NEO M – THE MAIN UNIT OF KEY MANAGER SYSTEM WITH 40W POWER SUPPLY

NEO M is the main unit of the key manager system with 40 Watt power supply. It is intended for power supply and connection of up to 8 NEO K-10 units, which together enable the storage and control of maximum 80 keys.
It has integrated TCP/IP converter, which allows NEO K-10 units to communicate with the software via LAN/WAN.

TECHNICAL DATA

NEO M	
Input voltage	110 – 230V AC, 50–60Hz
Output voltage	13.8V DC
Primary fuse	2A 250V
Current consumption	Up to 1W
Humidity	10-80%, non-condensing
Dimensions (mm)	550x150x80 (WxHxD)
Operating temperature	From +5°C to +55°C
Communication	RS485 or Ethernet
Controlling	Up to 8 NEO K-10 units
Protection	Short circuit, overload and thermal
Reader	Wiegand 26-bit 125 kHz/ 13.56 MHz or protocol reader 13.56 MHz (RS485)

Power Supply
The device can operate within a 110-230V AC, 50–60Hz input range. The output power of the in-built power supply is 40W, 13.8V fulltime. 10W is reserved for battery charging and normal operation and 30W is for the NEO K-10 units. The power supply has protection against both short circuits and current overload. In the case of protection activation, the power will be switched off for 5s. If this is repeated 20 times, the unit will switch off until electrical resetting takes place (unplugging from mains voltage).
This protection is activated if external consumption exceeds 2A.

7Ah battery support is included with a charging limit of 13.8 V DC and shut down at 10.5V. The charging time of an empty battery is approximately 8 hours. 7Ah battery can be installed in the box and connects to a cable marked with label "Battery". When operating from battery, the output voltage will drop from 13.8V to 10.5V.

Environment
Do not install the unit on/in a place, where it can come in contact with water. You must assure good cable joints, protected against moisture, otherwise corrosion may damage the controller. Damage in such cases is not covered by the warranty.

Communication
The unit has a default address 254. If you want to receive events from "tamper" switch ES8 that is connected to the panel, then it needs to be entered in the Codeks software.

Ethernet:
Connect the unit to the computer through your LAN via Ethernet connector. Adjust network settings of the unit using the Codeks Device Manager software so that it will function properly in your network. Please consult Codeks Device Manager's manual.

RS485:
If you do not want or cannot use the built-in Ethernet interface, connect RS485 communication of the NEO K-10 units to the communication converter from the Spider family: Spider-W5 USB, Spider-NET W5 and through it to the computer. For the RS485 communication line is recommended to use FTP or S-FTP cable. There can be only one key manager system on one communication line. You should not connect other controllers on this communication line.

CONNECTOR DESCRIPTION
Connectors are marked on the circuit board with AC, LAN, PWR, RDR, RDW1, RDW2 , TMP, CD0, CD1, CE0 – CE7.

CONNECTOR AC – connection of power supply

Description	Specification
AC	110-230 V AC, 50–60 Hz

Connection of 110-230 VAC 50-60 Hz power supply via supplied two-pin connector.

CONNECTOR LAN – Ethernet connection

Description	Specification
LAN	Ethernet

Connect the NEO M unit to a local network via built-in Ethernet interface with a standard (straight) network cable. You can change IP of the unit with the program Codeks Device Manager, so that the NEO K-10 units will work normally in your network. To change the IP address, refer to the instructions of the Codeks Device Manager software.

CONNECTOR PWR – backup battery connection, emergency power supply (if there is no power source)

Contact	Description	Specification
1	BAT	12V DC – 7Ah backup battery connection
2	GND	Ground
3	EMERGENCY	12V DC - when there is no longer any power source, connect at least 12V DC 7Ah battery on this contact
4	GND	Ground

Contacts follow each other in sequence from left to right. The first contact is marked with a white dot.

BAT – Backup battery support. Connecting 12V DC from the 7Ah battery.

EMERGENCY - It is designed for situations when there is no longer any power source. The unit has pre-fabricated cable with connectors, marked with label "EMERGENCY ", which is already connected to this contact. Red wire is connected to the EMERGENCY contact, black on the GND contact. In case of failure of all power sources, unlock and open the service panel on the bottom of the unit and pull out the cable. Connect this cable to at least 7Ah battery. Then press the buttons from ES0 to ES7 to open all key insert holes of each NEO K-10 unit.
You can press only one button at a time, otherwise you can damage the NEO M unit and the power source. Button may be pressed for max. 5 seconds, otherwise the deformation of the magnetic closures can occur.

Example: If you press the button ES0, all of the key insert holes, on the unit NEO K-10 which has connected contact EM (emergency) to the contact CE0 on the unit NEO M, will open.

CONNECTOR RDR – connection of protocol reader or connection of power supply for Wiegand 26-bit reader

Contact	Description	Specification
1	12 V DC	Max. 0.3 A, connect 12V DC to reader
2	GND	Ground, connect ground to reader
3	CA	RS485 A line - protocol reader
4	CB	RS485 B line - protocol reader

Contacts follow each other in sequence from left to right. The first contact is marked with a white dot.

CONNECTOR RDW0, RDW1 – connection of Wiegand 26-bit data lines, LED and beeper to the reader

Contact	Description	Specification
1	DATA 0	Wiegand data line 0
2	DATA 1	Wiegand data line 1
3	BUZZER	Output for buzzer
4	LED	Output for LED

Contacts follow each other in sequence from left to right. The first contact is marked with a white dot.

Connection of data lines and inputs for buzzer and LED of Wiegand 26-bit reader. The whole RDW0 or RDW1 connector must be connected from NEO M unit on each NEO K-10 unit. It can be looped from one to the next. On NEO K-10 unit the connector is marked with RDW.

CONNECTOR TMP – connection of tamper switches

Contact	Description	Specification
1	TP0	Tamper ES8
2	TP1	Tamper ES8

Contacts follow each other in sequence from left to right. The first contact is marked with a white dot.

TP 1 and TP 2 - Normally closed (NC) "tamper" switch ES8. It serves for indication of opened panel to an external device, when the NEO M unit no longer has any power source. It also reports an "ALARM" event in the software, when the NEO M unit is powered.

CONNECTOR CD0, CD1 – connection of power supply and RS485 communication line on NEO K-10 units

Contact	Description	Specification
1	12 V DC	Max. 1 A on 1 connector
2	GND	Ground
3	CA	RS485 A line
4	CB	RS485 B line

Contacts follow each other in sequence from left to right. The first contact is marked with a white dot.

The entire CD0 or CD1 connector must be connected on each NEO K-10 unit (max. 4 units on 1 connector) on DEV connector. It must be looped from one to the next.

CONNECTOR CE0, CE1, CE2, CE3, CE4, CE5, CE6, CE7 – connection of "Emergency" power supply if NEO M unit no longer has any power source

Contact	Description	Specification
1	12 V DC	Max. 5 A on 1 connector
2	GND	Ground

Contacts follow each other in sequence from left to right. The first contact is marked with a white dot.

Connect connectors CE0-CE7 to the EM connectors on the NEO K-10 units. When the units are connected, press the corresponding key to open all key insert holes on the NEO K-10 unit.
Example: Connect the connector CE0 from the NEO M unit to the connector EM on the NEO K-10 unit. Pressing the ES0 button opens all key insert holes on the NEO K-10 unit.

For proper operation EMERGENCY and GND contacts (PWR connector) must be properly connected to the appropriate power source.

Installation of NEO M

Unscrew the panel from housing and drill the holes in the wall. Mounting holes are marked with arrow labels. Push the plugs in the holes and fasten the housing on the wall. Do not install housings on Plasterboard (knauf) wall.
Connect all of the cables to the NEO M unit. Pull the cables, which go to the NEO K unit through the back hole out of the NEO M unit. Consult **"Connection instructions"** manual for more detailed mounting description.

ORDERING CODES

NEO [box]-[card]-[software]
Box: **M**
Card: **0** – without reader – reader is sold separately and can be 125kHz, 13.56MHz or protocol 13.56MHz
Communication: **NET** – Ethernet

Code	Specification
NEO M-0-NET	40 W power supply for up to 8 NEO K-10 units with battery back-up, in M housing, without the reader, integrated Ethernet, short-circuit, overload and thermal protection

OTHER

Please read through our warranty and disclaimer statements.

Connection scheme and additional support for the use of this product can be found on:
http://www.jantar.si/forum/en

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