

FEATURES:

IP65



MOD BUS



- Intuitive servicing - LCD TFT 5.7" screen, with touch panel.
- Data archiving on CompactFlash card, capacity up to 4 GB.
- IP65 protection grade on the front panel.
- 3 or 6 analog programmable measuring inputs.
- 6 or 12 alarms outputs.
- 4 or 8 digital inputs.
- Visualization of measurements in digital form, analog indicators, diagrams, bargraphs.
- RS-485 and USB serial interfaces.
- MS Windows® CE operating system.
- PC softwares: KD8 SETUP, KD CHECK, KD CONNECT, KD ARCHIVE.
- Programmable events.
- Menu available in various language versions.

INPUTS:



OUTPUTS:



RS 485

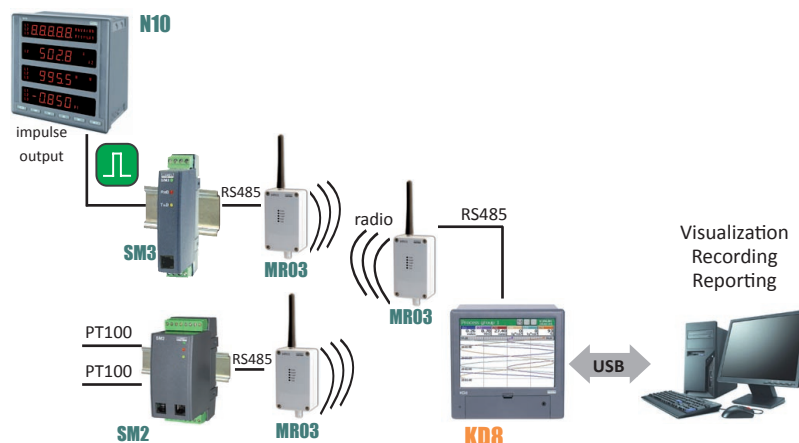
USB

GALVANIC ISOLATION:



Digital interface

EXAMPLE OF APPLICATION

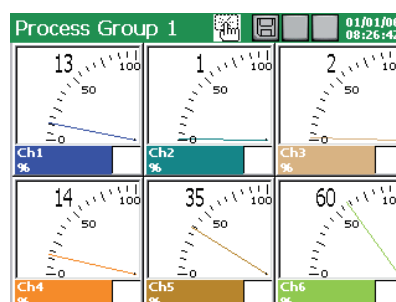
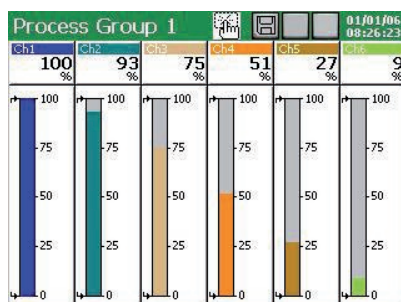
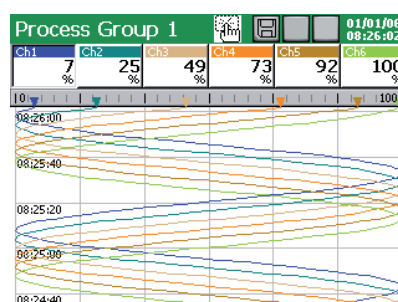
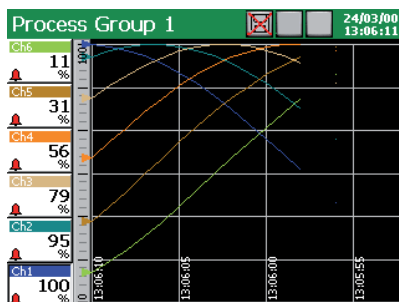


System of measurement, control and recording of temperature and energy with wireless communication.

EXAMPLES OF MEASURING DATA PRESENTATION

Various forms of data display:

- linear diagrams,
 - digital indicators,
 - analog views,
 - bargraphs,
 - tables and others.
- (manual and automatic switching between screens.)



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INPUTS

Input signal	Measuring range/ Accuracy class (%)		Minimal subrange/ Accuracy class (%)	
Voltage	0 .. ±9999 mV	0.15	5 mV	0.25
Current	0 .. ±20 mA	0.15	1 mA	
Thermocouple (TC): J (Fe-CuNi)	-200 .. 1200°C	0.1	100°C	1
K (NiCr-NiAl)	-200 .. 1370°C		130°C	0.7
N (NiCrSi-NiSi)	-200...1300°C		200°C	0.5
E (NiCr-CuNi)	-200...1000°C		100°C	1
R (PtRh13-Pt)	0 .. 1760°C	0.2	540°C	0.3
S (PtRh10-Pt)	0 .. 1760°C		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		130°C	0.7
Resistance transmitter (RTD): Pt 100	-200 .. 850°C	0.15	50°C	0.25
Pt 500		0.3		0.5
Pt 1000		0.3		
Ni 100	-60 .. 180°C	0.15		0.25
Cu 100	-50 .. 180°C			
GR.21 (GOST'78) (GOST'94)	-260 .. 1100°C			
50P (GOST'78) (GOST'94)				
100P (GOST'78)				
100P (GOST'94)				
50M (GOST'78) (GOST'94)	-200 .. 200°C			
100M (GOST'78) (GOST'94)				
Potentiometric transmitter	50 .. 2000 Ω	100 Ω		
Resistance transmitter	0 .. 2000 Ω		100 Ω	
Logic input	control signal 0/5 .. 24 V d.c.		switching frequency up to 50 Hz	

OUTPUTS

Output type	Properties
Relay	- electromagnetic relays: ≤ 250 V a.c./1 A or ≤ 30 V d.c./1 A

DIGITAL INTERFACE

Interface type	Properties
RS-485	interface: MODBUS Slave, baud rate 0.3 .. 256 kbit/s, transmission mode: ASCII/ RTU
USB	device V.1.1, socket USB-B

EXTERNAL FEATURES

Supply voltage	90 .. <u>230</u> .. 253 V	input power ≤ 30 VA
Temperature	operating: 0 .. <u>23</u> .. 55°C	storage: -20 .. 60°C
Humidity	< 70%	condensation inadmissible

RATED OPERATING CONDITIONS

Display field	LCD 5.7" TFT type	320 x 240 pixels, with touch screen
Overall dimensions	144 x 144 mm	panel cut-out dimensions: 138+1 x 138+1 mm
Weight	< 2 kg	
Protection grade	from frontal side: IP65	from terminal side: IP20

SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	noise emissions	acc. to EN 61000-6-4
	noise immunity	acc. to EN 61000-6-2
Isolation between circuits	500 V d.c.	acc. to EN 61010-1
Isolation between supply and measuring system	2 kV	
Pollution level	2	
Installation category	II	
Maximal operating voltage in relation to earth	for the measuring system, relays and supply: 500 V	acc. to EN 61010-1
Altitude above sea level	< 2000 m	

SOFTWARES ASSISTING THE KD8 RECORDER WORK:

KD ARCHIVE
Software destined to review and analyse archive data from the recorder on a PC computer, stored in a binary format with digital signature.

KD8 SETUP

Software destined to configure recorder settings by means of a PC computer.

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EXEMPLARY FUNCTIONS OF KD8 ASSISTING SOFTWARES

SOFTWARES ASSISTING THE KD8 RECORDER WORK:

KD CONNECT

Software destined for the communication between the recorder and the PC computer through the USB interface in order to download archive data and record/erase on the CF card.

KD CHECK

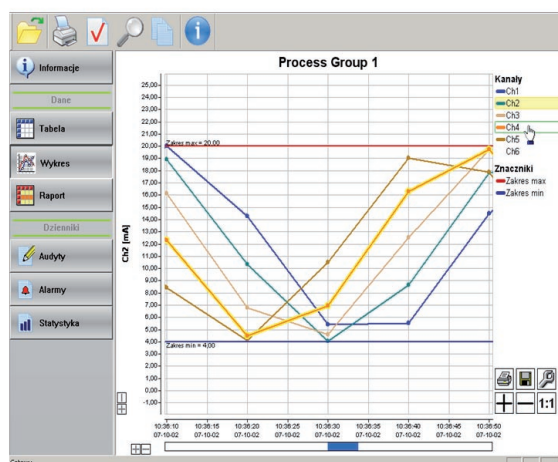
Software destined to verify the digital signature in archive data stored in text format.

Recorder information:

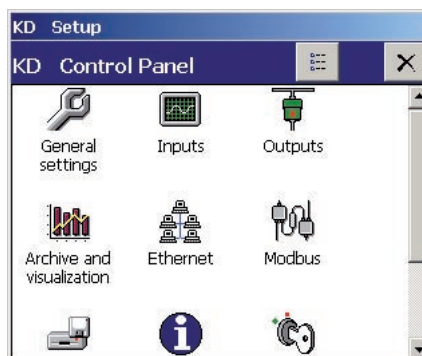
Copyright (c) 2007-2008 by LZF LUMEL S.A.
 Screen Recorder KD8
 System version: 0.5.0.3 (13/05/2008, 12:00)
 Hardware version: 00.00.00.00.00.00.00
 Image HW ver.: 10.00.00.00.00.00.00
 Bootloader version: 0.1.0.8

File name	Date	Size
20080519 123250 0 G1 - Process Group 1.csv	20/05/08 (13:16:50)	317K
20080519 123250 0 G2 - Process Group 2.csv	20/05/08 (13:17:00)	250K
20080519 123236 0 - AlarmLog.csv	25/05/08 (13:25:54)	5K
20080519 123250 0 - Process Group 1.csv	19/05/08 (10:37:20)	146K
20080525 084720 0 G1 - Process Group 1.csv	25/05/08 (08:24:38)	63K
20080525 084720 0 G2 - Process Group 2.csv	25/05/08 (08:24:38)	49K
20080525 102500 0 G1 - Process Group 1.csv	25/05/08 (09:25:42)	39K
20080525 102443 0 G1 - AlarmLog.csv	25/05/08 (09:25:42)	150K
20080525 102500 0 G2 - Process Group 2.csv	25/05/08 (09:25:42)	31K
20080525 112600 0 G1 - Process Group 1.csv	25/05/08 (09:42:36)	11K

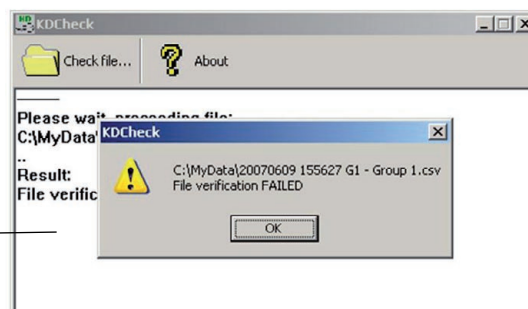
Downloading and erasing of archive data by means of the PC computer - KD CONNECT.



Review of archive data through the PC computer - KD ARCHIVE.



Configuration of the KD8 recorder by means of the PC computer - KD8 SETUP.

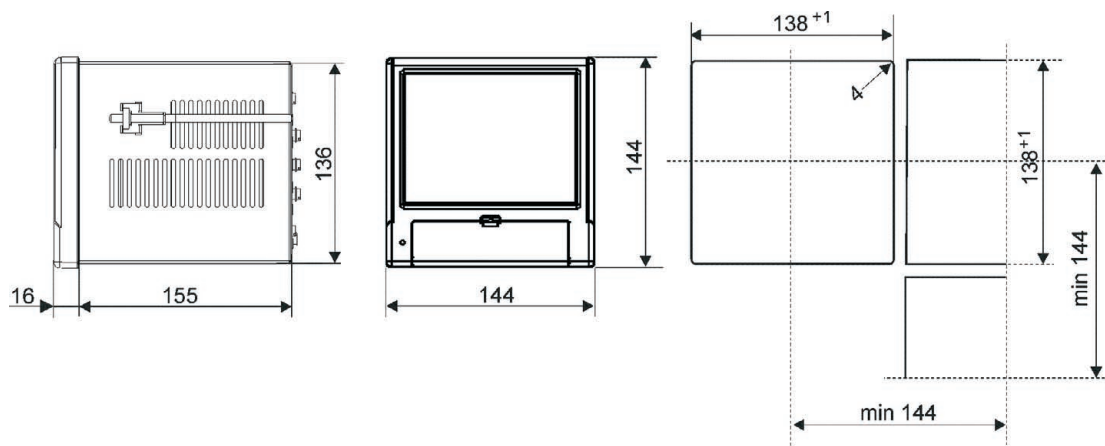


Verification of the digital signature of text data - KD CHECK.

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OVERALL DIMENSIONS



SEE ALSO:



Temperature sensors.



Interface converter PD10.



KD7 recorder.



For more information about LUMEL's products please visit our website:
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ORDERING

Screen Recorder KD8 -	X	X	X	X	XX	X
Measuring inputs:						
3 programmable measuring inputs	1					
6 programmable measuring inputs	2					
Alarms and binary inputs:						
without alarms and binary inputs	0					
alarms (NO relays) + binary inputs ¹⁾	1					
Supply:						
90..253 V a.c.		1				
Softwares servicing the recorder from PC:						
KD Connect, KD Check				1		
KD Connect, KD Check, KD Archive, KD8 Setup				2		
Version:						
standard					00	
custom-made ²⁾					XX	
Acceptance tests:						
without extra quality inspection requirements						0
with an extra quality inspection certificate						1
according to customer's request ²⁾						X

¹⁾ for each 3 measuring inputs a package with 6 alarms and 4 binary inputs is installed

²⁾ after agreeing with the manufacturer

Example of order:

the code **KD8-1-0-1-1-00-0** means:

- KD8** - recorder of KD8 type,
- 1** - with 3 programmable measuring inputs,
- 0** - without alarms and binary inputs,
- 1** - supply: 90 .. 253 V a.c.,
- 1** - with KD Connect and KD Check softwares,
- 00** - in standard version,
- 0** - without extra quality inspection requirements.