Neets Control – UniForm

Installation Manual

Neets

Foreword

The purpose of this document is to describe how to install and configure the Neets Control – UniForm, hereafter the UniForm.

CHANGES - Neets reserve the right to change the specification and functions of this product without any notice. Check www.neets.dk for the latest updated version of this manual.

Questions, AFTER reading this manual, can be addressed to your local distributor or:

Neets A/S
Denmark

by E-Mail: Support@Neets.dk

or you may use our contact form at www.neets.dk

Revision list

This document (no: 310-0350-002) has the following revision changes:

Author: Date	Description	Pages	Rev
NS: 12-02-2019	First release.	All	1.00

In the box

UniForm
1 x Neets Control - UniForm
Terminal connectors
Screws & wall plugs
1 x Mounting bracket
Quick guide

Important Safety Instructions

Caution:

Read these instructions:
Read and understand all safety and operating instructions before using the equipment.
Keep these Instructions:
The safety instructions should be kept for future reference.
Heed all Warnings:
Follow all warnings and instructions marked on the equipment or in the user information.
Avoid Attachments:
Do not use tools or attachments that are not recommended, because they may be hazardous

Warning!:

- This equipment should be operated only from the included power supply.
- To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).
- Power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them.
- Do not defeat the safety purpose of a polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. There are no user-serviceable parts inside. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards. Contact your local Neets reseller or distributor.
- If the equipment has slots or holes in the enclosure, these are provided to prevent overheating of sensitive components inside. These openings must never be blocked by other objects.
- Do not use this equipment near water.
- To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture and objects filled with liquids.
- Unplug the product before cleaning. Clean only with a dry cloth and not cleaning fluid or aerosols. Such products could enter the unit and cause damage, fire, or electric shock. Some substances may also mar the finish of the product.

FCC Class A Notice:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation. The Class A limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

FCC regulations state that any unauthorized changes or modifications to this equipment, not expressly approved by the manufacturer, could void the user's authority to operate this equipment.

The lightning bolt triangle is used to alert the user to the presence of uninsulated "dangerous voltages" within the unit's chassis that may be of sufficient magnitude to constitute a risk of electric shock to humans.

The exclamation point triangle is used to alert the user to presence of important operating and service instructions in the literature accompanying the product.

Neets

Contents

Description

UniForm is a compact and intelligent AV control system. It is remarkably simple to use, thanks to an intuitive user interface with eight buttons and a crisp E-ink display.

With UniForm anyone can start up a presentation without complicated procedures.
Simply press ONE button and you are ready to begin!

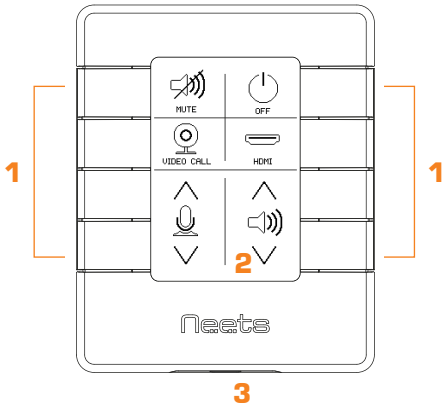
UniForm is a perfect choice for the classroom, meeting or conference room and is easy to install. UniForm can control devices through RS232 and LAN.

Function description	
RS-232 (Tx+Rx) or IR (Tx) (controls up to 2 IR devices on the port)	1
RS-232 (Tx) or IR (controls up to 2 IR devices on each port)	2
LAN device control	2
Power over Ethernet	Yes
I/O	3
Buttons	8
USB port for programming	1
PIR sensor input	Yes
Light on/off	Yes
Room darkening	Yes
Screen up/down	Yes
Volume control	Yes
Device feedback	Yes

Quick guide to the UniForm

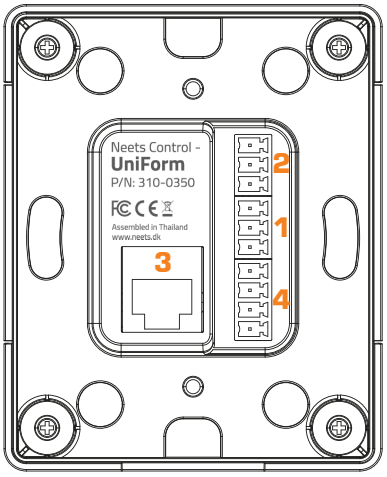
Buttons, indicators and connectors are available on the front and rear panels. These are shown below:

Front:



Number:	Description
1	Push buttons for controlling the AV setup with LED status lights
2	Front cover with label for button description
3	Mini USB for programming

Rear:



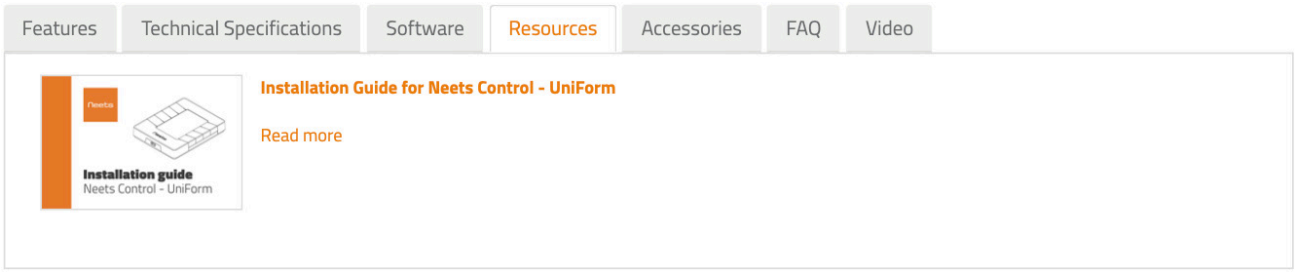
Number:	Description
1	1 x RS-232 port, Bidirectional or IR Unidirectional
2	2 x RS-232 or IR ports, Unidirectional
3	1 x RJ-45 Network (LAN) connector with PoE functionality
4	3 x Digital Input/Output

Installation

The Neets Control - UniForm can be installed in EU, DK(1,5 modul LK FUGA Air) standard electrical boxes by using the mounting brackets included in the box.

Find the Installation Guide at:

https://www.neets.dk/product/neets-control-uniform#Resources



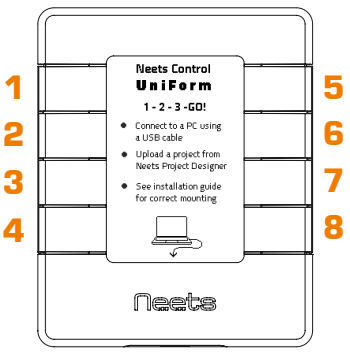
Connections and Controls

User Interface (E-ink and buttons)

The front of the UniForm consists of an E-ink-display, showing the functions related to the four bottuns on each side of the display. The buttons are numbered as shown to the right.

Each button has a tactile “click” feedback to ensure proper activation. Also, each button has an embedded multicolor LED light to indicate current status of the AV system.

E-ink display, button functions and LED indication are configured using the Neets Project Designer software.

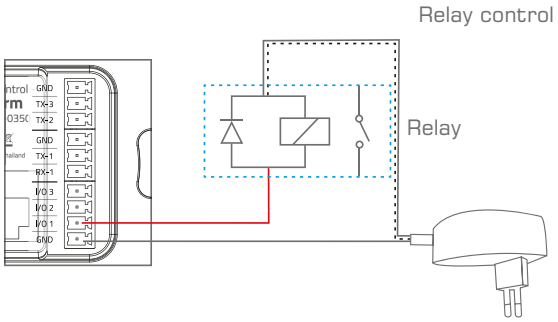


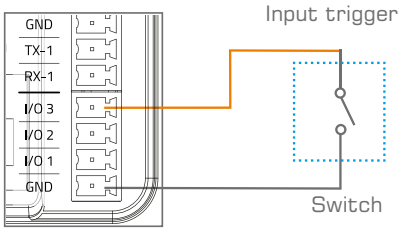
I/O ports

The three I/O (Inputs/Outputs) can be configured as either output or input. Each is available for connection to a PIR (movement) sensor, keyboard lock, relays or for other compatible uses. The ports are not potential free; you may need external relays to prevent ground loops depending on your application.

When used as outputs, the I/O ports are active low. When activated, the I/O ports are tied to GND through a FET transistor (also called open drain/ collector function). Each I/O can draw up to 24VDC/500mA.

When used as inputs, the applied voltage must be below 1 VDC to be accepted as LOW, and above 4 VDC (but below 24 VDC) to be accepted as HIGH. The inputs are default HIGH and must be connected to ground in order to change state.



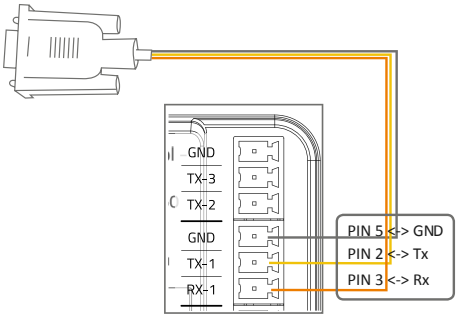


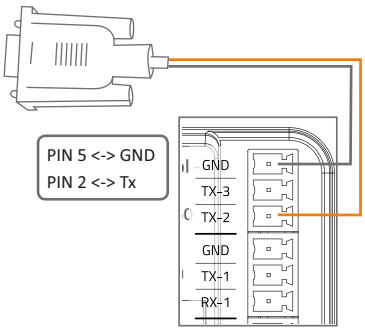
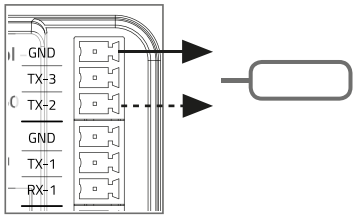
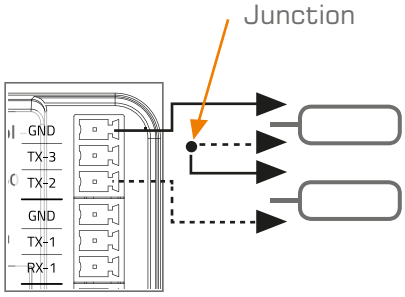
RS-232/IR ports

The RS-232 ports (TX-1, RX-1, TX-2, TX-3) are used for one- or two-way communication. Port 1 is a two way port, which can be used for devices for which a reply function is required, such as a projector.

All of the RS-232/IR ports can be configured in the Neets Project Designer software either as RS-232 or as IR emitter.

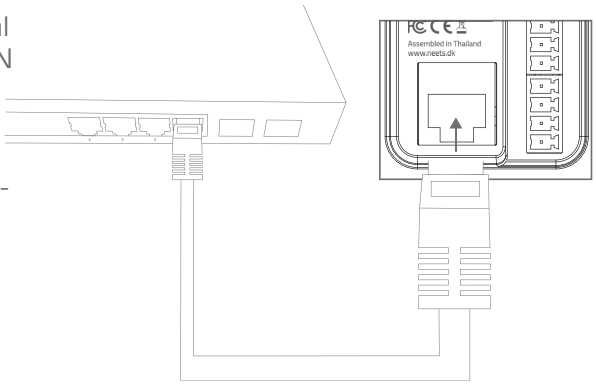
Connect the port as shown below.



		
When used as RS-232 transmit port: Connect the device to TX-1 and GND, as shown above.	When used as single IR port: Connect the IR emitter to TX-2 (striped wire) and GND, as shown above. Use Neets IR-Emitter	When used as dual IR port: Connect the IR 1 emitter to TX-2 (striped wire) and black wire on IR 1 emitter to IR 2 emitter (striped wire), and black wire from IR 2 emitter to GND, as shown above. Use Neets IR-Emitter

LAN port

The network connector integrates the system into a local area network. You must connect the UniForm to your LAN if you are using any of the LAN features of the product.



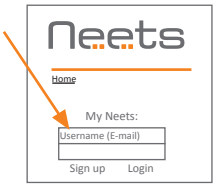
The UniForm has Power over Ethernet functionality built into the LAN interface which will power up the entire control system through a PoE-enabled PSE (power sourcing equipment) device. To power the UniForm, use a PoE enabled switch or a PoE power injector which complies with IEEE802.3af/at.

Two LEDs on the connector indicate the following:

Color:	Off	On	Blink
Yellow	No Link	Link	Activity
Green	10Mbit	100Mbit	

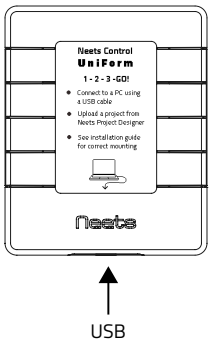
Configuration through USB port

The USB port is used exclusively for configuring the UniForm from the Neets Project Designer software. It can't be used to control any external devices.



Neets website - sign up

The USB port is located on the surface facing the floor when hanging on the wall. The host USB port can power the control system while configuring, so no external power is needed when configuring the UniForm. However PoE and the USB port may be connected at the same time, for example when changing the configuration on an already installed unit.

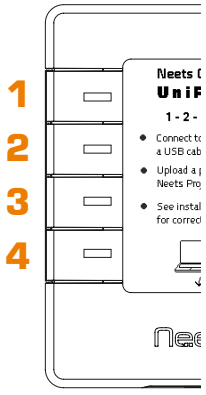


The USB connector for connecting to the UniForm is type "mini USB B 5P". (It is available on the web as a USB A to Mini USB B 5P).

Troubleshooting

Error indication using LEDs

If there is a fault in either the configuration or the SieRRa II unit, this will be indicated on the front button LED indicators. Button LEDs 1-4 are used to indicate the error; the LED indicators are numbered as shown.



The flashing error descriptions and patterns are described below:

LED shows	Description	Solution
1 Flashing 2 Flashing 3 Flashing 4 Off	No project found on the control system or unable to start the project	o Try to upload the project again. o Alternatively, there can be a problem in the project you have uploaded. In this case, try uploading an empty project and see if this works.
1 Flashing 2 Flashing 3 Off 4 Off	Unexpected Error	o Turn off the power to the control system for 20 sec before turning the power on again.
1 Off 2 Flashing 3 Flashing 4 Off	No contact to Neets extension unit	o Check to confirm that the serial number used in Project Designer matches the Neets extension unit. o Check the network or RS-232 connection from the control system to the Neets extension unit.
1 Off 2 Flashing 3 Flashing 4 Flashing	Wrong firmware version in Neets extension unit	o The Neets extension unit has a different firmware than the one in the control system. o Please upgrade the firmware by plugging in the USB cable from the Neets extension unit into a PC running Project Designer and follow the instructions.
1 Off 2 Off 3 Flashing 4 Off	Error in serial number	o You need to return the unit to Neets or your local dealer for replacement/repair.
1 Flashing 2 Off 3 Off 4 Flashing	Resuming factory default settings	o When pressing Switch 1 and 4 during power on, the system will delete the current settings and resume factory default. This method is only intended to be used if the control system locks up and enters “Unexpected Error”
Off button flashing once per second (all buttons flash if no off button is configured)	Unable to connect to configured TCP device.	o Verify the TCP device in the project is alive and responding on the specified IP.
Off button flashing 4 times per second (all buttons flash if no off button is configured)	Password incorrect on configured LAN device.	o Verify that the password is entered correctly in Project Designer for all LAN devices that require password.

Specifications

Display

Type	E-ink
Size	2.7 inch
Resolution	264x176 pixels
Colors	1-bit black/white

RS-232 / IR port

Ports	1 x bidirectional 2 x uni-directional
Baud rate	1200 – 115200 bit/sec
Data bits	7, 8
Parity	Even, Odd, None
Stop bits	1/1.5/2
IR frequency	400 Hz to 500 KHz
Connector	3 pin screw block

Product number

310-350	UniForm white

Compliancy

IEC/EN	55032
IEC/EN	55035
FCC	Part 15, Class A
CE	

Input / Output

Ports	3 x I/O
Input trigger low	< 1VDC
Input trigger high	> 4VDC
Output type	Open drain
Isolated output	No
Max voltage load	24 VDC
Max current	0.5 A
Connector	4 pin screw block

Network (LAN)

Speed	10 / 100 Mbit
Duplex modes	Half or Full
DHCP	Default off
Default IP	192.168.254.252
Default gateway	192.168.1.1
Default subnet mask	255.255.255.0

Power over Ethernet

Compliance	802.3af / 802.3at
802.3af mode	A + B
PD Class	1

General

Width	76 mm
Height	94 mm
Depth	15 mm
Weight	84 g
Shipping weight	0,25 kg
Shipping dimension: (W/D/H)	145x145x58 mm
Storage temperature	-20 °C to 50 °C
Storage moisture	Non-condensing
Operation temperature	0 °C to 30 °C
Operation moisture	Non-condensing