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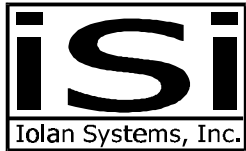
## SALES SPECIFICATIONS LA-XXW-PRXKY-Mx

### CONCEPT



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The user is warned that any changes or modifications not expressly approved by Iolan Systems, Inc. could void the user's authority to operate the LA-XXW-PRXKY-Mx Badge reader.



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**2. Purpose of this document**

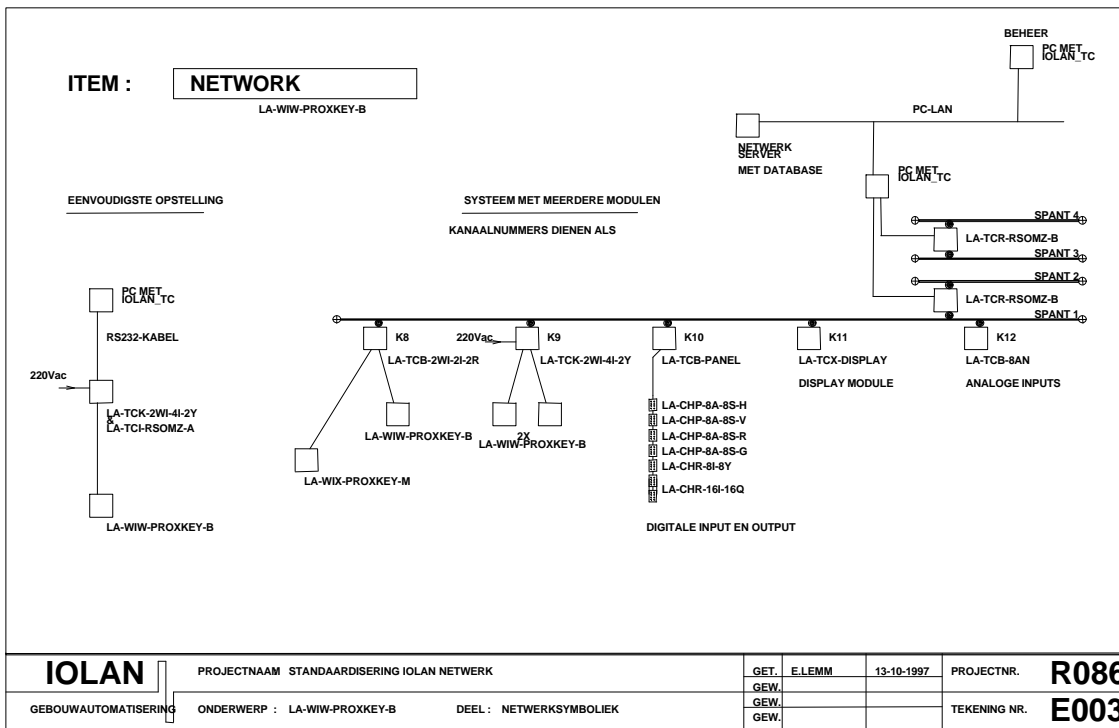
This document gives a full explanation of the possibilities of the LA-XXW-PROXKEY-MC. This information can be used, for example, in sales documentation.

**3. Description of the reader**

The LA-XXW-PROXKEY-MC is a 'wallmount-module,' a reader for MIFARE® tags. The module is designed for identification purposes. It uses a Wiegand data-interface to read a card number, or any other kind of data, and to send it to the connecting unit. There are three indicators: red, green and yellow. The yellow lamp blinks when the card is successfully read. A buzzer is available to give signals as programmed

**4. Data and Relation with TC Network**

The reader can be connected to a network as shown in this scheme:



**5. Technical data**

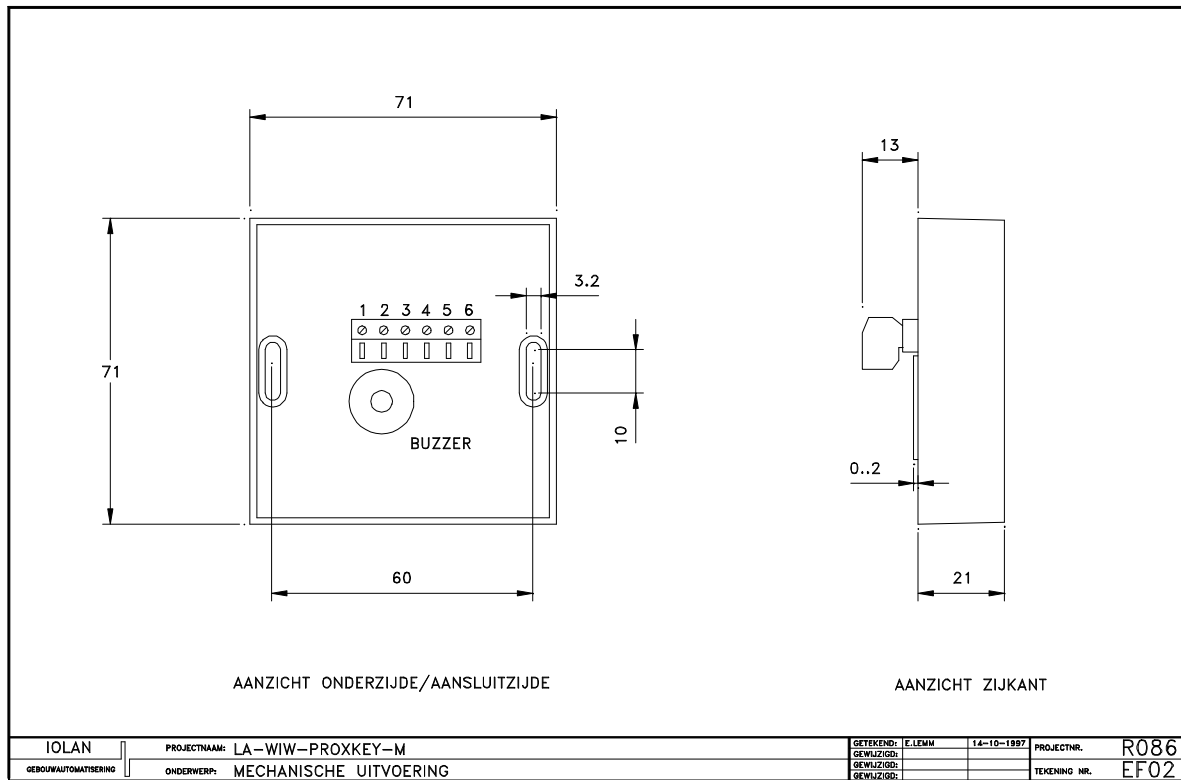
<b>Input</b>	
Input	<ul style="list-style-type: none"> <li>• 4.5 to 24 Volt +/- 10%. The power input is included in a 6 pin connector. In cooperation with IOLAN-modules the power is supplied.</li> <li>• 100 - 150 mA. (rest – reading / writing tag)</li> </ul>
<b>Technical data</b>	
WI interface	<ul style="list-style-type: none"> <li>• 6 pins connector with:</li> <li>• 2x power supply</li> <li>• 2x lamp switcher</li> <li>• 2x data. Wiegand 'clock-data'</li> <li>• Data structure according to ISO 7811/2-1986 TRACK 2</li> </ul>
Reading distance	<ul style="list-style-type: none"> <li>• 25mm typical, min 10mm max 35mm met transponder types : MF1-S50, MF1-P60 en MF1-L10</li> </ul>
Operating frequency	<ul style="list-style-type: none"> <li>• 13,56 Mhz.</li> </ul>
Data-transport transmitting speed	<ul style="list-style-type: none"> <li>• 106kBd</li> </ul>
FCC ID	<ul style="list-style-type: none"> <li>• OCQLA-XXWPRXKYMx</li> </ul>
Security	<ul style="list-style-type: none"> <li>• Data encrypted, protected against recording and 'replay-attack'.</li> </ul>
<b>Possibilities</b>	
Transponders	<ul style="list-style-type: none"> <li>• Can read from MIFARE® card types 1, 2, and 3.</li> <li>• Reader can hold one key (A or B) and one read location for transponder-identification.</li> <li>• Flexible transponder-code length.</li> </ul>
Indicators	<ul style="list-style-type: none"> <li>• One LED with options: Red, Green. For logistic matters. E.g.: red: no access; green: access allowed.</li> <li>• Panel can turn LED's on or off.</li> </ul>
<b>Mechanical aspects</b>	
Material housing	<ul style="list-style-type: none"> <li>• Typical W-housing</li> <li>• Black plastic housing, ABS plastic house.</li> <li>• Dimensions (without connectors; HxBxL mm ) 21x71x71mm. See drawing R086EF02.</li> </ul>
Connection to wall	<ul style="list-style-type: none"> <li>• 2x 3mm opening on 60mm distance. See drawing R086EF02.</li> </ul>
Cable connectors	<ul style="list-style-type: none"> <li>• Max. diameter 1.5 mm<sup>2</sup></li> <li>• Connectors 1x6 pins</li> </ul>
Protection	<ul style="list-style-type: none"> <li>• When connector-protected IP66.</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>• Stock -10..70 ° Celsius; 14..158 Fahrenheit</li> <li>• Operating temp -10..50 ° Celsius; 14..122 Fahrenheit</li> </ul>
<b>Installation</b>	
Connectors	6 Pins or 9 Pins , Ordernumber: EC220004 !
Mounting place	<ul style="list-style-type: none"> <li>• When mounting, outside connector must be protected with lacquer, or the edges must be made watertight.</li> </ul>
<b>Ordering information</b>	
Type	LA-XXW-PRXKY-MX
Order number	LA140110

**6. Parameters of the module**

There are no switches on the module; however, according to the MIFARE® protocol the readers must be personalized. There is a procedure available which accomplishes this.

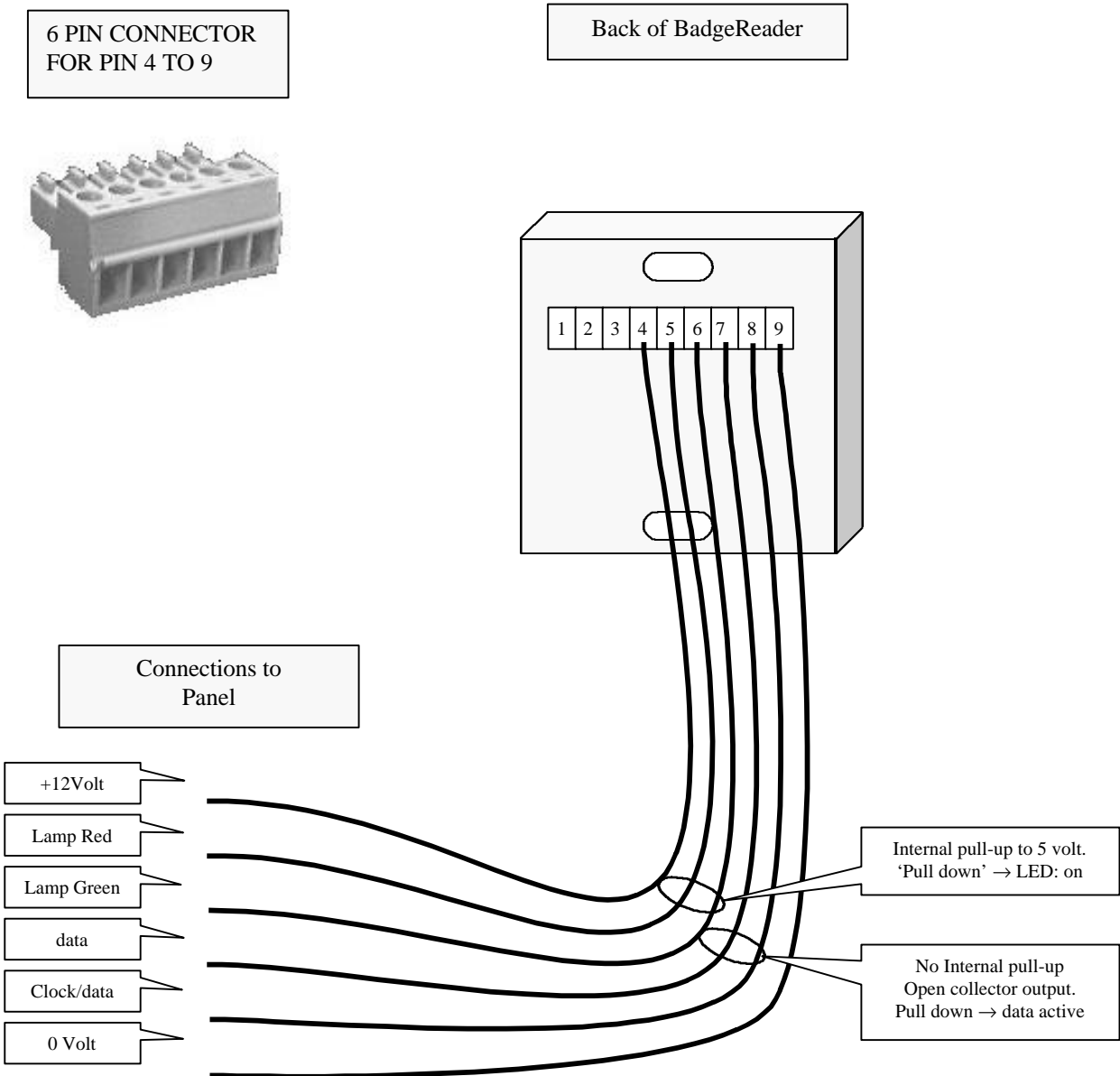
During this personalization-procedure, the key and pointers are downloaded. The key is necessary to gain access to an application on the transponder. The pointers determine where the information is located. The reader is constructed in such a way that downloaded keys can never be read from the reader; reading from the reader is physically impossible; encryption also negates this possibility.

**7. Dimensions of the module:**



\* For XXW 6 pin connector will be replaced by 9 pin connector !

8. Connecting





- D0 ..D9 is the card identification - number.

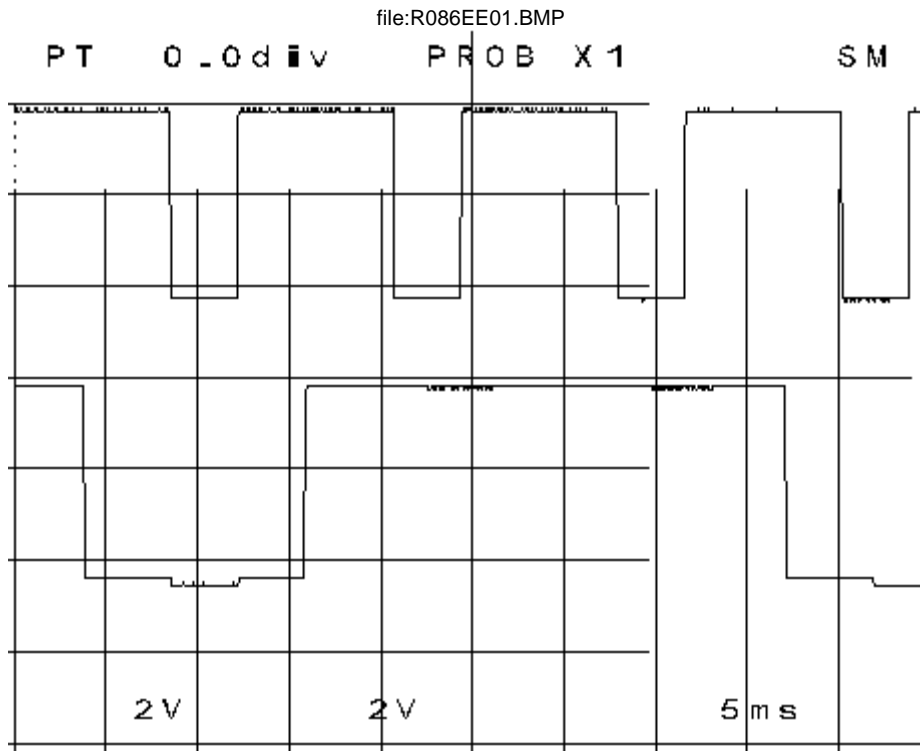
**11. Method of sending and timing**

The to be transmitted data is split up into characters and they are send out one by one Each character gets its own paritybit. The string as a whole gets an extra parity-character. The character structure is explained later in this document.

A character consists of 5 bits. 4 databits and 1 paritybit. These are transmitted 1 by 1:

1. Dataline setup
2. clockline goes low.
3. clockline goes up

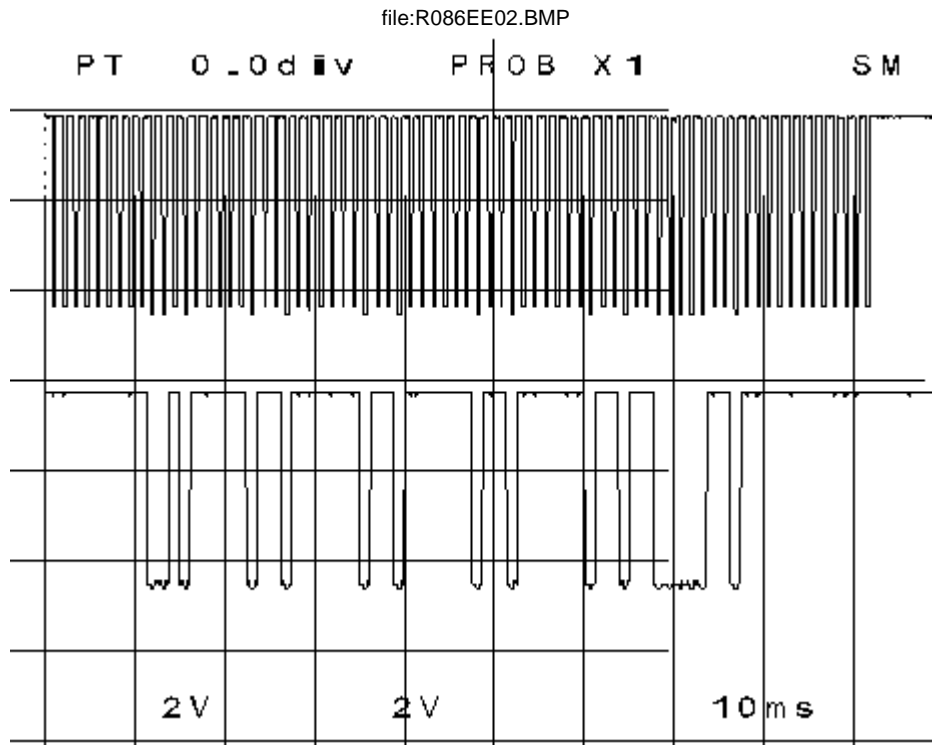
This gives the following pattern:



- The upper signal line is the clockline. (connector 2)
- The lower signal line is the dataline. (connector 3)
- The setuptime for data 3.5 mS.
- The clock low period is 3.5 mS
- The timelap the data remains up after going up of the clock is 3mS



A whole string of 10 characters would look like this:



In this case card number 0404040400 is send.

- The upper signal line is the clockline. (connector 2)
- The lower signal line is the data line. (connector 3)