Neets Control - AlFa

How does it work?

Neets
Intuitive Control

Foreword:

The purpose of this document is to describe how to install and configure the Neets Control - AlFa.

CHANGES - Neets reserve the right to change the specification and functions of this product without any notice.

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

Neets A/S – DK-8700 Horsens

by E-Mail: Support@Neets.dk

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

Revision list:

Author: Date	Description	Pages
TSA 27-10-2011	Org version	All
MJC 09-12-2011	Updated version	All

Table of content

Description:

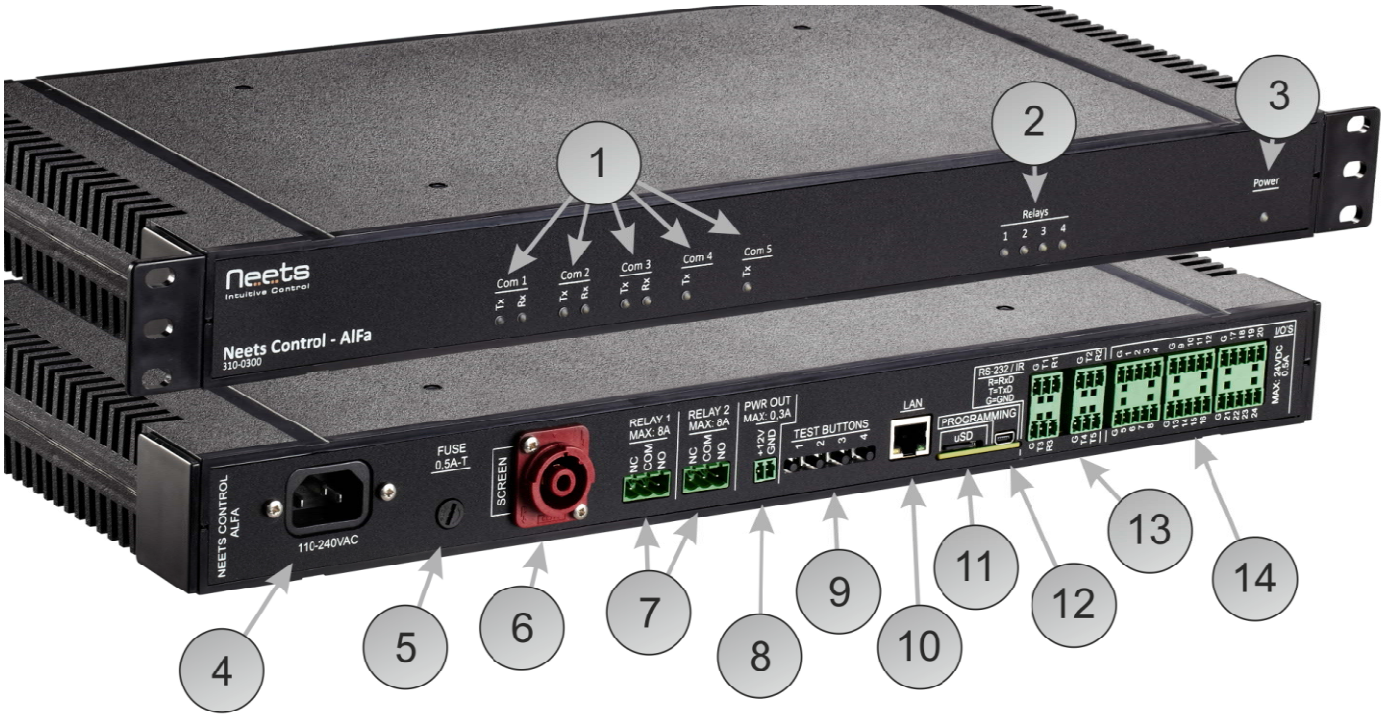
Neets Control – AlFa provides comprehensive yet intuitive control of complex AV systems in auditoriums and large conference rooms. The largest and most sophisticated controller in the Neets product range, Neets Control – AlFa installs quickly, is easily programmed, and provides end users with one-touch control of a multitude of AV and additional device functions.

All functions controllable by Neets Control – AlFa are available via a touch-screen panel on an Apple iOS or Android mobile device, or by a computer running Safari or Chrome web browsers. Custom graphical interfaces for even the most complex control requirements can be quickly programmed using the Neets Project Editor software. All connected devices are controlled through RS-232, IR, LAN or dedicated I/O. With LAN access enabled, complete systems can be controlled from another room or even off site.

The compact, 1U rack mount frame provides status monitoring with front panel LED indicators, and the rear panel allows easy access for connecting all necessary cables for control and programming. Wiring terminations employ plug-in Euroblock connectors (except for a CLIFFCON® connector for screen mode relays), ensuring that installation and servicing of Neets Control – AlFa will be straightforward, fast and efficient.

Description **Part number#:**	**Neets Control - AlFa** **310-0300**
RS-232 (Rx/Tx)	1
RS-232 (Tx, Rx) / IR (controls up to 4 devices)	2
RS-232 (Tx) / IR (controls up to 4 devices)	2
LAN device control (5 devices +programming)	1
I/O	24
Built in PSU	1
Built in relays	4
Micro SD card	1
Real time clock	1
Test buttons	4
LED	4
USB port	1
Controlled from web browser via wireless LAN	Yes
PIR sensor input	Yes
Light on/off	Yes
Room darkening	Yes
Screen up/down	Yes
Volume control	Yes
Alarm when RS-232 device is removed (Rx 1)	Yes
Projector feedback	Yes

Connections to the unit



Number	Description
1:	Status LED for transmit and receive of data (RS-232 and IR)
2:	Relay and error LED indication
3:	Power connected LED indicator
4:	110-230 VAC power in
5:	Fuse for control system (NOT for screen)
6:	Cliff connector for 230Vac screen control (NOT fused)
7:	Potential free relays
8:	Extern 12V DC out (300mA Max)
9:	Relay test buttons
10:	Network (LAN) connector
11:	µSD Card
12:	Mini USB for programming
13:	RS-232 and IR connectors
14:	Input/output connectors

Neets
Intuitive Control

Technical description

Technical details:	
RS-232	Baud: 1200-115200 Data bit:7/8 Parity: none, even, odd Stop bit: 1/1,5/2
IR	Transmit 381 Hz – 500 KHz
LAN	10/100 MBit
Input	Sence low < 1 VDC Sence high > 4 VDC
Output	Open drain Max voltage: 24 VDC Max current: 0,5 A
Power	110-230 V
Power out	12 VDC Max 0.3 Amp
Relay load max AC1	1150 Watt
Relay load max AC15 (230 VAC)	500 Watt
Relay single-phase motor rating (230 VAC)	370 Watt
Relay max voltage	230 VAC
Maximum screen size (recommended)	**3 meters**

USB

The USB port can only be used to program the Neets Control – AlFa from the Neets Project designer software. It cannot be used to control any devices what so ever.
The USB port is not able to power the control system while programming, so always remember to connect the 230 VAC power.

The USB connector needed to connect to the Neets Control – AlFa is of the type mini USB B 5P. You can buy this cable on the web (buy a USB A to Mini USB B 5P).
The cable type is also widely used for MID device and compact cameras and so on.

Power output

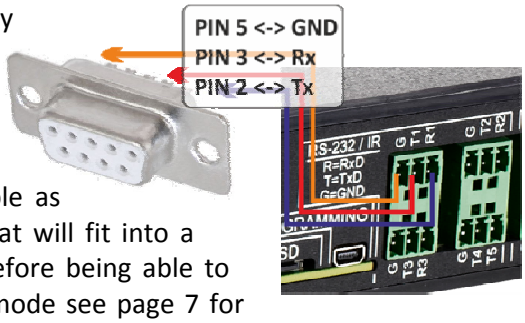
The power output is used to power any external device that might need 12VDC (up to 350mA).
When the Power led on the front are on, there are also 12VDC in this plug.

Time Battery (RTC)

The battery is type CR1216. The estimated lifetime of the battery is 5-7 years.
To obtain a new battery, contact your distributor or search the web for CR1216.
In order to replace the battery you need unscrew the 4 screws in the button of the box. When this is done, open the box and slide out the old battery (while power is disconnected) and slide in the new battery. To calibrate the clock again, you will need to upload the project for your system again.

RS-232 Port

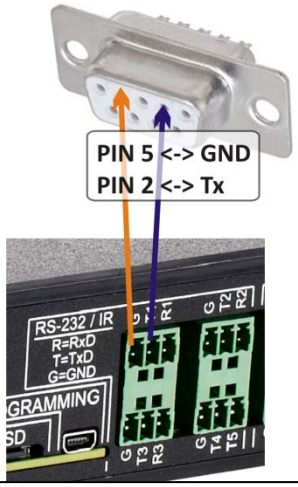
The onboard RS-232 ports (T1, R1, T2, R2, T3, R3) is used for two way communication. This port is used for the device you want to use reply on (e.g. your projector). T1 and R1 can also be used for uploading settings to the unit (be aware that this is the most slow way to do this).



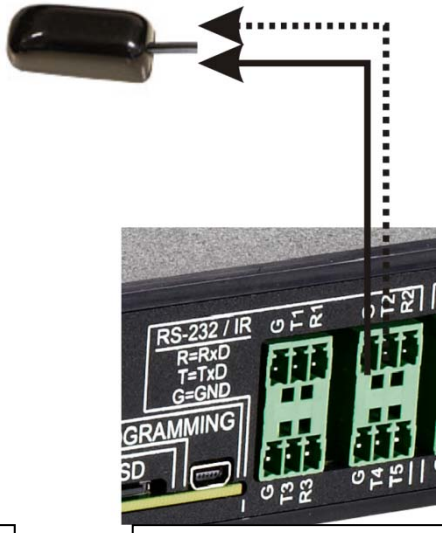
To connect the Neets Control - AlFa you must wire the RS-232 cable as shown here to the right. This is a Female 9 pin SUB-D connector that will fit into a standard computer RS-232 port, or any USB to RS-232 converter. Before being able to upload through the RS232 ports you need to set the AlFa into Bootmode see page 7 for details.

IR/RS-232 ports

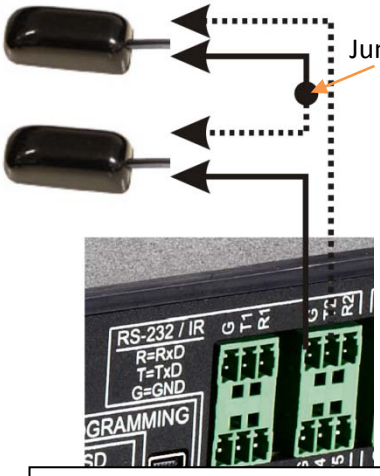
The AlFa has 4 ports (T2, T3, T4 and T5) that can be configured (in software) either as RS-232 or as IR emitter.



When used as RS-232 transmit port: Connect the device to e.g. T2 and GND, as shown here above.



When used as single IR port: Connect the IR emitter to e.g. T2 (white striped wire) and GND, as shown here above.

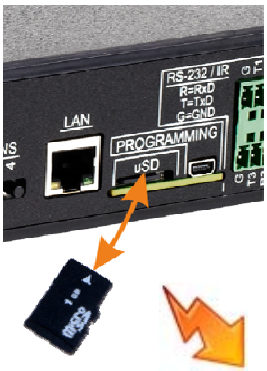


When used as dual IR port: Connect the IR-1 emitter to e.g. T2 (white striped wire) and black wire on IR-1 emitter to IR-2 emitter (white striped wire), and black wire from IR-2 emitter to GND, as shown here above.

uSD-Card

The uSD-Card is used to storage firmware, homepage and settings. Under normal operation removal of the uSD-Card is not needed. If needed, you can copy the settings and the firmware directly onto the card.

To remove the SD Card from the unit, you push the SD Card **gently** into the holder about 1mm (by using your finger tips). Release again, and it will slide out.



REMEMBER to remove power from unit before removing Micro SD card!

Switch and LED

The 4 switches (SW-1 to SW-4) are used to test the relay functions. The LED's are also used to indicate any faults that might occur modes that the software can end in (see section: fault finding).

To get the unit into boot mode (only when programming over RS-232), the following needs to be done:

- Press, and hold all 4 switch for 5 seconds (until all 4 LED flashes fast)

I/O Ports

The Neets Control – AlFa has 24 I/O onboard. They can be used for external keyboard, PIR (movement) sensor, Keyboard lock, extra relays and so on.
The ports are not potential free, that means you will need external relays if you need to prevent e.g. ground loops.

When used as output they are active low (when the software says activated the pin are tied to GND thru a FET transistor also called open drain/collector function). You can draw up to 24VDC/500mA

When used as input the voltage has to be below 1 Volt DC to be accepted as LOW, and above 4 VDC (but below 24 VDC) to be accepted as high. The inputs are default high and need to be connected to ground in order to change its state,

LAN

The network connector is for connecting the system to the local area network.

There are two LED's on the connector. They have the following meaning:

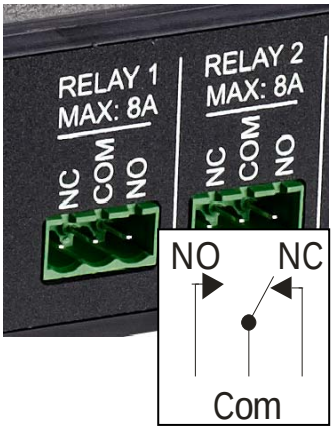
Color:

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

Default IP settings is:

IP address: 192.168.254.253
Subnet: 255.255.255.0
10/100Mbit: Auto
DHCP: Disabled

Build in relays



On Relay 1 and 2 of the 4 relays there is access to both the NO (Normal open contacts) and the NC (Normal close contacts) for greater flexibility.

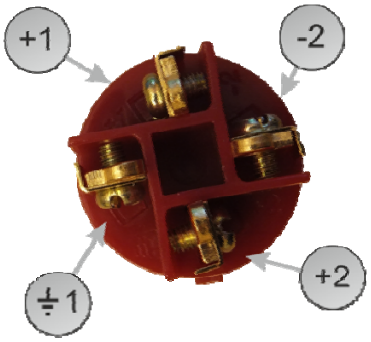
Controlling an electric screen or lift using the SCREEN port

Relay 3 and 4 are combined to a screen mode output and can only be used for controlling 230 VAC screens and lifts.
By using the included Cliff connector, you get an easy connection of your screen or lift, and a high level of security against short circuit.

The relay 3 is controlling the screen in the down direction, and there is ONLY power to the screen´s up direction (RELAY 4) when relay 3 is "released.

Below please find you find the pin connection to the included Cliff connector.

Cliff connector female connection		
Pin +1	Screen down (L)	Relay 3
Pin +2	Screen up (L)	Relay 4
Pin -2	Neutral (N)	
Pin ⏚1	Ground	

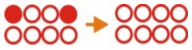


Fault finding

When errors occur the LED will indicate this. The following will give you a guide to find these errors.
In the Neets Control – AlFa the LED´s are placed here:

Fault		Solution
SD card missing		Control that the SD card is mounted correctly and that the µSD card that you are using are formatted with FAT.
Unexpected Error		There are properly problems in the project you have uploaded. Try e.g. to upload a empty project and see if this works or contact Neets or you dealer
Error in serial number		Doing the production of the unit, something has gone wrong. You need the return the unit to Neets or your dealer for replacement/repair.
Unzipping config.zip file after power on		If you manually have placed a project file on the µSD card the system will extract the files needed to run the project. After extraction, the system will start to run the project.
Unable to start the project		This scenario often happens when the µSD card in the unit are replaced with a blank µSD card. Alternative there can be a problem in the project you have uploaded. Try e.g. to upload a empty project and see if this works or contact Neets or you dealer
System are in boot mode		You have put the system in boot mode. This mode allows you to communicate with the system using Rx1/Tx1. See the section “Switch and LED” on page 7 for details on how to get the system into boot mode.

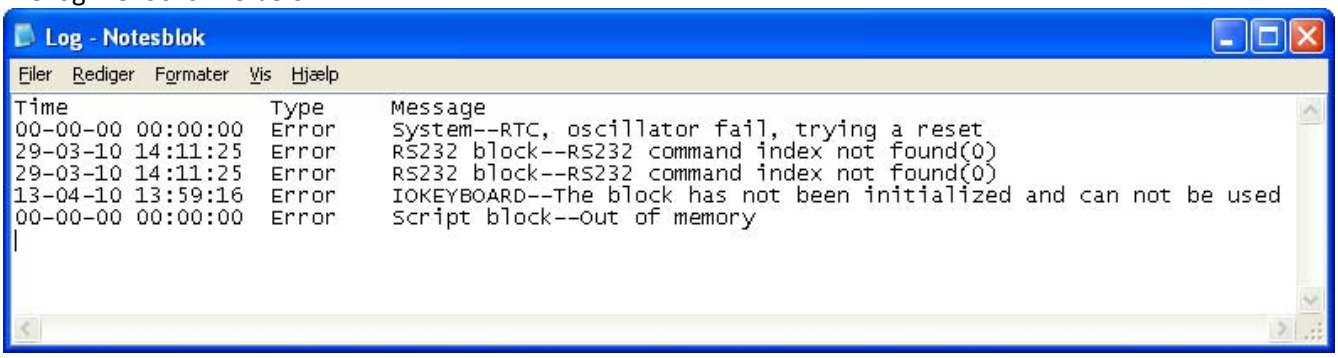
Setting the system into factory default mode.

System are resuming factory default settings		When pressing Switch 1 and 4 during power on the system will delete the current settings and resume factory default. This method are only intended to be used if the control system lock up and enter “Unexpected Error”

System log file

The Neets Control – AlFa has a log file, which contains information, warning and error that the system encounters during run.

The log file looks like below.



To give you the best support possible we recommend that you have access to the log file when contacting support.

There are two ways to get access to this file:

uSD card

If you put the uSD card into your computer you find the log file here: Drive\System\Log.txt

HTTP

Enter the following address into your browser: http://xxx.xxx.xxx.xxx//System/Log.txt.

xxx.xxx.xxx.xxx are the IP address of your Neets Control – AlFa.

Remember the two"//".