SCREEN RECORDER
KD8 TYPE

NEW

MAIN FEATURES:

- **LCD TFT 5.7" colour screen, 320 × 240 pixels, with touch screen,**
- **recording and data archiving on a CompactFlash card with capacity up to 4 GB,**
- **IP 65 protection class on the front panel,**
- **3 or 6 galvanically isolated analog measuring channels,**
- **6 or 12 alarm outputs (in twos for each measuring channels), and 4 or 8 digital inputs,**
- **supervised access to the recorder through the user's name (login) and password,**
- **visualization of measurements in digital form, bargraphs, charts, trends, and analog meters**
- **serial interfaces RS-485 and USB Device,**
- **user friendly graphical interface based on the MS Windows® layout**
- **MS Windows®CE operating system,**
- **complies with the regulation FDA CFR21 Part 11 - regulation for electronic records and signatures.**

APPLICATION

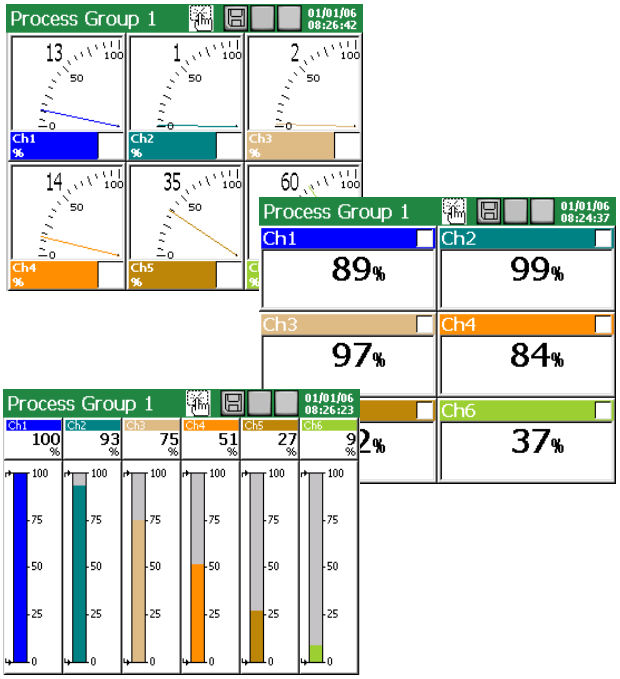
The KD8 screen recorder is applied as a data acquisition station in measuring and control systems. It finds application to measure, visualize and supervise technical process parameters in various industrial branches.
It can be also used as an autonomous measuring and recording device.

OPERATIONAL FUNCTIONS

- programmable measuring inputs to the direct connection: d.c. voltage and d.c. current, resistance and temperature sensors,
- internal memory of 6 MB with data support,
- exchangeable external memory, up to 4 GB,
- programmable events,
- visualization and archiving of analog input values and the logic input state,
- digital signature of archive data recorded in logic or text format,
- various language versions (Polish, English, Italian, French, Russian, Romanian)

DATA EXPOSURE

The KD8 recorder enables the visualization of recording data in the following shapes:
- linear charts and bar trends,
- digital and analog indicators,
- each channel has the possibility to assign settings as: colour, name, range and presentation view



DATA ARCHIVING

A CompactFlash card and the internal memory are destined for data archiving in the KD8 recorder. The recorder is delivered with a 1 GB CompactFlash card. Additional cards with sizes of 2 GB and 4 GB can be ordered separately.

PC SOFTWARE

KD8 SETUP, KD ARCHIVE, KD CONNECT and KD CHECK programs are destined for KD8 recorder service.

The KD8 SETUP program serves to configure KD8 recorders. The exchange of configuration data between the recorder and PC is carried out through the USB interface or the CompactFlash card.

The KD ARCHIVE program is destined for the visualization, verification of the digital signature, printout and export to CSV format, data recorded in the binary format with digital signature, obtained from the recorder.

The KD CONNECT program is destined for communication between PC and the KD8 recorder through the USB link. It enables the acquisition of archived data from the recorder, saving and erasing data on the CF card.

The KD CHECK program is destined for verification of the digital signature in archive data recorded in the text format with the digital signature.

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TECHNICAL DATA

Programmable measuring system:

- number of measuring channels	3 or 6
- input resistance	> 10 MΩ (U, TC); = 100 Ω (I)
- max. sampling rate	350 ms (in 1 measuring place)
- measurement accuracy class	acc. to table 1
- additional measuring error with the automatic temperature compensation of the thermo-couple reference cold junction	≤ 1°C
- isolation between measuring places	100 V d.c.
- isolation between the measuring place and the housing	500 V d.c.

Measuring ranges/accuracy class **Table 1**

Input signal	Measuring range/ Measuring accuracy (%)		Minimal sub-range/ accuracy class (%)	
Voltage	0... ± 9999 mV	0.15	5 mV	0.25
Current	0... ± 20 mA	0.15	1 mA	0.25
Thermocouple (TC):				
J (Fe - CuNi)	-200...1200°C	0.1	100°C	1
K (NiCr - NiAl)	- 200...1370°C	0.1	130°C	0.7
N (NiCrSi - NiSi)	- 200...1300°C	0.1	200°C	0.5
E (NiCr - CuNi)	- 200...1000°C	0.1	100°C	1
R (PtRh13 - Pt)	0...1760°C	0.2	540°C	0.3
S (PtRh10 - Pt)	0...1760°C	0.2	570°C	0.3
T (Cu - CuNi)	- 200...400°C	0.1	110°C	0.9
B (PtRh30 - PtRh6)	400...1820°C	0.2	1000°C	0.2
L (GOST)	- 200...800°C	0.1	90°C	0.2
K (GOST)	- 200...1370°C	0.1	130°C	0.7
Resistance thermometer (RTD):				
Pt 100	- 200...850°C	0.15	50°C	0.25
Pt 500	- 200...850°C	0.3		0.5
Pt 1000	- 200...850°C	0.3		0.5
Ni 100	- 60...180°C	0.15		0.25
Cu 100	- 50...180°C	0.15		0.25
GR.21 (GOST'78)	- 260...1100°C	0.15		0.25
GR.21 (GOST'94)	- 260...1100°C	0.15		0.25
50**P** (GOST'78)	- 260...1100°C	0.15		0.25
50**P** (GOST'94)	- 260...1100°C	0.15		0.25
100**P** (GOST'78)	- 260...1100°C	0.15		0.25
100**P** (GOST'94)	- 200...200°C	0.15		0.25
50**M** (GOST'78)	- 200...200°C	0.15		0.25
50**M** (GOST'94)	- 200...200°C	0.15		0.25
100**M** (GOST'78)	- 200...200°C	0.15		0.25
100**M** (GOST'94)	- 200...200°C	0.15		0.25
Potentiometric transmitter	50...2000 Ω	0.15	100 Ω	0.25
Resistance transmitter	0...2000 Ω	0.15	100 Ω	0.25

Admissible overload in the measuring system acc. to EN 60051-8

Logic inputs 4 or 8, with a common mass

- control signal	0/5...24 V d.c.
- switching frequency	up to 50 Hz (depending on the hardware configuration
- isolation to the housing	500 V d.c.

Alarms:

Electromagnetic relays:	6 or 12 (in twos for each measuring channel)
- contact voltages/ load current	250 V a.c./1 A 30 V d.c./1 A

Interfaces:

- RS-485 (Modbus Slave)	baud rate: 300...256000 bit/s transsmission mode: ASCII/RTU
- USB	V.1.1 device, socket USBB-G

General recorder parameters:

- frontal face dimensions	144 × 144 mm
- length behind the panel	155 mm
- panel cut-out dimensions	$138^{+1} \times 138^{+1}$ mm
- colour graphical screen	LCD 5.7" of TFT type, 320 × 240 pixels, with a touch screen
- external data carrier	CompactFlash card up to 4 GB
- memory of the internal buffer (flash)	6 MB
- working temperature	0...23...50°C
- climatic conditions	< 75% relative humidity, without condensation
- supply voltage	90...230...253 V a.c. or 18...24...30 V d.c.
- power consumption (max)	< 30 VA
- protection of the power pack supply	fuse RFS 1.6 A 250 V (a.c. supply)

Housing protection class:

- from frontal side	IP 65 acc. to EN 60529
- from terminal side	IP 20 acc. to EN 60529
Operational safety:	acc. to EN 61010-1
- installation category	II
- pollution level	2

Electromagnetic compatibility:

- noise emission	acc. to EN 61000-6-4
- noise immunity	acc. to EN 61000-6-2
Weight	< 2 kg

ORDER CODES

SCREEN RECORDER	KD8 -	X	X	X	X	XX	X

Measuring inputs:
3 programmable measuring inputs **1**
6 programmable measuring inputs **2**

Alarms and logic inputs:
without alarms and logic inputs **0**
alarms (NO relays) + logic inputs[1] **1**

Supply:
supply 90...253 V a.c. **1**
supply 18...30 V d.c. **2**

Programs for recorder service with PC:
programs: KD Connect, KD Check **1**
programs: KD Connect, KD Check, KD Archive, KD8 Setup **2**

Executions:
standard **00**
custom made[2] ..... **XX**

Acceptance tests:
without an extra quality inspection certificate **8**
with an extra quality inspection certificate **7**
according to user's agreements ..... **X**

[1] For each 3 measuring inputs, a package with 6 alarms and 4 logic inputs is installed.
[2] After agreeing with the manufacturer

Available accessories:
- 2 GB CF card 0923-611-190
- 4 GB CF card 0923-611-188

KD8-19A

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