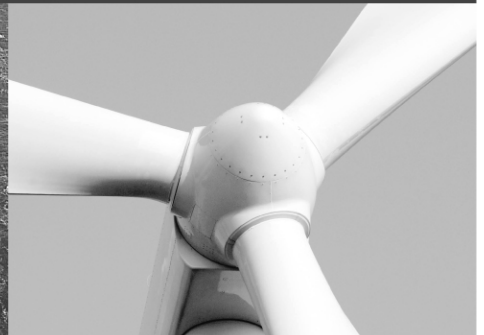




-power in control



## APPLICATION NOTES



## DELOMATIC 4, DM-4 GAS/HYDRO

### HMI Browser for PC

- Settings
- PC Connection to DM-4
- Saving logs



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## Table of contents

<b>1. ABOUT THIS DOCUMENT</b> .....	<b>3</b>
GENERAL PURPOSE .....	3
INTENDED USERS.....	3
CONTENTS/OVERALL STRUCTURE.....	3
<b>2. WARNINGS AND LEGAL INFORMATION</b> .....	<b>4</b>
LEGAL INFORMATION AND RESPONSIBILITY.....	4
ELECTROSTATIC DISCHARGE AWARENESS .....	4
SAFETY ISSUES .....	4
DEFINITIONS .....	4
<b>3. ABSTRACT</b> .....	<b>5</b>
<b>4. INSTALLING THE BROWSER</b> .....	<b>6</b>
LANGUAGE .....	6
OPTIONS.....	6
PARAMETER SELECTION.....	7
PROGRAMME DIRECTORY.....	7
<b>5. CONNECTION</b> .....	<b>8</b>
USB CONNECTION.....	8
TCP/IP CONNECTION ON INTERNAL NETWORK .....	8
TCP/IP CONNECTION VIA INTERNET .....	9
<b>6. USING THE BROWSER</b> .....	<b>10</b>
POP-UP WINDOW.....	10
GETTING TO THE HMI BROWSER WINDOW WHEN CONNECTED .....	11
<b>7. TRANSFERRING DATA FROM/TO DM-4</b> .....	<b>12</b>
AUTOMATIC STORING OF LOGS .....	12
STORING DATA FROM DM-4 ON THE PC .....	12
TRANSMITTING DATA FROM PC TO DM-4.....	13
SAVE DATA.....	14
DATA BACKUP .....	15

## 1. About this document

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### General purpose

This document contains the application notes for DEIF's Delomatic 4, DM-4, used in GAS or HYDRO applications.



**For functional descriptions, the procedure for parameter setup, complete standard parameter lists, etc., please see the Installation Instructions.**

The general purpose of the application notes is to offer the designer/user information about the use of the Human Machine Interface (HMI) browser software.



**Please make sure to read this handbook before working with the DM-4 controller and the gen-set to be controlled. Failure to do this could result in damage to the equipment or human injury.**

### Intended users

The document is mainly intended for the person responsible for designing DM-4 systems, but also the daily user. Naturally, other users might also find useful information in this document.

### Contents/overall structure

The document is divided into chapters, and in order to make the structure of the document simple and easy to use, each chapter will begin from the top of a new page.

## 2. Warnings and legal information

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### Legal information and responsibility

DEIF takes no responsibility for installation or operation of the generator set. If there is any doubt about how to install or operate the generator set controlled by the unit, the company responsible for the installation or the operation of the set must be contacted.

**The DM-4 is not to be opened by unauthorised personnel. If opened anyway, the warranty will be lost.**

### Electrostatic discharge awareness

Sufficient care must be taken to protect the terminals against static discharges during the installation. Once the unit is installed and connected, these precautions are no longer necessary.

### Safety issues

Installing the unit implies work with dangerous currents and voltages. Therefore, the installation should only be carried out by authorised personnel who understand the risks involved in working with live electrical equipment.



**Be aware of the hazardous live currents and voltages. Do not touch any AC measurement inputs as this could lead to injury or death.**

### Definitions

Throughout this document, a number of notes and warnings will be presented. To ensure that these are noticed, they will be highlighted in order to separate them from the general text.

### Notes



**The notes provide general information which will be helpful for the reader to bear in mind.**

### Warnings



**The warnings indicate a potentially dangerous situation which could result in death, personal injury or damaged equipment, if certain guidelines are not followed.**

### **3. Abstract**

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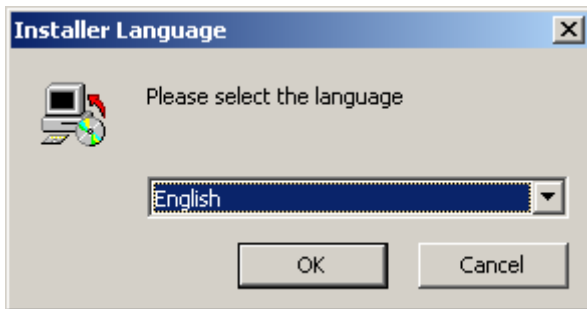
The HMI browser can be used for local Man-Machine Interface (MMI) as well as remote monitoring. With regards to setting up remote monitoring, this is described in a separate document, the "Application Notes, Remote Monitoring".

The HMI browser forms the interface between the PC and the Delomatic, using USB or TCP-IP. If TCP-IP is used, up to three individual PCs can be connected.

## 4. Installing the Browser

The installation of the browser is carried out automatically when the installation file is opened.

### Language

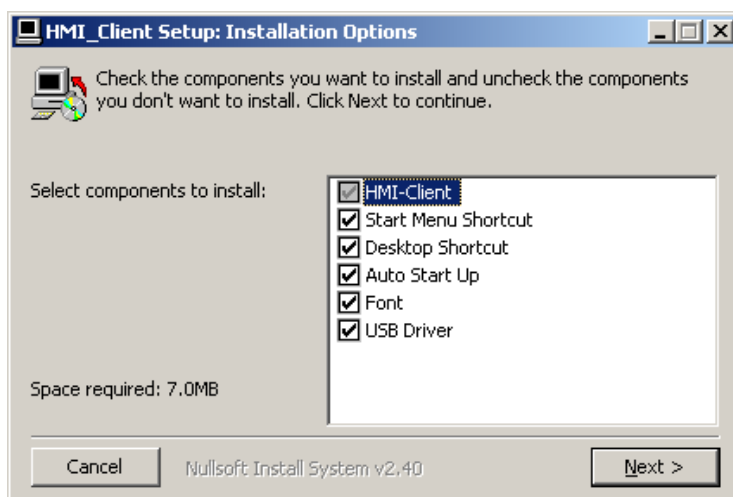


The supported languages are:

- German
- English
- French
- Rumanian
- Slovenian

If other languages are chosen, the selection will be for the installation assistant only; the rest will be in English.

### Options



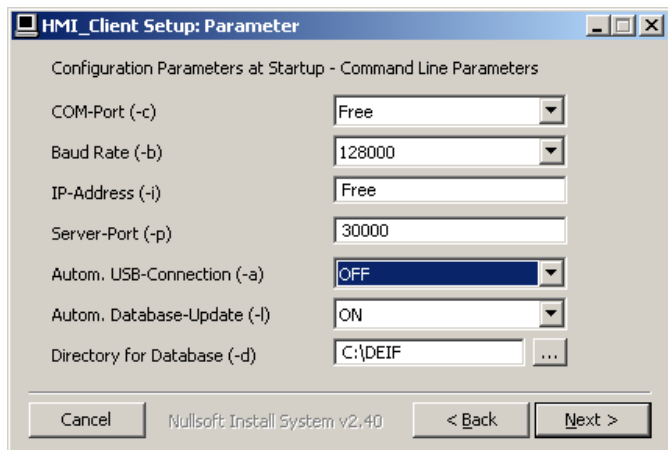
The wanted options are to be selected. When installing on a touch panel PC, the “Auto start up” is recommended to automatically activate the browser upon power-up.



In order to be able to use a USB connection to the DM-4, the USB driver must be selected.

### Parameter selection

This dialogue box sets the start-up values in the browser:

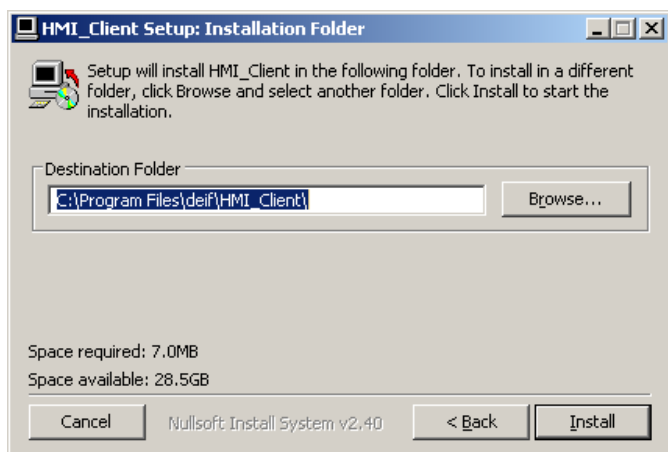


Hints:

- Automatic USB connection: if ON, the browser will automatically connect the USB connection to DM-4.
- Automatic database update: the database on the PC (logs, trending, parameters) is automatically updated.
- Directory for database: selects the directory under which the database is stored.

### Programme directory

Selects where the HMI browser (client) is installed:

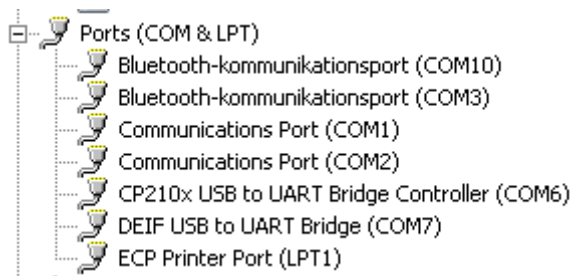


Before starting the installation, it is for safety reasons necessary to de-activate any already running HMI client.

## 5. Connection

### USB connection

Connect the DM-4 to a USB port on the PC. In order to connect, the COM port number must be found:  
Enter by Windows Start (left hand lower corner) -> Settings -> control panel -> system -> Hardware -> device manager -> ports (Com & LPT). In this example, the COM7 is the one to use.

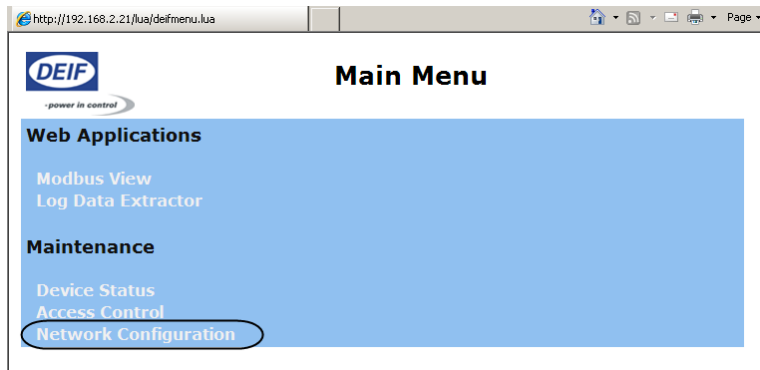


### TCP/IP connection on internal network

The IP address for the DM-4 is fixed, but can be changed.

The IP address must be selected so that it does not collide with already assigned addresses in your intranet. If you have an IT department, they can help selecting an address.

To change the IP address, select "Network configuration"



You may be prompted for a name and password:

User name: admin  
Password: admin





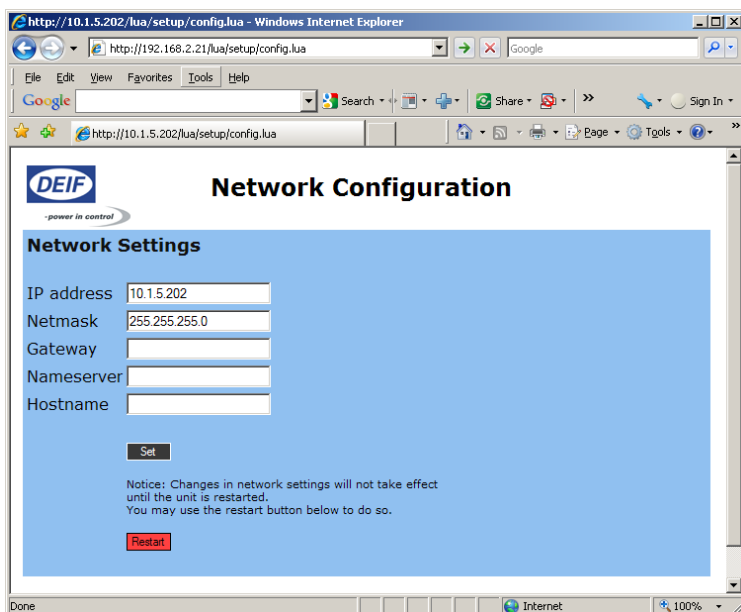
You can now change the IP address for the DM-4. Note that the system has to be restarted before the change takes effect.

The default IP address is 192.168.2.21  
The default netmask is 255.255.255.0



**When the IP address is changed, only the new address can be used to access the DM-4 via TCP/IP. Make sure that you use a valid address if changing it.**

Example:



### TCP/IP connection via internet

In order to access the DM-4 via the internet, the unit must have a server name (like [www.deif.com](http://www.deif.com) is the server name for DEIF).

We suggest using the dyndns.org service to establish a server name. If you use this service the server name will be "yourname".dyndns.org.

The server name is then to replace the IP address in the field "Servername / IP-Address". Hereafter, the DM-4 can be accessed from a PC anywhere in the world when connected to the internet.



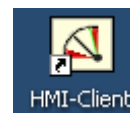
**If you have problems accessing the DM-4 via a company IT-system (intranet), the server port value (30000) may be the problem since some firewalls do not allow the use of this port number. The number cannot be changed.**

Please refer to the document "Application Notes, Remote Monitoring" for details.

## 6. Using the Browser

### Pop-up window

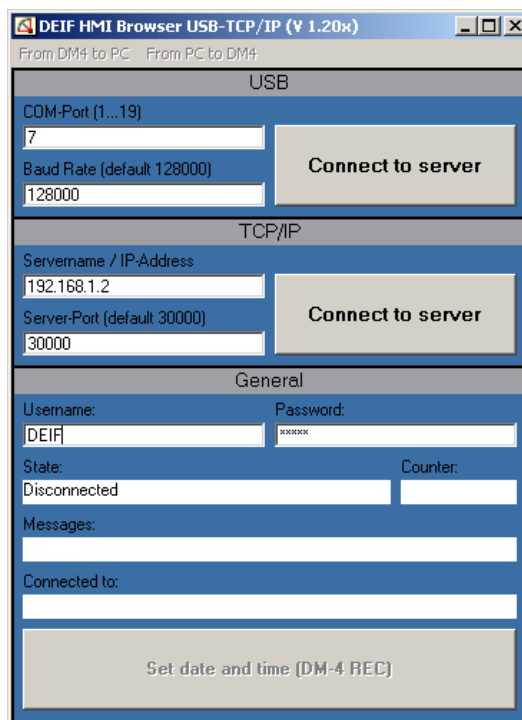
When double-clicking the browser icon, the pop-up window opens.



This section is the settings for USB (local) connection to the DM-4 system. Set the COM port number and click “connect to server”.

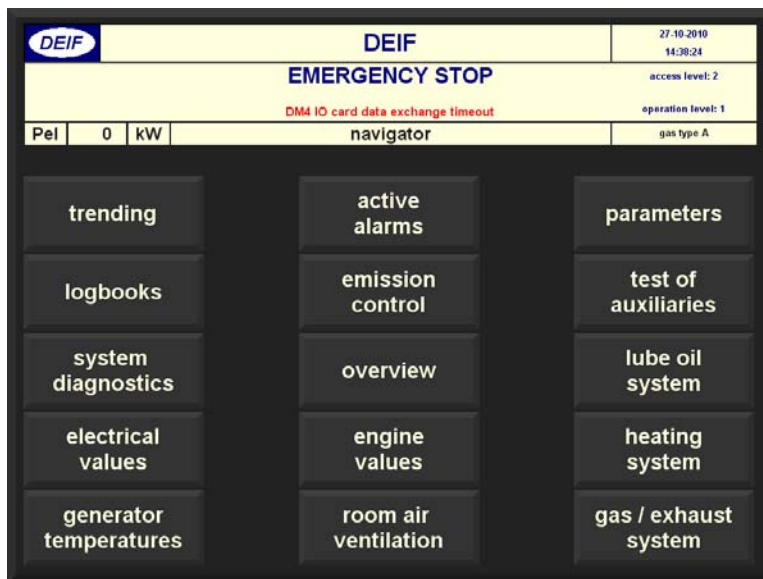
This section is the setting for TCP/IP connection. The setup of the IP address is described in a separate document (Webarm).

This is the general information field. The “username” and password are for future use and can be ignored. Once connected to the DM-4, the button “Set date and time (DM-4 REC)” can be used to transfer your computer’s date and time to the DM-4 system.



### Getting to the HMI browser window when connected

When you click "Connect" and the connection is established, the graphic presentation of data will start. The graphic is adapted to a 12" screen, and will fill this 100%. This means that you cannot see the pop-up window during normal operation, which is intended. Should you wish to see the pop-up window, click the lower right corner of the window. This will downsize the graphic screen and you can now maximise the HMI browser window. If you wish to maximise the graphic presentation again, click the same corner.



Click here

When connected, the HMI browser window looks like this:

In the top of the browser, there are 3 buttons, "From DM4 to PC", "From PC to DM4" and "Save Data".

The functionalities of these are explained in the next chapter.



## 7. Transferring data from/to DM-4

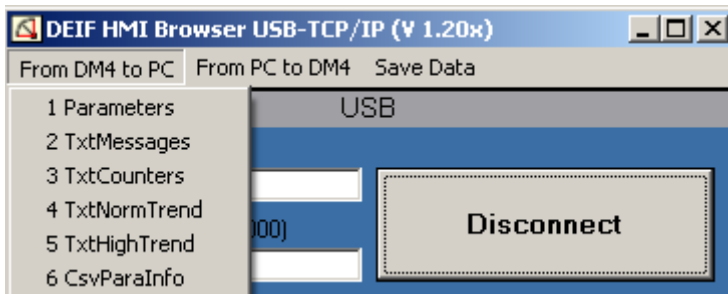
### Automatic storing of logs

On the computer, when connected, the data from the logs will be stored in the path C:\DEIF\projectname", where "projectname" is the name given to the project in the parameter "project name" (setting under project parameters).

The logs are stored in a cyclic manner.

### Storing data from DM-4 on the PC

When selecting "From DM4 to PC", these data can be stored manually:



1 Parameters are stored in a .par format. If you want to read the content of the file, change the extension to .txt. The file can now be read with MS Notepad or Excel.

2-5 are all stored in .txt format

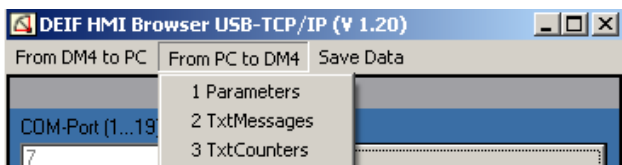
6 CsvParaInfo is stored in a .csv format which can be read with MS Excel

Selection	Explanation	Remarks
<b>Parameters</b>	Saves the DM-4 parameters on the PC.	Important if a software update of the DM-4 is carried out in order to save the parameters to the DM-4 after updating.
<b>TxtMessages</b>	Saves the text messages from the configurable parameters	
<b>TxtCounters</b>	Saves the counter name and units from counters	
<b>TxtNormTrend</b>	Allows reading of the selected curves in the normal speed trending section	Helpful during commissioning for analysing selected variables
<b>TxtHighTrend</b>	Allows reading of the selected curves in the high resolution	
<b>CsvParaInfo</b>	Information about the parameters in the DM-4	

For each selection, you will be prompted to select the folder where the data are to be stored.





## Transmitting data from PC to DM-4

When selecting “From PC to DM4”, you can transmit a data file to the DM-4 and thereby store the data file on the DM-4 e.g. to continue an existing log or to use a parameter file:



Selection	Explanation	Notes
<b>Parameters</b>	Transmitting of the parameters saved on the PC.	Necessary after updating of software since the update resets all parameters to factory setting
<b>TxtMessages</b>	Transmitting of the Message texts of the configurable parameters	E.g. after change of PCM module
<b>TxtCounters</b>	Transmitting of the Counters text and values	E.g. after change of PCM module

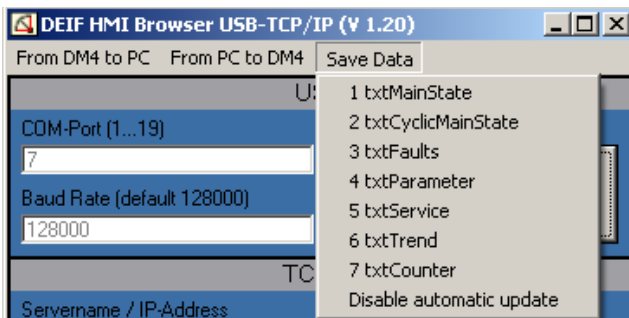
When doing this, you are prompted to select the file in question.

-  **The transmitting of data is only possible via USB connection.**
-  **Only files stored with the present HMI client can be used.**
-  **Before downloading parameter files, it is necessary that login level 2 is carried out.**
-  **When downloading parameters, it is important to monitor the “messages” field in the HMI client. If a download of a parameter fails, this will be indicated in this field.**

## Save data

Even though logging is done automatically, there may be reasons for storing data manually. This is done with the “Save Data” selection. When selecting one of the texts, it will be sent to the log folder on the PC immediately.

Also, if required, the automatic logging can be turned off here.



Selection	Explanation	Notes
<b>txtMainState</b>	Log book – condition changes	All condition changes in DM-4
<b>txtCyclicMainState</b>	Log book – cyclic logs	Hourly counters: - Running hours - kWh counter
<b>txtFaults</b>	Log book – error messages	All alarms and acknowledge of these
<b>txtParameter</b>	Log book – parameter changes	Old and new value
<b>txtService</b>	Log book - service	Service log
<b>txtTrend</b>	Long time trendings	Every 4 min. one value per curve (in DM-4 up to 600 intermediate values are stored)
<b>txtCounter</b>	Configurable counters	Value for each counter by turn of the date

### Notes:

- Log book data are stored in DM-4 and remains even after a power down. The number of logs depends on the DM-4 but at least 200 logs are stored for each log.
- Long time trending: intermediate values are stored in DM-4 but are lost upon a power-down.
- Configurable counters: the data are only available from the last change of date. If a daily log is needed, the connection to DM-4 must be maintained and “automatic update” must be ON. Alternatively, the data transfer can be done manually.

When sending a data text file is successful, this can be seen in the “general” section of the browser:

General	
Username:	Password:
DEIF	XXXXXXXX
State:	Counter:
Waiting for Bang	3
Messages:	
<b>File transfer successful: txtMainState.txt</b>	

### Data backup

It is recommended to carry out a cyclic backup of the data stored on the PC to prevent loss of data.

Since the data are all stored in the same folder, the content of this folder will increase over time.

If you transfer the entire folder to a backup, the HMI client will automatically create a new one. This is recommended after a software update, since the data may come from DM-4 in different formats.

DEIF A/S reserves the right to change any of the above.