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# THERMOPROZESS



## Program for monitoring MT825A1

MT825A1 08/10 Rev.2

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# **1 Installation, setup**

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Program MT825A1 is intended for PC with operation system WINDOWS. It runs under Control Web.

## **1.1 Requirements for PC configuration**

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Minimum configuration of PC:

- PC pentium with operation system Windows 95 and higher or Windows NT 4.0 Service Pack 3 and higher
- 32 MB RAM
- 50 MB blank space on HDD
- CD-ROM drive
- Mouse or some other point marker

Recommended configuration of PC:

- PC pentium with operation system Windows NT 4.0 Service Pack 3 and higher versions
- 64 MB RAM
- 50 MB blank space on HDD
- CD-ROM drive
- Mouse or some other point marker
- Accelerated graphic adapter with resolution 1024 x 768 pixels with color depth 16 bits and higher.

## **1.2 Installation of program**

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It consists of the installation of system Control Web 2000 Runtime and the installation of own application program.

### **Installation of Control Web 2000, Runtime**

- Put in CD „Control Web 2000“ to Your PC, the installation program Control Web is automatic released .
- Confirm the option „Runtime version – installation“, the guidebook for the installation tells you what to do during the installation of the whole system.
- Read carefully license pact and if you agree - confirm.
- Enter your name, company and series number, confirm this entered information.
- If no serious problem persists , leave the primary aim directory „C:\...\Control Web ...”.
- Choose typical installation.
- Leave the title of program item as „Control Web ...“.

## Installation of application program MT825A1

- Insert CD MT825A1 to CD-ROM drive.
- By inserting CD the autoinstall program will be run.
- Click „Next“ for start copying files.
- Click “Finish” to complete setup.
- Then opens the window MT825A1 and close it.
- If the autoinstall program did not run, you can run the installation manually, see below.

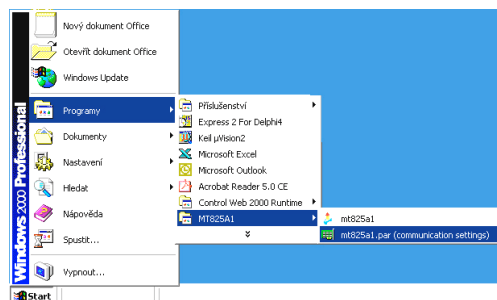
## Manual installation of program MT825A1

- Open CD and run setup.exe
- Click „Next“ for start copying files.
- Click “Finish” to complete setup.
- Then opens the window MT825A1 and close it.

## 1.3 System setting

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- Click on start button with the mouse on the Windows 95/98/ME/2000 Task Bar, and align the cursor with Programs, click on MT825A1 among the items displayed. And click on mt825a1.par (communications settings).



Example of file:

[COMM]

*commPort = COM1*

*baudrate = 9600*

*parity = no*

*databits = 8*

*stopbits = 1*

*rbuffer = 1024*

*wbuffer = 1024*

*cts\_flow = false*

*dsr\_flow = false*

*dtr\_control = disable*

*rts\_control = toggle*

*timeout\_repeat = 3*

*com\_repeat = 3*

*com\_interval = 50*

*timeout = 1000*

*pre\_key = 2*

*hold\_key = 2*

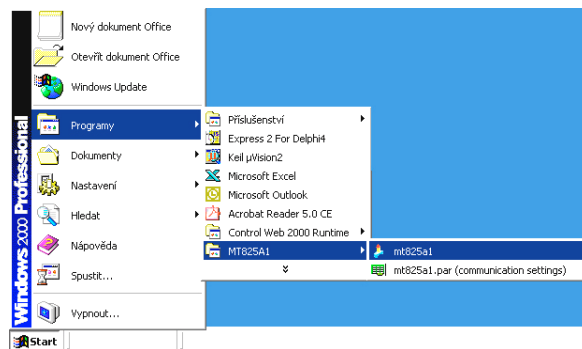
- In this file you will modify only the first item „commPort = COM1“ to your requested port (COM2, COM3, ...).
- Save this file mt825a1.par.

## **1.4 Starting and ending a program**

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### **Starting a program**

Click on start button with the mouse on the Windows 95/98/ME/2000 Task Bar, and align the cursor with Programs, click on MT825A1 among the items displayed. And click on mt825a1



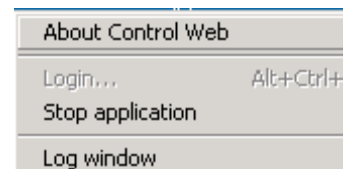
- For easier running you can insert the shortcut of this program on the desktop area of PC.

### **Ending a program**

In the right lower corner you will find this icon:



Click this icon and by clicking menu of application opens. By clicking on „Stop application“ you will end the monitoring program.



### **Database files**

- Data continuously read (in real time) are stored to directory  
C:\Program Files\MT825A1\DBF\
- Data transferred from the memory of the controller (datalogging) are stored to directory  
C:\Program Files\MT825A1\HIST\

## **1.5 Final agreement**

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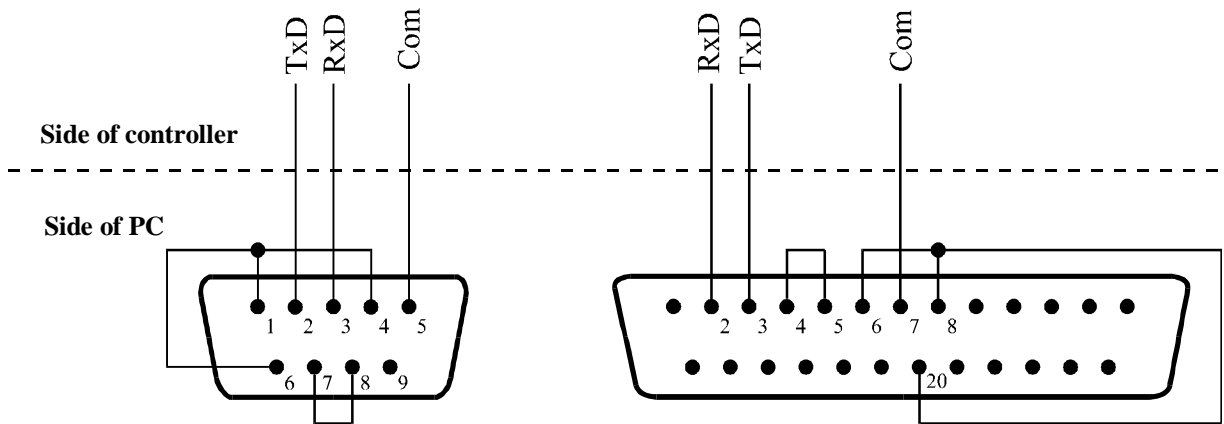
This program is licensed and it can be used only with 1 PC. In no case the supplier do not take over the liability for using this program.

# 2 Communication interfaces

The controllers can be equipped with communication interface **RS 232** or **EIA 485**. The baudrate of the communication is permanently set at 9600 Bd, the data bits is 8, no parity, 1 stopbit.

## 2.1 Interface RS 232

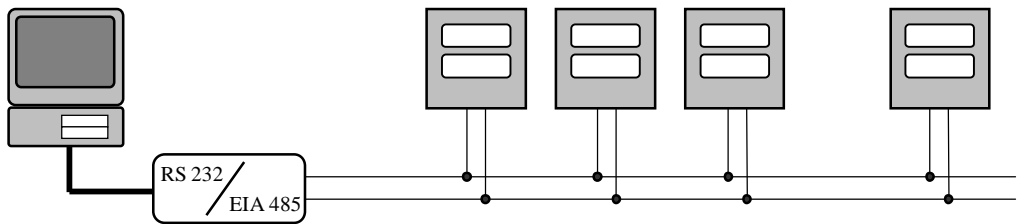
The interface RS 232 is intended for the link of 1 PC with 1 controller. Maximum network length can be 12 meters. The wiring of standard connectors DB-9 and DB-25 on the side of PC is illustrated in the following picture.



## 2.2 Interface EIA 485

The interface EIA 485 is suitable for industrial environment. The local network with this interface can link as many as 32 controllers with PC up to the distance 1200 meters. When repeaters are used more controllers can be linked at longer distance. In basic wiring there must be an appropriate converter or PC card for transferring of interface RS 232 to EIA 485 at the side of PC.

If controllers work in the environment with low interference, the communication line can be carried out with twisted pair cable. The simplest wiring of communication line illustrates the following picture.



# 3 Application program MT825A1

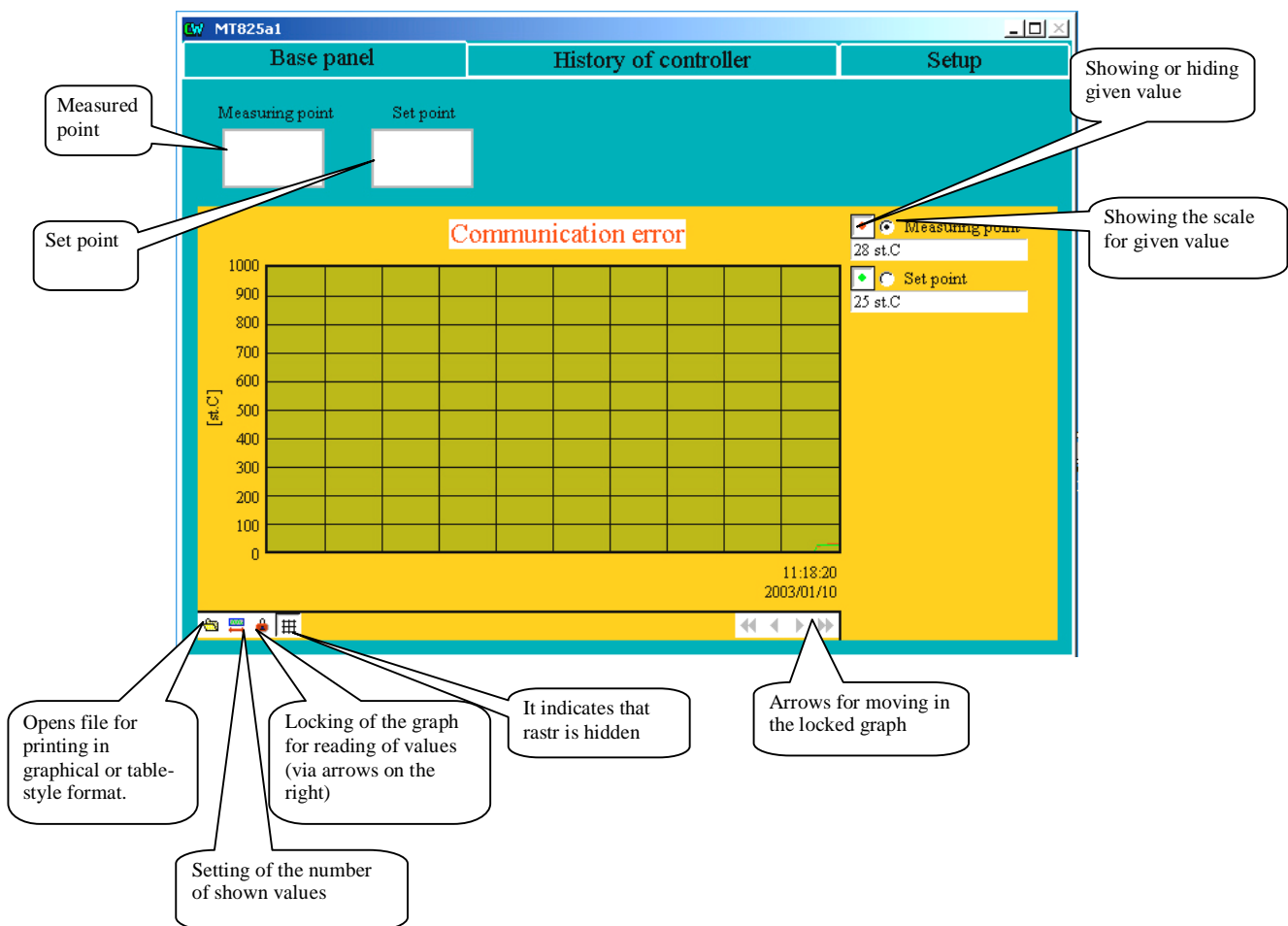
The application program MT825A1 enables to monitor programmable controller MT825-A, transfer the measured data (HIST), display and print the measured data in the table as well as in the graph.

## 3.1 Basic panel

These are shown on basic panel:

- Display with actual measured value.
- Display with actual set point value.
- Graph of trend. The values shown in the graph are saved on disk in period of datasaving.
- Error message „Communication error“, means error of communication line. It is shown only when it is actual.

### Appearance of basic panel



### **Graphical output**

Graphical output is intended for displaying of stored/archived data in the form of graph, for correcting a graph and printing a graph. The procedure is as follows:

- Click „Open a file“ in the left lower corner of the graph.
- Mark your requested archive file.
- Choose the displaying „Trend in the Trend Viewer“.
- Click „Show“. The requested data are shown in graphical form.
- The description of trend viewer is found in chapter [3.4](#).

### **Table-style output**

Table-style output is intended for displaying archived data in the format of table and for printing a table. The procedure is as follows:

- Click „Open a file“ in the left lower corner of the graph.
- Mark your requested archive file.
- Choose the message „Table in dBase Viewer“.
- Click „Show“. The requested data are shown in the table.
- The description of dBase viewer is found in chapter [3.5](#).

The data indicate the following information and error messages:

State of controller, measured value	
Sensor is not set	-22000
Error of sensor (broken sensor, ...)	-22001

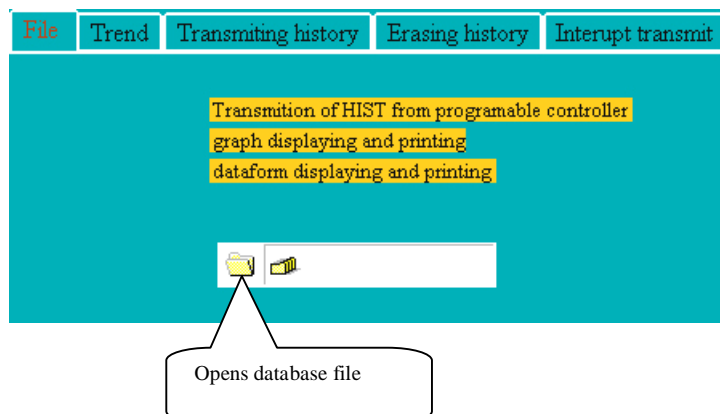
State of controller, set point value	
Control output is turned OFF - OFF	-22000

100 files (100 days) are stored on HDD. The oldest files are automatic deleted.

## **3.2 History**

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In submenu „History“ you can read and delete data that are saved in the controller memory, you can display and print the transferred data and in table-style form both in graphical form.



## File

The window file comprises „archive file“ that is intended for reading transferred data in table-style form (DATE ... datum, TIME ... čas, MERENA ... měřená hodnota). The description of database viewer is found in chapter [3.5](#).

## Trend

It opens the dialogue window „Trend“ in which data in graphical form can be displayed and printed. The description of this window „Trend“ is found in chapter [3.4](#). The parameters of Trend viewer are in file MT825A1.TVI.

## Transfer HIST (history of controller)

It enables data transferring from the controller to PC. The name of the file can be set in format „MmmDddPp.DBF“, where mm means month, dd – day, p – sequence of file on that particular day. The variable for month and day are actually set every time when the window „Transmitting history“ opens.

Transfer is run with the key „Transmitting history“, the key „Interrupt transmit“ will close the window.

## Erasing HIST

It deletes memory with data in the controller.

## Ending a transfer

It ends the transfer or cancels the command „Erasing history“, if it is not executed yet.

## 3.3 Setting

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Data that were set are accepted by confirming and clicking „OK“, by clicking „Cancel“ the new setting will be cancelled. The meaning of the parameters are as follows:

- Range of graph ... setting of range for graph.
- Period of datasaving ... defines how often measured data are written to the graph and also to data file.
- period of data acquisition ... defines the period for repeatable reading data from the controller.
- Error messaging ON/OFF... allows the detection of the communication error

Graph scale	period of datasaving	period of data acquisition
min. 0 ▲▼	minutes 1 ▲▼	seconds 5 ▲▼
max. 1000 ▲▼	seconds 0 ▲▼	

Error messaging on

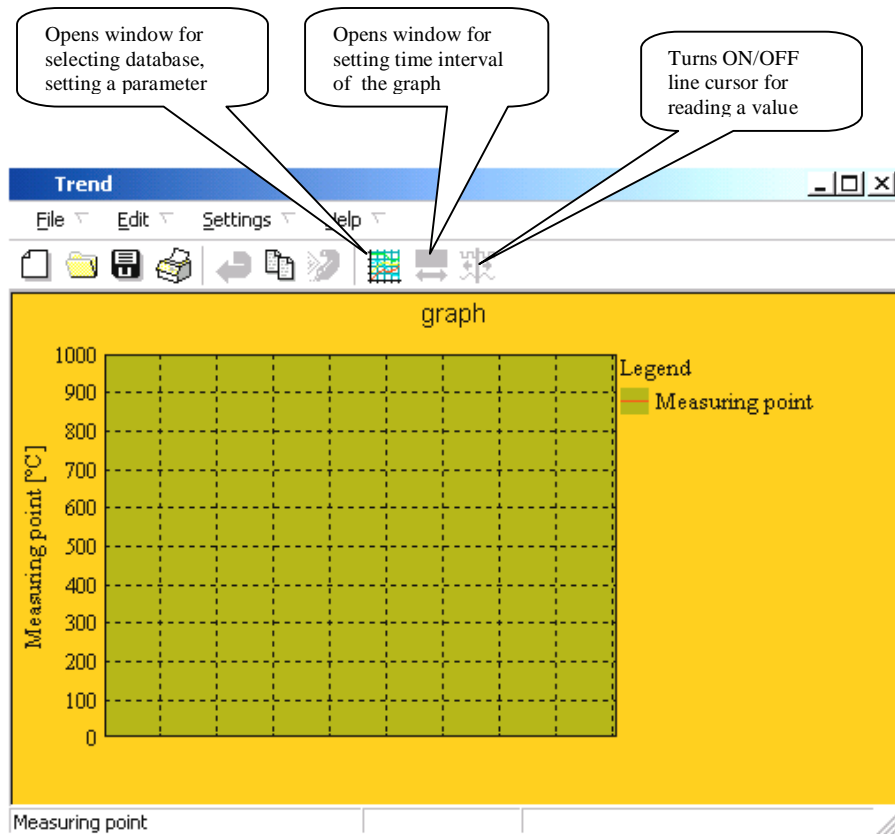
OK  
Cancel



### 3.4 Trend viewer

The trend viewer serves for displaying, evaluating and printing of the historical trends and statistical values.

#### Appearance of trend viewer



Data for trend can be gained from 1 or more database files. In this case the files are arranged one by one (arranged by their names) and you access to records/archives as if all the records were stored/comprised in one file. Via time cursor you can browse through single records and read values on the cursor position. For the course of each series you can define color, style of curve, range, units and title. By clicking on the title of series in the legend, you can change the scale of displayed values for y-axis. Also you can make use of the function zoom, looking up and displaying data in the selected time interval user setting of the appearance of trend viewer in well-arranged dialogue window.

#### Extended control of trend viewer via mouse

If time cursor is not displayed, you can mark the part of the graph with pressed the left key of the mouse and by releasing this key the part of the graph will be enlarged to the whole area of the graph. You can return to previous graph by selecting the command „Back“ in menu „Edit“.

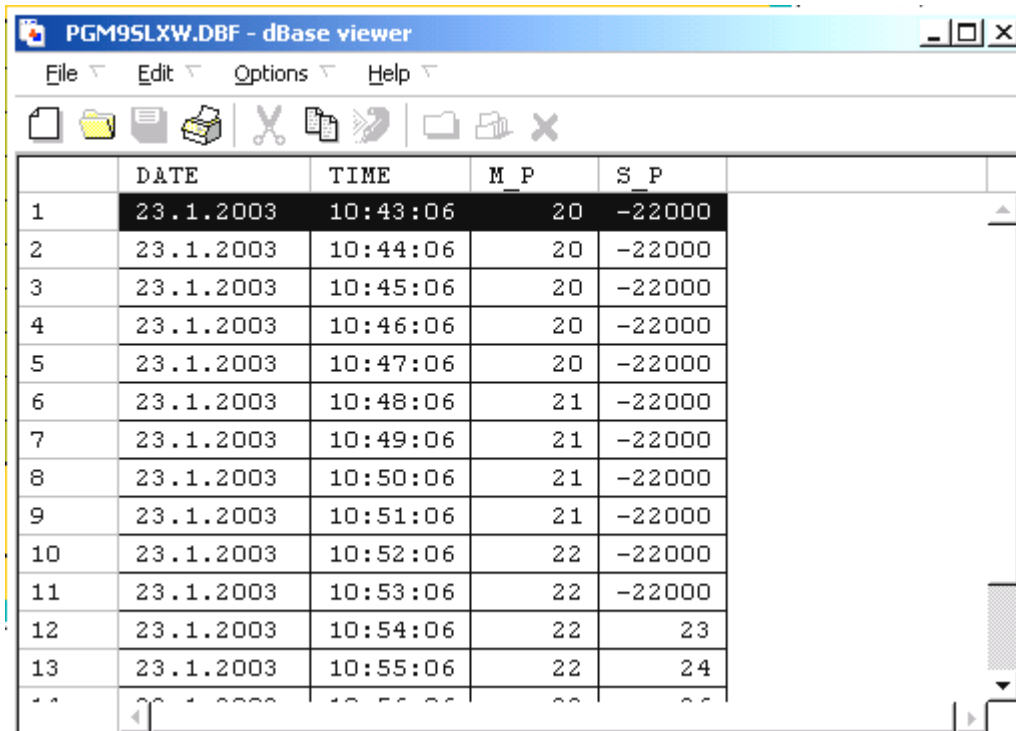
If time cursor is displayed and we press the left key of the mouse in the area of the graph of cursor and the course of series for a while, reachable values of the point are displayed. If there is a legend displayed you can change the description of y-axis by clicking the left key above the text of series.

### 3.5 Database viewer

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In this viewer you can work with data in the format „\*.DBF“.  
Data can be edited, stored under different title, printed, ...

#### Appearance of database viewer



	DATE	TIME	M_P	S_P
1	23.1.2003	10:43:06	20	-22000
2	23.1.2003	10:44:06	20	-22000
3	23.1.2003	10:45:06	20	-22000
4	23.1.2003	10:46:06	20	-22000
5	23.1.2003	10:47:06	20	-22000
6	23.1.2003	10:48:06	21	-22000
7	23.1.2003	10:49:06	21	-22000
8	23.1.2003	10:50:06	21	-22000
9	23.1.2003	10:51:06	21	-22000
10	23.1.2003	10:52:06	22	-22000
11	23.1.2003	10:53:06	22	-22000
12	23.1.2003	10:54:06	22	23
13	23.1.2003	10:55:06	22	24