
ALL 4000 INTERNET SENSORMETER

User's Manual





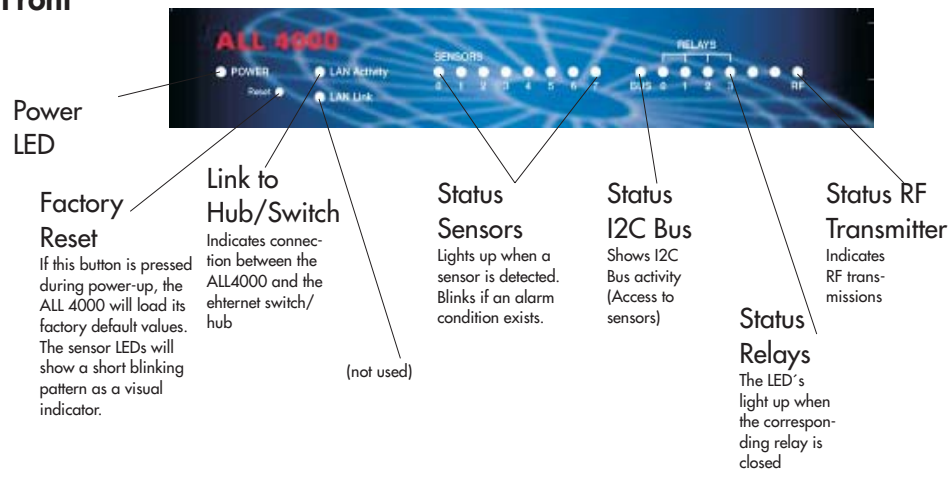
ALL 4000 INTERNET SENSORMETER



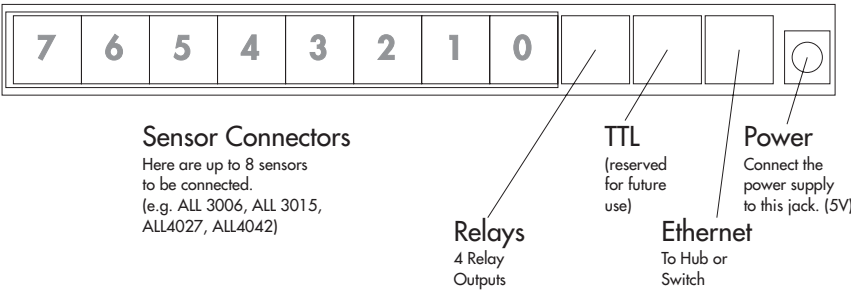
Package contents

- ALL 4000 Network Unit
- ALL 3006 temperature sensor with 1 m cable
- power supply
- User's Manual

Front



Rear



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Getting Started

Connect the ALL4000 unit to your network switch or hub by means of a standard 1:1 cable.

Now, connect the sensor(s) to their ports, and plug in the power supply.

The power LED will light up immediately, and after a short time the network LED, too.

A few seconds later you will notice that the sensor LEDs at their respective positions will light up.

The "BUS" LED shall light up once a second, immediately followed by the "RF" LED.

First Steps

The ALL4000 is set to the IP address 192.168.0.100 from the factory. If you are in the same subnet, you are able to access it directly. If not, then please change your computer's network settings in a way that you can access this default address. (if needed, please consult your network administrator)

With help of the commandline tool "PING 192.168.0.100", you can verify that a working communications path to your ALL4000 exists.

If yes, then just open a web browser (MS IE Versin 6 or later, Netscape Version 7 or later) and go to this URL: <http://192.168.0.100>

This should allow you to see the main screen with the display of sensor data:



At the bottom of the page you will see several hyperlinks:

"Sensors", "Relays", ... and "Configuration". Please click on "Configuration" to get to the menu with the device settings.

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This menu is the starting point for all settings of the ALL4000. You will probably change the IP address, netmask, Gateway etc. to fit your network first.

Parameter Overview

Device Name

The ALL4000's name that it will use for identification purposes. This device name is used in the XML output, and as a headline on most of the ALL4000 web pages.
Default: "ALL 4000"

Webserver

This allows to change the HTTP port number what the ALL4000's web server listens to.

Also, you can control the access to the device by setting a user name and password.

Default: "80", no User name, no Password

Network

The usual settings for the TCP/IP protocol. Please consult your network administrator to find out the correct settings for your local network.

Default: IP 192.168.0.100, Netmask 255.255.255.0, Gateway 192.168.0.1

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Sensors and Limits

On this page, you can give each sensor an individual name, and set the minimum and maximum allowed values for alarms.

Default: Sensor name = Sensor number,

Minimum: -55, Maximum: 155



The "Time interval for Graphics Refresh" can be set here in seconds. This value tells the ALL4000, after which elapsed time the history display in the browser will be scrolled by one pixel and updated with a new value.

These values are also stored in the ALL4000 internal memory, so that a newly opened browser window will also be able to show the entire history.

Default: 10 Seconds

RF Receivers

The ALL4000 has a built-in 433 MHz transmitter and can control all RF plugs and receivers from the Allnet catalog. With the optional ALL4039 868 MHz transmitter, it can also control the well-known "ELV FS20 system".

The menu allows to set name to every receiver, and assign different graphics for it.

"Boot default" sets the value that the transmitter will tell the receiver after power-up or reboot of the ALL4000. (off, on or last set value)

The other parameters are "House Code Letter" and "number" of the RF receivers. The letter corresponds to what is printed on the receiver; the number begins to count from 0...15 - some plugs are numbered "1...16" or "1...4" - here you have to assign the correct 1-digit lower number.

For the ELV FS20 receivers, set the "House Code Letter" to "Z" and then the 16-bit House code and receiver numbers to fit your FS20 setup.



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Timers

For every RF receiver there can be set up to 8 individual time switching points. This allows to switch receivers on or off at fixed points in time, with no need for programming skills. After selecting the Receiver and the number of the switch point, you will see the parameter window.



"Active" allows enabling or disabling of a switch

point. So, it is possible to deactivate a switch point without the need to delete it.

"Date" sets the date, at which the operation is scheduled to occur. The value "-1" means that this parameter is to be ignored.

(If on every month's 1. shall be switched, then enter D/M 1/-1; if you want to switch every day, just enter -1/-1)

"Time" sets the clock time of the switching point. Here, also every parameter can be ignored by setting it to "-1". (if you want to switch every full hour, then set it to H/M/S: 0/-1/-1)

"Type" tells the ALL4000, if it shall switch On (1), Off (0) or toggle the status (2).

Relays

Here the names and Images for the 4 internal relays can be configured, analog to the settings for the "RF receivers".

Clock and Date

This sets the internal CMOS RTC.

The "Timezone" is used for the sending of emails to the SMTP server.

Therefore, please do not use fantasy terms like "EST", only use valid timezones listed in RFC822 or RFC2822.



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SMTP Server/Email settings

Basic settings for the mail server and the sending email from the ALL4000.

"SMTP Server IP Address": the IP Address of the mail server that shall be used to transport the emails from the ALL4000.

"AUTH Username/Password": If the mail server wants authentication with username and password, you can enter those here.

"From:" - The email address that the ALL4000 tells the mail server that the mail is originating from. (some mail servers want these addresses to really exist and do not send mail otherwise for security reasons)

"To": at this email address sends the ALL4000 all its generated emails.

"Subject": Headline of the emails - this is the same for all generated mails, so these can be easily filtered by rules in the email client or server.

"send test mail" - generates a mail by the push of a button, so you can verify if the mail sending works as expected.



Hysteresis/Email

"Hysteresis": Minimum change of measured value before an email is triggered. (prevents generating a flood of emails just because the value is slightly wandering around a threshold point)

"Boot-Mail": This sends an email every time the ALL4000 is newly bootet or restarted. Could be used to detect power outages.

"continously send data": sends data in fixed time interval. (Always, not only if an alarm condition exists)



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"send email at alarm": sends an email if an alarm condition (Limit-over/under-run) exists, and again if the alarm condition is cleared.

"Email Interval": Time interval (in minutes) to send the emails, if "send email continuously" is enabled.

"Daily Email (hour)": in some applications, you might want an email to be sent only once a day, but at a fixed time. To ensure that this mail is always sent at the same time of the day, you can use this function.

Sensor-Offsets

The relative precision of the temperature sensors is very good, but depending on their location and air/gas flow and connection to thermal mass, it can happen that the measured values differ from reality by a small amount. With the offset you can trim this, so you get always correct values from your sensors.

Usually, these settings can be left at the default value of "0".



Air pressure

The air pressure sensors ALL3028 and ALL3028 give always the absolute air pressure in mBar (with reference to sea level).

This can be adjusted to localized air pressure (as seen on weather maps) by entering the localized standard air pressure.

(for Germering/Munich this is for example 972.45 mBar, so you would enter "97245" as value)

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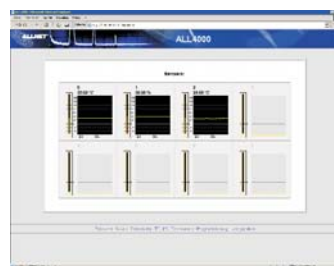
The User Interface

Sensor Display

This is the main page, to that every visitor of the ALL4000 is redirected.

It shows the values of all connected sensors directly in numeric version, as a bar graph display, and also in a small history graph.

If one of the ports is connected to a switch output (e.g. ALL3002/ALL3003), then clicking on the history graph toggles the switch status. If there is a counter connected to that port, all counters on that ALL4000 will be reset to 0 by clicking on the graph.



Relays

This page shows the status of the four internal reed relays of the ALL4000.

The Status (on/off) can be toggled by clicking on the relay's symbol.



RF Receivers

This shows the 16 possible Receivers that the ALL4000 can control via its 433 MHz transmitter.

The status can be toggled by clicking on the symbol.

This is the TRANSMITTER's status, not the real status of the relay in the receiver.

(if someone changes the receiver with a hand remote control, the ALL4000 cannot detect this)

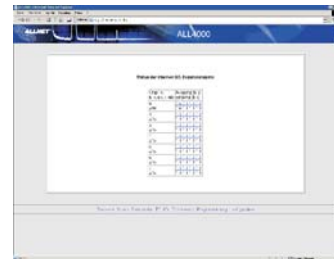


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TTL-I/O

This page shows the output- and input values of the bidirectional TTL ports that are connected to the internal I2C bus of the ALL4000.

The left column shows the port value in decimal, the right column show them in binary. The top row shows the output status, and can be changed by clicking on the bit you want to toggle. The lower row is the measured input signal. If you want to use any specific pin for input, you need to set the corresponding output pin to "1", otherwise it will be forced to "0".



Extremes

This shows the minimal and maximal values that ever occurred for every sensor.

These values are stored persistent, and survive even some period of power-off.

If needed, they can be cleared with the link "Delete all Values" on that page.



Programming

This Section allows you to load/save and edit programs, that will be executed by the ALL4000's internal script interpreter.

More information on this topic is covered in the "ALL4000 Programmierhandbuch" (sorry, only available in german language).

The menu entry "Extended Settings" contains very device specific settings. These do not need to be altered by the user under normal use.

XML

All data of the ALL4000 are available in an easily machine-readable XML file that can be downloaded. URL: <http://192.168.0.100/xml>

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Firmware Upgrade

For the ALL4000, there will be new firmware versions in irregular time intervals, that will have extended functionality, support for new sensor types etc. Upgrading to a newer firmware version is really easy: Just get the firmware file ("ALL4000_xxx.bin") from the Allnet web server and save it to your hard disk. Then, in the ALL4000 menu "Config-->Firmware Upgrade" click on the link "Allow Upload" to enable firmware uploading. After that, go again to "Config --> Firmware Upgrade", select the file location and press "Upload". The browser then will begin to put the firmware file into a reserved memory area in the ALL4000. When it is finished with that, the ALL4000 will check the uploaded file with a checksum, and then write it to its FLASH memory. After this is done, it will reboot with the new firmware version. (You can see this at the characteristic blinking of the sensor LEDs) There is NO feedback to the web browser, so it will eventually give you a timeout message regardless of success. Please be patient, this procedure will take approx. 3 minutes to complete.

Factory Reset

If for any reason, you can no longer access your ALL4000 (misconfigured network, forgotten password etc.), you can change all settings to the factory defaults by depressing the "Factory Reset" button on the front side of the ALL4000 with a paper clip, and then applying power. The ALL4000 will show you that it recognized the procedure with a blinking pattern of the sensor LEDs. After releasing the button, and power-cycling, the device will have the settings as if it were new. Warning: This erases all settings that you may have made, and it sets the IP address to the standard 192.168.0.100 - the firmware however will stay at the latest programmed release.

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EG-Konformitätserklärung

für das folgend bezeichnete Erzeugnis

ALL4000 Netzwerk-Sensormeter
ALLNET PartNr. 58273

wird hiermit bestätigt, daß es den Anforderungen entspricht, die in der Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedsstaaten über die elektromagnetische Verträglichkeit **(89/336/EWG)** festgelegt sind.

Zur Beurteilung des Erzeugnisses hinsichtlich elektromagnetischer Verträglichkeit wurden folgende Normen herangezogen:

EN 50022 + EN 55024 (1998+A1:2000+A2:3003)
EN 300 328 (2003-04)
EN 301 489-1 (2002-08), EN 301 489-17 (2002-08)
EN 60950-01 (2001)
EN 50371:2002

Diese Erklärung wird verantwortlich für den Hersteller/Bevollmächtigten

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