KD7 RECORDER

Process	s grou	o 1	8		01/06/05 20:02:55
0.26 meters	8.78 WXYZ	27.40 meters	ond 0 kg*m/s²	ChS O kg [#] m/s²	сњ 93 %
50.00			++1111	1111	99.00
29:02:40					
20102120					
20:02:00					
20:01:40					
KD7		-	Lon	don Elec	tronics Lte
		-			-

USER'S MANUAL FOR "KD7 ARCHIVE v.1.7" PROGRAM

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1. APPLICATION



The **KD7** Archive program

and analyse archived data stored in the binary format with digital signature from the KD7 recorder on a PC computer. Archive data stored in the **CSV** text format should be analysed in spreadsheet programs (e.g. MS Excel).

The KD7 Archive program enables to carry out following operations:

- automatic checking the correctness of stored data (digital signature),
- review of archived data in the graphical and numerical shape,
- printout of textual data and charts,
- creating reports
- storage of charts to graphical files *.bmp, *.jpg and *.png.
- files conversion from KD7 Archive version 1.0 to 1.1

Notice: the KD7 Archive program does not guarantee the correct work and service of data which have been modified or damaged. In particular, when the structure and the file integrity have been disturbed.

is destined to review

2. INSTALLATION OF THE KD7 ARCHIVE PROGRAM

Program requirements:

- Operating system: MS Windows 2000 or newer,
- 25MB of capacity on the hard disk and 512MB of RAM memory,
- Minimal screen resolution: 1024x768, recommended 1280x 800 or 1280x1024
- Remaining requirements as required by the operating system.

The program installation is typical for applications destined for the MS Windows environment. The installation program is on the added CD to the recorder, in the catalog **"KD7 Archive"**. In order to start the installation, one must activate the **KD7 Archive_install.exe** program being in the indicated catalog. Next, one must proceed according to messages appearing on the screen.

The installation standard process has the following run:

- 1. Selection of the language used during the process installation
- 2. Welcoming window of the application installer



Select one option:
O csv
O CSV with digital signature
Binary with digital signature

3. Selection of the destination catalog for the application

4. Selection of the group name for Menu Start

- 5. Possibility to place program icons in different places of the panel
- _ _ × Setup - KD7 Archive Select Destination Location Where should KD7 Archive be installed? Setup will install KD7 Archive into the following folder To continue, click Next. If you would like to select a different folder, click Browse C:\Program Files\KD7 Archive Browse... At least 2,5 MB of free disk space is required. < Back Next > Cancel i 🖥 Setup - KD7 Archive _ 🗆 × Select Start Menu Folder Where should Setup place the program's shortcuts? Setup will create the program's shortcuts in the following Start Menu folder To continue, click Next. If you would like to select a different folder, click Browse. KD7 Archive Browse... < Back Next > Cancel 🐻 Setup - KD7 Archive _ 🗆 🗙 Select Additional Tasks Which additional tasks should be performed? Select the additional tasks you would like Setup to perform while installing KD7 Archive, then click Next. Additional icons: 🔽 Create a desktop icon Create a Quick Launch icon < Back Next > Cancel 😴 Setup - KD7 Archive Ready to Install Ð Setup is now ready to begin installing KD7 Archive on your computer Click Install to continue with the installation, or click Back if you want to review or change any settings. Destination location: C:\Program Files\KD7 Archive Start Menu folder KD7 Archive Additional tasks: Additional icons: Create a desktop icon F < Back Install Cancel

6. Settings summary before installing the software

7. Window informing about the successful end of installation



During the first run of the application you will be asked for a License Key File. When there is no licence key, the program will start in the demo version.

KD7Archive - License Key	1	
This application is protected by a License Key File. Please indicate the License Key File for this application. It should be placed on the accompanied CD together with the instal files (e.g. 'D:\KD7 Archive\' where 'D:' denotes your CD-ROM drive). In case you cannot locate the file please contact your local representative. Browse		The keyfile has not been provided. Demo version is running with the following restrictions: * Only 100 records may be open, * Export is disabled, * Printing is disabled, * The chart cannot be saved to an image file,
Remark: Demo version will be run if the keyfile is not provided.		OK
OK Cancel	ſ	

3. SERVICING THE PROGRAM

3.1 Main application window – view without loading a file with measuring data



3.2 Selection of the session or the file with measuring data, verification of the digital signature.

1. When the **Open session** option has been chosen



The working mode by default of the KD7 Archive program is the work with data sessions. The session is the collection of archive data for the given measuring group – in the composition of which enter: measuring data and event logs (regardless of the number of files composing the given collection).

Audit log is common for all measuring groups and is always opened as a whole. It is recommended to open data in the shape of a session and not files.

	Untitled - KD7Archive						
	Data Edit View Options Help	○ []					
	1 Information	Select a path and a s Step 1 (of 2)	ession	d a consign for future and	hurie 📑	×	
The window Select a path	Grid Grid Chart	Path to KD7 Archive fi D:\KD7_Archive_1020 Update	les: J07\Samp	le data (correct)	Browse		
and a session is opening. After choosing one of the stored measuring group in it for analyzing	Logs	Group name Process Group 1	No. 1	Time Start 10:31:07, 02/10/07	Time End 10:40:50, 02/10/07	I	pplicati
the Time constrains window will be opened.	Alarm Log	<u>.</u>		6			
Set in the Time constrains window the beginning and the end of the time from which data will be presented and in the program.	interwal l analysed	Time constrains Step 2 (of 2) Please specify I Start time 10:31:07 End time 10:40:50 Measuring data: Audit log: Audit log: Audit log: Audit log: Comparison of the start of the	59 s 7 sa 583 583	trains for the data 2 October 2 October 2 October 2 October 2 October 2 October 2 October </th <th>2007 V 2007 V End C</th> <th></th> <th>×</th>	2007 V 2007 V End C		×

After finishing the selection of the time interval, when the option Verify digital signature while opening data will be marked in the File sign verification window – results, information about the result of the displayed signal verification is displayed.

- Succeeded, when file of data and logs were not be modified or submitted to damage.

Fi	File sign verification - results File verification SUCCEEDED! The data has not been modified. • Measuring data: CORRECT • Audk log: CORRECT • Audk log: CORRECT												
		File verification SUCC The data has not be • Measuring data: Co • Audit log: CORREC • Alarm log: No data • Statistics log: No d	EEDED! en modified. DRRECT T ata										
	Source	Record(s)	From	To	Result								
			-										
			ОК										

- **Failed**, when files were modified or submitted to damage (in the verification table, numbers of data records negatively verified are given, and in the **Data** table they will be marked with red colour).





The digital signature can be checked in any time with the program, choosing the digital signature verification from the main menu or the toolbar.

		1
<u>N</u>		
Sho	w digital signature file verif	ication status RAL DATA INFORI
	Digital signature:	CORRECT - the data has not b
Data	Start time:	09:00:00, 08/10/07
	End time:	10:05:00, 08/10/07
	Measuring data:	Opened (14 samples)
E Gria	Audit log:	Opened (18 samples)
	Alarm log:	No data (0 samples)

2. When choosing the Data \rightarrow Open File option in the menu, the standard window of file selection will be opened.

	open		ن النار
Process Group 1 - KD7Archive	Look in: 📔 My Documents	← 🗈 👉 🎟-	
ata Edit View Options Help Open Session Open File Recover Data Convert Old Files Export To Verify Digital Signature Print Drick Preview	20071002 103110 0 G1 - Process Group 1.KD7Ard Wy Recent Documents Desktop My Documents My Documents My Documents My Documents My Documents	1	
int Setup	File <u>n</u> ame:	▼ <u></u> pe	en
	My Network Places Files of type: KD7 Archive Data files (*.KD7arch	i) 🔽 Cani	cel

After choosing one of the stored files with data for analysis and accepting the choice, the **Time constrains** window will be opened. Further procedure, as above.

After choosing the **File sign verification-results** window , information about collected measuring data, and about the collected file (among others, about the data verification result – checking of the digital signature), the recorder and selected measuring groups are displayed.

Process Group 1 - KD/Archiv	/e							
Data Edi; View Options Help								
		i						
i Information		GENERAL DATA INFORMATION						
	Digital signature:	CORRECT - the data has not been modified.						
Data	Start time:	10:31:07, 10/2/07						
	End time:	10:40:59, 10/2/07						
	Measuring data:	Opened (59 samples)						
Grid	Audit log:	Opened (7 samples)						
	Alarm log:	Opened (49 samples)						
A Chart	Statistics log:	Opened (593 samples)						
Report		DEVICE INFORMATION						
	Device name:	KD7						
Logs	Device description:	REGISTRATORIUS						
	Device serial number:	0000000						
Audia Las	Device temperature unit:	°C						
Audit Log								
🛕 Alarm Log		GENERAL GROUP INFORMATION						
	Group name:	Process Group 1						
	Group number:	1						
1 Stat. Log	Channels count:	6						
	Base time (storage time):	0 min, 10 sec, 0 ms						

4. DATA PRESENTATION

In the lateral menu of the KD7 Archive program, options of the selection presentation shape of measuring data (Grid, Chart, Report) and event logs (Audit Log, Alarm Log, Stat. Log) are accessible.

4.1 Data presentation in the shape of data table

If there is lack of measuring data, one must collect data acc. to the section 3.2. Next, choose the pushbutton in the lateral menu.

Grid

When the window will be displayed with information about stored data in the old format (concerns data stored in recorders with the system version older than 0.2.0.1), one must carry out their conversion into the new version.

			•		
Blad	Data	Edit	View	Options	Help
The file is in the old format. Please convert it first using "Convert" menu option.	Op Op Rei	en Sess en File. cover D	ion ata	C	trl+S
ок	Con Exp	nvert O port To.	ld Files		
	ver	ity Digi	tai Sigr	lature	

Collected measuring data will be presented in the program in the shape of a table.

	Selection of filt type for channe	ratic el (s	s)	Select.	of chanr	nels in dat	ta window		Closing/ope iltration set	ning of the ting window	
122	Process Group 1 - KD7Archiv	/e									
Da	ta Edit View Options Help										
	2	×		$\left \mathbf{i} \right\rangle$							
<	i) Information	Filte	er type hlighting type fi	ilter	Apply	for channel ——	1 -		Ch1 Ch2		
	Data	Hid Sho Sho	hlighting type fil ing type filter ow incorrectly si ow range excee	lter gned records on ding values		h1 h2 h3	C Ch4 C Ch5 C Ch6		Ch3 Ch4 Ch5 Ch6		
			Filter data		🗲 Setti	ng accept	ation				
1	Chart	No.	Date	Time	Ch1 <4.00; 20.0	Ch3 <4.00; 20.0	Ch4 <4.00; 20.00>	Ch5 <4.00; 20.0	Ch6 <4.00; 20.00>		-
	-	-	-	-	Channel 1	Channel 3	Channel 4	Channel 5	Channel 6		
	Report		-	-	mA	mA	mA	mA	mA		
		1	02/10/07	10:31:10	19.79	14.64	10.69	7.06	4.64		
	Logs	2	02/10/07	10:31:20	12.67	5.72	4.11	4.44	6.63		
		3	02/10/07	10:31:30	4.66	5.36	8.33	12.19	16.01		
	🖉 Audit Log	4	02/10/07	10:31:40	6.69	14.05	17.52	19.62	19.85		
		5	02/10/07	10:31:50	15.97	19.99	19.20	16.63	12.93		



One can display data from the table , for all or only for the selected measuring channel acc. to one of the criteria:

- Without filtration,
- Favouring filter, (e.g. below, above or in the range of given data values),
- Concealing filter (e.g. below, above or in the range of given data values),
- Show only data with an erroneous digital signature,
- Show the range exceeding,
- Show only incorrect values (e.g. lack of data).

In the **View** window, one can select these measuring channels from which data will be displayed in the table. Set filtration options will be realized after choosing the **Filter data** pushbutton.



In the View \rightarrow Colors Legend menu, information are given about defined events, colours in which they are marked in the view of measuring data and event logs.

4.2 Data presentation in the shape of reports

If there is lack of measuring data, one must collect them acc. the section 3.2. Next select the

Report

Pushbutton in the lateral menu.

Data Edit View Options Help									re	Clos port	sing/c settii	penin ng wir	g th ndov	w		×		
Information Report type Channels © Every <n> minutes: 30 If Ch1 Data Chourly If Ch2 O Daily Setting acceptation</n>																		
Grid		Generate rep	ort	Current	t records co	ount: 1												
A Chart			Time ra	nge					Ch1							Ch2		
From To				Min	1		Max	1	Avg		Min			Max	_			
Benort		Date	Time	Date	Time	Date	Time	mA	Date	Time	mA	mA	Date	Time	mA	Date	Time	n
Nepon -	1	10/2/07	10:30:00	10/2/07	11:00:00	10/2/07	10:31:30	4.66	10/2/07	10:37:00	20.00	11.92	10/2/07	10:34:00	4.00	10/2/07	10:40:20	19

After setting the report type and measuring channels from which data will be displayed, select the **Generate report** pushbutton in the report window. The report will be displayed in the program window.

4.3 Printing, copying, export and data recuperation

4.3.1 Printing



ess Group 1 - KD7Archive

4.3.2 Copying of textual data



After marking with the mice cursor the data area and choosing in the toolbar, in the **Edit** \rightarrow **Copy** menu, data will be copied in the system locker and next they can be utilized in other programs.

4.3.3 Data export	Data export
💯 Process Group 1 - KD7Archive	Step 1 (of 3) Please specify type of data you would like to export
Data Edit View Options Help Open Session Ctrl+S Open File Recover Data Convert Old Files Export To Verify Digital Signature	General information Data Data Report Audit Log Alarm Log Statistics Log This option will export all records from the current data view (depends on filter settings)
Print Ctrl+P	<wstecz< td=""> Next ></wstecz<>

After choosing the **Eksport to** option in the toolbar of the **Data** menu, one must select the type of data (General information, Data, Report, Audit log, Alarm log or Statistics log) which have to be exported.

Next, depending on the data type:

1. Select the kind and format of exported data:

- measuring data: CSV (textual format) or XLS (format of MS Excel application, the export is only possible for the first 65 thousand data) or HTML (data in the shape of tables)
- reports: only **HTML**
- information: only **HTML**

2- Define the incoming path and the filename for exported data.

Data export Step 1 (of 3) Please specify type of data you would like	e to export		
C General information Data C Report C Audit Log C Alarm Log C Statistics Log	File format Page 2 (of 3) Please specify format type for exporting data C CSV (Comma Separated Values) C XLS (Excel format)	Path and file name Step 3 (of 3) Please confrue nath and a filename (if persesary)	×
This option will export all records from the cur settings)	CSV is a text format that may be open by many application, OpenOffice Calc	Destination path: C:\program Files\kD7 Archive\ File name (without extension):	Browse
	< Back 1	< Back End	Data export

4.3.4 Data recovery

After choosing the **Data** \rightarrow **Recover data** option in the toolbar, the program converts data in the defined file into the **CSV** textual format, stored in the same catalog.

		📈 Process	Group	o 1 - KD7/	Archive		
		Data Edit	View	Options	Help		
		Open Se:	ssion			Ctrl+S	
		Open File					
		Recover	Data				
		Convert	Old File	s			
				L			
KD7Archi	ve						×
i)	This option will convert all o cannot be open other way. Otherwise press Cancel bu	lata from a : New files v tton.	selecte vill be s	ed file int saved in	o the CS same fol	V format. der as the	This operation is recommended when a file source file. To continue please press OK.
			OK	:	Canc	el	

4.4 Data presentation in the shape of a chart

4.4.1 Chart servicing

• Setting chart properties



Chart Properties	X	Chart Properties	×
Channels Chart Ch1 Ch1 Ch2 Ch3 Ch4 Ch5 Ch5 Ch6 Show labels Ch6 Crcle Crcle	Min indicator Max indicator Max indicator Channel range: <4.00; 20.00>	Channels Chart Background colour: Exterior colour: Grid lines colour: Grid lines style: Solid Marker color: Marker line width: 3 V	Toraw Alarm Log Toraw Statistics Log Toraw Audit Log Default settings
	OK Cancel		OK Cancel

In the chart properties window, one can set:

- Measuring channels which will be displayed in the program window,
- The colour and the marker line width for the given channel,
- The setting visibility of additional minimum and maximum markers for the given channel,
- The visibility of labels ,the visibility and shape of markers on the chart for the given
- Colours of chart window elements,
- Display of event log icons.
- Or, one can choose:
- Settings by default

• View of data in the shape of chart

If there is lack of measuring data, one can collect data acc. to the section 3.2. After choosing the

pushbutton in the lateral menu, measuring data are displayed in the graphic form. The chart shows on the screen, the maximal time corresponding to 100 thousand samples. When there is more samples, one must rewind the chart (see below).



After choosing the active measuring channel in the program window (setting the mice cursor on the channel number and clicking – the area of the channel number will be marked by a yellow background). The unit, range limits, value scale and time scale are displayed in the chart window.

View of the screen with analog data (Ch1) and binary data (Ch2).



• Lighting-up the selected measuring channel



• Lighting-up limits of the measuring range

After setting the mice cursor in the area of the **Min. Range** or **Max. Range**, the line of the chosen range limit will be thickened.



• Displacement of the chart in the window, in the time or axis value.



4.4.2 Information icons on charts:



- alarm icon enabled
- alarm icon disabled
 - icon of statistics log
 - icon of audit log

Notice:

- 1. The red left upper corner of logs and alarms marks the occurrence place of the event in the time or value scale,
- 2. Alarm and totalizer icons have always the channel background colour for which they occur,
- 3. Audit log icons, since they are not related to measuring channel values, are drawn at the bottom of the chart window,
- 4. The audit log is opened in whole. When the audit icon description area is grey that means, that data are not belong to the opened session.
- Alarm icons



• Statistics icons







Event log icon (**Audit log**, alrm log, stat.log). Event description area.

After setting the cursor on the icon of the event log marker (audit *and/or* alarm *and/or* statistics), information with the description of this event (description area) is displayed.

4.4.3 Transition from log or data table presentation into the chart

Notice: Log icons are visible on the data chart after connecting their lighting in the setting menu of chart properties. (see section 4.4).



A double click of the mice cursor on the line of data table or the table of the selected event log causes the automatic displacement of the cursor on the chart, in the shape of a time marker (unless that the chart exists).



Carry out the marker configuration (colour and time thickness) in the setting menu of chart properties (see section 4.4.1). A click by the right mice pushbutton on the chart removes the time marker.

- Audits in the log and on the chart

	<u> </u>		
i Information	liter type Do not filter data		
Data			
	Filter data Current records count: 59		
Grid	D. Date Time Tag		
	1 08/10/07 08:57:11 Configuration Changed (Admin)		
👫 Chart	2 08/10/07 10:05:37 Storage Card Removed		
	3 08/10/07 10:06:51 Storage Card Inserted		
	4 08/10/07 10:06:55 Control Panel Opened (Admin)		
Report	5 08/10/07 10:07:07 Control Panel Closed (Admin)		
	6 08/10/07 10:07:11 Configuration Changed (Admin)	Storage C	ard Inserted
Logs	7 08/10/07 10:32:25 Storage Card Removed	10.54.51,	00/10/07
	8 08/10/07 10:34:31 Storage Card Inserted		
	9 08/10/07 10:57:02 Storage Card Removed	· · · · · · · · · · · · · · · ·	
B Addit Lug	10 08/10/07 11:05:47 Storage Card Inserted 34	+:00 10:34:15 10:34:30 1	10:34:45 10:35:00
	11 08/10/07 11:20:11 Control Panel Opened (Admin) 10	.07 08/10/07 08/10/07 0	08/10/07
	12 08/10/07 11:20:20 Control Panel Closed (Admin)		

- Alarms in the log and on the chart

	×		i							
information	Filte	r type	1	•	Apply for channel -	1				
Data					C ch1 C ch2 C ch3	C ch4 C ch5				_
Grid		Filter data	Cu	rent records cou	nt: 59	1000	Totalize Totalize	r Periodic Call		_
Chart	No.	Date 02/10/07	Time 10:31:07	Al. Max - On	Tag	Source Ch2	 Min: 4.0 Source:	0, Max: 20.00, Avg Ch1	: 11.27 [mA	шİ
Report	2	02/10/07 02/10/07	10:31:25 10:31:29	Al. Max - Off Al. Min - On		Ch2 Ch1	Chn. Va 10:31:3	l: 4.93 7, 02/10/07		
Logs	4	02/10/07 02/10/07	10:21:22	Al. Max - On Al. Min - Off		Ch2 Ch1	3			
	6	02/10/07	10:32:15	Al. Max - Off Al. Min - On		Ch2 Ch1				
Madin Log	8	02/10/07	10:32:23	Al. Max - On		Ch2				
Alarm Log	9 10	02/10/07 02/10/07	10:32:27 10:33:05	Al. Min - Off Al. Max - Off		Ch1 Ch2				
	11	02/10/07	10:33:09	Al. Min - On Al. Max - On		Ch1 Ch2				

- Statistics in the log and on the chart

Data		Filter data		C ch1 C ch2 C ch3	0	Totalizer Periodio Call Totalizer: 000000798 [] Min: 4.00, Max: 20.00, Avg: 13.10 [mA]
1 Chart		Filter data		_		Source: Ch1 Chn. Val: 14.81
	No.	Date	Time	Тад	5	10:32:08, 02/10/07
	50	02/10/07	10:31:56	Totalizer Periodic Call	Ch	
Depart	51	02/10/07	10:31:57	Totalizer Periodic Call	Cł	
report	52	02/10/07	10:31:58	Totalizer Periodic Call	Ch	
	53	02/10/07	10:31:59	Totalizer Periodic Call	1	
Logs	54	02/10/07	10:32:00	Totalizer Periodic Call	Cł	
	55	02/10/07	10:32:01	Totalizer Periodic Call	Ch	
🥖 Audit Log	56	12/10/07	10:32:02	Totalizer Periodic Call	Ch	
- Addit Log	57	02/10/07	10:32:03	Totalizer Periodic Call	Cł	
	58	02/10/07	10:32:04	Totalizer Periodic Call	Cł	ł – – – – – – – – – – – – – – – – – – –
🔺 Alarm Log	59	02/10/07	10:32:05	Totalizer Periodic Call	Cł	
	60	02/10/07	10:32:06	Totalizer Periodic Call	Ch	
	61	02/10/07	10:32:07	Totalizer Periodic Call	Ch	
Stat. Log	62	02/10/07	10:32:08	Totalizer Periodic Call	Ch	
	63	02/10/07	10:32:09	Totalizer Periodic Call	Ch	ŀ

KD7-09/3.B

April 2008

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