



## KD6 - SCREEN RECORDER



## Bildschirmschreiber

### KD6

Der Schreiber KD6 ist für Messung, Visualisierung und Kontrolle der Parameter von technologischen Industrieprozessen in verschiedenen Industriezweigen vorgesehen.

Es kann als Datenerfassungsstation in Mess- und Regelsystemen oder als autonomes Mess- und Aufzeichnungsgerät eingesetzt werden.

- ▶ Einfache und benutzerfreundliche Bedienung, grafischer 3,5-Zoll-TFT-Farb-LCD-Display.
- ▶ Bis zu 60 logische Kanäle (max. bis zu 8 analoge Kanäle).
- ▶ Eingänge:
  - programmierbarer Messeingang (0,4 oder 8),
  - Binär (0,4 oder 8),
  - Modbus RTU Master (10 Geräte je 10 Register).
- ▶ Ausgänge:
  - Relais (0, 4, 6, 8 oder 12),
  - Analog (0, 4 oder 8),
  - Hilfsspannungsversorgung 24 V d.c. / 30mA.
- ▶ Versorgungsspannung : 85...253V AC, 90...300V DC oder 20...60 V DC.
- ▶ Je nach Bedarf hat der Benutzer die Wahl zwischen folgenden Kommunikationsschnittstellen: RS-485 MODBUS (Master und Slave), ETHERNET (MODBUS TCP/IP, WWW, FTP, NTP, DHCP), USB Host 2.0.
- ▶ Möglichkeit zum Austausch von Konfigurationsdaten zwischen dem Bildschirmschreiber und PC über die USB-Schnittstelle.
- ▶ Interner Speicher 8 GB.
- ▶ Mit Webserver können Sie den aktuellen Status des Bildschirmschreiber über einen beliebigen Webbrowser anschauen.
- ▶ Erweiterte mathematische Funktionen für Messwerte.
- ▶ Archivierung und Visualisierung von Messdaten, die von externen Geräten über RS-485 MODBUS an KD6 übertragen werden.
- ▶ Außenmaß: 96 x 96 x 77 mm



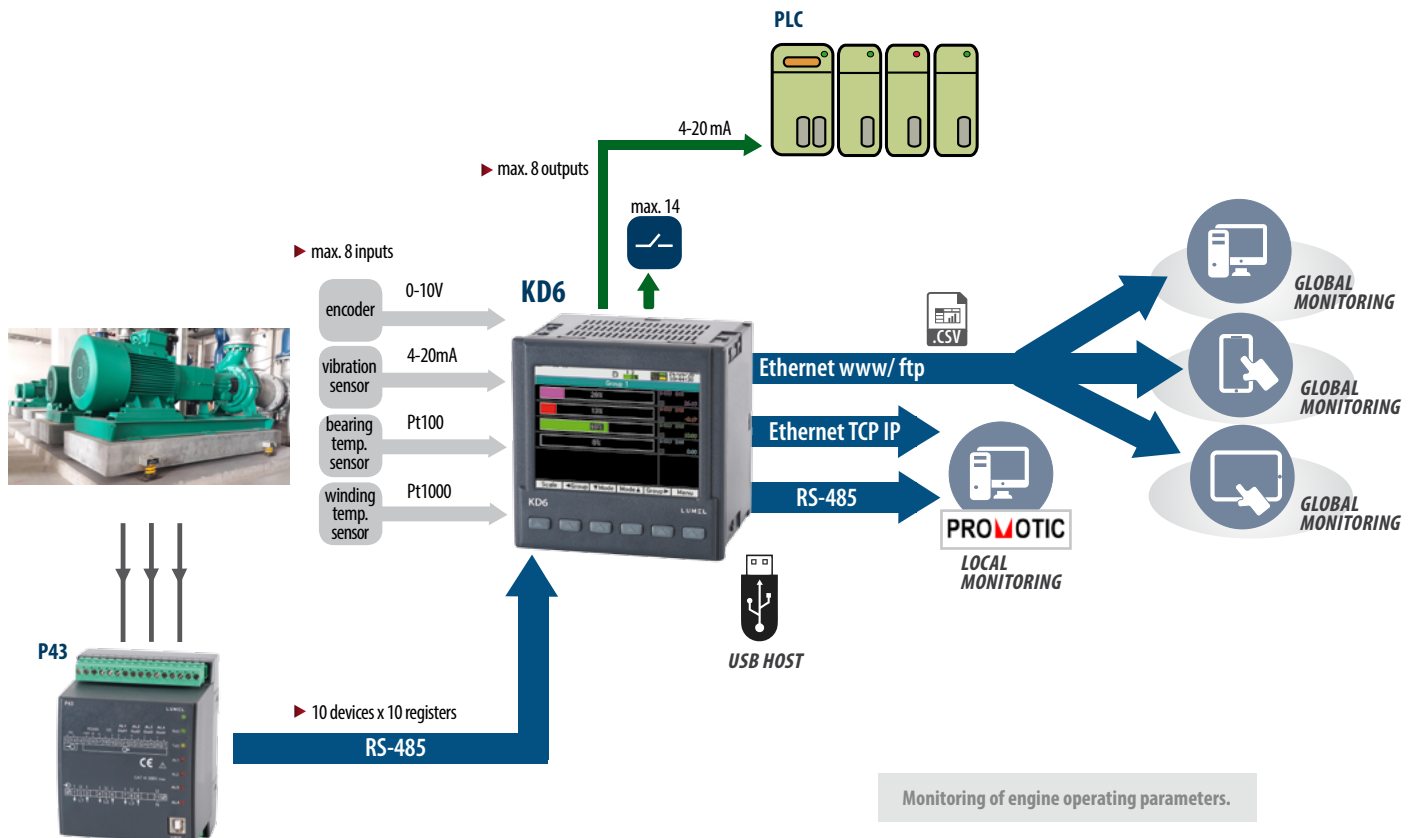
**NEW**



## KD6 - SCREEN RECORDER

- **Up to 60 logical channels** (max. up to 8 analog channels).
- **Input:**
  - measuring programmable (0,4 or 8),
  - binary (2 or 6),
  - digital Modbus RTU Master (10 devices up to 10 registers).
- **Outputs:**
  - relays (2, 6 or 8),
  - analog 0/4...20mA (0, 4 or 8),
  - supplying output 24V d.c. / 30mA,
  - digital RS-485 Modbus.
- **Graphical color display:** LCD TFT 3.5", 320 x 240 pixels, **fully configurable by a user.**
- **Archiving of measured parameters in the internal file system memory with a capacity of 8GB.**
- Data logging in the form of CSV.
- Extensive alarm, math and scaling functions.
- Data presentation in digital form, in form of analog indicators, line charts, bargraphs.
- Independent recording for each group of logical channels (interval, registration trigger mode).
- Built-in USB HOST 2.0.
- **Modern and user-friendly Ethernet interface 10/100 BASE-T:**
  - protocol: MODBUS TCP/IP, HTTP, FTP,
  - services: www server, ftp server, DHCP client.
- Programming of parameters using **free eCon software.**
- NTP client for synchronization with a time server.
- Overall dimensions: 96 x 96 x 77 mm.

## EXAMPLE OF APPLICATION



FEATURES	INPUTS	OUTPUTS	GALVANIC ISOLATION

## TECHNICAL DATA

INPUTS					
Sensor type / Input signal		Standard	Range		Basic error
RTD	PT100	EN 60751:2009	-200...850 °C	-328...1562 °F	0.2%
	PT500		-200...850 °C	-328...1562 °F	
	PT1000		-200...850 °C	-328...1562 °F	
Fe-CuNi (J)		EN 60584-1:2014	-100...1200 °C	-148...2192 °F	
Cu-CuNi (T)			-100...400 °C	-148...752 °F	
NiCr-NiAl (K)			-100...1370 °C	-148...2498 °F	
PtRh10-Pt (S)			-5...1760 °C	23...3200 °F	
PtRh13-Pt (R)			-5...1760 °C	23...3200 °F	
PtRh30-PtRh6 (B)			200...1820 °C	392...3200 °F	
NiCr-CuNi (E)			-100...1000 °C	-148...1832 °F	
NiCrSi-NiSi (N)			-100...1300 °C	-148...2372 °F	
Voltage			±10 V, ±300 mV, ±75 mV, 10 V, 300 mV, 75 mV,		
Current			±40 mA, 40 mA		
Resistance R			0...4000 Ω		

## ADDITIONAL INPUTS

Binary inputs	2 or 6 inputs; 0 V d.c. – inactive binary input, 5...24 V d.c. – active binary input
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## OUTPUTS

Output type	Properties
Analog	current: 0/4 .. 20 mA programable, load resistance ≤ 400 Ω
Relays	2, 6, 8 relays, NOC, load 250V / 0,5A a.c. or 30V / 5A d.c.
Supplying output	1x output 24V d.c. /30 mA

## DIGITAL INTERFACE

Interface type	Properties	
RS-485	1x Modbus Master/Slave interface 1x Modbus Slave interface	Transmission mode Modbus RTU: 8N2, 8E1, 8O1 Bauderate: 9.6, 19.2, 38.4, 57.6, 115.2 kbit/s Address:1...247
Ethernet	Modbus TCP/IP, NTP protocol 10/100 Base-T	WWW server, FTP server, DHCP client RJ45 socket
USB	HOST 2.0	

## EXTERNAL FEATURES

Readout field	graphical color display: LCD TFT 3.5", 320 x 240 pixels	
Overall dimensions	96 x 96 x 77 mm	panel cut-out dimensions: 92.5 x 92.5 mm
Weight	0.3 kg	
Protection grade	from frontal side: IP65	from terminal side: IP20

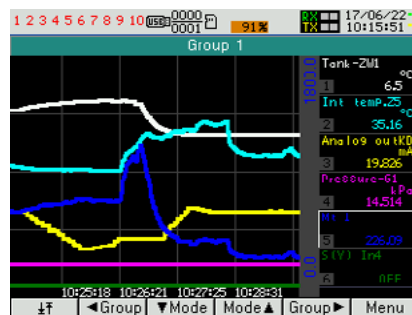
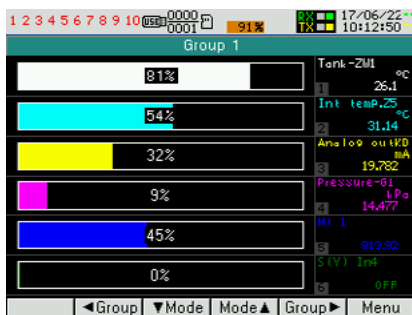
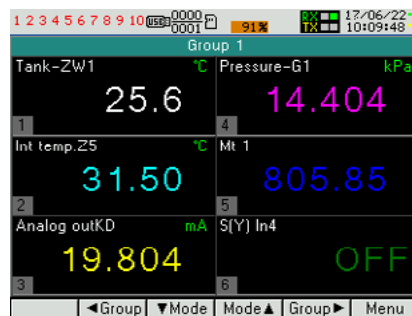
## RATED OPERATING CONDITIONS

Supply voltage	→ 85...253 V a.c. (40...50...60 ... 400 Hz), 90...300 V d.c. or 20...60 V d.c.	power consumption ≤ 12 VA
Preheating time	30 min.	
Ambient temperature	-10...23...55°C, K55 class acc. to EN61557-12	
Humidity	0...40...60...95%	without condensation
Operating position	any	
Additional error (in % of the basic error)		from ambient temperature change: < 50% / 10°C

## SAFETY AND COMPABILITY REQUIREMENTS

Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Isolation between circuits	basic	acc. to EN 61010-1
Pollution level	2	acc. to EN 61010-1
Installation category	III	acc. to EN 61010-1
Maximal phase-to-earth voltage	<ul style="list-style-type: none"> <li>for supply circuit and relay outputs 300 V</li> <li>for measuring input 50 V</li> <li>for circuits of RS-485, Ethernet, analog outputs: 50 V</li> </ul>	acc. to EN 61010-1
Altitude a.s.l.	< 2000 m	

## DATA VISUALISATION

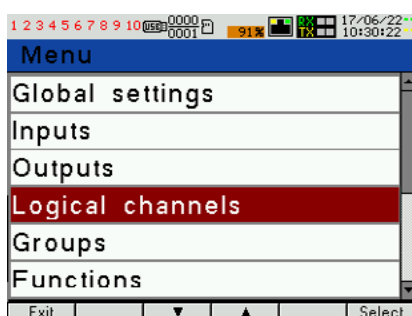
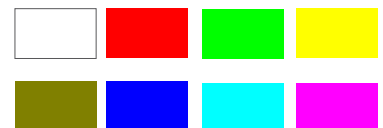


Various forms of data presentation:

- line charts
- digital indicators
- analog view
- bargraphs

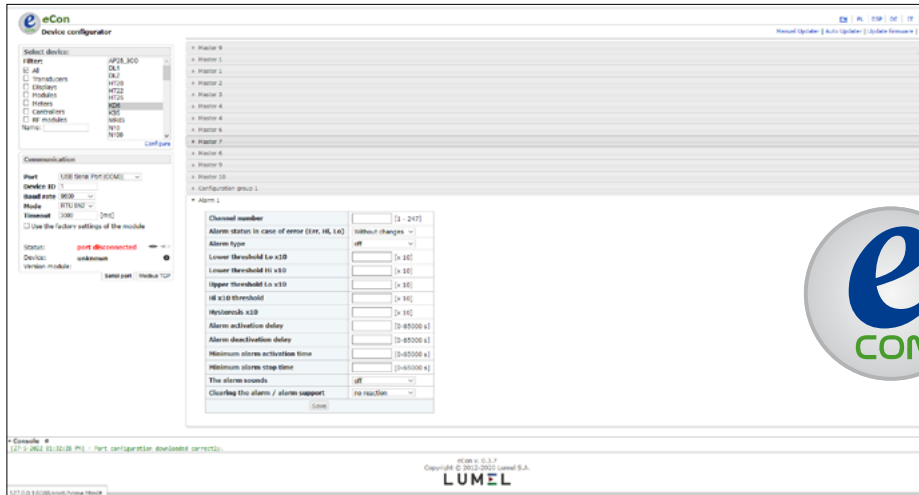
up to 10 programmable screens  
(6 parameters per page);  
ability to change color for all screens

Available colors for digital indications:



Easy to use and intuitive menu;  
information bar with status of:  
logical group archiving, USB port status,  
status of used memory storage,  
Ethernet and RS-485 interface,  
time and data.

## RECORDER CONFIGURATION WITH FREE eCON SOFTWARE

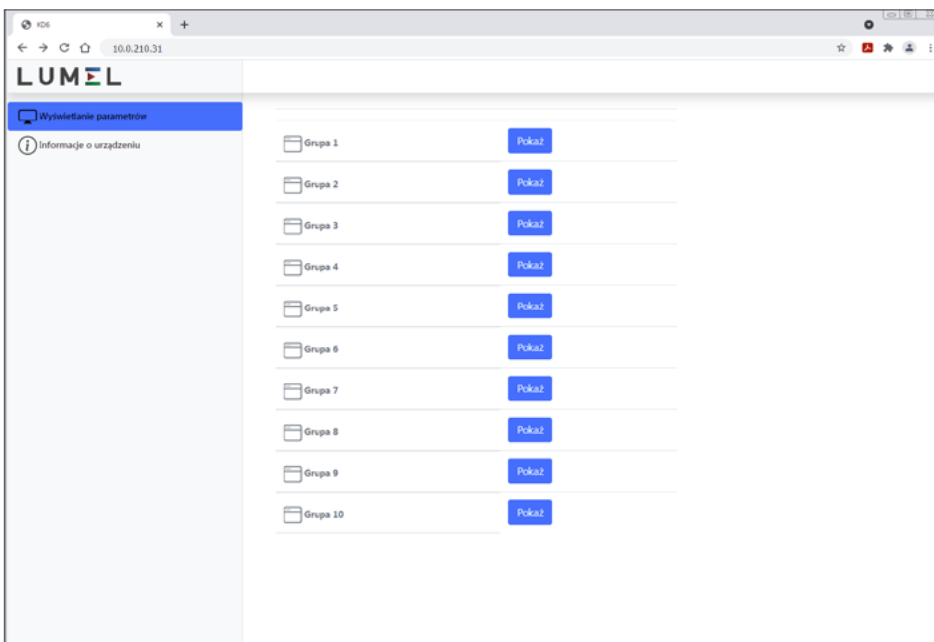


ability to configure and update of KD6 with free eCon software (via RS-485 or Ethernet interface)

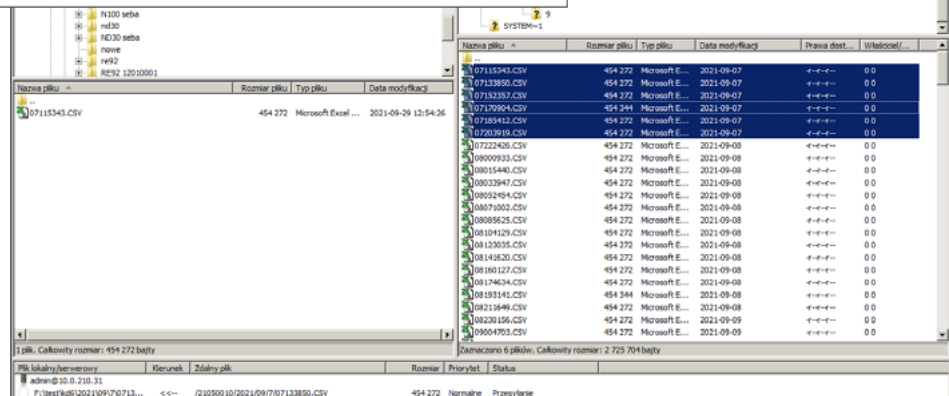
Saving the configuration to a file and loading to many of the same recorders or creating a backup copy.



## REMOTE READOUT OF PARAMETERS THROUGH ETHERNET: WWW SERVER, FTP



www server for remote reading of current measurement data; FTP server for downloading archived data in CSV files



## ORDERING CODE

KD6	X	X	X	XX	X	X
<b>I/O module – slot X*:</b>						
4 x programmable measuring inputs	4					
<b>I/O module – slot Y:</b>						
without module	0					
6 x relay outputs	1					
4 x relay outputs + 4 x binary inputs separated from each other	2					
4 x analog outputs + 4 x binary inputs with common ground	3					
4 x programmable measuring inputs	4					
<b>Supply voltage:</b>						
85...253 V a.c., 90...300 V d.c.			1			
20...60 V d.c.			2			
<b>Version:</b>						
standard				00		
custom-made**				XX		
<b>Language:</b>						
Polish/English					M	
other*					X	
<b>Acceptance tests:</b>						
with test certificate						0
with calibration certificate						2
acc.to customer's request**						X

\* all possible variants for slot X are described in the user manual in chapter 11

\*\* only after agreeing with the manufacturer

