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## 1 General Information

### 1.1 Validity of these instructions

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This document is a supplement to the operating manuals of NEMS

- "New Value /First Value and Process Indicator System NEMS 16 Contact Potential 15V/DC...30V/DC" (DLT5070)
- supplementary brief instructions for users (DLT5072)
- "New Value /First Value and Process Indicator System NEMS 16 Contact Potential AC230V" (DLT5080)

The specifications in this document apply to the latest software version. Should you have an older version of the software, this may cause complications to your device.

This document is valid for the following devices:

- NEMS 16 with contactor voltage 15V/DC...30V/DC
- NEMS 16 with contactor voltage AC230V

in any configuration

The operating terminals are in accordance with the following engineering standards and regulations:

- EN 60730
- EMC Code
- low voltage directive

## 2 Safety

### 2.1 German Law on Device Safety

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#### **Note the instructions for use!**

The German Law on Device Safety regulates the following:

Observe these instructions!

Use the device only in compliance with the instructions contained in this document for Terminal NEMS (Publication No. DLT5062-09-aE-0004).

If this document is a supplement, use it only in combination with the basic manuals.

#### **Use the devices only for the purpose described in this documentation.**

Used by trained personnel only. The device may only be operated and serviced by persons whose knowledge and training qualifies them to do so. Observe the safety provisions of the burner manufacturer.

#### **To be used only in a grounded power line network!**

#### **Electrical connection with devices that are not mentioned in these operating instructions**

##### **Liability for the function of the device shall be transferred to the owner or user.**

Liability for the function of the device shall be borne by the owner or user insofar as the device has been used by persons without the necessary knowledge, has been improperly used, serviced or repaired or has been handled in a manner that does not conform to proper use.

Modifications to the device render the type approval null and void. Inputs and outputs of the device and associated modules may only be connected as indicated in this manual.

LAMTEC GmbH & Co KG is **not** liable for damages occurring as a result of non-compliance with the above instructions. Compliance with the above instructions shall **not** entail any **extension** to the warranty and liability provisions of LAMTEC GmbH & Co KG's terms of sale and delivery.

Insofar as reference is made to laws, regulations and standards, the basis for these shall be the law of the Federal Republic of Germany.

### 2.2 For Your Safety

---

In this operating instructions, the following symbols are used as important safety instructions to the user. These symbols appear wherever there is a need for this information in a particular section.

It is essential to note and comply with the safety instructions, particularly the warnings.



**DANGER!**

Indicates possible danger to personnel, particularly with regard to electrical equipment

---



**WARNING!**

Indicates possible danger to personnel if the system components are not handled correctly.

---



**CAUTION!**

Indicates danger to system components or possible impairment of functionality.

---



**NOTICE!**

Contains important additional information for the user concerning the system or system components and provides helpful tips

---

Contained in texts that provide information on how to perform tasks.

In performing all tasks, the operator is requested to observe all statutory safety regulations and to do everything possible, according to the circumstances, to prevent injury to persons or damage to equipment

## **3 Purpose**

### **3 Purpose**

Display and operation of the NEMS New-signal/First-signal Indicator System.

#### **3.1 Functions**

---

- Monitoring and display of the system status
- Chronological display of all current messages (alarms).
- Selection and acknowledgement of alarms
- Setting/resetting of bypasses and display of all bypasses set
- Generation, display and printing of histories (events stored in chronological order)
- Comprehensive filter options for histories
- Selective status interrogation of a signal input
- All functions also available via Ethernet/Internet browser
- E-mail for new alarms

## 4 Configuration

The configuration data of the terminal would be stored as a configuration file.

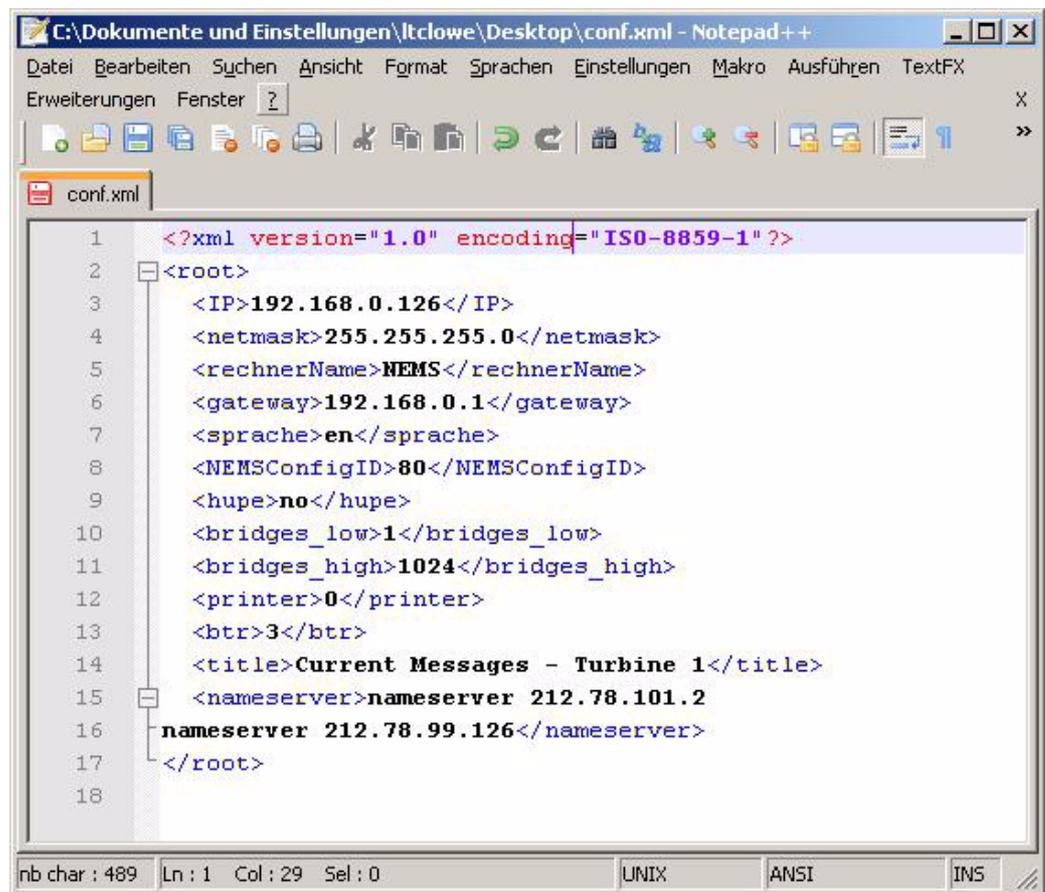


Fig. 4-1 Configuration file NEMS Display and Operating Terminal

You can access the *conf.xml* file at the NEMS Terminal via FTP. The file can be edited at all times. Changes made would be immediately saved permanently. However, it will only be activated after the user leaves the parameter window. This means the parameter window should be opened and closed at least once after editing the *conf.xml* file, in order to activate the changes made.

#### Items in the *conf.xml* file:

- Item `<hupe>` has no particular meaning. The terminal has no internal horn and the external horn is controlled by LSB.
- Item `<btr>` contains the registered addresses of the LSB modules.
- Item `<title>` holds the title for the "Current Messages" mode. (see chapter 6 "Current Messages" mode).
- Item `<nameserver>` is necessary for the sending and forwarding of emails. (see chapter 9 Ethernet/Email/Intra- and Internet (only in German))
- Item `<sprache>` defines the language of the display. You may choose between the following two entries:
  - *de* = German
  - *en* = English

Further items can only be found in the *syspwd.xml* file. This file is password protected and is relevant for setting and resetting bypasses (see chapter 8.2.5 FTP, *conf.xml* and *syspwd.xml*).

## 5 General operations

The display and operation of the NEMS terminal is easy and has a well laid-out structure. Specific functions and symbols on the display always remain the same if they are required on several display levels.

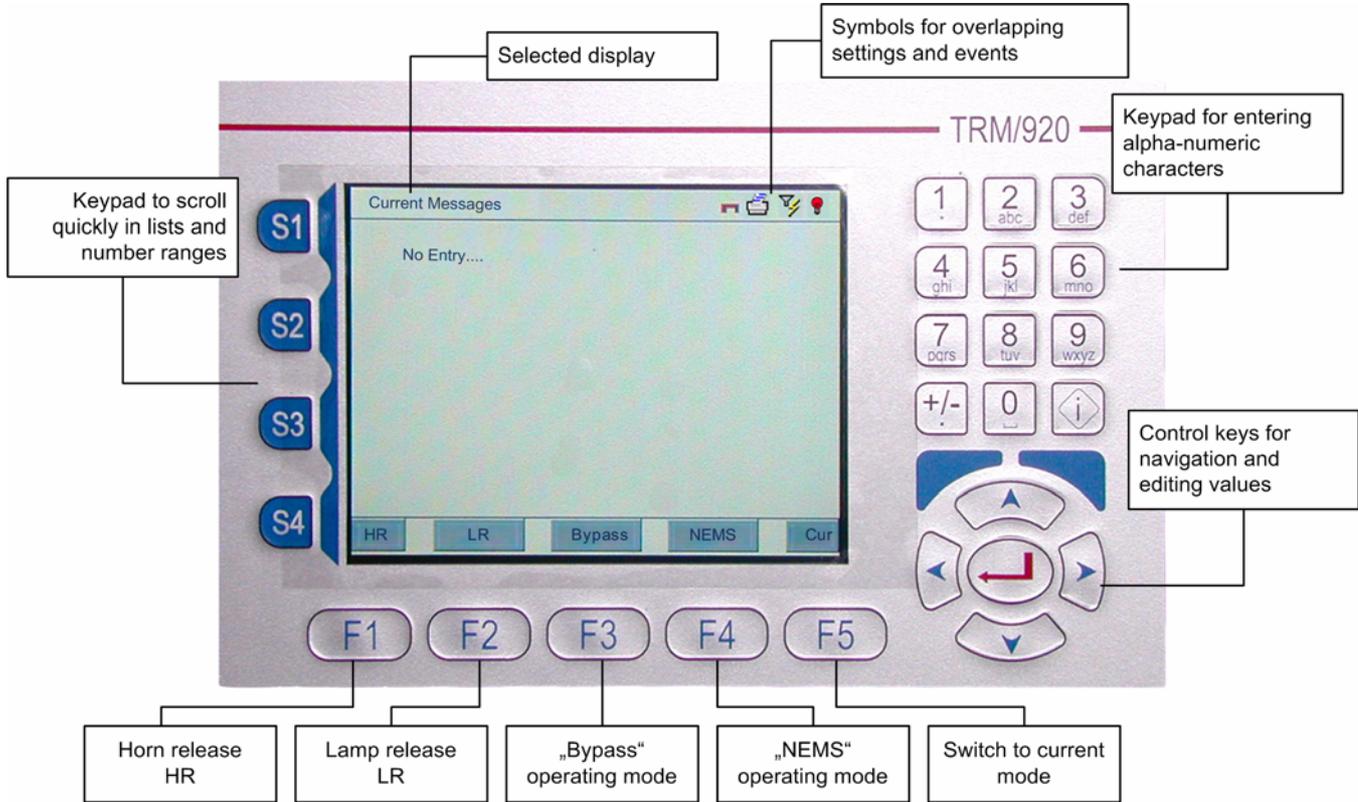


Fig. 5-1 General display and key functions

### Symbols for general events include:



#### Current messages changed.

New alarms have been received or old ones have gone. This symbol will appear to let the operator know that messages have changed.



#### Active history filter.

The filter is active and therefore all entries may not be displayed in the history.



#### History printing.

If this symbol is active, a history is in the process of being printed. The printing of current events will be delayed.



#### Bypasses set.

This symbol indicates that bypasses have been set on the terminal.



#### Key lock.

This symbol informs the operator that all keys in the terminal have been locked.



#### Logged in.

The key symbol shows that you are logged in.



#### Break.

The sand glass shows that the system is currently processing.

## 5 General operations

### Key fields:



You may use these keys (S1 ...S4) to scroll quickly through a list or to make defined changes in numerical values.

S1 scrolls 100 elements up or increase the actual numerical value by 100

S2 scrolls 10 elements up or increase the actual numerical value by 10

S3 scrolls 10 elements down or decrease the actual numerical value by 10

S4 scrolls 100 elements down or decrease the actual numerical value by 100



The F1...F5 keys are function keys. The application of these keys varies according to the mode you are in. The following section describes the functions of the keys in the respective modes.



The terminal offers an alpha-numeric keypad. The keys can be used to enter numbers, however consider the following:

The number you have entered would be trailed to the last digit of existing numbers. If the incurred number is out of range, the number would be adjusted so that it fits and stays within the allowable range. By entering a "0", you can "defer" the existing numbers. For example, if you enter the number "007", that means you have entered a "7". If only "7" is entered, this would be trailed and you would obtain one of all existing numbers ending with "7".



This keypad is designed for Navigation.

You may navigate with these arrow keys within the window or scroll in a list. With the "Enter"-key, you can confirm entries and windows.

### Key lock:

For security purposes, you may lock the keys of the Terminal. The lock will apply on all the keys of the terminals.



To lock the keys, please press the buttons at key sequence S1, S2, Cursor up, one after the other. The time period to press the key should not exceed 1 sec. Thereby, you are not permitted to press the keys altogether.



Should you wish to unlock the keys, please provide the same key sequence as you used to lock the keys.



If the keys are blocked, a lock would be shown at the title row.

### Acknowledgement key on NEMS

Acknowledgement key would be forwarded in the terminal or vice versa.

If you acknowledge a message on NEMS, it should also be acknowledged in the Terminal. Similarly, if you acknowledge a message on the Terminal, it should also be acknowledged on NEMS.

## 6 "Current Messages" mode

### 6 "Current Messages" mode

Here, all active (incoming) messages are displayed with date/time in chronological order.

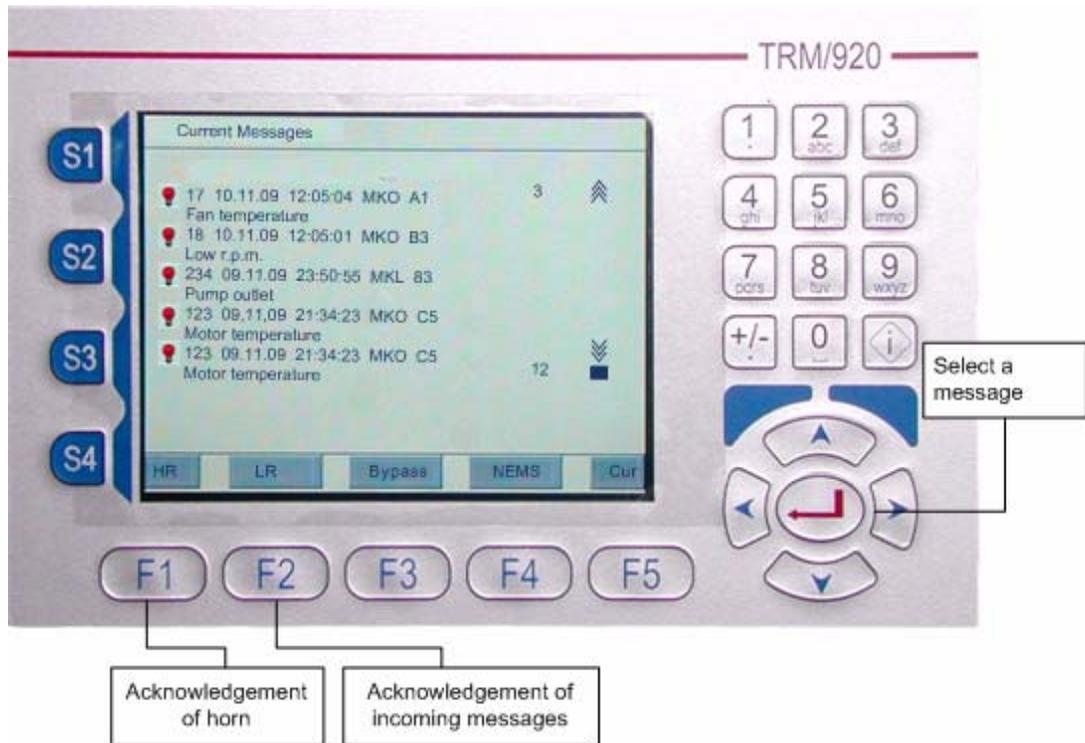


Fig. 6-1 Key functions for the "Current messages" mode

The following messages (symbols) are available:

MKO	Incoming signal with valid event time (must be acknowledged).
MKZ	Incoming signal with invalid time (must be acknowledged) (time = time received at the terminal).
MKI	Incoming signal - unstable (must be acknowledged).
FKO	Incoming contact chatter rejection with valid event time (must be acknowledged).
FKZ	Incoming contact chatter rejection with invalid time (must be acknowledged) (time = time received at the terminal).
FKI	Incoming contact chatter rejection unstable (must be acknowledged).
MKQ	Signal acknowledged but still present.
MKC	Incoming signal with cyclic message (does not have to be acknowledged).
MCI	Incoming signal with cyclic message and is unstable.
FKC	Incoming signal with cyclic message (does not have to be acknowledged).
BKO	Incoming process status signal (does not have to be acknowledged).
BKZ	Incoming process status signal with invalid time.
BKI	Process status signal unstable.
BKC	Incoming process status signal with cyclic message.

**Format of the message on the display:**

123	09.11.09	21:34:23	MKO	C5
Message no.	Date	Time	Symbol	Group

**Message text (Example):** Engine temperature

## 6 "Current Messages" mode

Graphics will be used to visually distinguish between the messages displayed:



flashes red

**MKO, MKZ or MKI and FKO, FKZ or FKI:**

Input physically active (message present, not acknowledged) or contact chatter rejection triggered.



flashes red

**MKO, MKZ or MKI:** Input physically deactivated (message gone, not acknowledged).



lights red

**MKQ,** Message present and has been acknowledged.



lights red

**MKC or MCI and FKC,** Message or contact chatter rejection present.



lights green

**BKO, BKZ, BKI or BKC:** Process status signal present.



Select the messages by using the function keys for navigation.



Acknowledge messages with the F2 / LR (=lamp release) key. In the process, the acknowledgement will only apply to the terminal or to the terminal and the NEMS 16 device according to the setting on the NEMS16 device in each case.

The messages will be deleted from the display if the message has been acknowledged on the terminal (only **MKO, MKZ and MKI**) and the message would be deactivated (gone).

**MKC, BKO, BKZ, BKI and BKC** messages would be deleted from the display without acknowledgement from the user, as soon as there is a signal that the input is gone.



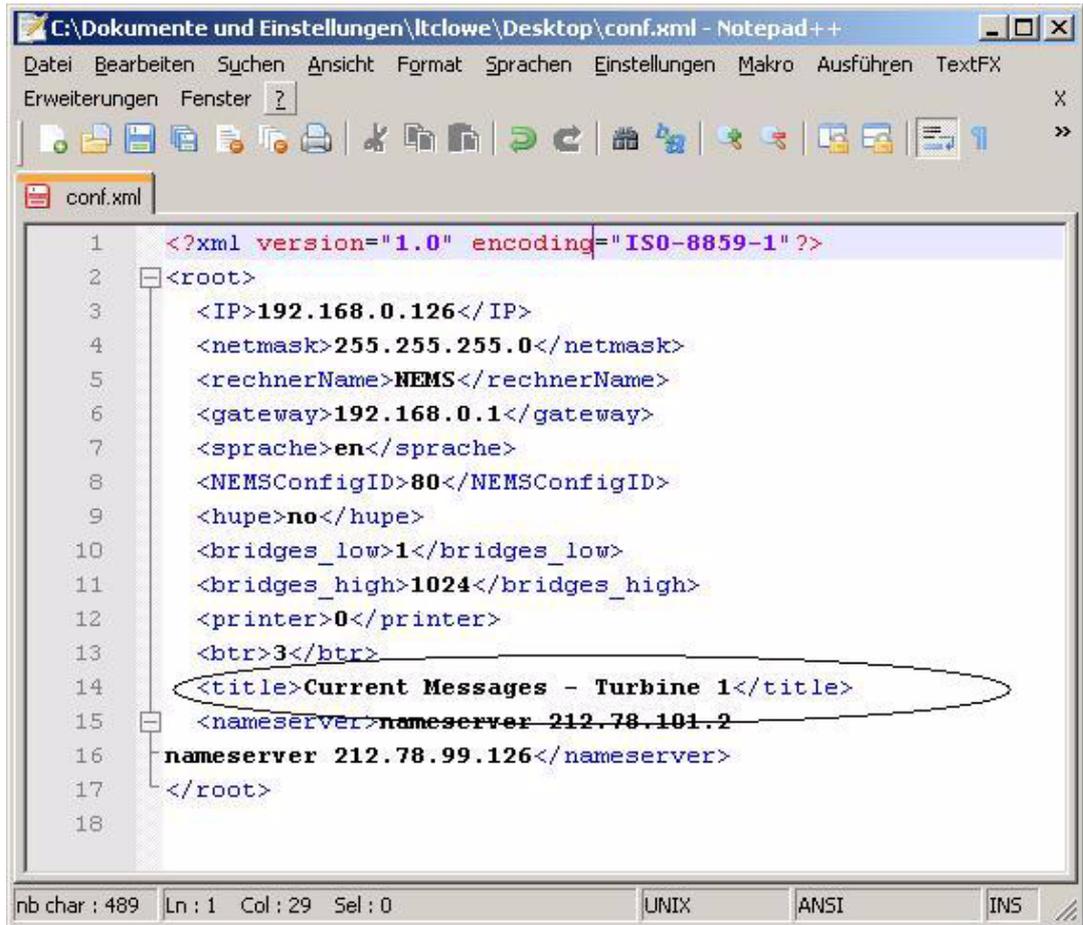
The arrows indicate that there are other messages beyond the current display area. The number indicates the relevant number of hidden messages.

Bypassed messages will not be displayed unless an **MKO, MKZ or MKI** message is present before the bypass is set. Then this will be present with the deleted signal bit until it has been acknowledged (see Bypass). The first message received will be displayed at the top of the screen. New messages received will be added underneath (in chronological order). If you have scrolled up or down the screen, the display will jump to the first entry when a new message is received if the messages displayed have already been acknowledged. Otherwise the screen will continue to display the area you have reached by scrolling up or down.

### Titles:

You may configure your own titles in the "Current Messages" window if you wish. These titles would only be displayed in the "Current Messages" window in the terminal or in the corresponding window of the web application. The titles must be fully inscribed into the configuration file (including "Current Messages"). This gives you the option to shorten the text, when the display is too long.

## 6 "Current Messages" mode



```
1  <?xml version="1.0" encoding="ISO-8859-1"?>
2  <root>
3    <IP>192.168.0.126</IP>
4    <netmask>255.255.255.0</netmask>
5    <rechnerName>NEMS</rechnerName>
6    <gateway>192.168.0.1</gateway>
7    <sprache>en</sprache>
8    <NEMSConfigID>80</NEMSConfigID>
9    <hupe>no</hupe>
10   <bridges_low>1</bridges_low>
11   <bridges_high>1024</bridges_high>
12   <printer>0</printer>
13   <btr>3</btr>
14   <title>Current Messages - Turbine 1</title>
15   <nameserver>nameserver 212.78.101.2
16   nameserver 212.78.99.126</nameserver>
17 </root>
18
```



### NOTICE!

Please consider the length of the text.

When the title is too long, this will overwrite the icons in the title row !

### 7 Bypasses in the NEMS system

There are two different bypass functions in the NEMS system: one is implemented in the NEMS16 devices alone while the other is implemented on the terminal and applies to the whole system.



NOTICE!

*Inputs can be configured as bypass switches in NEMS16 devices.*

Signal inputs in the NEMS 16 device can be assigned to this bypass switch and will therefore be removed when the bypass switch is active.

If a bypass switch is active, an MKC (message received with cyclic telegram) will be displayed for the switch on the terminal. The message text should refer to the bypass switch (eg bypass switch pump).

The inputs bypassed by this switch on the NEMS16 device will not be displayed on the terminal.

If an assigned signal input was received (MKO or MLD) and the bypass switch was then activated, the message will be marked as "gone" on the terminal (MGE) but will remain on the display until the message is acknowledged.

If messages on the terminal via cyclic messages or process status signals were active (MKC or BKO, BKZ, BKI und BKC), these will disappear for all the inputs assigned to the bypass switch.

If the bypass switch is deactivated, the message for the switch will disappear from the terminal automatically without acknowledgement.

Signal inputs set which were bypassed will be received on the terminal with a cyclic message (MKC or BKC). If a message which has not been acknowledged yet was already active before setting the bypass switch, it will remain active.



NOTICE!

Bypasses for single messages can be set on the terminal.

#### **How to set bypass in the terminal:**

- enter your password
- Call up the "Single Messages" display (see chapter 7.2 "Single Messages" mode)
- Select the message number that you wish to bypass
- the input can be bypassed by "BSet" and can be deleted with "BRes"

The bypasses will be transferred to the corresponding NEMS16 device where the input will likewise be set to "bypassed".

Incoming messages received by bypassed inputs will not be displayed (exception: LED colour set in the NEMS16 device).

## 7 Bypasses in the NEMS system

### 7.1 "Bypass" mode

In "Bypass" mode, all currently bypassed messages will be displayed on the terminal (see 8. Bypasses in the system). They will be displayed in chronological order, ie the entries will be listed in the order (from bottom to top) in which the bypasses were set.

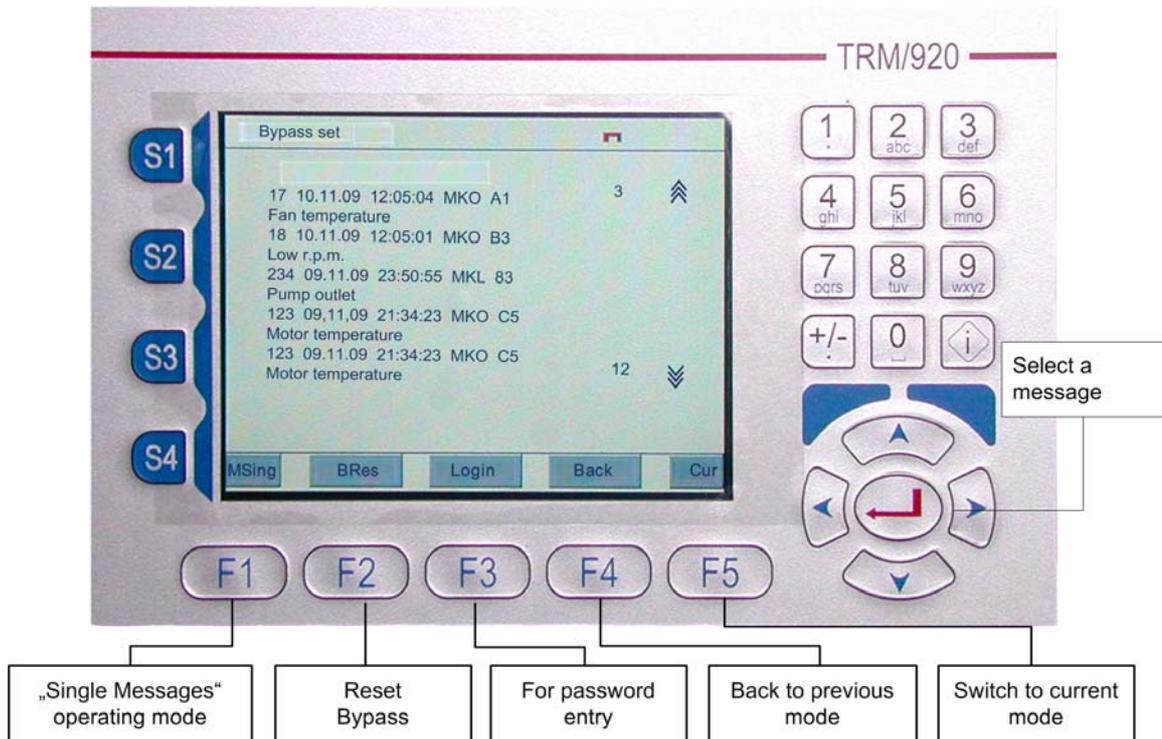


Fig. 7-1 Function keys for the "Bypass" mode

Before you can set or reset the bypass, you must authenticate yourself by entering the right password. The password for this clearance is stored in the configuration directory of the terminal \DOC\sypwd.xml. Here, you may also edit the password.

The password is only valid for 20 sec. This time period can be extended by setting or resetting another bypass. If there is no activity in the last 20 sec., the login would be invalid. Should you need to perform any other task(s), you are required to log in again. As long as the login is valid, there would be a key symbol displayed on the title row.

#### Login, Bypass Setting and Resetting

Push the F3 button, so that the entry field for the log in would be displayed. Here, enter your password and confirm it with the "Enter" key. If you are logged in and did not perform any tasks in the last 20 sec., the login would be terminated and access would be invalid. Should you need to perform any other task(s), you are required to log in again.

The operation and significance of the display elements are consistent with the "Current Messages" window (see ). After a successful login, you can reset the selected bypass with the "BRes" function key. The setting of a bypass is only valid in the "Single Messages" window.

## 7 Bypasses in the NEMS system

### 7.2 "Single Messages" mode

A single message is displayed in this window as well as its current status. A bypass can also be set or reset for the message selected. With the key which is on the top right hand side corner of the window, you can identify to see if your authentication is valid. If this is not the case, it could be caused by the following reasons:

- You have not authenticate yourself through the log in button
- You have been in idle mode for more than 20 secs. and your access have been denied

In this case, you are required to re-log in (see chapter 7.1 "Bypass" mode)

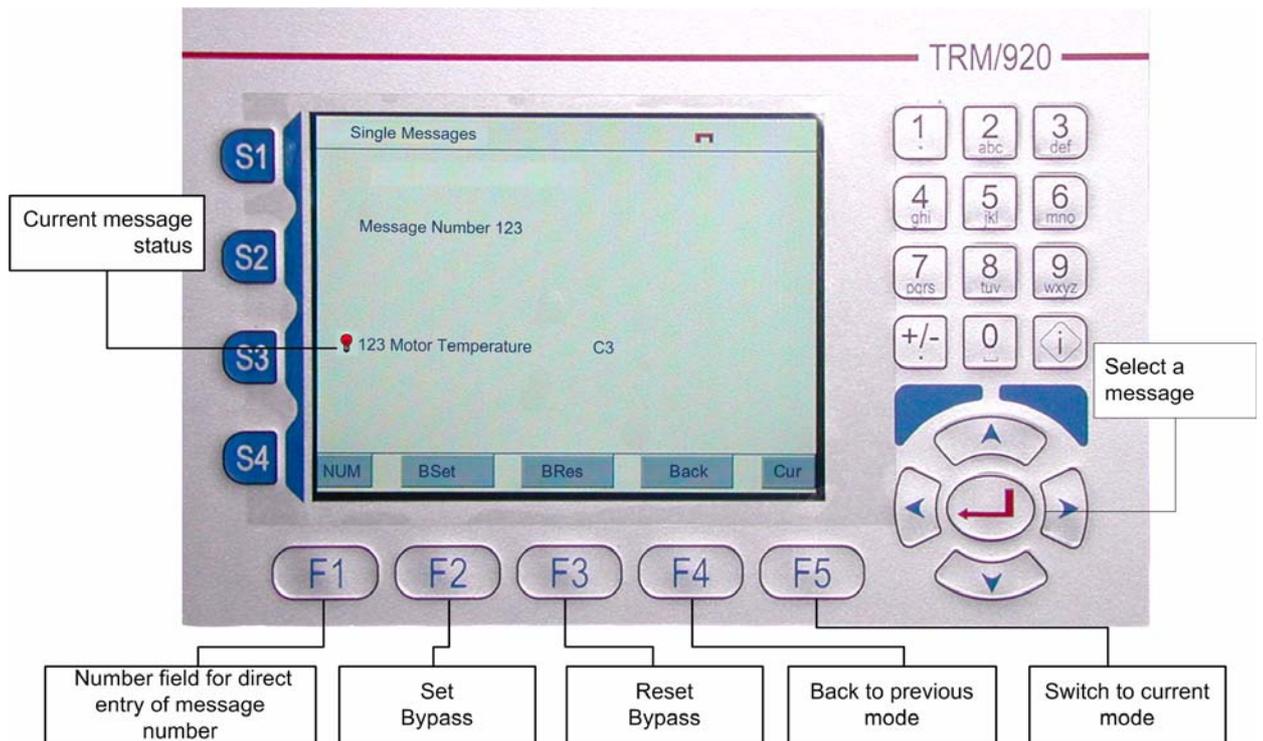


Fig. 7-2 Function keys for "Single Messages" mode

The following messages' status can be displayed:



lights up red **(MKO, MKZ, MKI, MKC, MCI, FKO, FKZ, FKI, FKC):**  
Input physically active and message or contact chatter rejection set



lights up red **MKO, MKZ or MKI:** Input physically active (message gone, not acknowledged)



lights up green **BKO, BKZ, BKI or BKC:** Process status symbol present. Status OK.



No active/valid message.

### 7.3 USB - Port

---

#### Save History:

The USB port can be found on the right hand side of the window, under Display and Keys.

Functions of LED:

- without USB Stick → LED OFF
- USB Stick hidden → LED blinks red quickly and green and changes to continuous light

Saving

- saves the fault events automatically every 10 min (each saving overwrites the *file histo.hst*).
- saves manually by confirming the keys in the following order:
  - F4 - NEMS
  - F2 - Events
  - F2 - Save

The LED flashes. The display shows the message of "Events saved".

The events history would be transmitted to the USB-Stick in XML format (*uhist.xls*). Use this file for analysis / statistic purposes only. You cannot reload this file during startup of the system. Each saving overwrites the file *uhist.xls*.

- If the USB-Stick is plugged to the Terminal permanently, the events history (*histo.hst*) would be transmitted to the USB-Stick and the terminal's memory every time the device is switched on.



---

#### NOTICE!

When the terminal is switched on, only the events that were automatically generated are transmitted automatically to the USB-Stick and the terminal's memory. Events that were manually saved events would not be transmitted to the USB-Stick and the terminal's memory.

---

#### Save indicator texts:

- The system saves the message texts on condition that:
  - the USB stick is plugged
  - You transfer the message texts with the NEMS Configuration Software to the system (NEMS / terminal) while the USB stick is plugged.  
You will find information about the NEMS Configuration Software in the NEMS documentation DLT5070  
A .MLD file will be generated

## 8 "NEMS System Status" mode

### 8 "NEMS System Status" mode

The "NEMS" display shows the current status of the NEMS devices connected. There is a field for each of the 64 NEMS devices available and this field indicates the process status of the device in question. The number indicates the first signal input of the NEMS 16 device in each case.

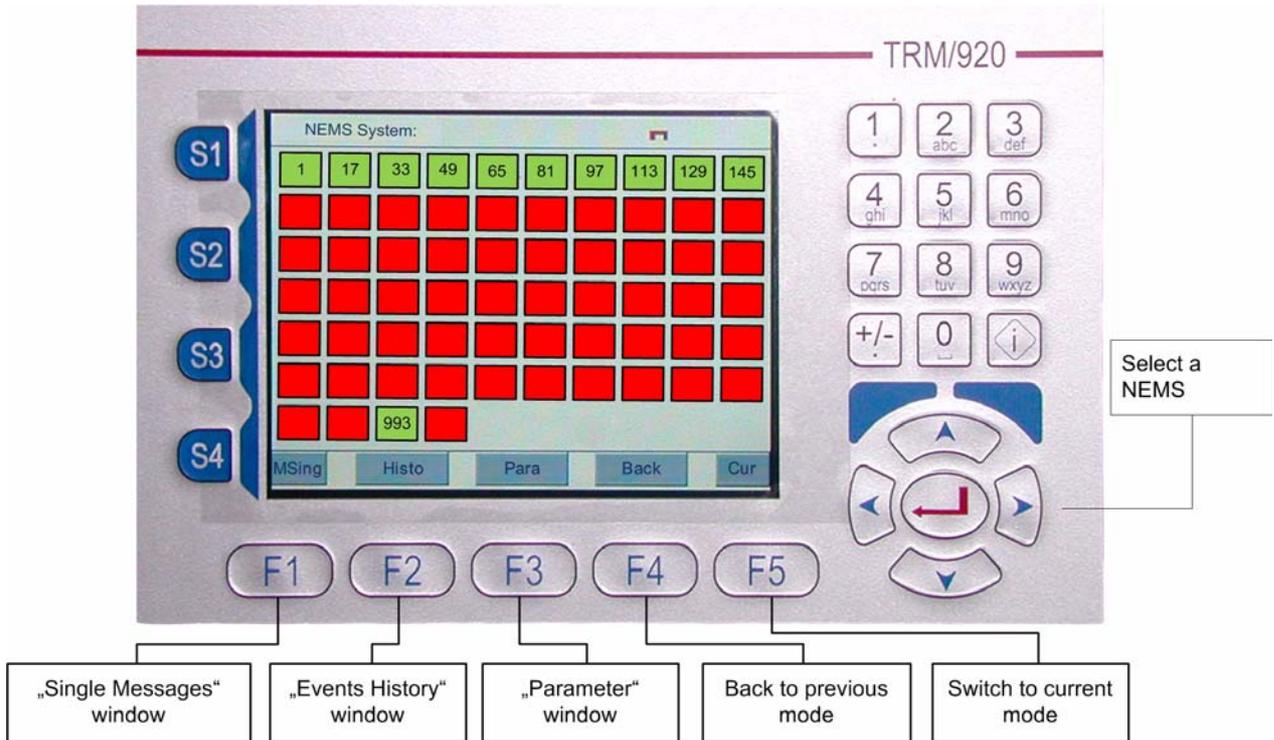


Fig. 8-1 Function keys for "NEMS System" mode

-  active device (17 corresponds to LSB address 2)  
= first message number for the 2nd NEMS16 device
-  deactivated device

8.1 "Events" mode

This mode displays a history of events received in chronological order. The display corresponds to the print-out from the logging printer in a-line format.

The display can be filtered. A symbol in the top right-hand corner indicates whether or not the filter is active and not all events may be displayed.

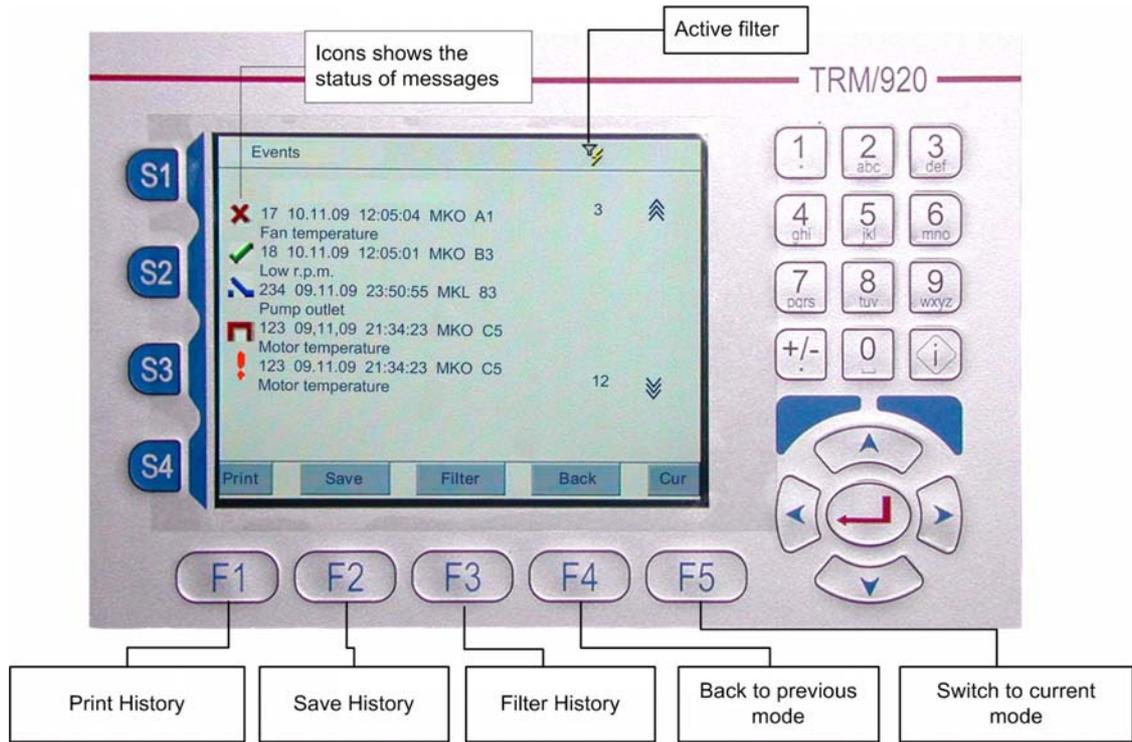


Fig. 8-2 Function keys of the "Events" mode

- ⌆ ⌇ The arrows indicate that there are existing messages which are beyond the display area. The figures next to these arrows show the number of messages that lie beyond the upper limit and the number of messages that lie beyond the lower limit.
- ⬆ ⬇ The arrows indicate other existing events outside the display area. These will be updated after a key is pressed (up/down).

The following conventions apply with regard to storing the messages in the history:

- The messages will be stored in RAM and contain the date/time, message number and status.
- The messages are stored in a ring buffer store which holds 2000 entries. Therefore the 2001st entry will overwrite the first entry in the store.

The function for printing the history prints out events on the logging printer. The print-out takes account of all current settings for the history, even the filter! If the filter is set, only events which match the filter settings will be printed. The filter settings will also be printed.

The online print-out of current events is suppressed while the history is printing. They will be stored and added after the history has been printed.

While the history is being printed, the printer symbol will appear on the display. This will indicate to the operator that the history is being printed. During printing, the key assignment will change from "Print" to "Cancel". You can cancel the printing of a history using the "Cancel" key.

## 8 "NEMS System Status" mode

On the history print-out, the start and end is indicated on the continuous stationery by lines of "\*\*\*\*\*". If the filter is active, all the filter settings will be printed in the header so that the format settings for the print-out can also be identified at a later date.

### Saving the events

The events can be saved in two ways:

- in the flash disc in the terminal
- in a USB Stick, that is plugged to the USB port of the terminal.

Every 10 min., the system verifies if any changes has been made to the events. When this is the case, all the chnages made would be saved to the flash disc. Irrespective of that, the user can make savings manually by pushing the "Enter" button or th F2 button in the Events menu.

the system would attempt to save the changes in that were generated automatically and the ones that were done manually. The manual changes would be saved through a USB Port into a USB Stick. Any fault which occur during this time would be ignored. The events would be saved in a binary format (see chapter 7.3 USB - Port).

Within the "Events" mode, you can save a filtered event to the USB Stick by pushing the F2 button. The file would be stored in text format and can be accessed with Microsoft Excel. This is the same format which the web application use.

### The following events (symbols) are valid:

MKO	Incoming signal with valid time	
MKZ	Incoming signal with invalid time	
MKI	Incoming signal unstable	
MKC	Signal received via cyclic message	
MCI	Signal via cyclic + unstable	
FKO	Incoming contact chatter rejection with valid time	
FKZ	Incoming contact chatter rejection with invalid time	
FKI	Incoming contact chatter rejection unstable	
FKC	Incoming contact chatter rejection received via cyclic message	
MGE	Outgoing signal	
MGZ	Outgoing signal, invalid time	
MGI	Outgoing signal, unstable	
MGC	Outgoing signal via cyclic message	
FGE	Outgoing contact chatter rejection gone	

## 8 "NEMS System Status" mode

FGZ	Outgoing contact chatter rejection, invalid time	
FGI	Outgoing contact chatter rejection, unstable	
FGC	Outgoing contact chatter rejection via cyclic message	
MKQ	Signal on the terminal acknowledged	
BKO	Incoming process status signal	
BKZ	Incoming process status signal, time invalid	
BKI	Incoming process status signal, unstable	
BKC	Incoming process status signal via cyclic message	
BGE	Outgoing process status signal	
BGZ	Outgoing process status signal, time invalid	
BGI	Outgoing process status signal, unstable	
BGC	Outgoing process status signal via cyclic message	
BSE	Bypass set	
BRS	Bypass deleted	
SYS	NEMS device received (activated)	
SYS	NEMS device gone (deactivated)	
SYS	NEMS restart via power on	
SYS	NEMS restart due to SW watchdog	
SYS	NEMS restart due to power supply	
SYS	NEMS restart due to software reset	
SYS	Master clock failure	
SYS	Master clock active	
SYS	Master clock DCF77 receipt interrupted	

## 8 "NEMS System Status" mode

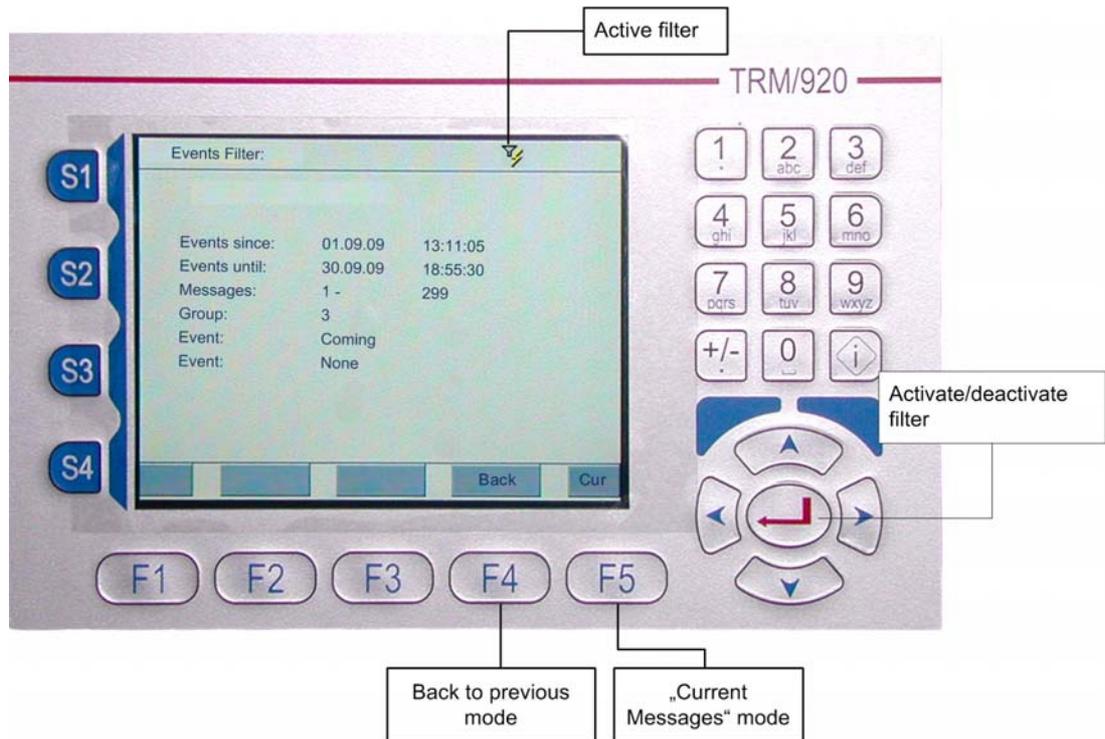
SYS	Master clock DCF77 receipt OK
SYS	Master clock change-over MEZ <-> MESZ
SYS	Master clock switching sec. for receipt



## 8 "NEMS System Status" mode

### 8.1.1 "Events Filter" mode

The "Filter History" window can be used to set and activate a general filter for displaying the event history.



The following settings are available where all the conditions set always apply:

- Events from: Start date/time for history
- Events to: End date/time for history
- Message from/to: Message number from/to
- Group: Selection of a group (A1-Z9) where the "\*" symbol stands for "Joker". Example: \* 3 shows all messages in groups A-Z with the index 3 (A3, B3,..., Z3)
- Event: Two event groups can be selected. Either Event 1 OR Event 2 will always be valid.

The following options are available:

- INCOMING All incoming events from the messages will be displayed
- OUTGOING All outgoing events from the messages will be displayed
- BYPASSES All bypass events will be displayed
- SYSTEM All system events will be displayed (device received or faulty)
- ALL All events will be displayed
- NONE No events will be displayed

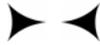
## 8 "NEMS System Status" mode

Example relating to the event filter (Event 1 OR Event 2):

- With INCOMING or OUTGOING, all incoming and outgoing events from the messages stored will be displayed.
- With ALL or NONE (or any other option), all events will always be displayed.
- With BYPASSES or NONE, only bypass events will be displayed.

**Tastenfunktionen zum Einstellen der Filter:**

 Increase or decrease the selected value

 Select next or previous value



Switch the filter on/off

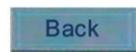


S1 to change the value by 1

S2 and S3 to change the value by 10



S4 to change the value by 100



Back to previous mode



Switch to current mode

## 8 "NEMS System Status" mode

### 8.2 "Parameter" mode

Important settings for the NEMS are entered in "Parameter" mode.

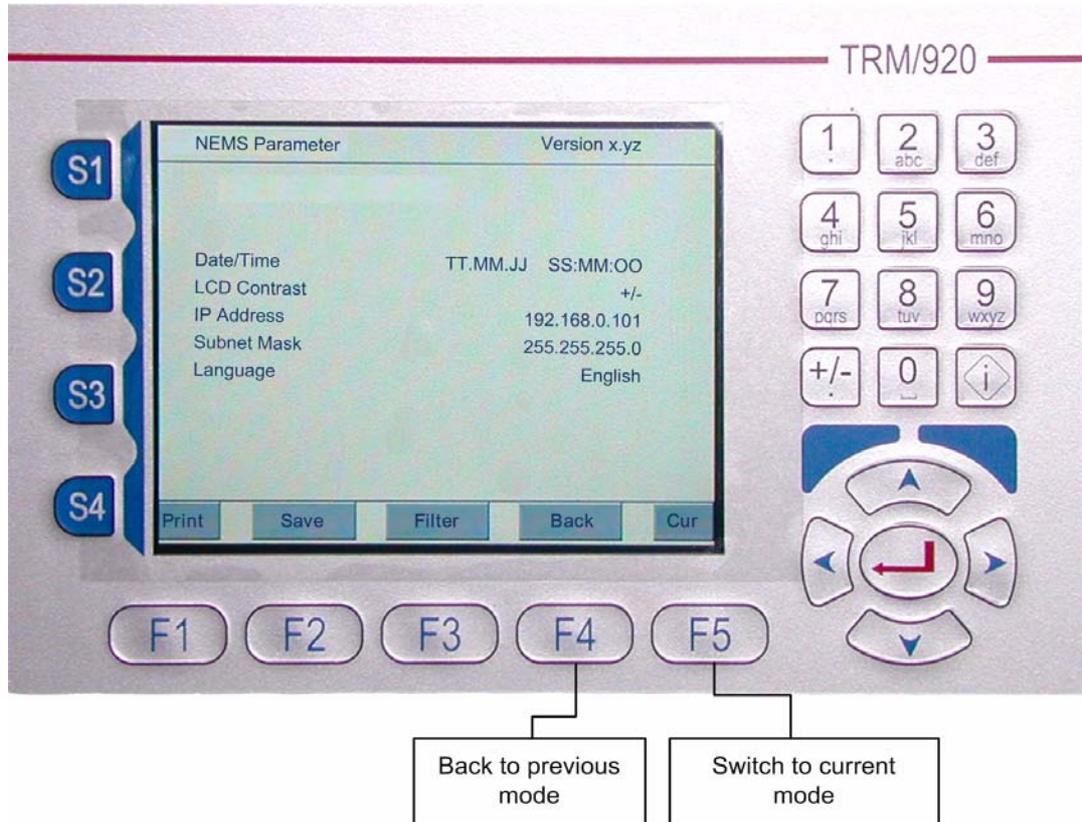


Fig. 8-3 Functions of parameter mode

#### 8.2.1 Date - Time

The current system time will be displayed and can be reset. The time displayed is passed on to NEMS devices using the "back" button and then stored in the real-time clocks.



##### NOTICE!

Attention: The time displayed will always be passed on. Should the "Parameter" page be displayed for too long without "back" being pressed, the time will have to be entered again.

If there is a radio clock in the system, this time setting will be ignored..

#### 8.2.2 LCD contrast

This facility is used to adjust the contrast for the LCD display using the "Up" and "Down" keys. The current setting will be stored on the LCD interface! . Active from hardware V1.1.

- bright
- half brightness

## 8 "NEMS System Status" mode

### 8.2.3 IP and subnet mask

---

Please set the IP Address and the subnet mask for the network in this field. The default settings should be as follows:

- IP Address 192.169.0.101
- Subnet mask 255.255.255.0

The settings will be incorporated in a start script using the "back" key and this script will be executed when the terminal is booted up.

Therefore this setting will not become effective until the terminal is restarted again.

### 8.2.4 Language

---

Available languages are selected here. The language is adopted when the "back" button is pressed and will become active immediately.

### 8.2.5 FTP, conf.xml and syspwd.xml

---

#### conf.xml

Other factory settings for the terminal can be entered in the conf.xml file.

An FTP connection to the terminal must be set up (user name and password can be obtained from Lamtec Service). The conf.xml file is located in the /DOC directory:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<root>
<IP>192.168.0.101</IP>
<netmask>255.255.255.0</netmask>
<terminalname>NEMS</terminalname>
<gateway>192.168.0.1</gateway>
<language>de</language>
  <NEMSConfigID>80</NEMSConfigID>
<hooter>yes</hooter>
<bridges_low>1</bridges_low>
<bridges_high>1024</bridges_high>
<printer>1</printer>
</root>
```

Meaning of the parameters:

"IP" and "netmask"	IP and subnet mask of the Ethernet TCP/IP socket.
"terminalname"	Network name of the terminal.
"gateway":	Standard gateway in the network.
"language":	Language set. Currently de for German, en for English.
"NEMSConfigID"	Address of the terminal for parameterisation via NEMSConfig.
"hooter":	no function
"Bridges_Low"	restrict the area in which bridges to the NEMS can be set/reset on
"Bridges_High"	the terminal.

## 8 "NEMS System Status" mode

**"Printer":** One-line print-out similar to NEMS16 (=1) or two-line print-out with full message text similar to Display Terminal (39 characters max.).

### **sypwd.mxl**

Enter the password for the authentication to the system (login) between the tags PasswordLevel1. This authentication is required for enhanced modification like setting a bypass.

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<root>
<PasswordLevel1>5644<PasswordLevel1>
</root>
```

**"PasswordLevel1":** Password for authentication to the terminal. Default value = 5644

## 9 Ethernet/Email/Intra- and Internet (only in German)

### 9 Ethernet/Email/Intra- and Internet (only in German)

As an option, the terminal can be connected to the Ethernet via TCP/IP protocol. This will open up new possibilities for fault indication and monitoring.

Using this IP, the terminal can be operated via the Ethernet/Intranet/Internet from any web browser at <http://192.168.0.101> (or set IP).

#### 9.1 Web function "Home"

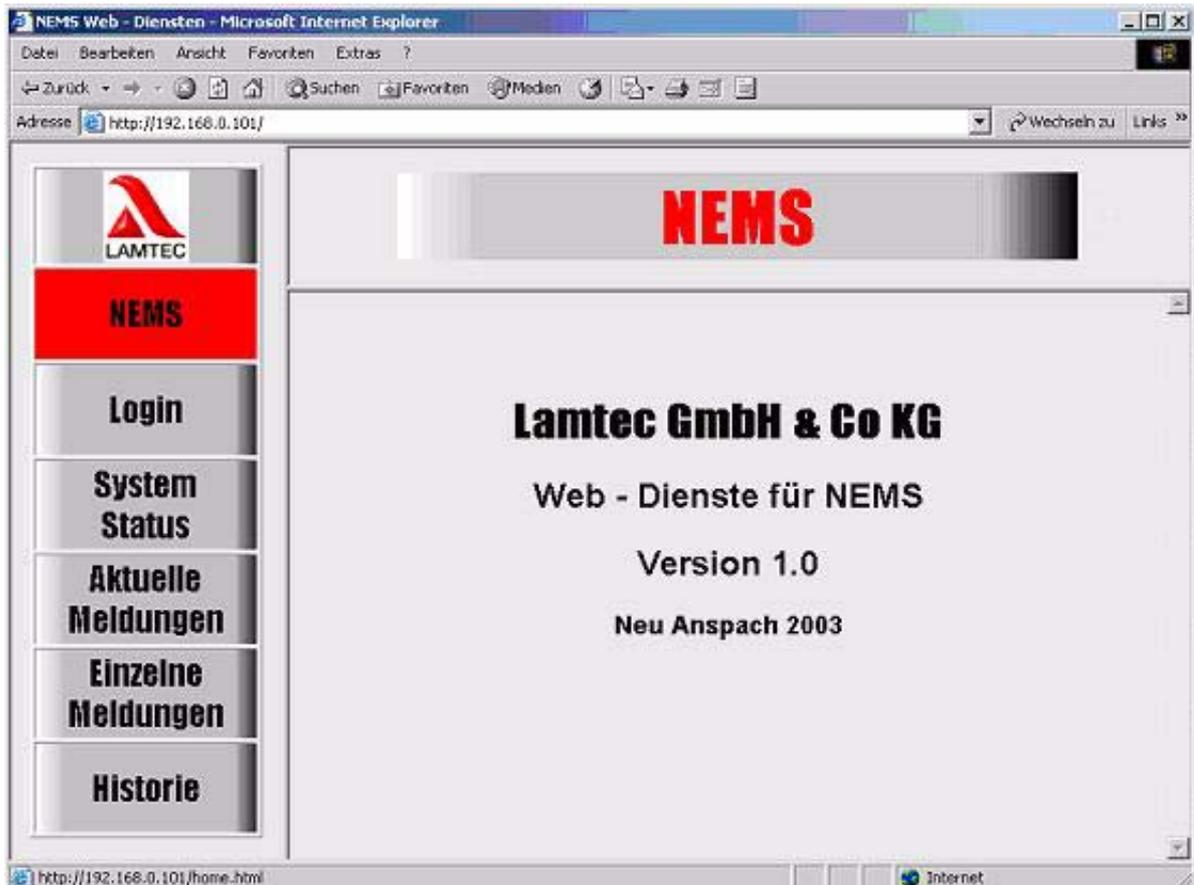


Fig. 9-1 Start page for the web application

### 9.2 Web function "Login"

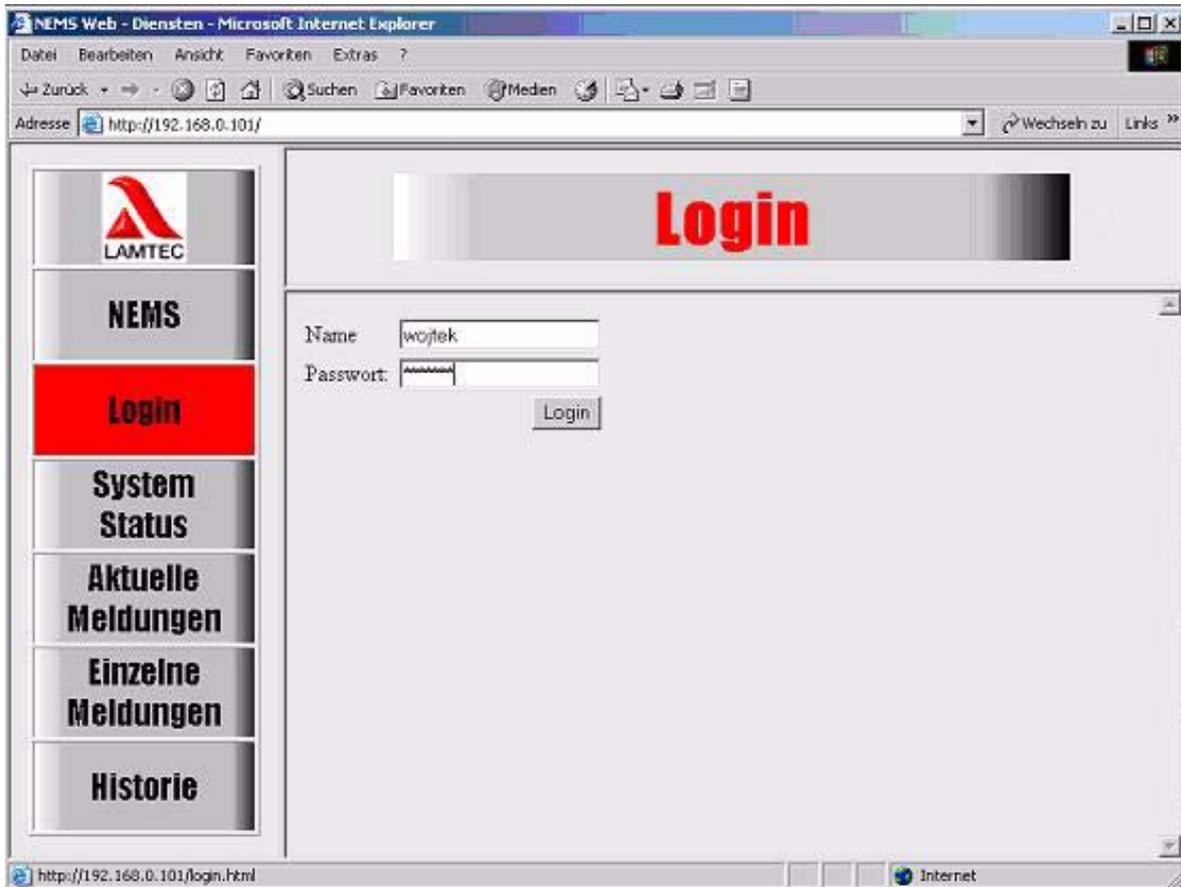


Fig. 9-2 Log in window of the web application

The user can log in within the system. Once logged in, the user will have access to all web functions and can operate the terminal. Only one user can be logged in at any one time.

Users who are not logged in may view the facilities.

Log in is possible when:

- no other user is logged in or
- the last session has ended or
- the currently logged in user make an attempt to re-log in within 60 minutes (time-out). In this case, the user have the option to extend his session or log in from another PC.

## 9 Ethernet/Email/Intra- and Internet (only in German)

### 9.3 Web function "System Status"

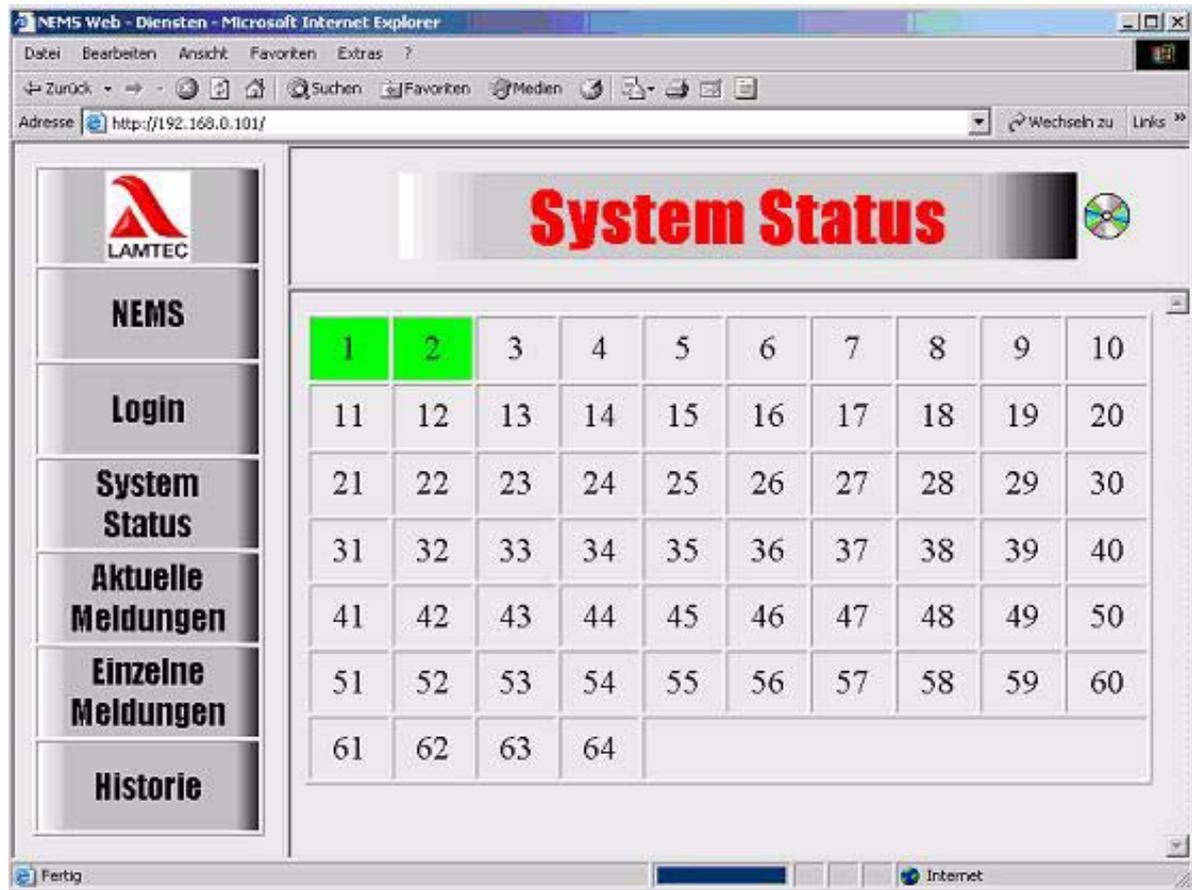


Fig. 9-3 Online display of the system status similar to the "System" terminal window.

## 9 Ethernet/Email/Intra- and Internet (only in German)

### 9.4 Web function "Single Messages"

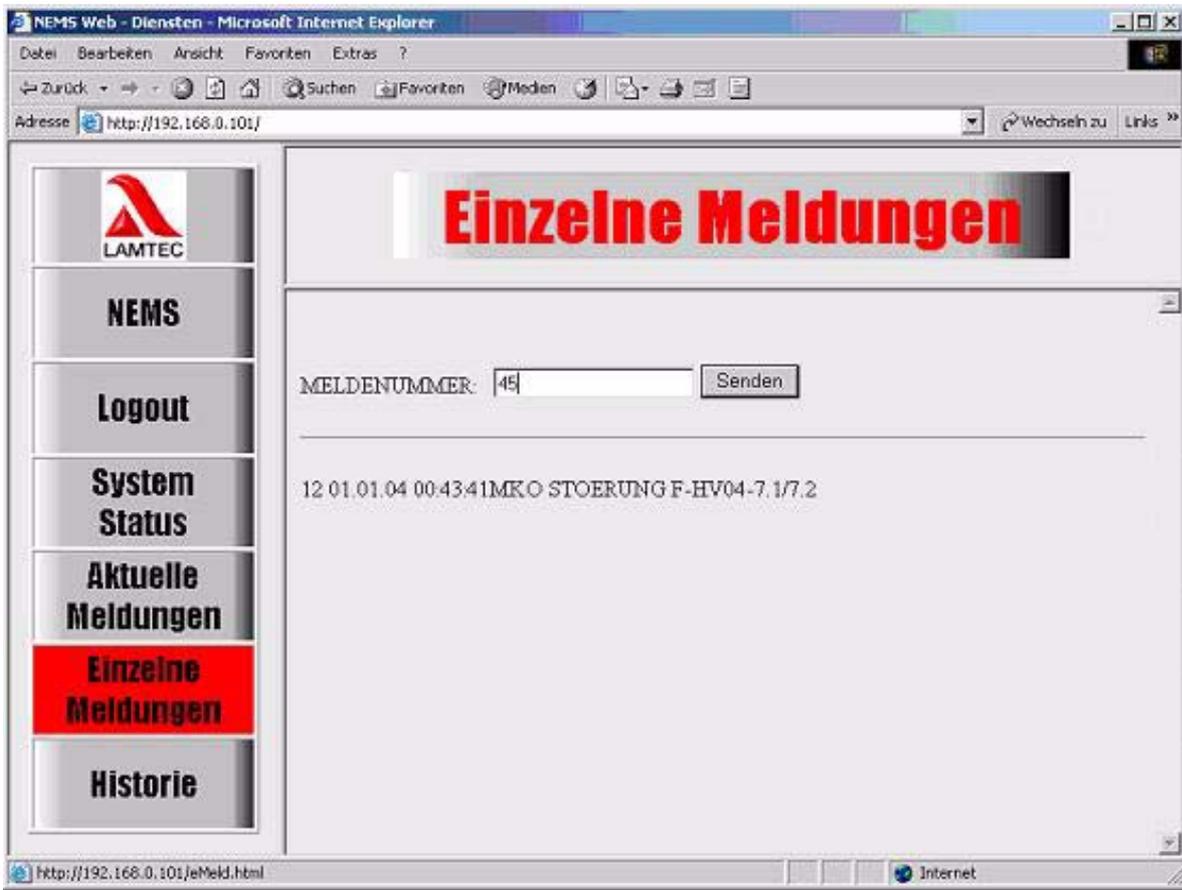


Fig. 9-4 Online display of "Single Messages"

A user who has logged in may enquire about the current status of one of 1024 possible messages. If the message number entered is correct, the data will be updated.

Users who have not logged in will only see the last interrogation and cannot specify a message number.

### 9.5 Web function "Current Messages"

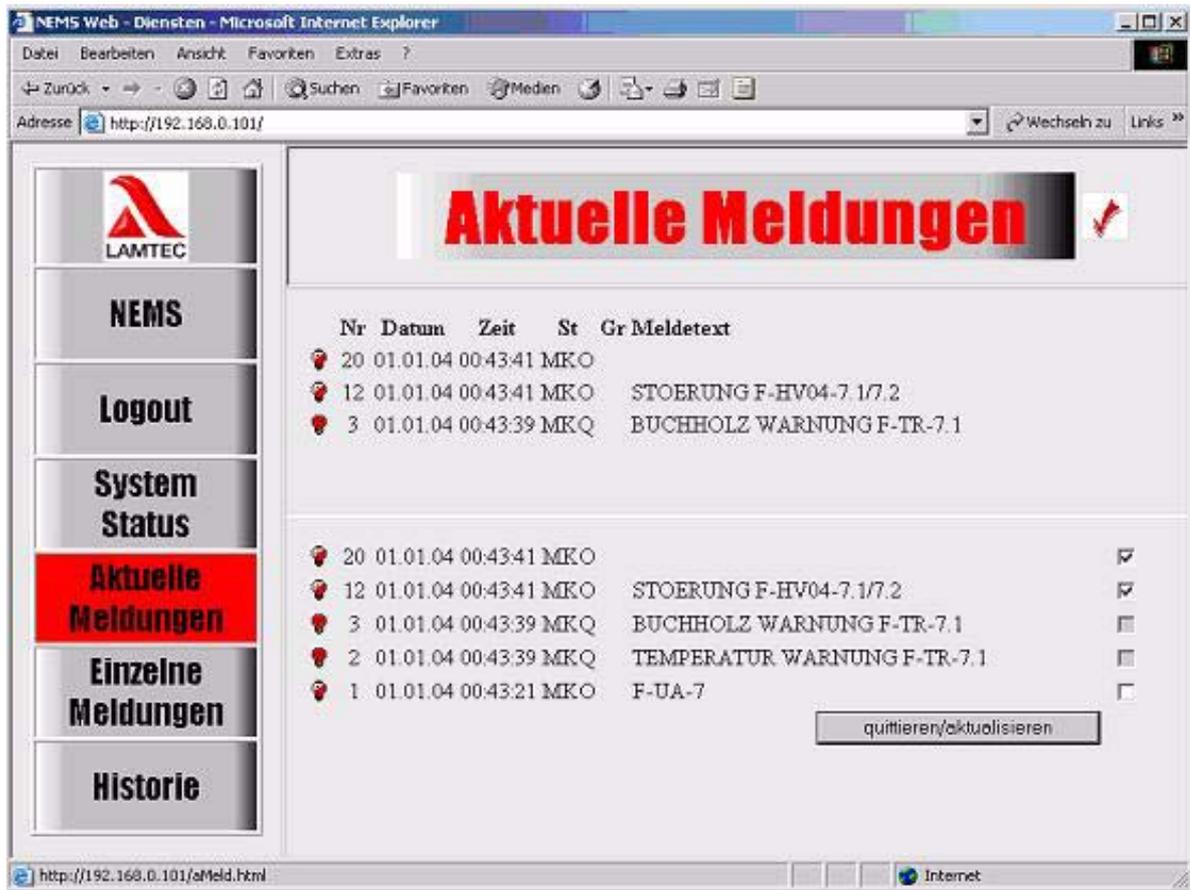


Fig. 9-5 Online display of "Current Messages"

A two-part login window will appear on the display with the 3 latest messages in the top section and a list of all active messages in the bottom section. You can scroll through the bottom section. So even if you scroll up and down, the latest messages will always be visible at the top.

Users who have logged in can acknowledge active messages using the checkbox after the message. In order to do this, all the messages to be acknowledged will be marked with a tick and the selection requested using the "Acknowledge/Update" button on the terminal.

The display will be updated automatically every 5 seconds. Acknowledgements will be displayed in the next update.

### 9.6 Web function "History"

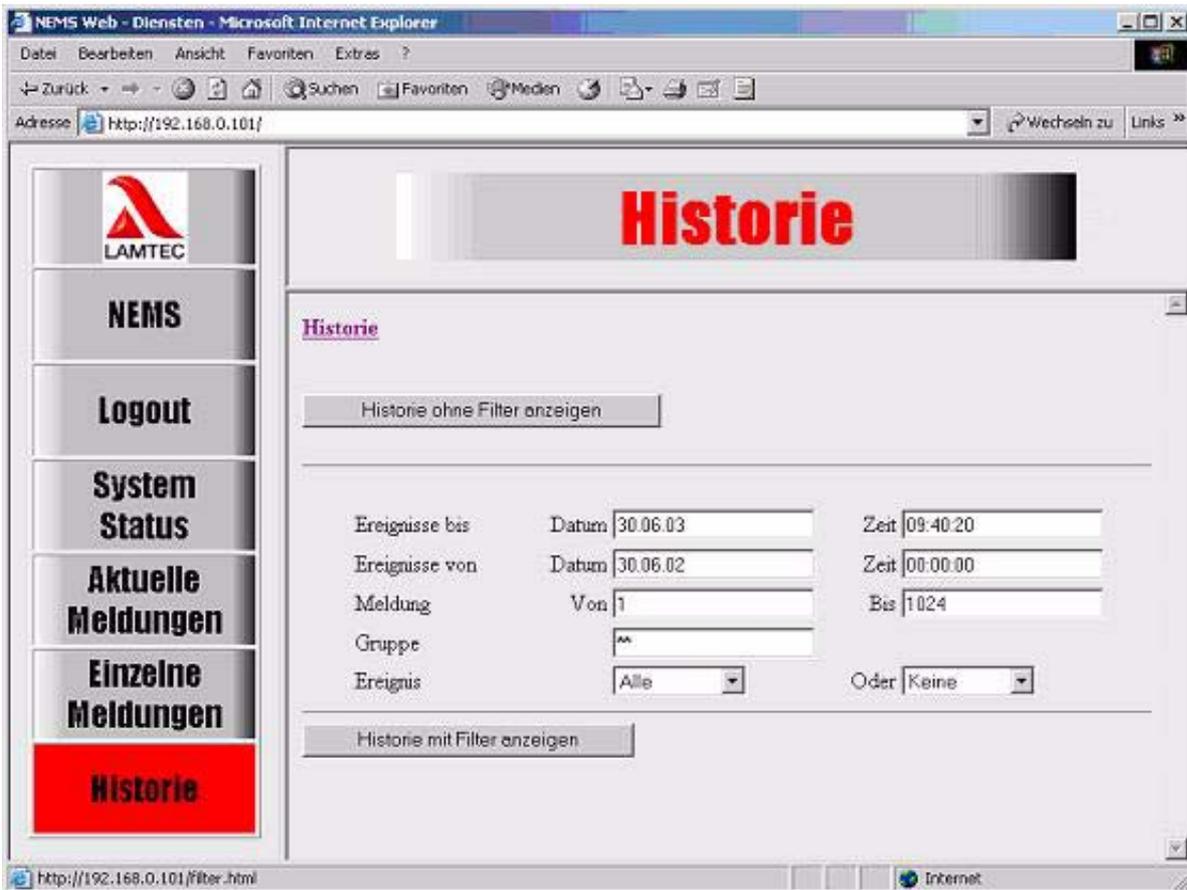


Fig. 9-6 Online display of "Events History"

A user who has not logged in can only call up the last version of the history generated via the "History" link.

A user who has logged in can generate a new history and can choose whether or not to use a filter in the process.

Filter settings will be set on the page in the same way as on the "Filter" terminal.

The history generated will be displayed immediately. If MS-Excel is installed on the PC, the corresponding browser plug-in will be opened and the list will be displayed in Excel format. Without Excel, a text version of the list will be displayed in the browser.

### 9.7 Web function "E-mail"

---

In the case of new messages, an e-mail can be sent from the terminal. The file "/DOC/nems-mail.xml" is to be configured for this purpose. The SMTP server must be accessible in the network (or via the standard gateway).

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<root>
<Sender>
<mail>NEMS2@web.de</mail>
<pass>lamtec</pass>
<smtp>smtp.web.de</smtp>
<pop>pop.web.de</pop>
<bettref>Message from NEMS fault indication system</bettref>
<text>
NEMS 192.168.0.101
A new message has been received.
The exact information can be found via the link:
http://192.168.0.101
List of current messages:
</text>
</Sender>
<mailingList>
<mail>winne@lamtec.de</mail>
</mailingList>
</root>
```

All the settings required for the SMTP server are entered under *<Sender>*. The terminal supports logging in without a password and with POP3 login (not encoded).

The *<text>* is freely configurable and will be supplemented by a list of all current messages which will be generated automatically.

The *<mailingList>* contains all the recipients of the e-mail.

## 10 Technical Data

### 10 Technical Data

#### 10.1 Design

- Single-board computer with LINUX operating system
- Built into 19" rack or panel mounting case 100 mm deep
- Sealed keypad with
- Type of protection: IP00
- Colour LCD display with background lighting (service life of 50,000 h)
- Resolution: 320x240 pixels (1/4 VGA)
- Power consumption: 22 W approx.
- BUS interface: LAMTEC SYSTEM BUS
- Optional PROFIBUS via additional module

#### 10.2 Connections Back Panel

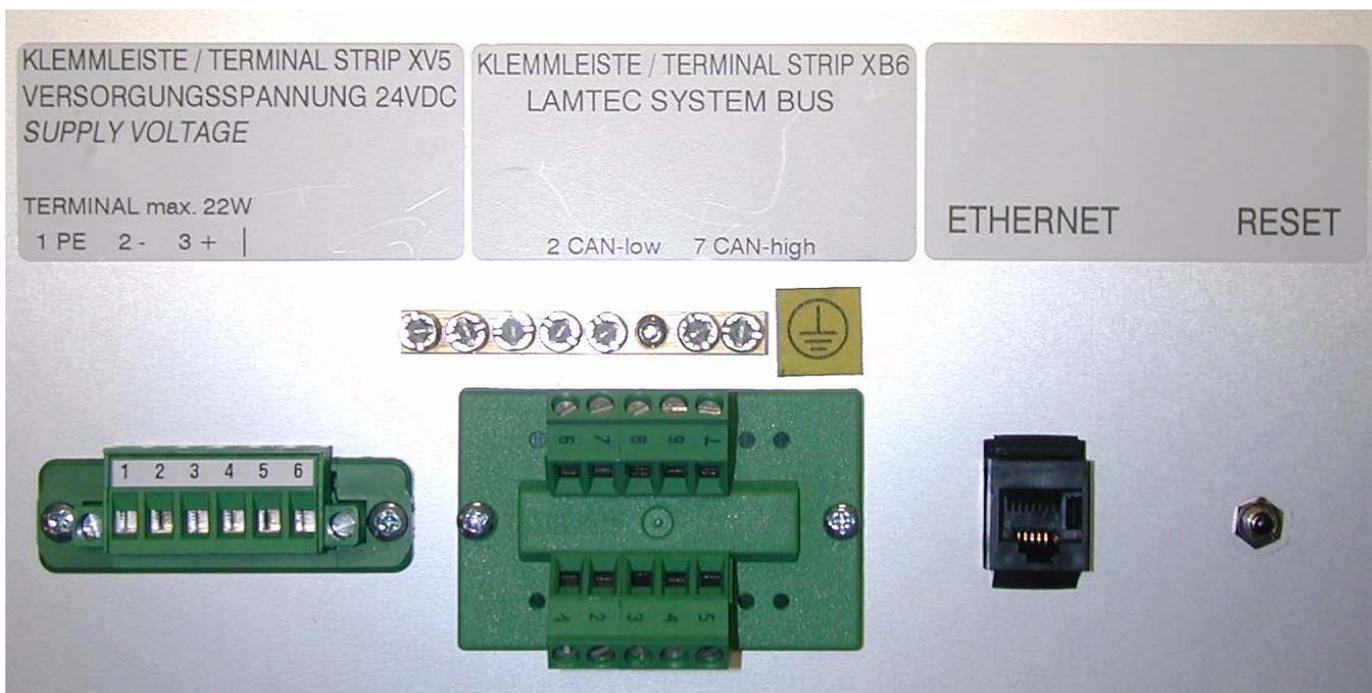


Fig. 10-1 Connection on the back panel

## 10.3 Wiring example

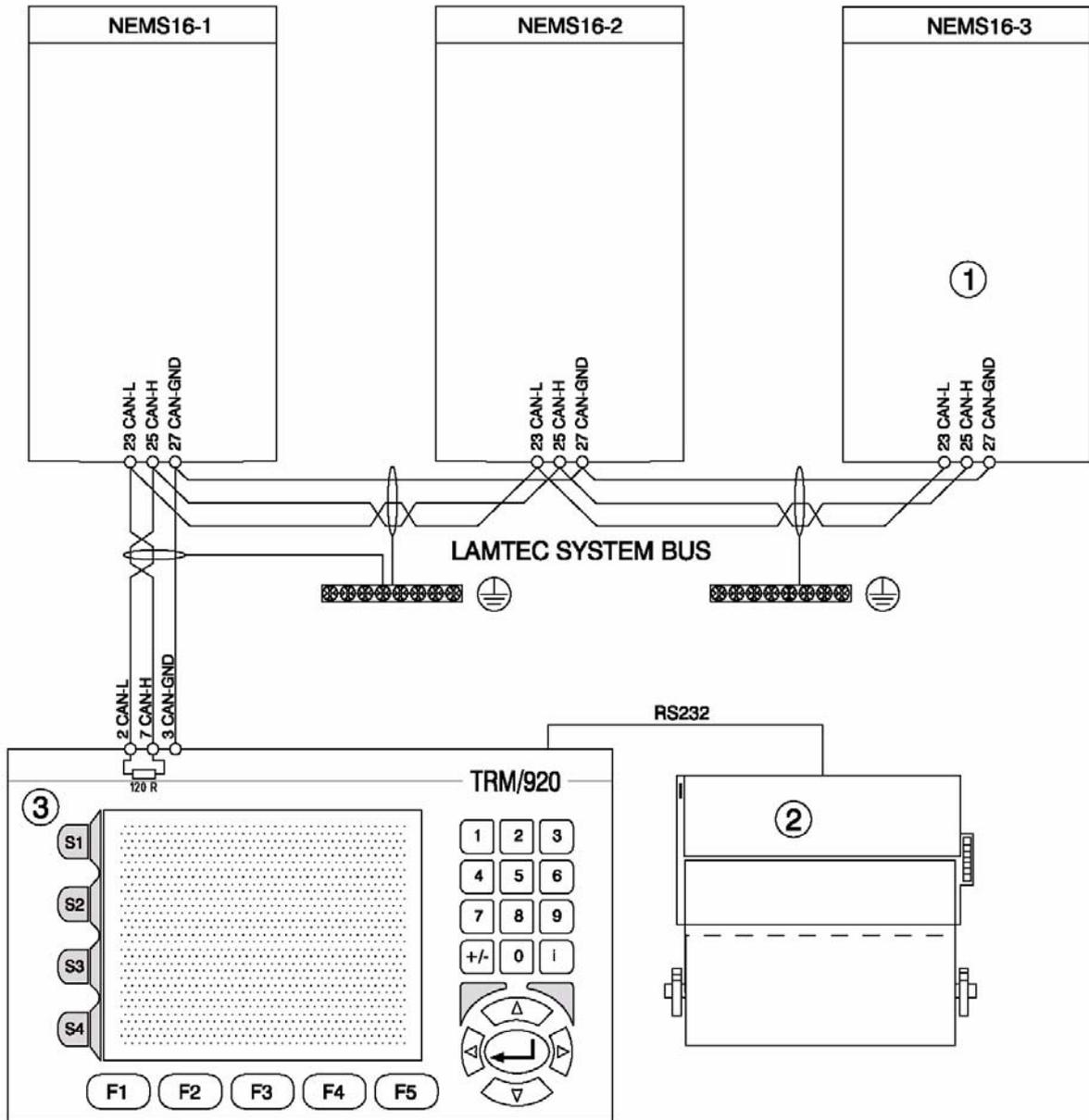


Fig. 10-2 Wiring Example

For the cable length and cross section conductor of the LSB, we recommend:  
 0 - 500m 2x2x0,34mm<sup>2</sup>, stranded pair with shield 120 Ω

## 10 Technical Data

### 10.4 Panel cut-out

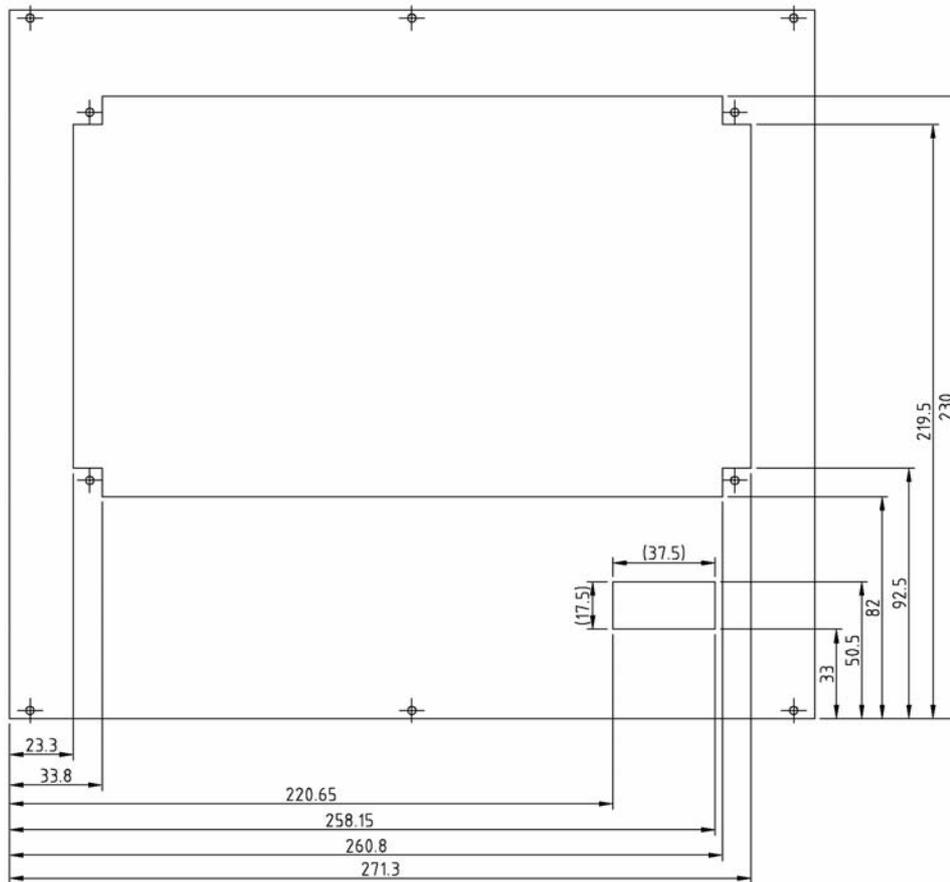


Fig. 10-3 Panel cut-out

### 10.5 Order No.

- 680R6007N mounted in rack 6HE
- 680P6022 as a spare part
- 680P6023 USB interface

### 10.6 Messages / Faults

---

No.	Message Texts
12	CAN Driver Error. Messages lost!
13	CAN FIFO Overrun. Messages lost!
14	Internal FIFO Overrun. Messages lost!
15	Internal FIFO Overrun. Can not send!
16	Display Error!
17	CAN Bus can't be initialized.
18	Undefined Error.
19	Fatal Error. Shut down...!
20	At least one NEMS went offline.
29	Error in message text file.
70	Printer Error: Head up
71	Printer Error: Paper empty
72	Printer Error: Paper almost empty
73	Printer Error: Sensor failure
74	Printer Error: Cutter blocked
75	Printer Error: Temperature failure
77	Serial Interface 1 Error
79	Printer Buffer full (send)
76	Printer Error: Voltage Error
78	Printer Buffer full (send)
80	Internal Print Buffer full (Histo)
81	No Printer available...
89	Fatal Error while sending CAN Message
122	Events saved ...
123	Text have been actualized.
124	Error during text transfer!
149	History saved.
151	History not saved: memory stick full.
152	History not saved: file readonly.
153	History not saved: unknown reason.
154	History not saved: memory stick not ready.

## 10 Technical Data

### 10.6.1 Common Alarm

---

Common alarm, which will be released of each incoming alarm. The following settings are possible:

- working / closed contacts
- static
- dynamic 1 sec
- impuls 1 sec.

### 10.6.2 Additional Alarm "UNACKNOWLEDGED"

---

If an alarm isn't acknowledged within a defined time, an additional „unacknowledged“ alarm will be generated. The alarm cycled (reset and trip) the whole defined time, until the given alarm condition is acknowledged. Once triggered, this alarm is remain active for 1/3 of the defined time.

The following settings are possible:

- working / closed contacts
- trigger delay

### 10.6.3 Horn

---

Common horn, which will be released of each incoming alarm.

The following settings are possible:

- working / closed contacts
- retriggering (once / always) after a defined retrigger time

### 10.6.4 Watchdog

---

The Watchdog monitors the NEMS-System to faults. The setting is fix to closed contact.

In following fault conditions the contact will drops down:

- fault of a NEMS-card
- fault of a LSB-module
- fault of the terminal
- fault of the supply voltage
- interruption of the Lamtec System Bus connection

The fault message still remains active, although you have corrected the cause of the fault. To acknowledge this fault message, go to "Current Messages" mode and push the horn acknowledgement key.





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