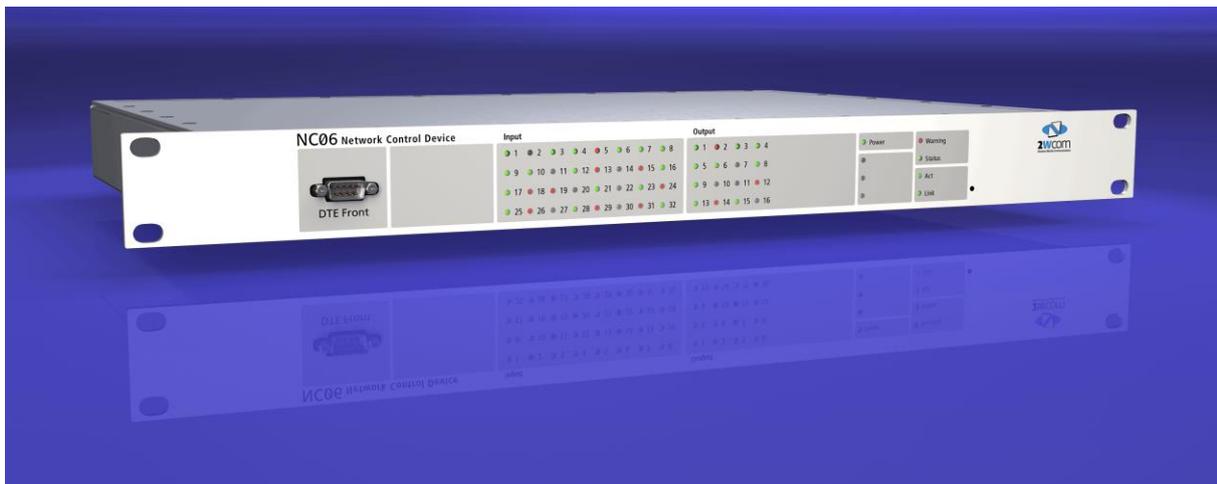


NC06

Network Control Device



User Manual

2008, December

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1. Introduction

The NC06 Network Control Device, hereafter referred to as "NC06", can be used to control and monitor e.g. broadcast transmitter equipment by switching inputs and switching outputs. The NC06 is equipped with the Simple Network Management Protocol Version 2 (SNMP V2) for data communication. The functions of SNMP V1 can also be used.

The included web interface is used to configure the NC06. Some configuration functions are also available via SNMP.

The equipment to be controlled and monitored can be connected to the rear sided 50 pole D-Sub connectors .

Messages and relevant events trigger an SNMP event, sent to a definable fault management server. Alternatively the NC06 can send a notification email or switch a relay.

Important

Read this instruction manual carefully before attempting to operate the NC06. Save this instruction manual for future reference – it contains important safety and operating instructions for the device.

Safety definitions

Warning	Describes precautions necessary to prevent injury, loss of life, fire or an electrical shock
Caution	Describes precautions necessary to protect the equipment

Further notices

The model as shown on the cover may differ from the supplied model.

Configurations, functions and specifications are subject to change without notice.

2. Precautions

- Dangerous high voltage is present inside the housing. Even after disconnecting the mains supply, dangerous high voltage may be present for a certain time.
- The housing should never be opened by the user.
- To avoid the risk of electrical shock hazards: Check the front panel / housing for damage and the supply cord for abrasion / damage.
- Use a grounded three-wire power supply cord and -plug only, which complies with the national regulations. If necessary, another than the supplied supply cord has to be used, which complies with the regulations of the country where the unit is operated.
- The unit must be plugged into a grounded power outlet only - Shock hazards may exist if the unit is not properly grounded.
- The grounding wire/contact must not be removed.
- Make sure that the AC power outlet is next to the device and readily accessible to the user.
- Do not operate the unit in a dusty environment or in direct sunlight exposure.
- Ensure sufficient heat dissipation during operation.
- The surface of the unit can heat up during operation – do not touch.
- Devices that are connected to the unit could be damaged by the unit or damage the unit itself, if the output levels exceed the limits.
- Never expose the unit to rain, snow, or liquids. Do not touch the unit with wet hands.
- Do not use corrosive detergents on the unit.
- Do not operate the unit in the presence of flammable gases. Explosion can result.

3. Supplied Parts

- NC06 Network Control Device
- Power supply cord
- RJ-45 patch cable
- CD with SNMP MIB files
- User manual

4. Manufacturer

2wcom Systems GmbH • Am Sophienhof 8 • 24941 Flensburg • Germany
Phone (+49) 461 – 662830-0 • Fax (+49) 461 – 662830-11
contact@2wcom.com • www.2wcom.com

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5. NC06 Installation

5.1. Installation

Best setup location

The device should be installed in a 19" rack. Avoid direct sunlight, proximity to radiators and air conditioning, dust, water, and chemicals. Choose a rack location that permits a clear view of the indicators on the device and ensure a sufficient heat dissipation of the device.

Mains supply connection

The device is designed for operation with 100 to 240 V AC, 50 to 60 Hz. No power switch is available; unplug mains supply connector to remove power. Keep the mains supply plug readily accessible to the user.

Warning:

Disconnect mains power plug prior to opening the housing. Repair of the equipment must only be carried out by authorized and qualified personnel. Read also the precautions on page 4 !

5.2. First steps

No configuration software is necessary to configure the NC06. The complete configuration can be done by using the integrated web interface.

Please connect the NC06 and a computer to an IP network. Then open a web browser on the computer and enter the IP address of the NC06 in the address bar.

The default IP is **192.168.14.250**. Please enter "admin" as user name and password. The web browser then shows the NC06 main page.

For security reasons it is necessary to login again after about 15 minutes of inactivity.

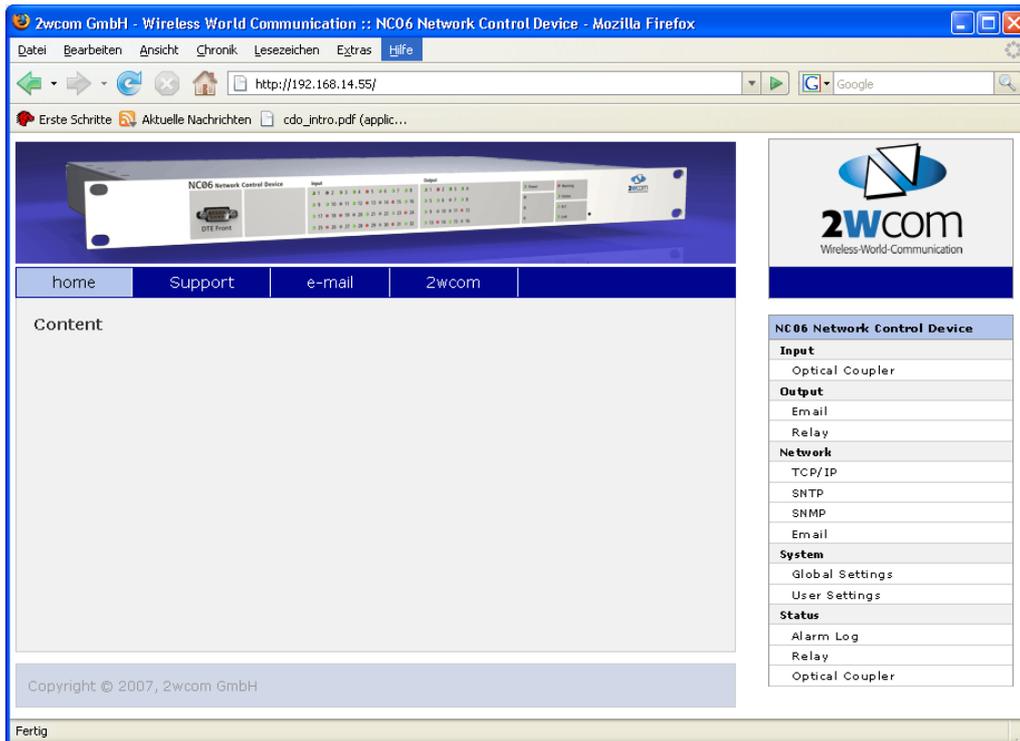


Fig. 1: NC06 main page

The right sided part of the browser window shows a menu with the configuration categories. The left sided part can show the configuration fields of a selected menu.

As a beginning, please make yourself familiar with the required network settings (page 15), the connections on the input and output interfaces (page 25 and 24), the configuration of the switching inputs and outputs (page 10 and 13) and the system configuration (page 19).

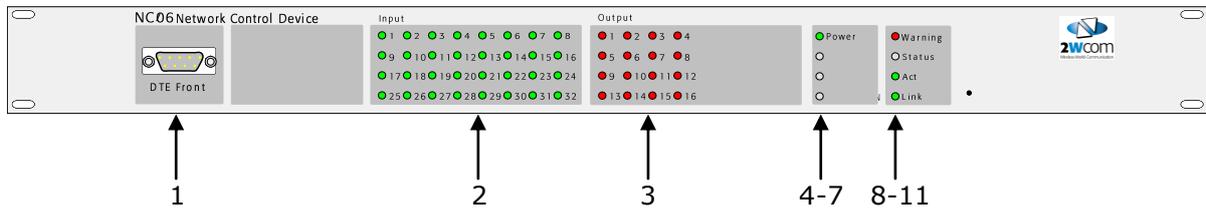
Notes:

All delivered new devices have initially the same IP address. In this state, do not connect more than one unit to the ethernet at the same time. If you quickly connect one device after the other individually for the device configuration, it may be necessary to reset the ARP table of the computer (MAC address / IP address assignment) for an instant access to the next connected device. Details about it can be found in the troubleshooting list on page 27.

DO NOT use the forward/back button of your web browser! Only use the buttons of the web interface.

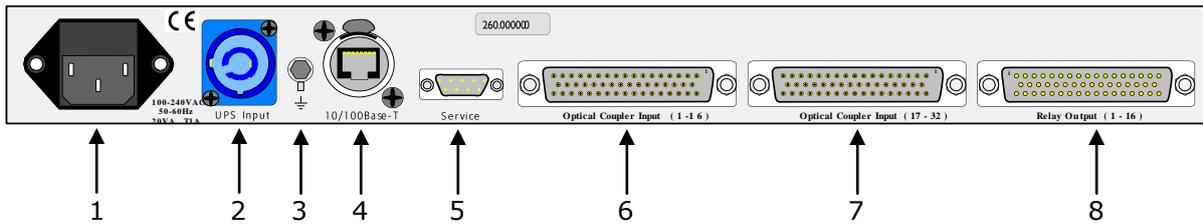
6. Control elements and connectors

Front panel



1	[DTE Front]	No function.
2	[Input] LED Matrix	The LED´s of the activated switching inputs light up in green, red, or orange color. Additional to the normal mode, the LED´s can blink and flash.
3	[Output] LED Matrix	The LED´s of the activated switching outputs (relay) light up in red color.
4	[Power] LED	Lights up in green color when supply voltage is provided to the device.
5	-	No function
6	-	No function
7	-	No function
8	[Warning] LED	Flashes in red color during the initialisation process of the integrated Ethernet network module.
9	[Status] LED	No function
10	[Act] LED	Flickers in green color if data communication is active on the Ethernet network interface.
11	[Link] LED	Lights up in green color when a physical connection is established on the Ethernet network interface.

Rear side



- | | | |
|---|---------------------------------|---|
| 1 | Power supply connector | Standardized IEC supply connector with integrated fuse holder (1A, 230 V, slow blow type, 5x20 mm). |
| 2 | [UPS Input] | Optional add-on function: Input for emergency power supply of the NC06 in the event of mains supply loss. |
| 3 | [Grounding stud] | The stud can be used to connect a grounding system if necessary. |
| 4 | [10/100 Base-T] | RJ-45 connector for Ethernet data communication. |
| 5 | [Service] | Servicing connector – cannot be used for data communication to the device. |
| 6 | [Optical Coupler Input (1-16)] | 50 pole D-Sub connector (female); pins of the optical coupler (opto-isolated) inputs 1...16 |
| 7 | [Optical Coupler Input (17-32)] | 50 pole D-Sub connector (female); pins of the optical coupler (opto-isolated) inputs 17...32 |
| 8 | [Relay Output (1-16)] | 50 pole D-Sub connector (male); pins of the switch relay 1...16 |

7. The "Input" menu

7.1. The "Optical Coupler" (opto-isolated input) menu

The "Optical Coupler" menu can be used to configure the setup of the 32 optical coupler (opto-isolated) inputs. The setup is divided into global settings and individual optical coupler settings. The global settings affect all available optical couplers, the individual optical coupler settings affect only the selected optical coupler. Click on the [save] button for settings to take effect.

7.1.1. *The global "Optical coupler settings"*

The following global settings are available:

- **Monitoring all optical coupler** [enable/disable]: Activate and deactivate the monitoring of all optical coupler (opto-isolated) inputs.
- **Time of astable key**: Adjustable debounce time for the input. So the change of the input signal is not considered as valid immediately, but after the delay time to prevent unwanted effects by the bouncing of an external switch (e.g. a mechanical relay).
- **Master Input** [enable/disable]: The first input of the NC06 can be used as a master input. All events and emails are then first stored and only sent if the master input is activated. So it is for example possible to first establish an internet connection via an external modem, before the events and emails are sent.

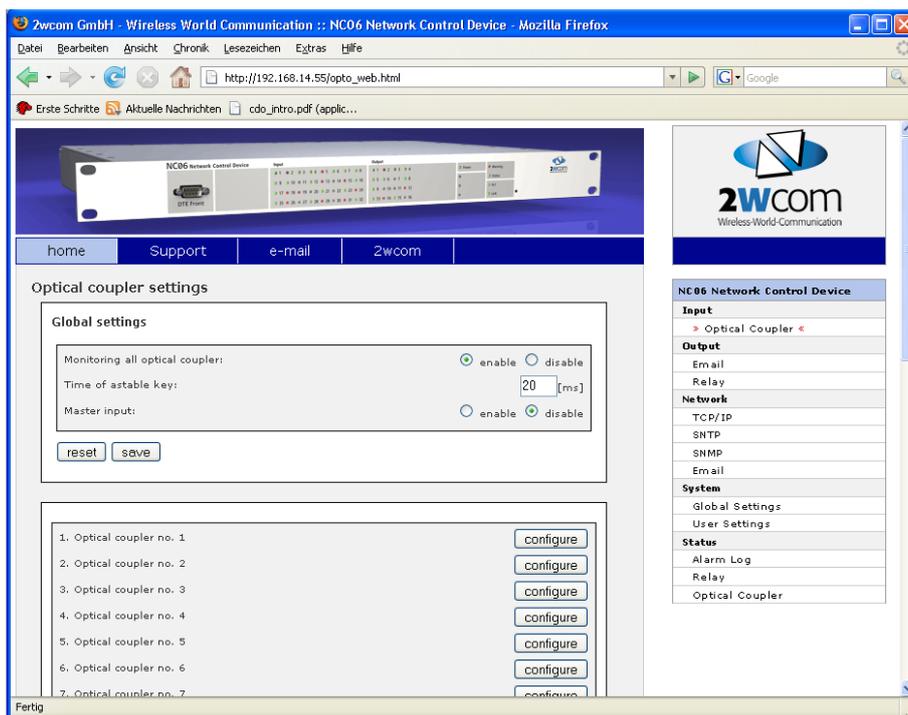


Fig. 2: The "Optical Coupler" menu

Below the "Global settings", the individual optical coupler (opto-isolated) inputs are listed in the format: "Number of optical coupler input, name of optical coupler input". To configure an individual optical coupler input, click on the [configure] button of the corresponding input.

7.1.2. The individual optical coupler settings

The page of the individual optical coupler (opto-isolated) input settings has two sections. The “Global settings” and the “Alarm settings”.

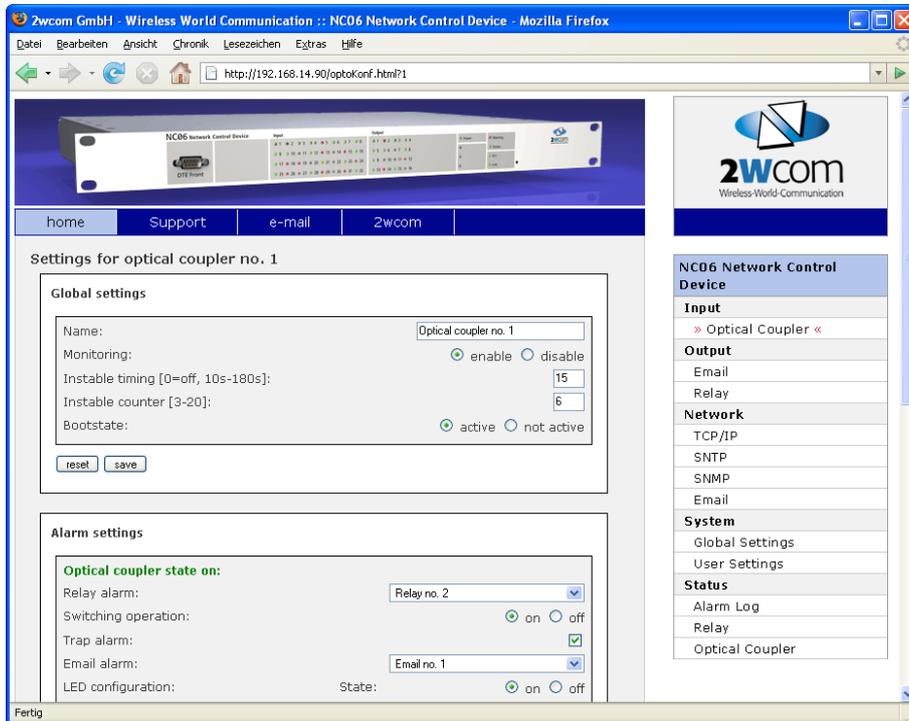


Fig. 3: Individual optical coupler (opto-isolated) input settings

7.1.2.1. The „Global Settings“ of an optical coupler input

The following global settings are available:

- **Name:** The name of the corresponding optical coupler (opto-isolated) input.
- **Monitoring** [enable/disable]: Activate and deactivate the monitoring of the corresponding optical coupler (opto-isolated) input.
- **Instable timing** [0=off, 10s-180s]: Adjustable time for flapping signal check. A flapping signal alarm is triggered if the flapping interval time and the allowed amount of pulses is exceeded. Enter 0 to switch this function off.
- **Instable counter** [3-20]: Adjustable amount of allowed pulses (switching from 0 to 1 or from 1 to 0) for flapping signal check. If the allowed number of pulses is exceeded, a flapping signal alarm is triggered.
- **Bootstate** [active/not active]: Select if the device should check the opto-isolated input for active or not active state after boot-up. If the opto-isolated input has the wrong state, the warning action of the actual opto-isolated input state is executed.

7.1.2.2. The "Alarm Settings" of an optical coupler input

The "Alarm Settings" define the alarm action to be done if the optical coupler (opto-isolated) input status changes ("on", "off", "flapping"). The following settings are available:

- **Relay alarm:** Defines the relay to be switched.
 - **Switching operation** [on/off]: Defines how to switch the relay. If "none" is selected, the setting has no effect.
- **Trap Alarm:** Defines if an event should be sent.
- **Email Alarm:** Defines the email to be sent.
- **LED configuration:** Defines if the corresponding LED should be activated. It can be selected if the LED emits green, red, or orange color and if it works in normal, blink, or flash mode. This function is not provided for the "instable" state.

Note: A relay can only be reset if all active alarms for the relay are reset.

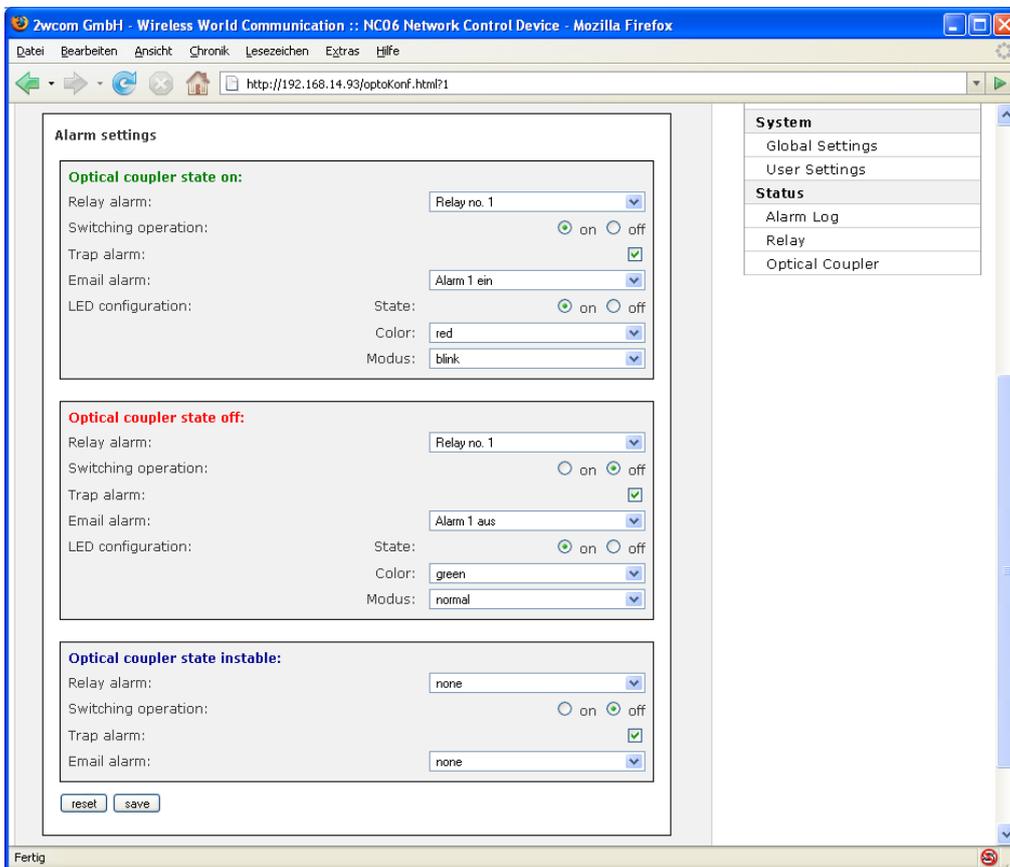


Fig 4: "Alarm Settings" of an optical coupler input

8. The "Output" menu

8.1. The „Email“ menu

The email menu can be used to configure up to 64 emails that can be used as event messages. It is possible to configure the name, subject, and text of the individual email.

To configure an individual email, click on the [configure] button of the corresponding email entry.

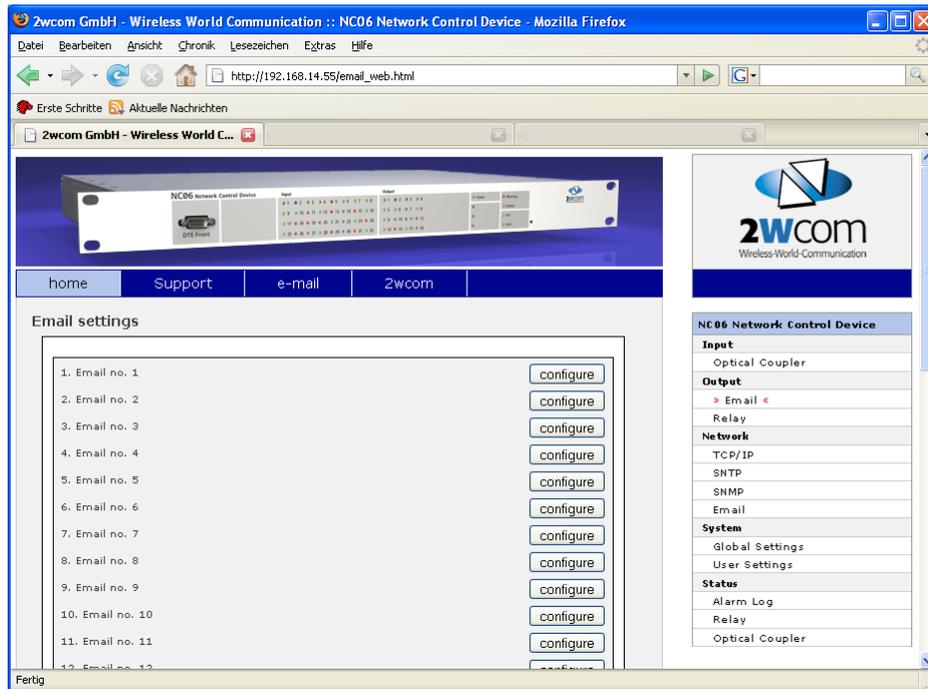


Fig 5: The "Email" menu

8.2. The „Relay“ menu

The "Relay" menu can be used to configure all relay. The menu has the same structure as the "Optical Coupler" menu (global settings and individual settings).

8.2.1. The „Global settings“ for all relay

- **Enable/disable all relay** [enable/disable]: Enables or disables the activation of all relay.

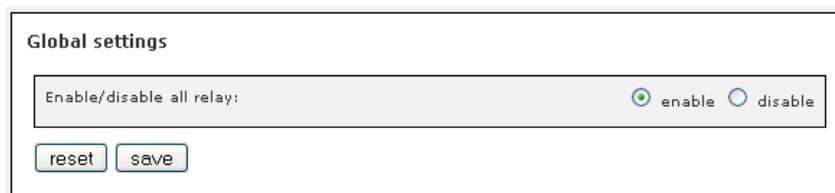


Fig 6: The "Global settings" of the relay.

8.2.2. The individual relay settings

By clicking the corresponding [configure] button of a relay, it is possible to configure the individual settings of this relay. The setting page has two sections: Global settings and alarm settings.

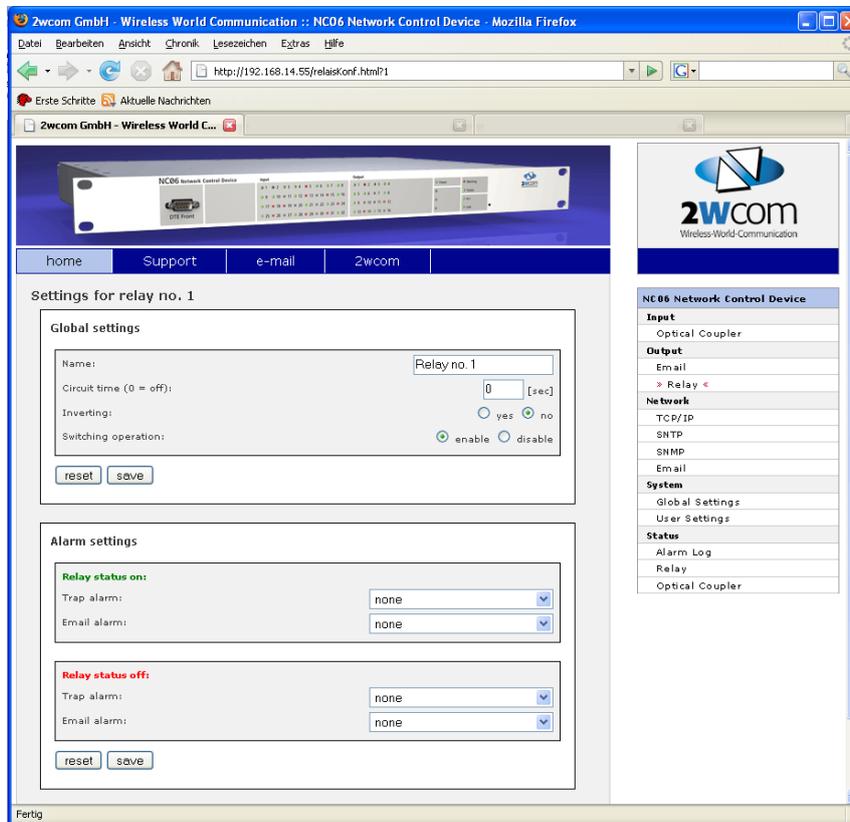


Fig 7: Individual relay settings

8.2.2.1. The „Global settings“ of the individual relay

The following parameter can be configured:

- **Name:** The name of the relay. It is possible to enter a designator with up to 31 characters.
- **Circuit time (Pulse Duration):** Defines the delay time until a relay is automatically reset. If "0" is entered, the function is deactivated.
- **Inverting** [yes/no]: No function.
- **Switching operation** [enable/disable]: Enables or disables the activation of the corresponding relay.

8.2.2.2. The "Alarm settings" of a relay

The "Alarm settings" can be used to determine the possible action upon the activation of a relay (SNMP Trap / Email Alarm).

9. The "Network" menu

9.1. The „TCP/IP“ menu

The "TCP/IP" menu can be used to configure the main settings for the ethernet network. This is the IP-address, the network mask, the gateway, and the http port.

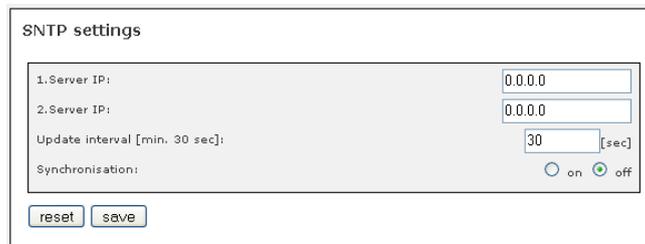
After clicking the [save] button for settings to take effect, it is necessary to reboot the NC06. To do that, just click on the [reboot] button of the "The system must be reboot!" pop-up window. After the initialisation (about 30...60 sec.), the NC06 main page appears on the screen (if the IP address was changed, please enter the new IP address in the address bar of the browser).

Note: The first and second domain name server setting has no function in the present firmware version. Changes are ignored.

9.2. The „SNTP“ menu

The "SNTP" (**S**imple **N**etwork **T**ime **P**rotocol) menu can be used to configure the settings of the integrated real-time clock. It is possible to synchronize it to an SNTP server or to set it manually. To use the SNTP server, it is necessary to configure the following settings.

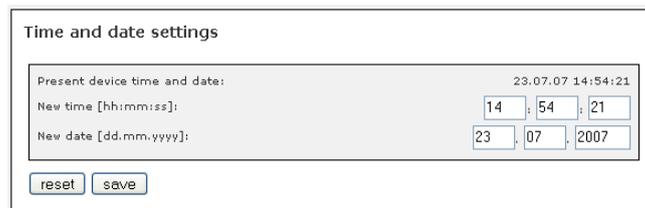
- **1. Server IP:** The IP address of the SNTP server.
- **2. Server IP:** An alternative SNTP server IP address. This server address is used, if the first server is not in service. If no alternative SNTP server is required, the IP-address needs to be set to 0.0.0.0
- **Update interval:** Defines the time between the individual real-time clock synchronizations. The interval time cannot be below 30 seconds.
- **Synchronisation [on/off]:** Activates or deactivates the synchronization with the SNTP server.



The screenshot shows the "SNTP settings" configuration page. It contains four input fields: "1. Server IP:" with the value "0.0.0.0", "2. Server IP:" with the value "0.0.0.0", "Update interval [min. 30 sec]:" with the value "30" and "[sec]" label, and "Synchronisation:" with radio buttons for "on" and "off", where "off" is selected. At the bottom, there are "reset" and "save" buttons.

Fig 8: SNTP settings

If you want to set the real-time clock manually, use the input fields in the section "Time and date settings".



The screenshot shows the "Time and date settings" configuration page. It displays the "Present device time and date:" as "23.07.07 14:54:21". Below this, there are input fields for "New time [hh:mm:ss]:" with values "14", "54", and "21", and "New date [dd.mm.yyyy]:" with values "23", "07", and "2007". At the bottom, there are "reset" and "save" buttons.

Fig 9: Manual setting of the real-time clock

9.3. The „SNMP“ menu

The “SNMP” (Simple Network Management Protocol) menu can be used to configure the settings for the sending of events. Additionally the menu can be used to configure the passwords for the control/administration of the NC06 via the Simple Network Management Protocol.

Click the [save] button for the settings to take effect.

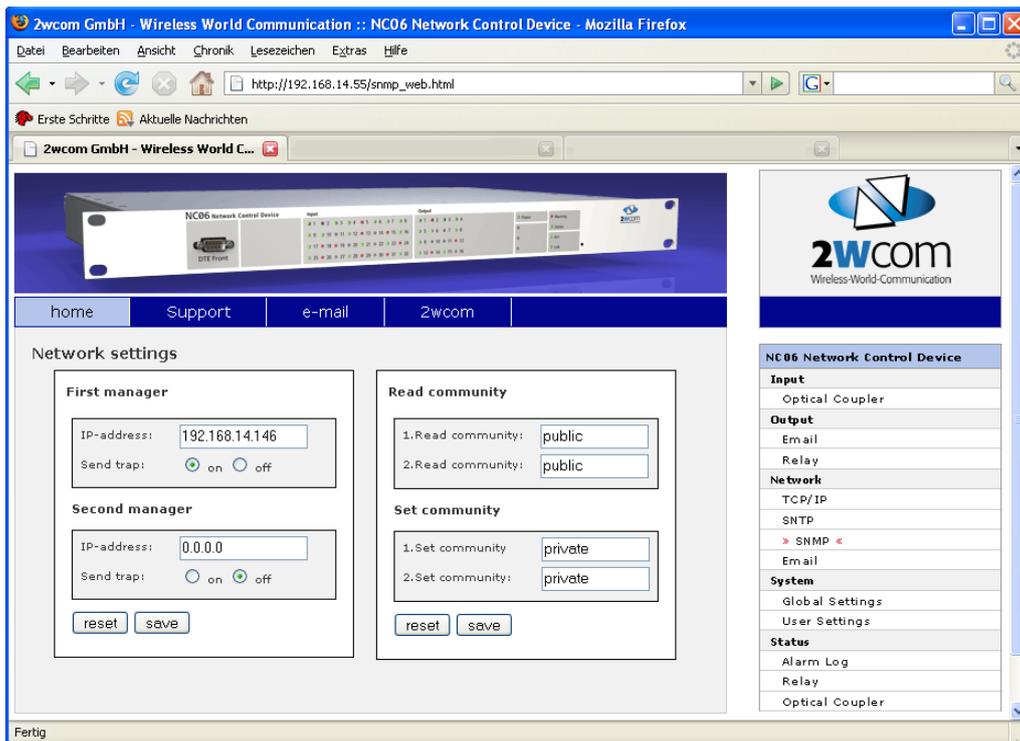


Fig. 10: SNMP Settings

9.3.1. Configure event sending

The NC06 can send events to two different SNMP managers. To use SNMP, enter the corresponding IP addresses in the input field(s) “IP-address” and turn on the event sending for the corresponding IP address with the switch “Send trap”.

9.3.2. The SNMP passwords (community strings)

The NC06 provides four passwords for the SNMP administration. Two passwords are for read-only access (read community) and two passwords are for read/write access (set community).

9.3.3. Overview of NC06 SNMP functions

The following SNMP device functions require an appropriate SNMP software on the computer / server that has the corresponding 2wcom NC06 MIB files loaded:

- Sending of SNMP Events in case of switching the individual optical coupler inputs
- Enable or block the sending of SNMP events for specific optical coupler inputs
- Enable or block the sending of SNMP events for all optical coupler input
- Enable or block specific optical coupler inputs
- Enable or block all optical coupler inputs
- Display the status of individual optical coupler inputs
- Display the individual optical coupler switching cycle counter
- Assign and display names for the individual optical coupler inputs
- Assign an individual event priority number for OFF > ON switching events
- Assign an individual event priority number for ON > OFF switching events
- Set and display the status of the master input function

- Sending of SNMP Events in case of switching the individual relay
- Enable or block the sending of individual relay events
- Enable or block the sending of all relay events
- Enable or block individual relay
- Enable or block all relay
- Set and display the individual pulse duration for the relay actuation
- Display the status of specific relay
- Display the individual relay switching cycle counter
- Assign an individual event priority number for relay switching events

- Display and partially set the configuration of the NC06 ethernet interface

9.4. The „Email“ menu

The “Email” menu can be used to configure the settings for the sending of emails. The following parameters need to be setup:

- **SMTP server ip:** The IP of the outgoing mail server
- **SMTP server port:** The port of the outgoing mail server
- **Username:** Name of the email account
- **Password:** Password of the email account
- **Emailserver authentication:** Email mode with (enable) or without (disable) authentication on the SMTP mail server.
- **Sender:** The email address that the recipient sees as the sender address.
- **Receiver:** The email address of the recipient.

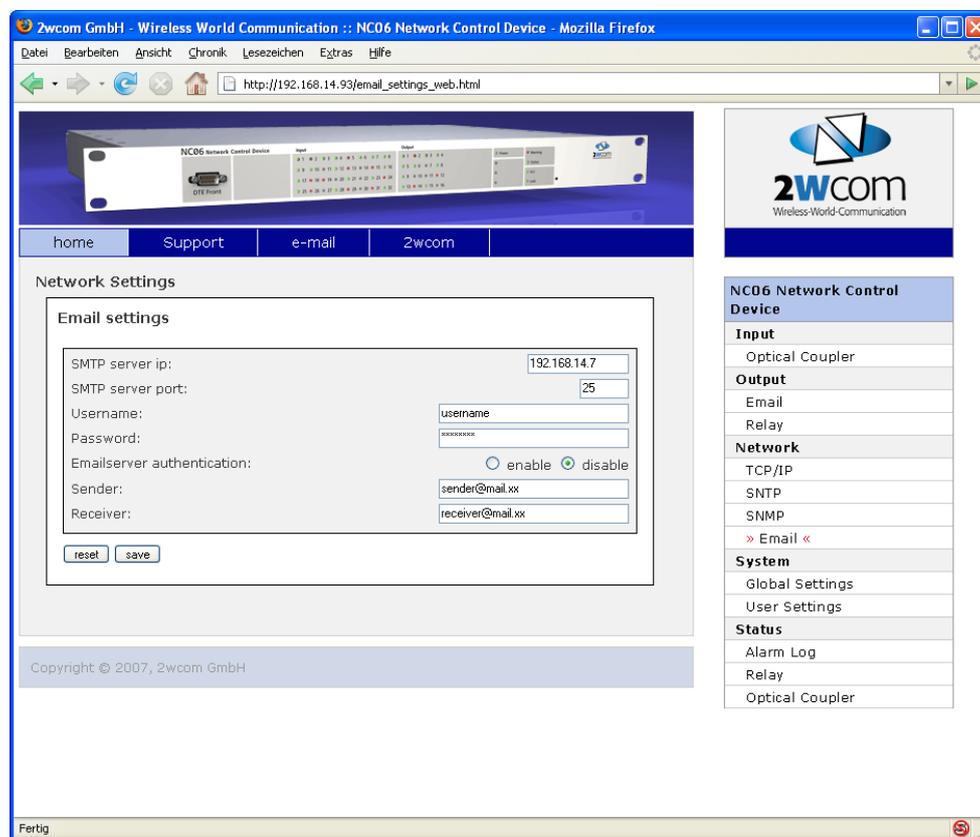


Fig 11: Email settings

10. The "System" menu

10.1. The "Global settings" menu

The "Global settings" menu has four sections:

- System parameter
- System information
- Upload/Download settings
- Reboot/Reset

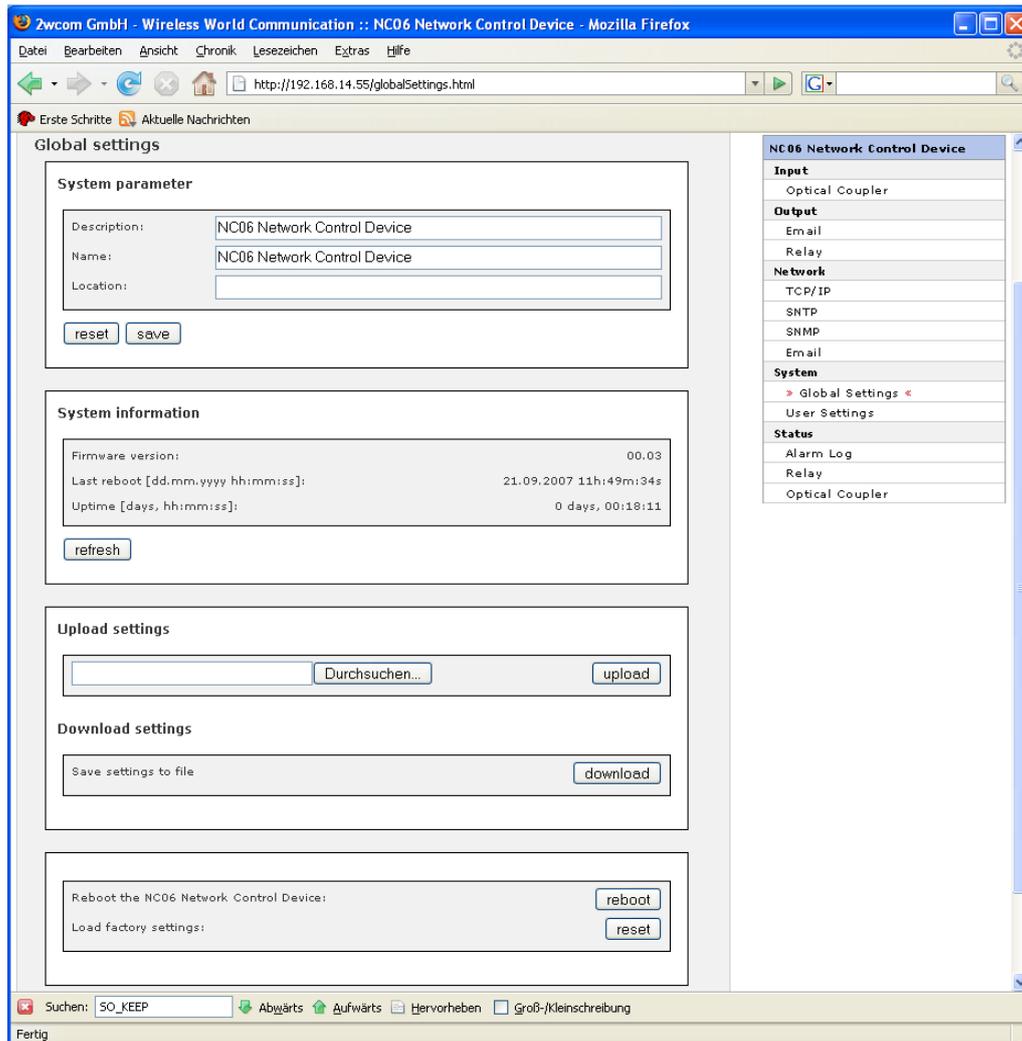


Fig. 12: The "Global settings"

10.1.1. The system parameters

The system parameters can be used to configure

- a system description,
- a system name,
- and the location of the system.

These system parameters can also be found in the SNMP MIB tree at

- sysDescr (OID: 1.3.6.1.2.1.1.1),
- sysName(OID: 1.3.6.1.2.1.1.5),
- and sysLocation (OID: 1.3.6.1.2.1.1.6).

10.1.2. The system information

- Firmware version: The version number of the currently used firmware.
- Last reboot: Date and time of the last NC06 reboot.
- Uptime: Time since the last NC06 reboot.

10.1.3. Upload/Download settings

- Upload: Installation of a configuration file
- Download: Save settings in a configuration file

Note: The installation of a configuration file **MUST NOT** be interrupted. The process can take a couple of minutes.

10.1.4. Reboot/Reset

- Reboot: Manual reboot of the NC06
- Reset: Loads the default factory settings (this sets the IP address of the NC06 to 192.168.14.250). Afterwards the NC06 performs a reboot.

10.2. The "User settings" menu

The "User settings" menu can be used for the administration of the password for the administrator account access and the guest account access. This menu is only accessible if the user is logged in as administrator.

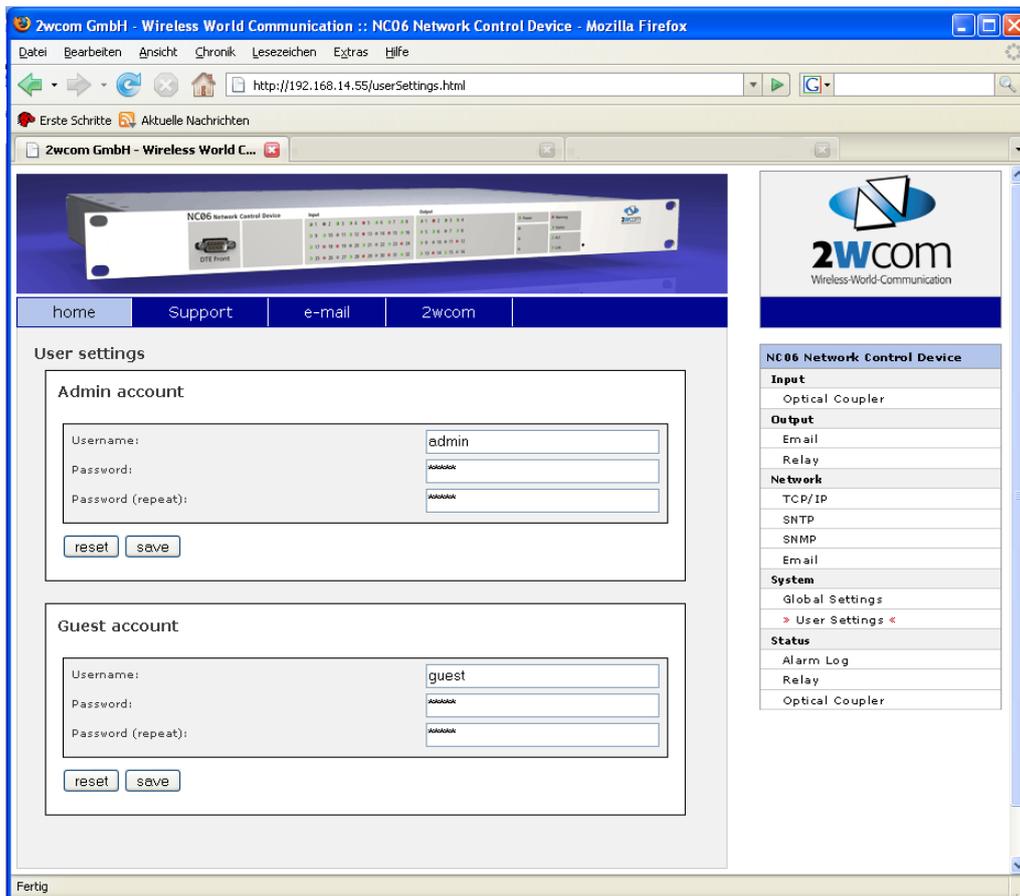


Fig. 13: "User settings" menu

10.2.1. Overview of access rights

Menus	Administrator		Guest	
	Read	Write	Read	Write
Input				
Optical Coupler	X	X	X	--
Global „Optical coupler settings“	X	X	X	--
Individual settings	X	X	X	--
„Global settings“ of opto-isolated input	X	X	X	--
„Alarm settings“ of opto-isolated input	X	X	X	--
Output				
Email	X	X	X	--
Relay	X	X	X	--
Global „Relay settings“	X	X	X	--
Individual settings	X	X	X	--
„Global settings“ of a relay	X	X	X	--
„Alarm settings“ of a relay	X	X	X	--
Network				
TCP/IP	X	X	X	--
SNTP	X	X	X	--
SNMP	X	X	X	--
Email	X	X	X	--
System				
„Global settings“	X	X	X	--
„User settings“	X	X	--	--
Status				
„Alarm Log“	X	X	X	--
„Relay“	X	X	X	--
„Optical coupler status“	X	X	X	--

11. The "Status" menu

11.1. The "Alarm log" menu

The "Alarm log" menu logs all alarms. The alarms have the following structure: Current number, name, 1. timestamp (occurrence of the event), 2. timestamp (execution of the alarm), status.

- **Current number:** The number of the alarm.
- **Name:** The name/designator of the alarm.
- **1. Timestamp:** Time of the occurrence of the event.
- **2. Timestamp:** Time of the execution of the alarm.
- **Status** [waiting/ok/failed/disabled]: Present status of the alarm.
 - **waiting:** An alarm event occurred, but is not yet executed. Example: It is configured, that the activation of an optical coupler (opto-isolated) input triggers the sending of an email. Because the master input is not set, the email is not sent. The alarm status is set to "waiting".
 - **ok:** An alarm event occurred and is already fully processed.
 - **failed:** e.g. an email was not sent because of wrong login data.
 - **disabled:** A triggered event was not sent because it was not activated

The "refresh" button can be used to refresh the content of the alarm log page. The "delete" button can be used to delete the complete content of the alarm log buffer. The alarm log buffer has a storing capacity of up to 254 alarms. If the buffer is full, the oldest entries are overwritten first.

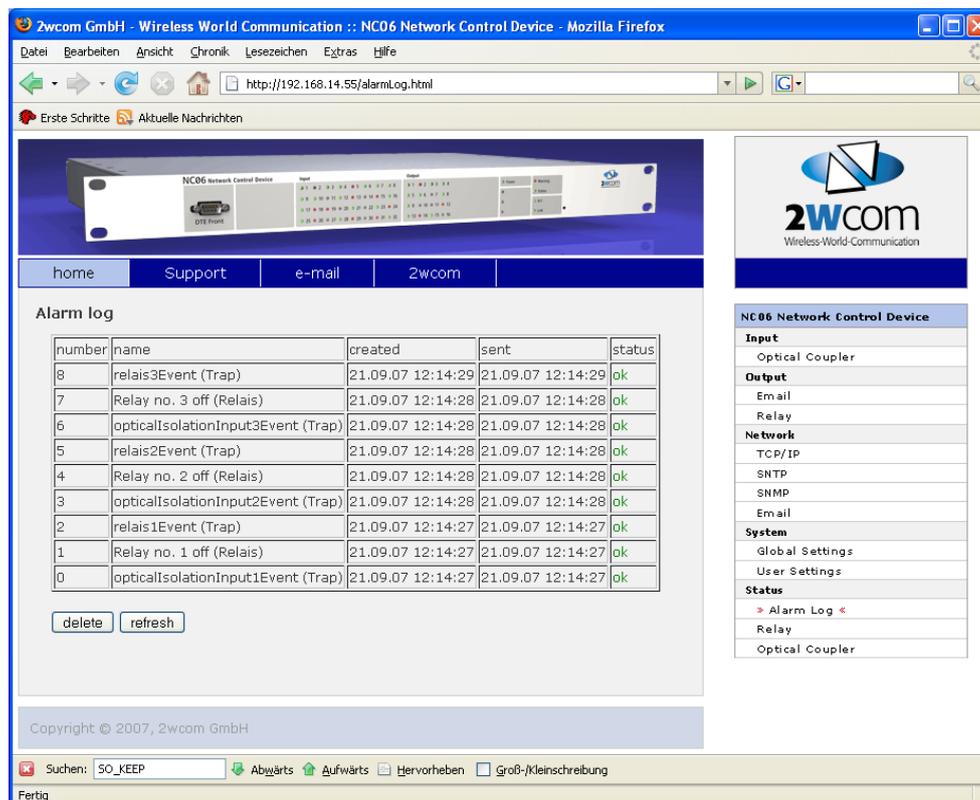


Fig. 14: The "Alarm log" menu

11.2. The "Relay" menu

The "Relay" menu shows the current switching state of the relay and it is possible to manually switch all relay individually.

11.3. The "Optical coupler status" menu

The "Optical coupler status" menu shows the current state of the optical coupler (opto-isolated) inputs.

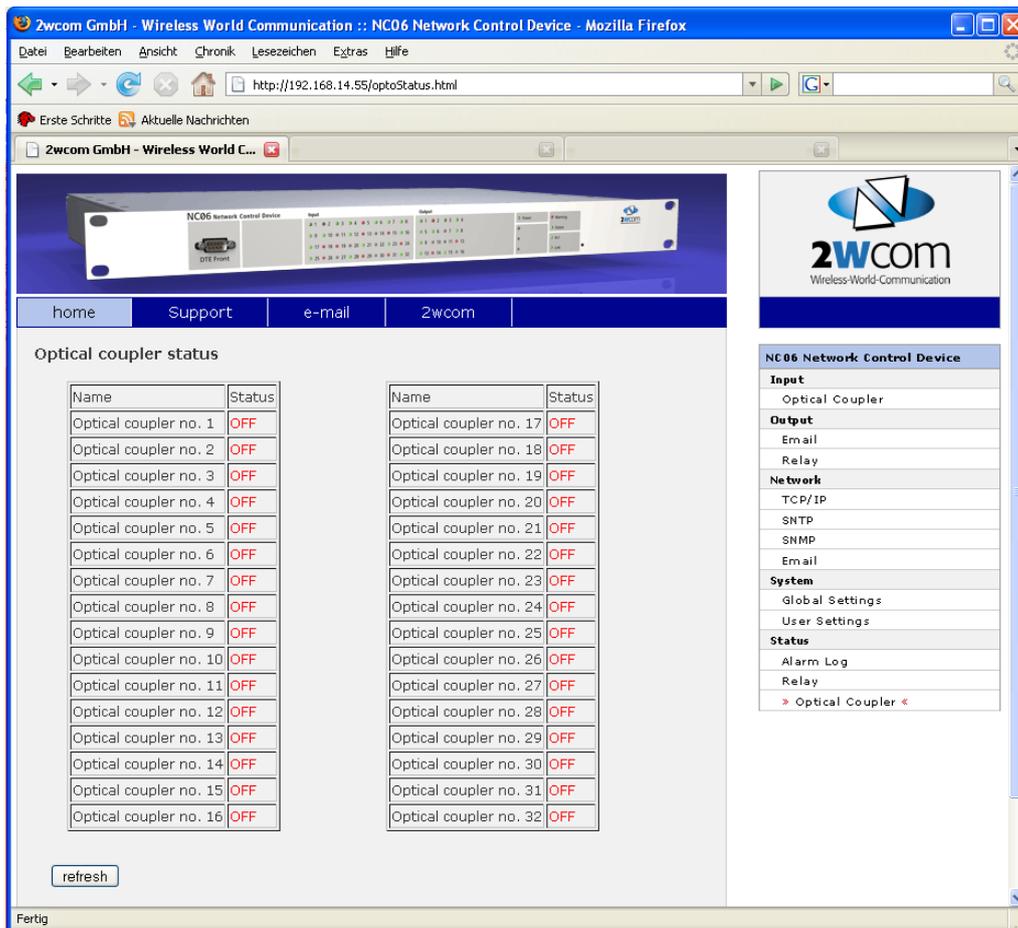


Fig. 15: The "Optical Coupler Status" menu

12. The interfaces

The relay outputs and opto-isolated inputs are provided on 50 pole D-Sub connectors (female and male). These are easy to obtain and offer a good flexibility regarding the part size.

12.1. The output interfaces

The Fig. 16 shows the pin assignment of the relay connector. Each three pins of a „column“ represent a relay (see Fig. 17). Please note that polarized relay are used, so that the switching state does not get lost without power supply.

Caution: The maximum power rating of the relay switch contacts is 25 W or 55 VA, if a maximum permissible current of 1 A is not exceeded. The maximum switch voltage is 90 V DC or 100 V AC.

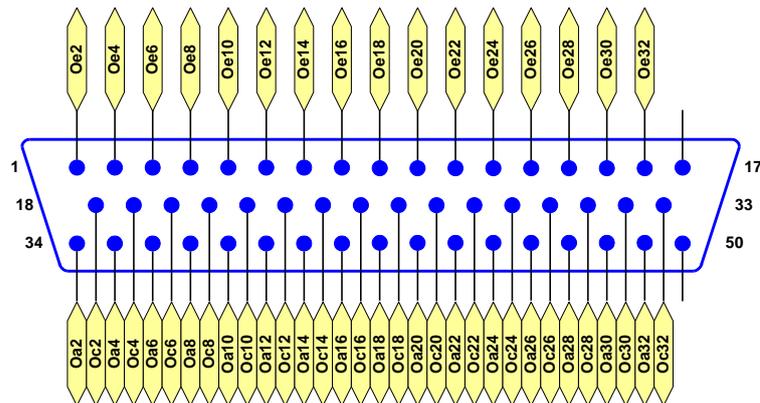


Fig. 16: The relay connector

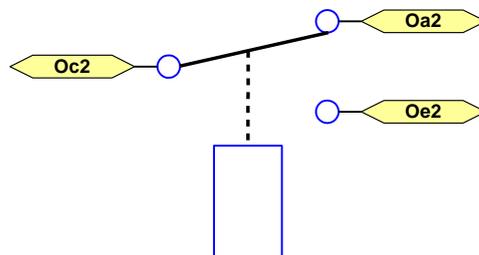


Fig. 17: Relay pins

12.2. The input interfaces

The 32 optical coupler (opto-isolated) inputs are available at two 50 pole D-Sub female connectors (see Fig. 18 for pin assignment).

Isolated switching: Each optical coupler input has its own ground pin to enable isolated switching (e.g. GND1 corresponds to Ib1). To activate an optical coupler input, an external switch voltage from about +6 V DC to max. +30 V DC can be applied at the specific input. The switch current for a voltage of 12 V DC is about 1.5 mA.

Switch operation with the provided switch supply: If no isolated switching is required, it is possible to use the provided switch supply Uout0 and Uout1 (+12 V DC). Then it is necessary to connect the GND pins of each used input to the device ground (pin 17 and 50). To activate an input, the switch supply is switched to the specific input. Please note that this means, that the switching is not isolated from the device.

The switch supply Uout1 and Uout2 is fused by PolyFuses, which trigger if the admissible current of max. 200 mA is exceeded. These PolyFuses are reset automatically after a couple of seconds, if the current is well below the limit. So a replacement after an overcurrent is usually not necessary.

Caution: Do not apply AC, a negative voltage, or a voltage above the maximum of +30 V DC to the optical coupler (opto-isolated) inputs.

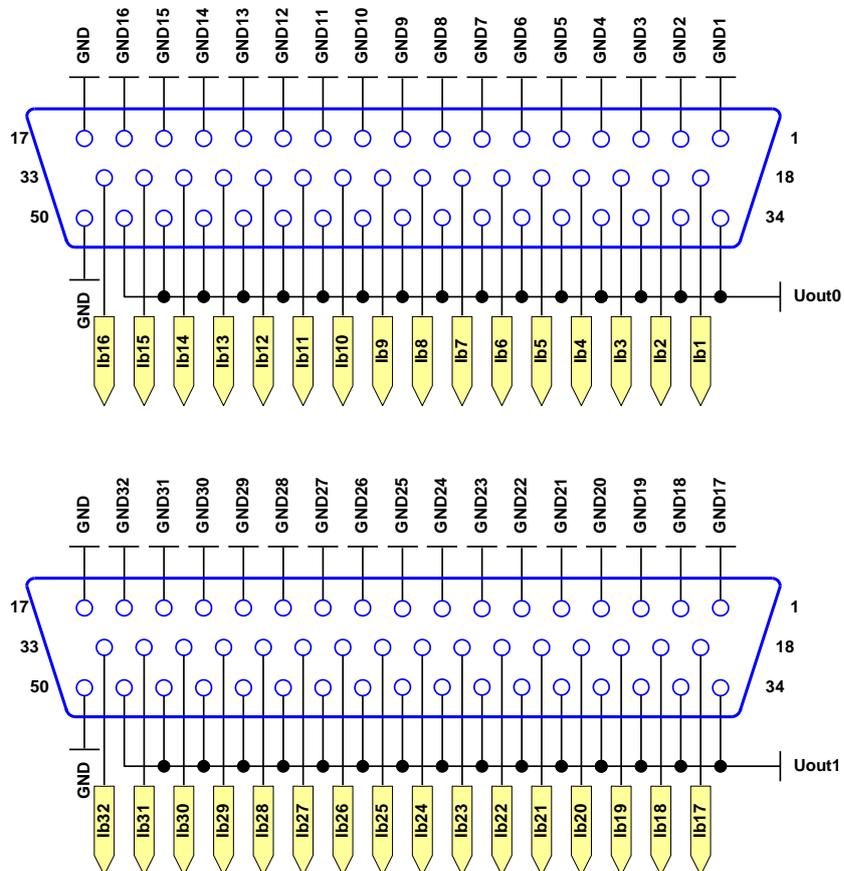


Fig. 18: The optical coupler (opto-isolated) input connectors (1-16 and 17-32)

13. Maintenance and servicing

Maintenance

No special maintenance is necessary on the device. Dust can be removed by a dry duster. For cleaning use only neutral, non-corrosive detergents applied to a cloth - not the device.

Servicing

The modules of the device are complex, and should be serviced only by authorized personnel.

The 2wcom GmbH is equipped with special measurement and repair kits. Therefore a repair by the user is not intended.

Calibration

Due to the design and construction of the device, no calibration is necessary.

14. Troubleshooting

The following chart is designed to help you to correct minor problems with the use of the device prior to contact our service department (report failures by email to contact@2wcom.com or fax to +49 461-97892-11). Also be sure to read the entire manual carefully, as this often helps in understanding and fixing typical problems.

Problem	Possible cause	Solution	Ref.
Device does not turn on	<ul style="list-style-type: none"> • Power cable is improperly connected • Mains supply failure • Blown fuse 	<ul style="list-style-type: none"> • Check supply cord • Check mains supply • Replace fuse by same type 	
Device cannot be operated via ethernet	<ul style="list-style-type: none"> • Network connection malfunction • IP address is not known and is not on default. • A device with the same IP address was connected a few minutes before. Therefore the ARP table still assigns the old MAC address to the IP address. • http port is not set to default value 80. 	<ul style="list-style-type: none"> • Check the connection and consult the responsible network administrator if applicable. • Connect an RS-232C cross-over cable to the rear-sided "Service" connector and use a terminal software to connect (9600/8/N/1). Use "ipinfo" to display the present ethernet settings of the device. You can use "help" to display the possible configuration commands (e.g. for IP address configuration use "set ipaddress x.x.x.x" followed by a reboot). • For an instant access to the device please reset the ARP table by entering "arp -d" in the Windows Command Prompt. • It is also possible to readout/set the http port via SNMP (control/network settings/http settings; Note: Device reboot necessary). If you want to use other ports than 80, it is necessary to include the port when you enter the IP address in the web browser (e.g. for port 8000 use "192.168.14.250:8000".) 	
Input / Output does not operate as expected	<ul style="list-style-type: none"> • All or individual optical coupler (opto-isolated) inputs or relay are deactivated • Functions of the optical coupler (opto-isolated) inputs are not properly configured 	<ul style="list-style-type: none"> • Check if all or individual optical coupler (opto-isolated) inputs or relay are deactivated • Configure the functions of the optical coupler (opto-isolated) inputs 	Page 10,11 Page 13,14 Page 12
SNMP function does not work	<ul style="list-style-type: none"> • SNMP function is not properly configured 	<ul style="list-style-type: none"> • Configure SNMP event destination, SNMP passwords (community strings) 	Page 16
Email function does not work	<ul style="list-style-type: none"> • Email recipient address is not properly configured • SMTP server requires authentication 	<ul style="list-style-type: none"> • Configure email recipient address • Use a SMTP server that accepts a connect without authentication 	Page 18
SNTP function does not work	<ul style="list-style-type: none"> • SNTP function is not properly configured 	<ul style="list-style-type: none"> • Configure SNTP function 	Page 15
Events and email messages cannot be sent	<ul style="list-style-type: none"> • Master input function is not properly configured or master input is not activated 	<ul style="list-style-type: none"> • Configure master input function or activate master input 	Page 10
It is not possible to save settings.	<ul style="list-style-type: none"> • You are logged in to the device as a guest 	<ul style="list-style-type: none"> • Only logged-in administrators can save settings 	Page 21

15. Specifications

NC06 - Network Control Device – Technical Details

Interfaces

General Purpose:

Input Output

Remote control input

Connector
Control Voltage
Input resistance
Auxiliary supply provided at connectors

32 opto isolated inputs
2 x 50 pole sub-D female
6...30 V DC
8 k Ω (nominal)
2 x 12 V DC/0.5 A
(for optional non-floating control)

Remote control output

Connector

50 pole sub-D male
16 floating relay contacts
max. switching power:
25 W, 55 VA
max. switching current:
1 A
max. switching voltage:
90 V DC
100 V AC
nominal switching:
1 A, 25 V DC
0.55 A, 100 V AC
switching commands:
impulse or continuous
Input/output of setup functions

Data interfaces

Connector

Transmission rate

TCP/IP data interface

Connector

Type

Data format

2 serial interfaces,
RS-232C, rear
9 pole sub-D male
9600 baud, asynchronous
input/output of data setup
and programming functions
via web interface
SNMP-Set/Get Commands
Neutrik Ethercon / RJ 45 (rear)
full duplex 10/100 BASE-T
HTTP, SMTP, SNMP, SNTp
internal realtime clock

Front panel

LEDs

Reset push button

General Data

Power consumption

Case dimensions

Front plate

Weight

Housing

Rated temp. range

Operating temp. range

Storage temp. range

Power supply

32 Inputs (red/green/yellow),
free selectable
16 Outputs (red),
Power, Warning, Status,
Link, Act
pin hole

20 VA
19", 1 HU, depth: 310 mm
width: 424 mm
484 mm
3 kg
aluminium chromated
+5°C to +45°C
0°C to +50°C
-40° to +70°C
internal, 100 V...230 V ($\pm 10\%$),
50...60 Hz

Optional: Uninterruptible
power supply input

Connector

12 V...30 V
< 15 W
Message via SNMP in case of
a loss of power with a following
shut-down of the device.
Neutrik PowerCon

Version: 14.08.2008
These data are subject to
modifications and amendments.
Errors excepted.