



: 06.05.2009

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**1** ..... **5**

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**RS-485** ..... **34**

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**5** ..... **39**

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TC210, TC215..... 55

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Eurotrace ..... 61

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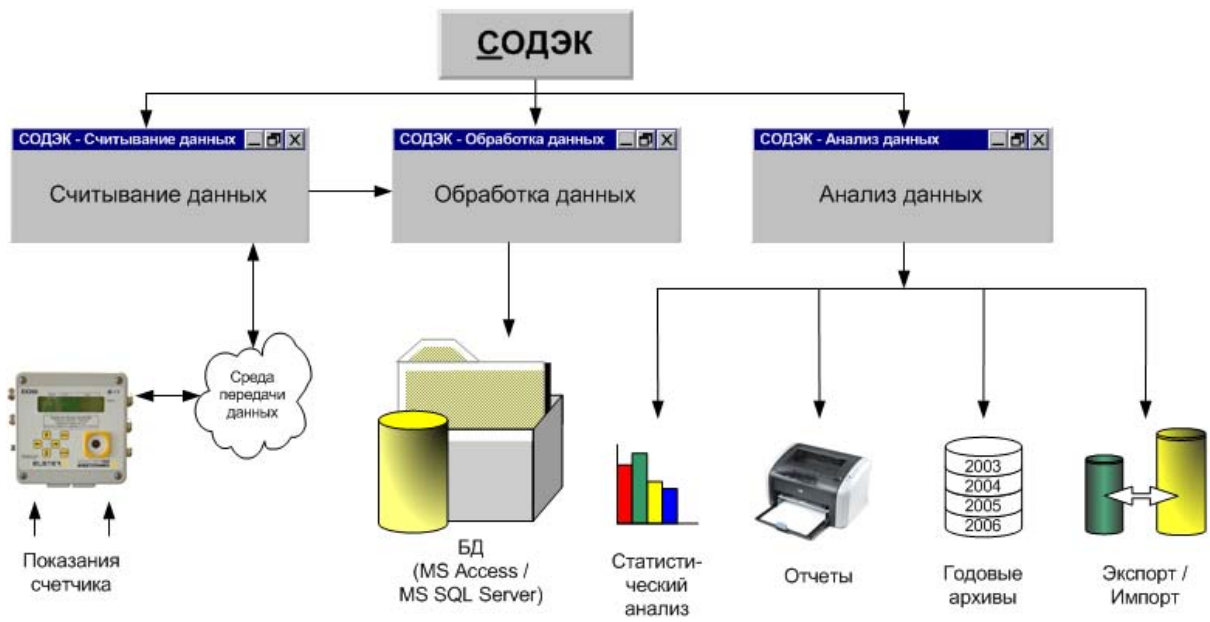
- ..... 72

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-	.....	73
-	.....	73
	.....	74
«	».....	75
	.....	75
«	».....	77
<b>7</b>	.....	<b>78</b>
<b>8</b>	.....	<b>80</b>
	.....	<b>81</b>

## 1.1 Введение

ЕК-87, ЕК-88, ТС-90, ЕК260, 210, ТС215.



- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_ « \_\_\_\_\_ »
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- \_\_\_\_\_
- \_\_\_\_\_ / \_\_\_\_\_
- \_\_\_\_\_
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- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

## 1.2 Установка

### 1.2.1 Ошибка при установке драйверов COM/USB

Desktop Windows, IBM PC-COM/USB,

- IBM PC-
- Microsoft Windows 95/98/NT/2000/Server 2000/Server 2003/XP/Vista.
- 100
- ( )
- COM (USB).

, . . . Desktop

- 1) Windows " ( | , | | ) ( ) , , |
- 2) Windows95, Microsoft DCOM95 \Service.
- 3) Win2000/Windows Server 2000/Windows Server2003, Microsoft MDAC 2.8 \Service.
- 4) Windows98, WindowsXP ,
- 5) USB COM- (USB-COM).

DCOM95 (Distributed Component Object Model) –

MDAC (Microsoft Data Access Components) -  
Windows 2000, MDAC  
Windows. MDAC MS Office.

## 1.2.2 Óñòàí î âêà è ðåãèñòàöèÿ ÑÎ ÄÝÊ

- “ “ ” - ” ,  
 “ ” .  
 "setupsodek.exe".
- :
- ▶ CD-ROM . Windows  
 - , [ ], .
  - ▶ “ ” (  
[www.gaselectro.ru](http://www.gaselectro.ru) .
  - ▶ , .
  - ▶ “ ” ,  
 "C:\SODEK".
- 
- 1) “ ” “ ” , “ ” ( .  
 ).  
 (sodek.mdb), , , .
- 2) “ ” ,  
 DbUpgrade.exe, .
- ▶ , .
  - ▶ “ ” ,  
 - “ ” .  
 - , [ ].



```

,
.
_____
" ( Register.exe ),
" -
▶ [ ]
.

```

### 1.2.3 Óäèäáí èå Ñî ÄÝÊ

```

unins000.exe. ( : C:\SODEK),

```

## 1.3 Работа с базами данных

### 1.3.1 Адаптируем базу данных к MS SQL Server

?

Microsoft Access (sodek.mdb)  
Microsoft Access (sodek.mdb)  
Server - "

Microsoft SQL Server.  
" "

Microsoft SQL

Sodek.  
MS SQL Server

(instance)

Microsoft SQL Server,  
Sodek

?

?

#### Microsoft Access?

Access

Microsoft  
"report".

```
MSACCESS.exe c:\Sodek\db\sodek.mdb /WRKGRP c:\Sodek\db\sodek.mdw /USER
"report"
```

Windows  
Windows

- sodek.ini [Interface]\OpenDBInMSAccess=ON

**c** ?

MS Access (mdb)

2 .

sodek.mdb



?

. , .

?"

:"...

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( , )

( . .)

," "

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### 1.3.2 Í àñòðî éèà ï àðàì àòðî â ï î äèëp ÷áí èÿ

```

Microsoft Access,
(sodek.mdb sodek.mdw)
(
Microsoft Access
),
:
▶
▶ sodek.ini Windows
▶ sodek.ini Windows
▶ [Directories] "DataBaseDir=(...)"
▶ "=" Microsoft Access (sodek.mdb)
▶
▶ (sodek.mdb sodek.mdw)
▶
_____ :
{ }
[Directories]
DataBaseDir=C:\SODEK\DB
{ }
[Directories]
DataBaseDir=\\Datastore\Data\SODEK\mdb

Microsoft SQL Server,
:
▶
▶
▶ |
▶

```

► SQL Server>].' : < >[\<

► [OK].

\_\_\_\_\_:

Datastore\SQLData3

{ 'Datastore'- , 'SQLData3' - MS
   
 SQL Server}

Datastore

{ MS SQL Sever (
   
 ), }

\_\_\_\_\_ TCP/IP- , :

192.168.0.63\SQLData3

### 1.3.3 Ñî àäèí àí èà ñ áàçî é ààí í û ã

\_\_\_\_\_,
   
 ( \_\_\_\_\_).

► | | (MDB)

► | | (MSSQL)



|YYYY.



### 1.3.4 Ðãêî ì áí äàèèè ï ì î áññî à†áí èð ñî õðàì í î ñòè äàì í ù õ ÑÎ ÄÝÊ

1.

2.

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4.

\\SODEK\DB\sodek.mdb".

Windows,

5.  
job),

6.

( )

4 5.

( ) ,  
).

(

:  
:

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(".\Export")



- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

### 1.3.5.1.1

« »,



).



- ▶ [>],
- ▶ [>>],
- ▶ [<],
- ▶ [<<],
- ▶ , (c) ( )
- ▶ \_\_\_\_\_
- |     |         |                      |  |
|-----|---------|----------------------|--|
| $<$ | $> = <$ | $( ) > + «00:00:00»$ |  |
| $<$ | $> = <$ | $( ) > + «23:59:59»$ |  |
- ▶ \_\_\_\_\_
- ▶ [ ], \_\_\_\_\_

### 1.3.5.1.2

- ▶ \_\_\_\_\_
- ▶ \_\_\_\_\_
- ▶ [ ], \_\_\_\_\_

: 'Sodek\_Transport\_File\_yymmddhhnss.tf',  
 'yymmddhhnss' -  
 (yy - , mm - , dd - , hh - ,  
 nn - , ss - ). : 'Sodek\_Transport\_File\_050304140330.tf' -  
 4 2005 14:03:30.

### 1.3.5.2


1. - ;
2. - ,
3. - ;
4. - ,  
( ).

« » ,  
 « » .  
 ( . )  
 « » .

▶ | | ....  
:

1. \_\_\_\_\_
2. \_\_\_\_\_

### 1.3.5.2.1

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, . -  
( )  
, .  
/  
. - " "  
" ".  
- :  
▶ », «  
▶ ,   
▶ .  
▶ ( ".  
tf").  
▶ .  
« », -  
« ».

### 1.3.5.2.2

\_\_\_\_\_.

\_\_\_\_\_ :

- ▶ \_\_\_\_\_,
- ▶ \_\_\_\_\_,
- ▶ \_\_\_\_\_ [ \_\_\_\_\_ ],

\_\_\_\_\_ - \_\_\_\_\_

« \_\_\_\_\_ ».

### 1.3.5.3

\_\_\_\_\_ « \_\_\_\_\_ ».

\_\_\_\_\_ Windows

## 1.3.6 Ã ä â ã à å æ ç è é â

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\_\_\_\_\_

\_\_\_\_\_ (1 + 0|1|2|3 \_\_\_\_\_),

...  
 \[SODEK]\BD\Years.

\_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_

\_\_\_\_\_ 1 \_\_\_\_\_ : 1)

; 2)

\_\_\_\_\_ , \_\_\_\_\_  
\_\_\_\_\_ , \_\_\_\_\_ " " , \_\_\_\_\_

### 1.3.6.1

\_\_\_\_\_ :  
▶ - \_\_\_\_\_  
▶ | \_\_\_\_\_  
▶ \_\_\_\_\_  
▶ " \ "  
▶ " \ " ( - "10:00").  
▶ \_\_\_\_\_  
▶ [OK].  
\_\_\_\_\_  
( ) \_\_\_\_\_

### 1.3.6.2

- \_\_\_\_\_

## 1.4 Считывание данных

-  
 -  
 ( )  
 GmbH, " Elster  
 ( : )  
 WinLIS.  
 -  
 , [LIS200](#).

### 1.4.1 Åðàì áí í û á ô àéëû

-  
 ASCII- ( . MS Excel).  
 .  
**LIS100** (EK-88, EK-87, TC-90)  
 :  
 tempz.NNN -  
 tempza.NNN -  
 tempze.NNN -  
 NNN ( 999 001)  
**LIS200** (EK260, TC210, TC215)  
 :  
 NNNNNNNN.agr -  
 NNNNNNNN.aga -  
 NNNNNNNN -

### 1.4.2 Ñàì áéñòàà ì ðèáí ðî â

**LIS100** -  
 ELSTER GmbH.  
 DS100  
 : -87, -88 -90.  
**LIS200** -  
 LIS200, LIS100.  
 2001. : 260, 210 215. 61107-

### 1.4.3 Àâäåí èå

-88, -87

- ;  
- ;  
- ;  
- ;

« »

TC-90

15 ( )

EK260

-1 ;  
-2 ;  
- ;  
- ;  
- ;

:

-  
-

: " " " "

"

210, 215

" "

: " " " "

"

-

:

\_\_\_\_\_

" - " LIS200,

\_\_\_\_\_ ( " \*.ini").

\_\_\_\_\_

### 1.4.4 Äöàâí î å ì åí þ

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(F3) -

(F4)

? (F1)

#### 1.4.4.1 -

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#### 1.4.4.2 -

\_\_\_\_\_ « »

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### 1.4.4.3

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"?"

## 1.4.5 Äèàëî ãè

### 1.4.5.1

« »

0 9 12 z). (

1 254). (

260

( )

« »

LIS100 (EK-88,...)

[LIS100.](#)

LIS200 (EK260,...)

[LIS200.](#)

LIS100 - 0 9, LIS200 - 0 9  
A F.

( LIS200).

260.

RS-485.

" " ("

1:180 ( " " " ),  
EK260).

( LIS200),

...

00:00

).

« »

LIS100

"..."

LIS200

"...";

« »

" "

" "

' "

,"

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### 1.4.5.2

« »

,

"8N1" ( . . . [LIS100](#)

- 8,

, - - 1),

[LIS200](#) - "7E1" ( . . .

- 7,

, - - 1).

« »

"W", "-", "+", "A" " , " .

GmbH,  
"-100".

« »

..INI \_\_\_\_\_ *modem.ops,*  
" " :  
"

( )

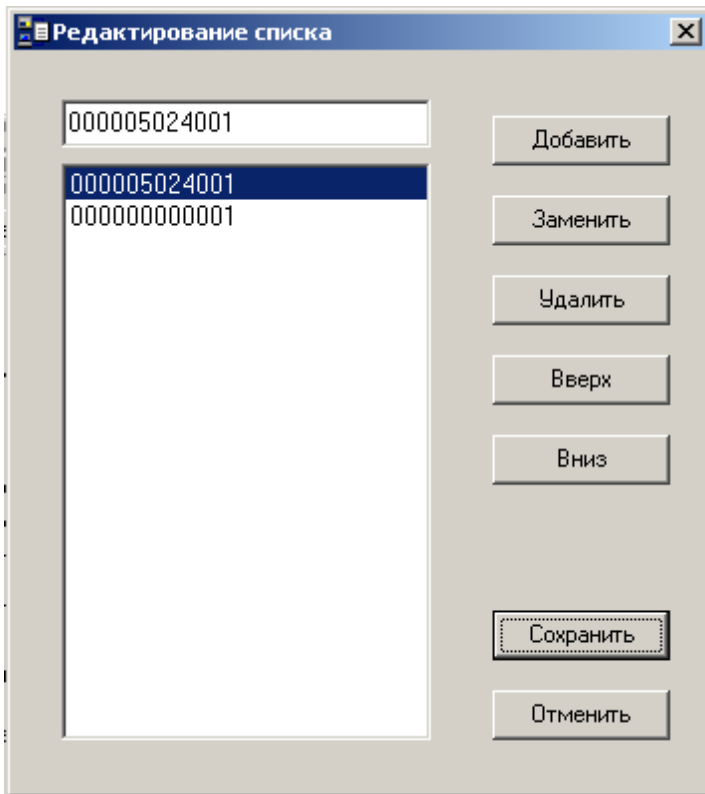
( )

)	DCD (1- , 0-	)	DCD (
)	DSR (1- , 0-	)	DSR (
)	CTS (1- , 0-	)	CTS (

DCD, DSR CTS  
▶ [ ]

**1.4.5.3**

RS-485.

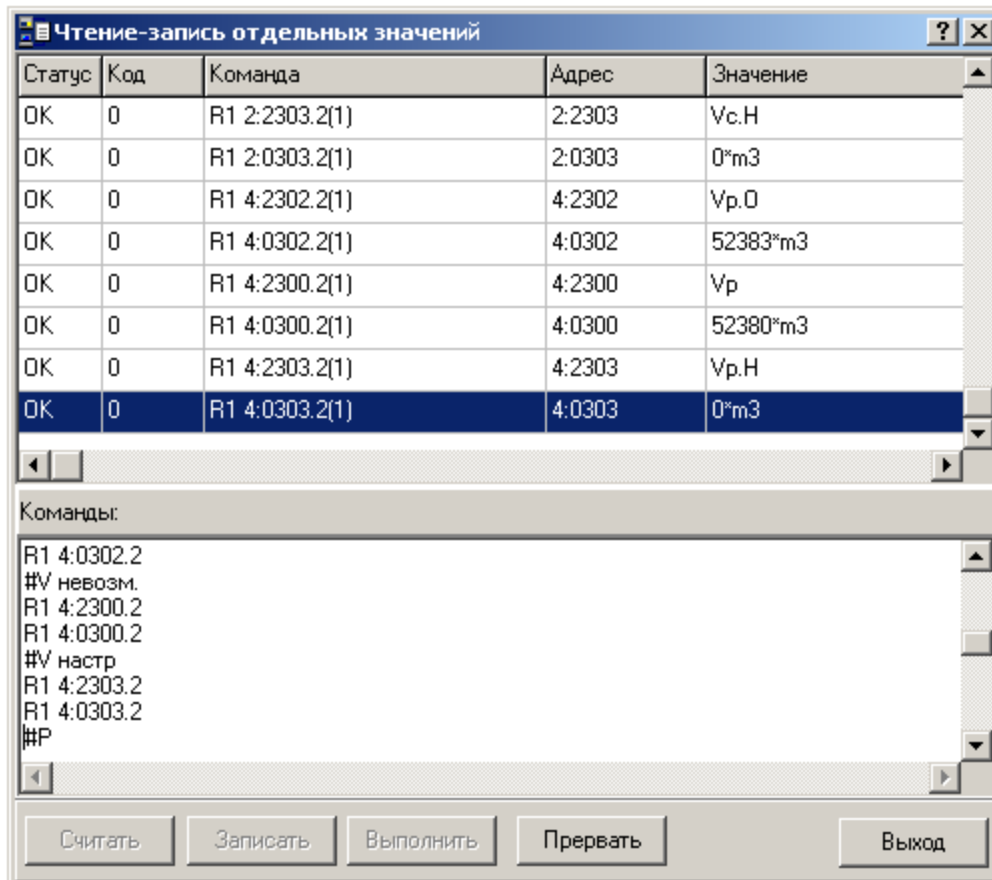


12,

0..9.

## 1.4.5.4

[LIS200](#)



= 0 -  
 > 0 -  
 < 0 -

```

" " " " " "
- " " " " " "
- ( )
- , " " " " " "
, " " " " " "
[ ]
, " " " "
.
[ ]
"sample.wpp".
-

```

Î î áðàèÿ	Êðàèèèé ôî ðì àð	Ï î ëí ú é ôî ðì àð	Ï ðèì áð
xòáí èå	<Àäðáñ>	R1 <Àäðáñ>	R1 13:2312
Çàì èñü	<Àäðáñ> (<Çì à÷áí èå>)	W1 <Àäðáñ> (<Çì à÷áí èå>)	W1 13:2312(0.6735)
Êî ì ì áí òàðèé	#<Ëð áí é òàêñò>	#<Ëð áí é òàêñò>	#

## 1.4.6 Ôàéëü í àñòðî àê

### 1.4.6.1

#### [USER]

NAME=GasElectro

MARK=0B

PASSWORD=00000000

#### [Directories]

TMPDir=C:\SODEK\TMP

LIS100

ARCDIR=C:\SODEK\ARC

LIS200

**[CONNECT]**

COM=COM1  
 INITCOM=19200,N,8,1,BIN,IGP0,TO700  
 VIAMODEM=1 -1 - 0  
 PROTOKOLTO=5000 ( .)  
 PHONE=22  
 DIALMODE=T  
 REPDIALNUM=5  
 DIALINTERVAL=20  
 EM100=0

**[MODEM]**

TYPE=Default

**[PARAM]**

AUTOADJTIME=0  
 MINDIFTIME=10 ( )  
 MAXDIFTIME=30 ( )  
 DIALOG=1  
 LIS=200  
 RORange=MO:1 "MO:1"

"  
 ". "TO:DDDDD."  
 ,  
 HHHH" DDDDD.HHHH -  
 -

Borland Delphi TDateTime.

**1.4.6.2**

**[TYPE]**

Default = modem1 " "  
 IDC-2814 = modem2

**[Default]**

ResetCmd = &F ( 1.2)  
 InitCmd = E0|Q0 , " |"  
 DialCmd = D ( 1.2 )



```

HangupCmd = H0                («          »)
CmdTerminal = +++
OkMsg      = OK                «          »
ConnectMsg = CONNECT          «          »
BusyMsg    = BUSY             «          »
NoCarrierMsg = NO CARRIER    «          »
NoDialToneMsg = NO DIALTONE   «          »
ErrorMsg   = ERROR            «          »
DialTimeout = 60000           (          )
CmdTimeout = 500              (          )

DCD = 1                        DCD
DSR = 1                        DSR
CTS = 1                        CTS

```

```

_____
HangUpCmd                1.2                " ".                ResetCmd, InitCmd
:
▶ "modem.ops"           (          ,          Windows).
▶ [TYPE]                :
                        =modemX
, -                      ;
▶ :
[          ]
▶ [Default]
▶
▶ "modem.ops".

```

## 1.4.7 Dàæèì ø èí û RS-485

### 1.4.7.1

[LIS200.](#)

RS-485 EIA RS-422/RS-485.

RS-485 ( " ).

RS-232 RS-485.

PC- ( )

RS-485/232. LIS200

- ADAM-4520 - COM -

RS-232;

- ADAM-4530 -

ADAM-4520 RS-485 260

- -02.

[LIS200:](#)

2 = 5

2 = 0

2 = 2

2 = 19200

ADAM-4530 RS-485 260

- -02. RS-232 ADAM-4530

[LIS200:](#)

2 = 5

2 = 0

2 = 2

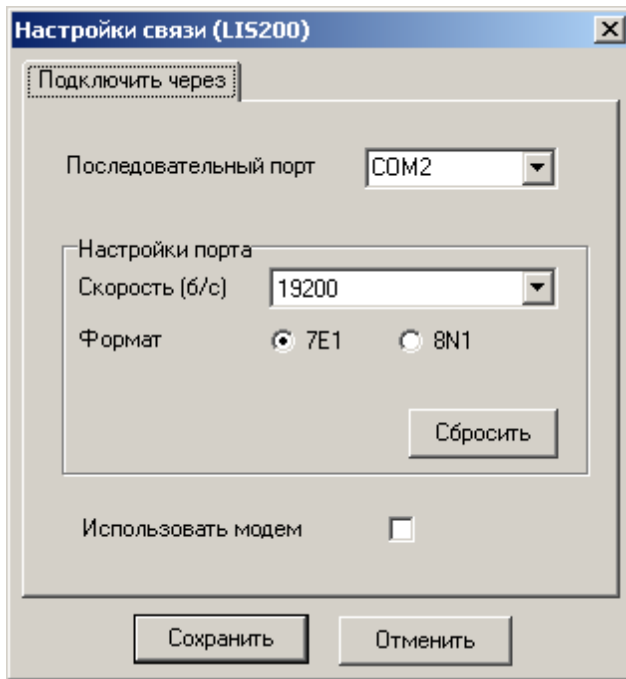
2 = 19200

RS-485

2:70

### 1.4.7.2

RS-485



### 1.4.7.3

RS-485

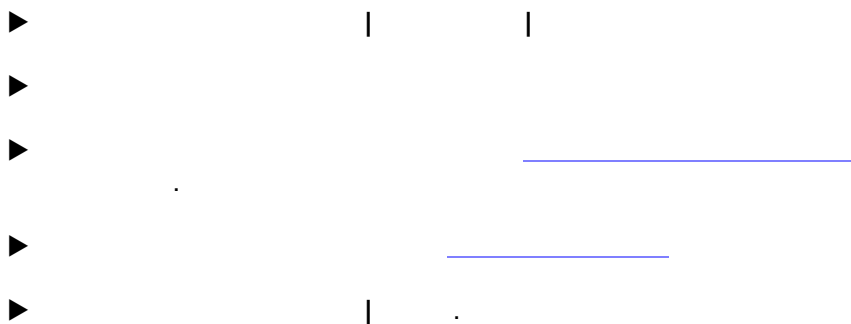
RS-485.



RS-485

## 1.4.7.4

LIS200: RS-485 ( ).



**СОДЭК**

**Адрес корректора**

000000000002

Считать архив >>

Чтение-запись отдельных значений >>

Выбрать следующий корректор >>

Выход

LIS200.

on-line

- ▶
- ▶
- ▶
- ▶
- ▶

(  
);

## 1.4.8 Í àñòđî ééà ñ÷èòû âàí èÿ ï î ðàññì èñàí èð

**Windows**

“ - Windows “ ”.

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•

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“ —

”.

▶

).

▶

“ ”.

▶

“ > ”.

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“ — ”.

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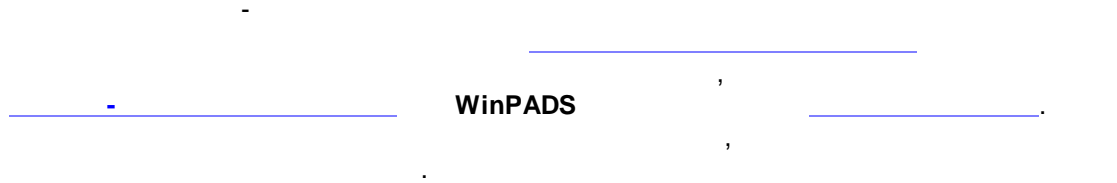
“ ” “ ”

▶

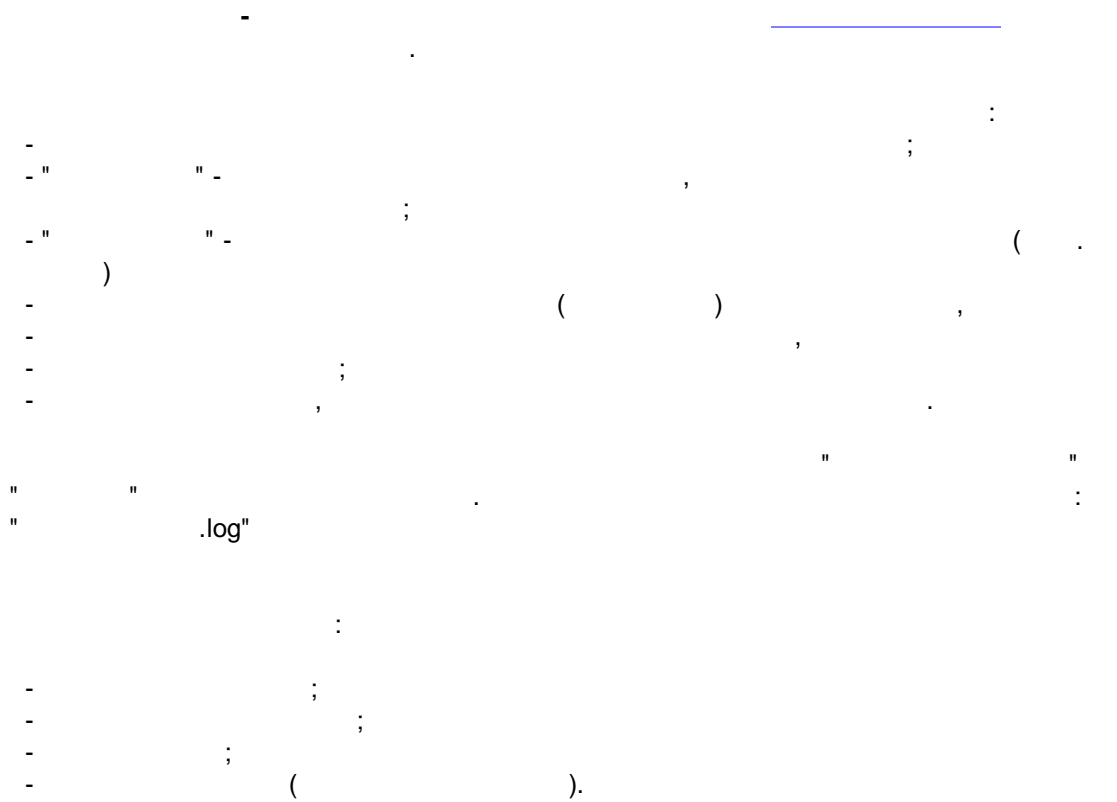
“ ” “ ” “ ”

\_\_\_\_\_

## 1.5 Обработка данных



### 1.5.1 Анализ данных



### 1.5.2 Анализ данных

#### 1.5.2.1



\_\_\_\_\_

?

### 1.5.2.2

\_\_\_\_\_ -  
( " " ) \_\_\_\_\_ ,  
"..\SODEK\TMP".  
\_\_\_\_\_ -

### 1.5.2.3

\_\_\_\_\_ ( " " ).  
" " "  
" " "

### 1.5.2.4

...  
\_\_\_\_\_

### 1.5.2.5

\_\_\_\_\_ ,  
" " " ,  
" " " ,  
" " " ,



### 1.5.2.6 "?"

-  
-

## 1.5.3 Đái òà ñ ĩ òĩ ãđài ì ĩ é

### 1.5.3.1

\_\_\_\_\_, " (., "...\SODEK\ARC").

\_\_\_\_\_ " " "

" " "drug and drop".

( ) " " "

\_\_\_\_\_ " " "

### 1.5.3.2

\_\_\_\_\_ " " "

• " " "

• " \_\_\_\_\_ " "

• " " "



## 1.6 Анализ данных

90, 210, 215) LIS100, LIS200 ( -87, -88, 260, ( )).

« »,

( , , ),

MS SQL Server). (MS Access), (

### 1.6.1 Í à†àëî ðàáí òù

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1.6.2.3

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1.6.2.4

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( " " " " " " ( , " ) ,

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\_\_\_\_\_ , \_\_\_\_\_  
» ( « » ) «  
» ( « » ) .

( " " " " " " " " ) ,  
15- 10 2007 :



" "

" " : "

LIS100, LIS200

( . )

LIS200

( . / )

EK260

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\_\_\_\_\_  
[TC210, TC215](#)  
\_\_\_\_\_

**1.6.2.5**

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**1.6.2.6**

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### 1.6.2.9

Separated Values) XLS (Microsoft Excel). CSV (Column

- ▶ \_\_\_\_\_
- ▶ " "
- ▶ .
- ▶ | |
- ▶ (" ") - CSV
- ▶ XLS. (" ")

[ ], XLS, Excel, Microsoft Office. Excel;

\_\_\_\_\_  
XLS ( . )  
( . / )

\_\_\_\_\_  
" "  
" "  
" "  
\_\_\_\_\_

### 1.6.2.10

( ) EK260.  
( ), \_\_\_\_\_


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 ( ) , ( . \_\_\_\_\_  
 « \_\_\_\_\_ »), \_\_\_\_\_.

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 (" ' ")  
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 , " ( " " ) . ,  
 " , " " .



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 ▶ LIS200.  
 ▶ " " " " , | .  
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 ▶ " ".  
 :  
 ▶ " " ,  
 ▶ c [Enter].  
 ▶ , .  
 :  
 ▶ " ..."  
 ▶ / ,  
 .  
 :  
 ▶ Windows " "  
 ▶ ,  
 ▶ , [SHIFT] + [Up, Down, PgUp,  
 PgDown], [CTRL]+[ ].  
 ▶ " ".  
 ,  
 MS Office.  
 . :  
 \_\_\_\_\_



:  
 ▶ \_\_\_\_\_  
 ▶  " "  
 ▶ .  
 ▶ [OK].  
 , " " " "  
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1.6.2.11.4

TC210, TC215

TC210, TC215

TC210 (TC215)

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: " " , " " " " ").

« \_\_\_\_\_ »  
: " " " " ").

« \_\_\_\_\_ »  
: " " ").

TC210 (TC215)

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1.6.3 Đảảàèèđĩ ààí èả ààí í ù ã

1.6.3.1





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### 1.6.3.3

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### 1.6.3.5

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### 1.6.3.6

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### 1.6.3.9

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### 1.6.3.10

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**1.6.4.2**

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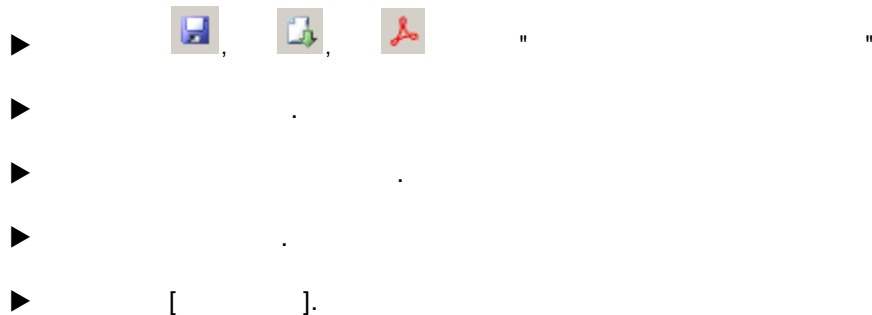
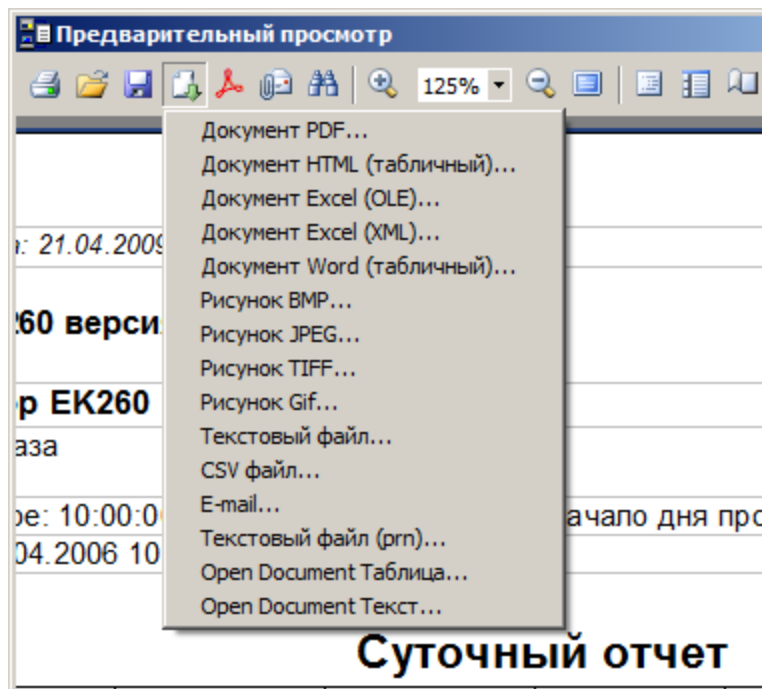
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## 1.6.5 Àèðòáèüí û à ĩ ðèáí ðû

### 1.6.5.1



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### 1.6.5.3

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### 1.6.5.4

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## 1.6.6 Æðàò è±åñêéé èí òåðð åéñ ì ðì ãðàì ì ù

### 1.6.6.1

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### 1.6.6.2

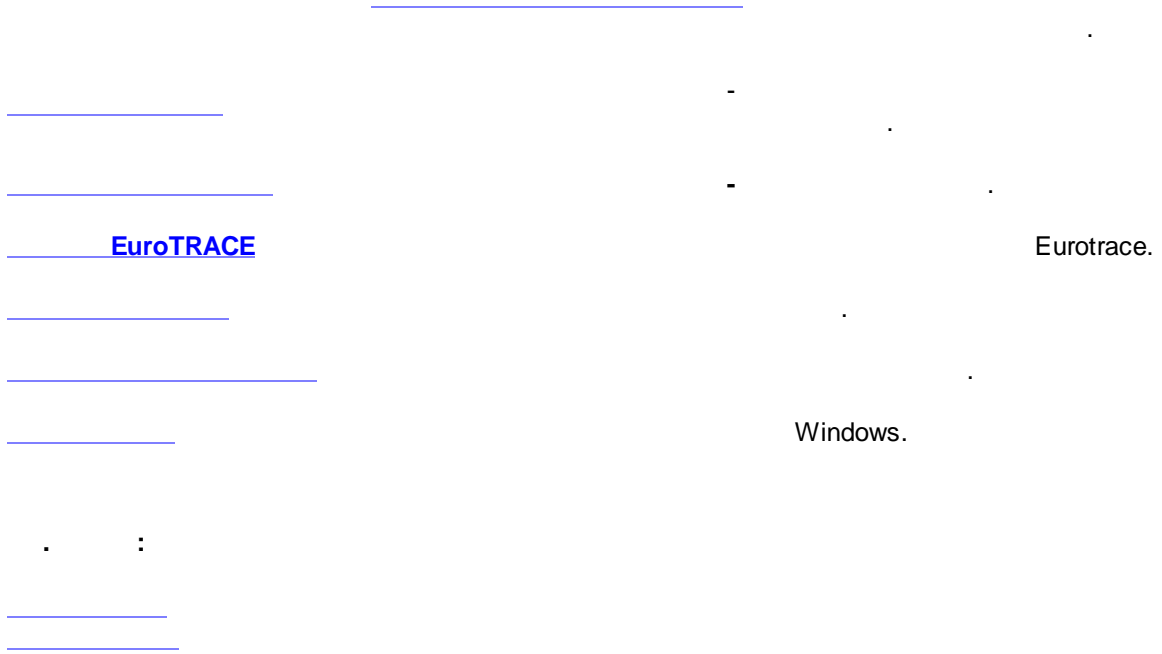
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### 1.6.6.2.1

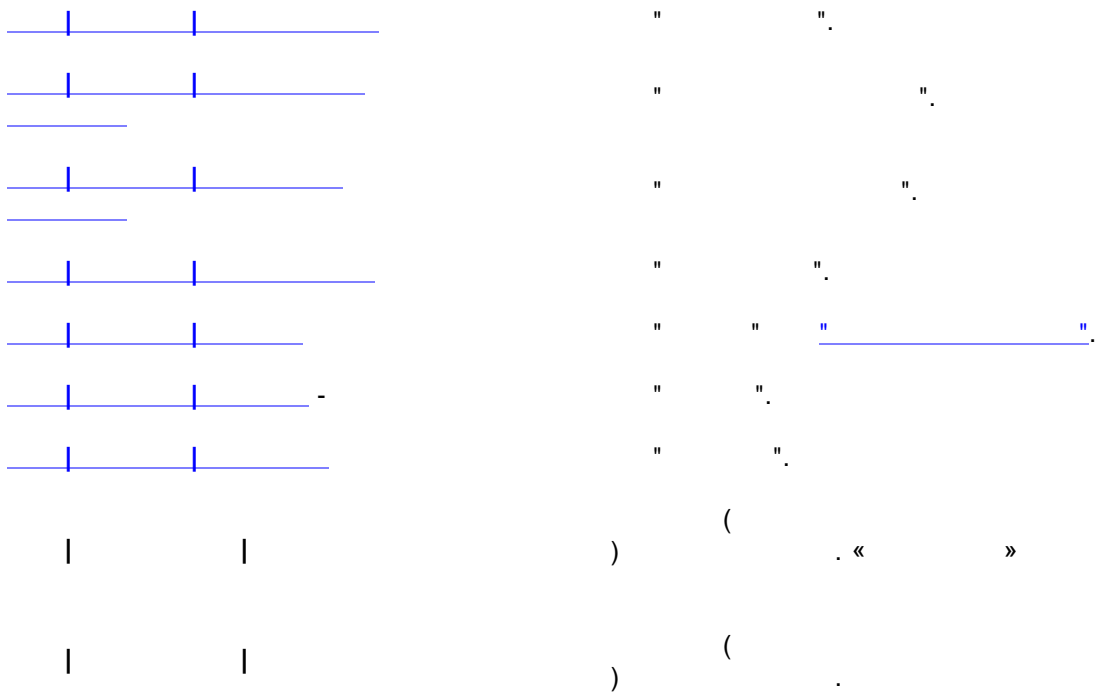
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1.6.6.2.4 -



1.6.6.2.5 -





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**1.6.6.2.6 -**

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**1.6.6.4**

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**1.6.6.5**

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1.6.6.6

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 (http://www.gaselectro.ru/download/re/sxema\_ek260free.pdf,  
 http://www.gaselectro.ru/download/re/sxema\_ek260danger.pdf).

## 1.8 Заключение

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: (83147) 3-54-43  
: (83147) 3-54-41  
: ek260@bk.ru



# Алфавитный указатель

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ADAM-4530 34

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