals, CD.



**Fingerprint Reader System**



Each finger contains a unique pattern which belongs to the person. The ownership of that identification “system” is granted by nature to each of us. We can assign names, numbers, but the patterns of the fingers as well as many other unique features of the body are given.

We don't have to remind, store somewhere or care about it. There is simply.....

It is an incredible value among others which can be used to make our life easy, safe and comfortable. Just show your identification – it is me! - I want that and that and that ...

And there are 10 of them.

To use the finger in order to identify yourself or a function is to let the technology identify the unique pattern of a specific finger and locate typical Minutiae in this unique finger. The minutiae are the points where the pattern changes its character, actually where the lines are split or converted. Each point will be identified as coordinates and vectors for each minutia. There can be recognized up to 50 minutiae. Normally, approximately 30 are recognized.



Conlan Fingerprint Reader identifies the pattern by help of temperature detection. A sensor is able to measure in a pattern up to 300 times 400 pixels. The image is then converted into a digital one, with no gray-scaled picture and corrected lines.

From that digital image, the system will find out the particularities of the lines: where two lines merge in one, or where a line is interrupted, so on. These characteristics are called minutiae. The system is able to

percept up to 50 minutiae for a finger.

Conlan Fingerprint Reader has been developed and produced in the same style as the other Conlan's core products - Keypads and Proximity Readers, in the classical slim Scandinavian design. There is available in the color: RAL 9006 (Weissaluminium). Other RAL colors could be ordered by request.



### General features:

\* 2000 fingers \* Waterproof \* Indoor and outdoor use \* Easy handling \* Codes from 1 to 8 digits \* Applications: **stand alone Fingerprint Reader - stand alone Fingerprint - Codes and Fingerprint Reader for unlimited users \***

The Conlan Fingerprint Reader is equipped with LEDs:

**Yellow** to show – in work – that you have to show your finger.

**Red** - for not accepted finger.

**Green** - for accepted finger.

There are buzzer tones for accepted or not accepted finger.

Additionally, the red and green LEDs as well as the Buzzer can be externally controlled.

Conlan windows based programming tools give you the opportunity to set the parameters for Security Level (the security level for recognizing a non accepted finger compared to the security level for recognizing a finger as another finger):

- minimum image quality (the area of pattern in the finger)
- minimum number of minutiae for recognizing a finger
- other variables such as time, addresses etc.

The Fingerprint Reader is currently delivered with 12 core cables:

- RS 232 for direct communication to the computer.
- RS 485 for communication through bus in integrated system.
- Wiegand output for adapting controllers in order to integrate the Fingerprint Reader.
- Open collector output (500 mA) for arming/disarming/door opening/gates/comfort controlling.

### Communication possibilities:

Open collector (500 mA)

RS 485 for bus communication

RS 232 for programming on site from a computer

Wiegand output 26 bits

### Extension modules:

• **4 relays box** for finger activation (relay 1 for finger 1, so) work on the 485 bus communication. Up to 10 fingers per person.

• **I/O module** (2 input and 2 output) works on the 485 bus:

- arming/disarming or master/slave
- door control unit

### Specifications:

- ☐ Power: 9-28 V DC < 1 W
- ☐ Water and vandal proof (sealed)
- ☐ IP 67
- ☐ Temp: from -30 to +70 degree.
- ☐ Dim (HxWxD): 90 x 75 x 30 mm
- ☐ Standard colors: RAL 9016 (Verkersweiss) and 9006 (Weissaluminium)
- ☐ 2000 fingers, < 20 ms/match
- ☐ Up to 10 fingers/user
- ☐ High security – up to 50 Minutiae. Security control.

- ☐ Matching time < 20 ms
- ☐ Standard Farben: RAL 9016 (Verkehrsweiß) und 9006 (Weissaluminium)
- ☐ Encoding time < 1 sec
- ☐ False rejection rate (FRR):  $1,4 \times 10^{-2}$
- ☐ False acceptance rate (FAR):  $1 \times 10^{-4}$  (at FRR  $1,4 \times 10^{-2}$ )
- ☐ Equivalent error rate (EER):  $1 \times 10^{-3}$
- ☐ Applications: stand alone or in network
- ☐ Programmable from the Conlan Quick setup program for Windows.
- ☐ Programmable from a Keypad.

### Wires:

Color	Meaning	Box Input	Description
Reed	+12Vcc	1 =13	Power supply – 9V to 28V dc
Black	GND	2 =14	Power and signal ground. PC - DB9 – pin 5
Blue	RS485-A	3 =15	RS485 X+ line
Orange	RS485-B	4 =16	RS485 X- line
	Box Tamper	5	
	Box Tamper	6	
Violet	Wiegand 1	7	Wiegand D1
Gray	Wiegand 0	8	Wiegand D0
Yellow	Open Collector	9	500mA max.
Light Green	Ext.Green LED	10	Active low – connecting to ground will lit Green LED
		11	
Light Reed	Ext.Red LED	12	Active low – connecting to ground will lit Red LED
Reed	+12Vcc	13 = 1	Power supply – 9V to 28V dc
Black	GND	14 = 2	Power and signal ground. PC-DB9 – pin 5
Blue	RS485-A	15 = 3	RS485 X+ line
Orange	RS485-B	16 = 4	RS485 X- line
Brown	Ext. Buzzer	17	Active low – connecting to ground will activate buzzer
		18	
Green	RS232 – RX	19	PC- DB9 – pin 3
White	RS232 – TX	20	PC- DB9 – pin 2

### Notes

- All wires from the Fingerprint Reader/Keypad go in the connection box, in the input indicated above.
- There is an RJ14 connector on the box for quick setup by a Keypad.

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