Temperature and Humidity Monitor System

DataLoggerTH Software Manual

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				1			10 25.10.201	13-14:38:24 192.168.0.71 2 13-14:38:24 192.168.0.71 2	29,1	40,3	40,3 % 0	ver upper amit 12,0 °C ver lower limit 55,0 %	
							12 25.10.201	13-14:37:25 192.168.0.71 2 13-14:37:25 192.168.0.71 2	29,1	40,3	40,3 % 0	ver upper amit 12,0 °C ver lower limit 55,0 %	
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1	IP Address(Port) or COM Port	SubNet ID	Device Name	Read Date - Time	Temperature [*C]	Limits [-40 - +125*C]	Rel. Humidity [%]	Limits [0 - 100%]	T lower["C]	T upper["C]	RH lower[%]	RH upper[%]	
_	192.168.0.70(10001)	10	Sensor 10, Server room	25.10.2013-11:28:21	28,0 °C	Lower 20°C Upper 30°C	38,9 %	Lower 25% Upper 65%	20 °C	30 °C	25 %	65 %	
	192.168.0.71(10001)	1	Sensor 1	25.10.2013-11:28:23	29,4 °C	Lower 20°C Upper 30°C	38,7 %	Lower 25% Upper 65%	20 °C	30 °C	25 %	65 %	
	192.168.0.71(10001)	2	Sensor 2	25.10.2013-11:28:13	29,3 °C	Lower -20°C Upper 12°C	38,5 %	Lower 55% Upper 65%	-20 °C	12 'C	55 %	65 %	
	192.168.0.71(10001)	3	Unice	25.10.2013-11:28:15	29,2 °C	Lower 20°C Upper 30°C	39,5 %	Lower 25% Upper 65%	20 °C	30 10	25 %	65 %	
	192.168.0.71(10001)	•	Heater mam	25.10.2013-11:2017	20,0 0	Lower 20°C Upper 30°C	40,5 %	Lower 25% Upper 65%	20.0	30.10	25.46	65.94	
					20,1 0	Lower 20°C Upper 30°C	30,2 /0	Lower 25% Upper 65%					
			DataLogg	erTH, ELEN, s.r.o.		Start LOG	192.168.0.70 - 1	8					



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Introduction

DataLoggerTH is a PC Windows based software application, which is used for logging measured data from the temperature and humidity monitoring systems.

These systems can consist of one or more large size digital displays and sensor devices. Once displays and sensors are installed and connected to a serial line RS485 or LAN Ethernet TCP/IP network, data logging software can be used to record the measured values and show them on a remote PC. (Please note, the PC running the DataLoggerTH must be connected to the same network as the sensor devices and monitors.)

Besides recording the values, upper and lower limits can be set for temperature and humidity values. Exceeding these limits will cause that displayed values will become red. Query on selected devices is also possible to make a quick table of the recorded values for a specified time period. This table can then be exported into Excel file.

Software Installation

Please run the setup.exe file from the supplied CD, or download this file to your hard disk and double click it. It will install the application software to your PC automatically. Alternatively, you can simply copy to your PC hard disk the entire DataLoggerTH folder with unpacked files, which you have received from your display/sensor supplier.

Starting Application

After software installation double-click the DataLoggerTH icon on your desktop. Or you can run DataLoggerTH.exe file from DataLoggerTH folder on your PC. The Temperature and Humidity Data Logger application window will open.

Configuring the Application Settings



Click on the "System Configuration" button to set the main data logger parameters. The main "System Configuration Settings" window will open.

Temperature:	System intervals:	Login options:
View:	Reading interval [s]:	Mode:
As graphics \sim	20	● Single ○ Master ○ Slave
Input: • °C • F	File Save interval [min]:	Allow looin screen at startup
lumidity: View:	Timeout [s]:	Shared file:
As graphics \sim	30	1
Startup setup		
Auto start in trav icon	Modbus TCP / RTU	Cancel O.K.

For **"Temperature View"** and **"Humidity View"** sections you can choose how these values will be displayed in the main table. If you select **"As graphics"**, values in the main table will be displayed with a graphical representation. If you select **"As text"**, the measured values will be displayed as plain text only.

In "System intervals:" section please select the desired values for:

Reading interval (in seconds) – this is the time period how often the sensor data will be read. It can be set from 1 to 60 sec.

For example if set to 10 sec., the application will request measured data from the sensor every 10 seconds (or from a display with built-in sensor). Although it is possible to set this value as low as 1 sec., it can cause too much data traffic over the LAN network. This is especially true if several devices are connected and read.

File Save interval (in minutes) – this is the time period how often the recorded data will be stored into a log file. It can be set from 1 to 60 min.

For example if set to 10 min., the application will save the log file every 10 minutes.

Timeout (in seconds) – this is the time period in which the reading from the sensor must be received, otherwise a communication error will be recorded. In case of large networks, please allow longer time for receiving messages (e.g. 10 to 30 seconds).

Login options: Allow login screen at startup – check this box to turn on or off the login window with admin or user privileges with password option at startup. Select "Administrator" if you want to read and record measurements, run query on recorded values, change settings, or add devices to the list. Select "User" if you want to read current measurements only. No other options are available in this mode.

Mode: Single O Master O Slave	Login:	
	User name: User	×
Allow login screen at startup	Password:	trator
Shared file:		
	Change	Cancel OK

Login options – Mode: - allows different modes of DataLoggerTH operation. **"Single"** means that only one user from one PC will be accessing and using the DataLoggerTH software. **"Master"** means that multiple users will access the measured and recorded values, while the PC on which the "Master" option is selected will record the measured values on its hard disk (can be local or network disk). Other users running the DataLoggerTH software and logged as administrator will be able to read the database file from this "Master" PC when reading the stored values. **"Slave"** means that PC with this option selected will be a passive reader only, measured values will not be stored on this user's PC.

Please note that although it is possible to run the DataLoggerTH software from multiple locations on different PCs, only one PC can be set as "Master" to have the measured values stored in its internal file on the hard disk. Other users, if logged in as administrator, can either read the current measurements or run a search query from the database file of recorded values on the Master PC.

In "Startup setup:" section there are options for starting and running the program:

Auto start in tray icon – check this box to turn on or off the automatic running of the measurements in the background. When the program is started, communication with devices is executed and application will be moved into the system tray as an icon.

Modbus TCP / RTU - check this box to turn on or off the communication with temperature/ humidity displays or sensors via MODBUS protocol. Note, it is not possible to combine devices with ASCII (YDN) and MODBUS communication protocols. After you have finished all the **"System Configuration Settings"** click the **OK** button. New Settings will be saved. These settings will be remembered even after you close and restart the DataLoggerTH application. Once you set the correct options, there is no need to set it again after you start the application.

Adding Devices

Click on the "Add Device" button to add and configure sensor/display settings. The
 "Add Device to List" window will open. In this window it is necessary to set the Network Settings and Temperature/Humidity Limits.

Interface:	IP Address:	TCP Port	Device Name:		
Ethernet	192.168.0.70	10001	Sensor 1, Server Room	i	
	Serial Port:	SubNet ID:	Redirect IP Address:	Redirect TC	P Port:
 Serial 	COM1 \lor	1		1024	
nperature Limits		H	umidity Limits:		
nperature Limits Lower: 21	Upper:	H	unidity Limits: Lower: 30	Upper: 70	

Select the version of communication interface for the sensor or monitor from which you want to read the values. You have two options to choose from, depending on the type of display communication interface which you have purchased.
Ethernet – LAN version of connection with TCP/IP protocol.
Serial – RS485 serial line connection.
If Ethernet Interface is selected, enter the IP Address of the display. This value depends on the unique IP Address which was set in factory or by your supplier. For example: 192.168.0.70.

TCP Port:	Please set the TCP Port of the display or sensor device. The correct factory setting value should be: 10001 (three zeroes between ones).
SubNet ID:	Please set the SubNet ID number of the display or sensor device. If several sensors or displays are on the same network each sensor/display device must have a unique ID number which is preset in the factory. This number is on the label on the sensor box or on the back side of display.
Device Name:	Enter some meaningful description of the measuring device (sensor or display with built-in sensor). For example: <i>"Sensor 1, server room"</i> , etc.
Redirect IP Address:	This field is optional. Normally you can leave it empty. But if you want to have the read values transferred to another PC, enter the IP address of the destination PC. You can open the DataLoggerTH software on that PC and read the values.
Redirect TCP Port:	This field is optional. Normally you can leave it empty. But if you want to have the read values transferred to another PC, enter the IP address of the destination PC.

Please note, it is important that the DataLoggerTH application software is run on a PC which is connected on the same LAN network as measuring devices (sensors and displays).

Temperature / Humidity Limits: Please set the desired upper and lower temperature and humidity limits values. When these values are exceeded the alarms are indicated by data values in red color.

Removing Devices from List

If you want to remove the device from the table you can click on the **"Delete Device"** button. It will be removed from the list.

Editing Device Parameters



Click on the **"Edit Device"** button to add and configure sensor/display settings. The **"Edit Device Parameters"** window will open. In this window you can change the parameters of the selected device in the list table.

		Device Name:			internace.
	vor Beem	Econor 10 Conver	TCP Port:	IP Address:	Ethornat
	ver Room	Sensor To, Server		192.100.0.70	Ethernet
ect TCP Port:	ress: Redirect	Redirect IP Address	SubNet ID:	Serial Port:	Original
	1024		1	COM1 V	Olsenal
	Upper:	Lower:		Upper:	Lower:
-	65	25		30	20
	Upper: 65	Lower:	H	Upper:	mperature Limits: Lower: 20

Starting Data Logging



Click on the **"Start"** button to start data logging of the listed devices in the table. Depending on the reading interval set in the System Configuration window, it might take some time for the values of each sensor to be shown in the table.

Every time the device measured value is read, the value in the table is updated. If the data are received correctly the **"Status"** data column will show **"O.K."**.

If there is a communication failure, the **"Status"** data column will show **"Fail"** to indicate that the device data cannot be read. Please check the Device Parameters if everything is set correctly. Then check if the devices (sensors and/or displays) are powered and connected to the network.

Data logging table is divided into several columns. Please see pictures below.

ter Terr	perature and Humidity Data L	ogger					
System	<u>D</u> evice <u>R</u> eport <u>H</u> elp						
X	+ -				2 3) 🚺 🚽	
Status	IP Address(Port) or COM Port	SubNet ID	Device Name	Read Date - Time	Temperature [°C]	Limits [-40 - +125°C]	Re
0.К.	192.168.0.70(10001)	10	Sensor 10, Server room	25.10.2013-11:28:21	28,0 °C	Lower 20°C Upper 30°C	
0.К.	192.168.0.71(10001)	1	Sensor 1	25.10.2013-11:28:23	29,4 °C	Lower 20°C Upper 30°C	
0.К.	192.168.0.71(10001)	2	Sensor 2	25.10.2013-11:28:13	29,3 °C	Lower -20°C Upper 12°C	1
0.К.	192.168.0.71(10001)	3	Office	25.10.2013-11:28:15	29,2 °C	Lower 20°C Upper 30°C	
0.К.	192.168.0.71(10001)	4	Library	25.10.2013-11:28:17	28,8 °C	Lower 20°C Upper 30°C	
0.К.	192.168.0.71(10001)	5	Heater room	25.10.2013-11:28:19	29,1 °C	Lower 20°C Upper 30°C	
<							
			DataLog	gerTH, ELEN, s.r.o.		Start LOG	192.1

								-	
2 3	()								
Temperature [°C]	Limits [-40 - +125"	C]	Rel. Humidity [%]	Limits [0 - 10	0%]	T lower[°C]	T upper[°C]	RH lower[%]	RH upper[%]
28,0 °C	Lower 20°C U	pper 30°C	38,9 %	Lower 25%	Upper 65%	20 °C	30 °C	25 %	65 %
29,4 °C	Lower 20°C U	pper 30°C	38,7 %	Lower 25%	Upper 65%	20 °C	30 °C	25 %	65 %
29,3 °C	Lower -20°C L	Jpper 12°C	38,5 %	Lower 55%	Upper 65%	-20 °C	12 °C	55 %	65 %
29,2 °C	Lower 20°C U	pper 30°C	39,5 %	Lower 25%	Upper 65%	20 °C	30 °C	25 %	65 %
28,8 °C	Lower 20°C U	pper 30°C	40,5 %	Lower 25%	Upper 65%	20 °C	30 °C	25 %	65 %
29,1 °C	Lower 20°C U	pper 30°C	39,2 %	Lower 25%	Upper 65%	20 °C	30 °C	25 %	65 %
									:
	S	Start LOG	192.168.0.70 - 1						

Stopping Data Logging



Click on the **"Stop"** button to stop data logging of the listed devices in the table. Displayed values will be cleared from the logging table. This is so the user is not considering the last recorded values to be current by mistake.

Query on History Records



Click on the **"Query"** button to open the **"Query on Temperature and Humidity History Records"** window. You can select desired devices and set Start Time and End Time of the history records.



Once you have made your selection, history data can be displayed in a report by clicking on the **"Run Query Report"** button.



The history query report can be also converted into Excel XLS file by clicking on the **"Export data to XLS file"** button.

arameters:			9 👪	1			
Start Time: 21.	11. 2019 丶	1:00:00	Device Data:				
End Time: 21	11 2019	16:14:36	Date and Time	Net ID	SubNet ID	Device Name	Temperature [%
21.	11. 2019	10:14:30	25.10.2013-11:21:54	192.168.0.71	1	Sensor 1	0,0
Record Type: All	records	~	25.10.2013-11:22:55	192.168.0.71	1	Sensor 1	29,4
	1000100		25.10.2013-11:23:55	192.168.0.71	1	Sensor 1	29,4
elect Device:			25.10.2013-11:24:56	192.168.0.71	1	Sensor 1	29,4
Net ID	SubNet ID	Device Name	25.10.2013-11:21:54	192.168.0.71	2	Sensor 2	0,0
192.168.0.70	10	Sensor 10, Server ro	25.10.2013-11:21:58	192.168.0.71	2	Sensor 2	29,3
▼ 192.168.0.71	1	Sensor 1	25.10.2013-11:21:58	192.168.0.71	2	Sensor 2	29,3
▼ 192.168.0.71	2	Sensor 2	25.10.2013-11:22:55	192.168.0.71	2	Sensor 2	29,3
▼ 192.168.0.71	3	Office	25.10.2013-11:22:55	192.168.0.71	2	Sensor 2	29,3
192.168.0.71	4	Library	25.10.2013-11:23:55	192.168.0.71	2	Sensor 2	29,3
192.168.0.71	5	Heater room	25.10.2013-11:23:55	192.168.0.71	2	Sensor 2	29,3
			25.10.2013-11:24:56	192.168.0.71	2	Sensor 2	29,3
			25.10.2013-11:24:56	192.168.0.71	2	Sensor 2	29,3
			25.10.2013-11:21:54	192.168.0.71	3	Office	0,0
			25.10.2013-11:22:55	192.168.0.71	3	Office	29,2
			25.10.2013-11:23:55	192.168.0.71	3	Office	29,2
			25.10.2013-11:24:56	192.168.0.71	3	Office	29,2

vevice boto.						
Date and Time	Net ID	SubNet ID	Device Name	Temperature [°C]	Rel. Humidity [%]	Description of Device Status
25.10.2013-11:21:54	192.168.0.71	1	Sensor 1	0,0	0,0	О.К.
25.10.2013-11:22:55	192.168.0.71	1	Sensor 1	29,4	38,5	О.К.
25.10.2013-11:23:55	192.168.0.71	1	Sensor 1	29,4	38,5	О.К.
25.10.2013-11:24:56	192.168.0.71	1	Sensor 1	29,4	38,5	О.К.
25.10.2013-11:21:54	192.168.0.71	2	Sensor 2	0,0	0,0	О.К.
25.10.2013-11:21:58	192.168.0.71	2	Sensor 2	29,3	38,8	29,3 ℃ over upper limit 12,0 ℃
25.10.2013-11:21:58	192.168.0.71	2	Sensor 2	29,3	38,8	38,8 % over lower limit 55,0 %
25.10.2013-11:22:55	192.168.0.71	2	Sensor 2	29,3	38,7	29,3 °C over upper limit 12,0 °C
25.10.2013-11:22:55	192.168.0.71	2	Sensor 2	29,3	38,7	38,7 % over lower limit 55,0 %
25.10.2013-11:23:55	192.168.0.71	2	Sensor 2	29,3	38,8	29,3 °C over upper limit 12,0 °C
25.10.2013-11:23:55	192.168.0.71	2	Sensor 2	29,3	38,8	38,8 % over lower limit 55,0 %
25.10.2013-11:24:56	192.168.0.71	2	Sensor 2	29,3	38,8	29,3 °C over upper limit 12,0 °C
25.10.2013-11:24:56	192.168.0.71	2	Sensor 2	29,3	38,8	38,8 % over lower limit 55,0 %
25.10.2013-11:21:54	192.168.0.71	3	Office	0,0	0,0	О.К.
25.10.2013-11:22:55	192.168.0.71	3	Office	29,2	39,5	О.К.
25.10.2013-11:23:55	192.168.0.71	3	Office	29,2	39,4	О.К.
25.10.2013-11:24:56	192.168.0.71	3	Office	29,2	39,4	О.К.

The Report.xls file can be opened from the DataLoggerTH folder on your PC.

	. 0	e e			Report.xls	x - Excel	
SÚBOR	VOMOC	VLOŽIŤ	ROZI	LOŽENIE STRANY	VZORCE Ú	IDAJE REVÍZIA ZOBRAJ	ZIŤ ACROBA
Prilepit 😽	Calibri B I 	- 11 <u>U</u> - A [^] A <u>A</u> - Písmo	A Ex	E E Normanie	Všeobecné ▼	Podmienené formátovanie * Formátovať ako tabuľku * Štýly buniek * Štýly	Vložiť · Odstrániť Formát · Bunky
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A		В	C	D	E	F	G
1 EPRC	M.S	.A.					
Histor	Rei	ords of	Tom	nerature ar	d Humidity	Report	
	y Neu	Jords of	rem	iperature ai	Id Humany	Report	
3 All rec	ords						
4 Time rang	je: 25.10	.2013-00:00:00) to 25	5.10.2013-14:37:20	5		
5 Date an	d Time	Net ID	ID	Temperature [°C]	Rel. Humidity [%]	Description of Device Status	
6 25.10.2013	-14:36:24	192.168.0.71	1	28,8	40,8	0.K.	
7 25.10.2013	-14:37:25	192.168.0.71	1	28,8	40,8	0.K.	
8 25.10.2013	-14:35:32	192.168.0.71	2	29,1	40,4	29,1 °C over upper limit 12,0 °C	
9 25.10.2013	-14:35:32	192.168.0.71	2	29,1	40,4	40,4 % over lower limit 55,0 %	
10 25.10.2013	-14:36:24	192.168.0.71	2	29,1	40,3	29,1 °C over upper limit 12,0 °C	
11 25.10.2013	-14:36:24	192.168.0.71	2	29,1	40,3	40,3 % over lower limit 55,0 %	
12 25.10.2013	-14:37:25	192.168.0.71	2	29,1	40,3	29,1 °C over upper limit 12,0 °C	
13 25.10.2013	-14:37:25	192.168.0.71	2	29,1	40,3	40,3 % over lower limit 55,0 %	
14 25.10.2013	-14:36:24	192.168.0.71	3	28,8	41,5	0.K.	
15 25.10.2013	-14:37:25	192.168.0.71	3	28,8	41,4	0.K.	
16							
17	-		~				
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PRIPRAVENÝ							III III -

*Please note, you must have the Microsoft Excel application software installed on your PC in order to open the query report file.

Help Information

Click on the **"Help"** button to open the help manual.

About the Software



Click on the **"About"** button to open the window with information about the software version and licensing.

Closing the Application



Click on the **"Application Exit"** button to close the software application. All device parameters and configuration values will be stored, so when you start the application again there is no need to set it again.

ELEN, s.r.o., Lubochnianska 16, 080 06 Lubotice, Slovakia tel.: +421 51 773 3700, +421 905 637 717, +421 911 637 716, fax: +421 51 759 9142 e-mail: sales@elen.sk, www.elen.sk