nexgentec network keypad NGT-HKNKP-INT-V02 hardware and installation manual

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1 Introduction

Thanks for purchasing the nexgentec network keypad. It may contain 2 parts:

- A Feller universal bus keypad (see section 3 for compatibility)
- The network processor board (NPB). For all Feller universal bus keypads use the NGT-HKNKP-INT-V02

The keypad part may be delivered trough your electrician. Please order then the correct network processor board for your keypad

2 Features

- Connects a universal bus keypad from Feller to a standard network using POE IEEE 802.3af, mode A or B. Maximal consumption 1,5W.
- Enables control systems to connect over TCP or UDP
- Provides a website for configuration
- Works with any cable that is matching the minimal standard for Cat5 UTP and above

3 Compatible universal bus keypads from Feller

Examples: Feller universal bus keypads in white:

Type	Desc.	Feller number	"Einheits" number (EM)
1-4 fold	4 Buton / 0 LED	3924.FMI.61	325 206 000
1-8 fold	8 Buton / 0 LED	3928.FMI.61	325 209 000
1-4 fold	4 Buton / 6 LED	3924.FMI.L.61	325 216 000
1-8 fold	8 Buton / 8 LED	3928.FMI.L.61	325 219 000

Feller universal bus keypads in black:

Type	Desc.	Feller number	"Einheits" number (EM)
1-4 fold	4 Buton / 0 LED	3924.FMI.60	325 206 950
1-8 fold	8 Buton / 0 LED	3928.FMI.60	325 209 950
1-4 fold	4 Buton / 6 LED	3924.FMI.L.60	325 216 950
1-8 fold	8 Buton / 8 LED	3928.FMI.L.60	325 219 950

All Feller bus keypads are supported!

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4 Hardware installation

**MAKE SURE THAT THE CABLE IS NOT CONNECTED TO THE POE SWITCH!**

4.1 Cables

Make sure to use a Cat5e or better cable. The electrician must measure and approve the cable for at least 100BaseTX Ethernet. 2 Keypads can be connected to a 4-pair cable using mode A

4.2 POE mode B (Power over spares cable)

In this mode the orange and the green pair of cables is used for data, the other 2 pairs for power.

The network connector must be connected this like:

RJ-45 Pin	Signal	Direction	Cable color	Keypad connector
1	TX+	--->	Orange-white	1
2	TX-	--->	Orange	2
3	RX+	<---	Green-white	3
4	Power+	--->	Blue	4
5	Power+	--->	Blue-white	5
6	RX-	<---	Green	6
7	Power-	<---	Brown-white	7
8	Power-	<---	Brown	8
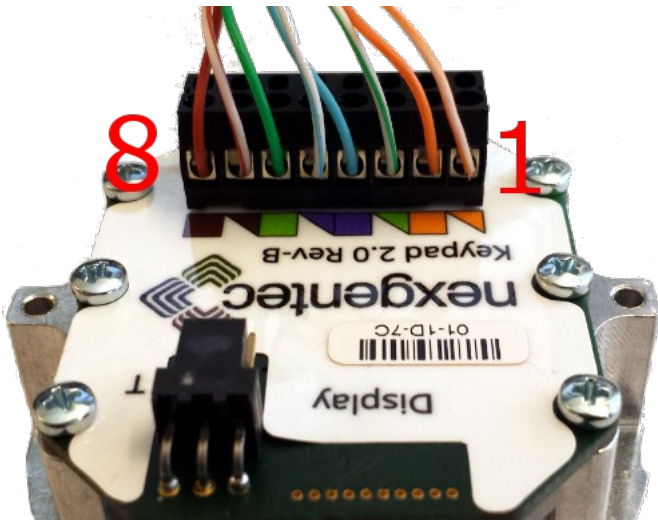
On the other end the RJ45 plug looks like this: (tab is on back)

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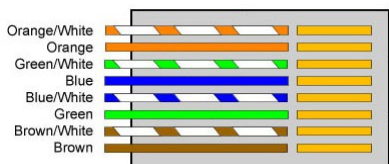
4.3 POE mode A (Power on the data pairs)

If this mode should be used make sure that your switch is supporting it. Most of the cheap POE inserter do not!

In this mode only the orange and the green pair of cables need to be connected. MDI and MDI-X are supported.

RJ-45 Pin	Signal	Direction	Cable color	Keypad connector
1	TX+ / Power	--->	Orange-white	1
2	TX- / Power	--->	Orange	2
3	RX+ / Power	<---	Green-white	3
4				
5				
6	RX- / Power	<---	Green	6
7				
8				

DO NOT CONNECT TO THE SWITCH BEFORE HARDWARE INSTALLATION IS COMPLETE

## 4.4 Temperature sensor connector

The temperature sensor is connected on the back using the 3 pin connector
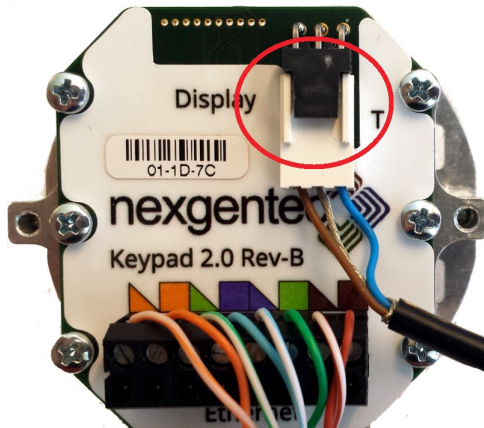
The colors from the cables may vary, the plug direction is always the same. Use it as reference.

## 4.5 Installing the mounting ring and processor board
Mount the original from Feller with the universal bus keypad delivered mounting metal ring and insert the network processor board
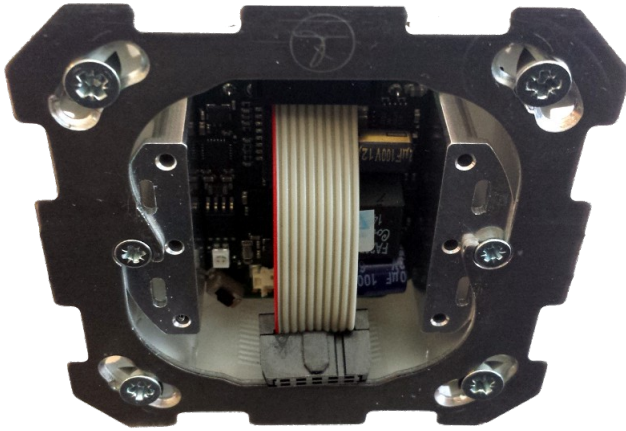
4.6 Connect the universal bus keypad
Connect the universal keypad using the small cable. Press the keypad firmly into the matching holes in the outer frame.
**CAREFULLY!!!!!! WE DO NOT TAKE BACK MODULES THAT ARE MECHANICALLY DAMAGED**
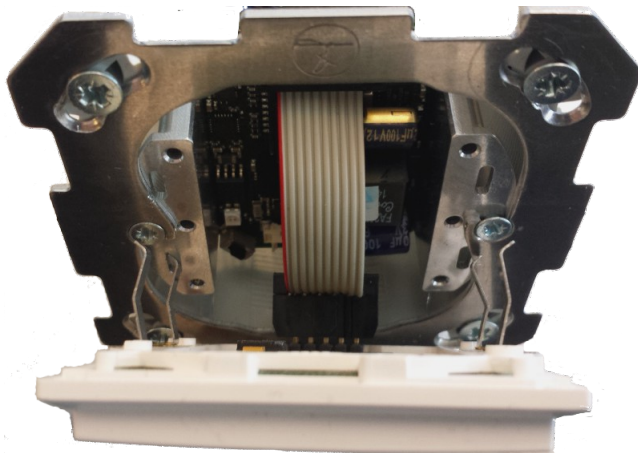
IF THE KEYPAD IS SEAT CORRECTLY, CONNECT THE RJ45 TO THE POE SWITCH NOW. IF YOU ARE UNSHURE REDO THE MOUNTING PROCESS.

4.7 After install
After a correct installation the the Keypad is flashing up RED-> GREEN -> BLUE and continues with a solid RED 20%. All is ready now to connect over network. The network processor board is only working correctly if the universal keypad is connected. Without it will not be reachable over network.

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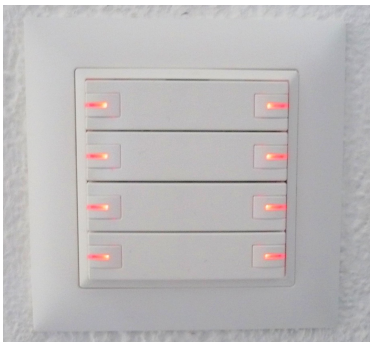
5 Network services

5.1 HTTP

The network processor board features a web server to configure the network settings. As well the buttons can be executed for test reasons. To connect insert the default IP into the browsers address field: http://192.168.123.99 and press enter. An authentication window appear:
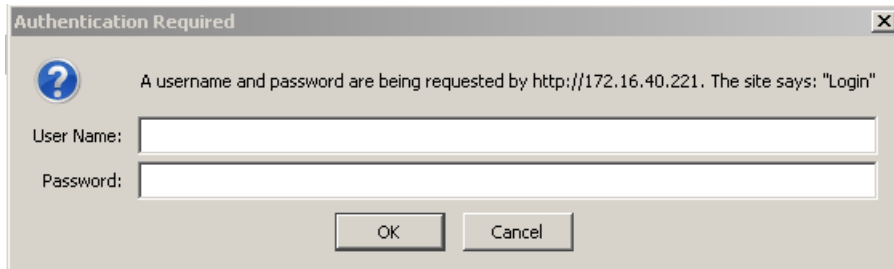
Default user name is *admin* and password *nexgentec*

After successful authentication the main page appears:

- IP: IP of the network processor board, if empty, DHCP is active
- Netmask: The netmask for the IP
- Gateway: Gateway
- UDP reply IP: If a UDP packet is received the reply will be sent to this address. 255.255.255.255 means that its a broadcast.
- Password: Set a new password for the web interface. If forgotten a rest will bring it back to default (nexgentec)
- Factory Defaults: The network processor board can be set back to the original settings by following this instructions
- Key buttons: Simulates a key press

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5.2   Reset settings

The factory settings can be restored by pressing the button on the network processor board during upstart.
After reset find the keypad at: http://192.168.123.99
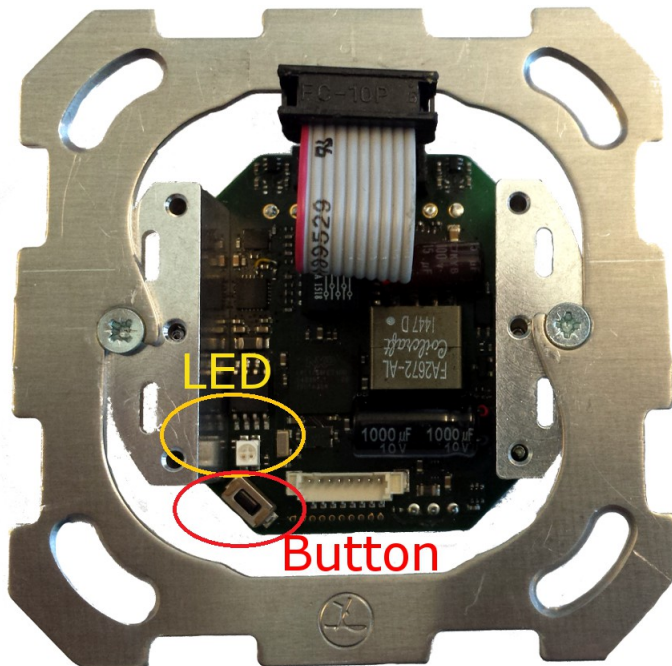
Proceed like this to ensure a save reset:

1. Remove network cable from the POE switch
2. Remove Feller keypad
3. Re-insert the network cable into the POE switch while holding down the button. The led will flash several times and finally remain steady. At this point release the button, the processor board will reboot with factory defaults
4. Remove network cable from the POE switch
5. Install Feller keypad
6. Re-insert the network cable into the POE switch

6 Firmware

6.1 Versions
Contact nexgentec for new firmware files.

6.2 Updating firmware
1) Open the nexgentec network keypad software and connect to the desired keypad
2) Go to "Settings" and enable the firmware update function. Enter 2222 as authorization code
3) Press "start" in the firmware update section, the network keypad updater starts
4) The update process does update and start the new firmware
5) Once done the keypad software can be reconnected to the keypad

6.3 Canceling the update process
If the update process is started by accident it can be canceled by removing the power from the keypad. DO not interrupt a running update, the keypad may be lost and need to be returned to the factory,