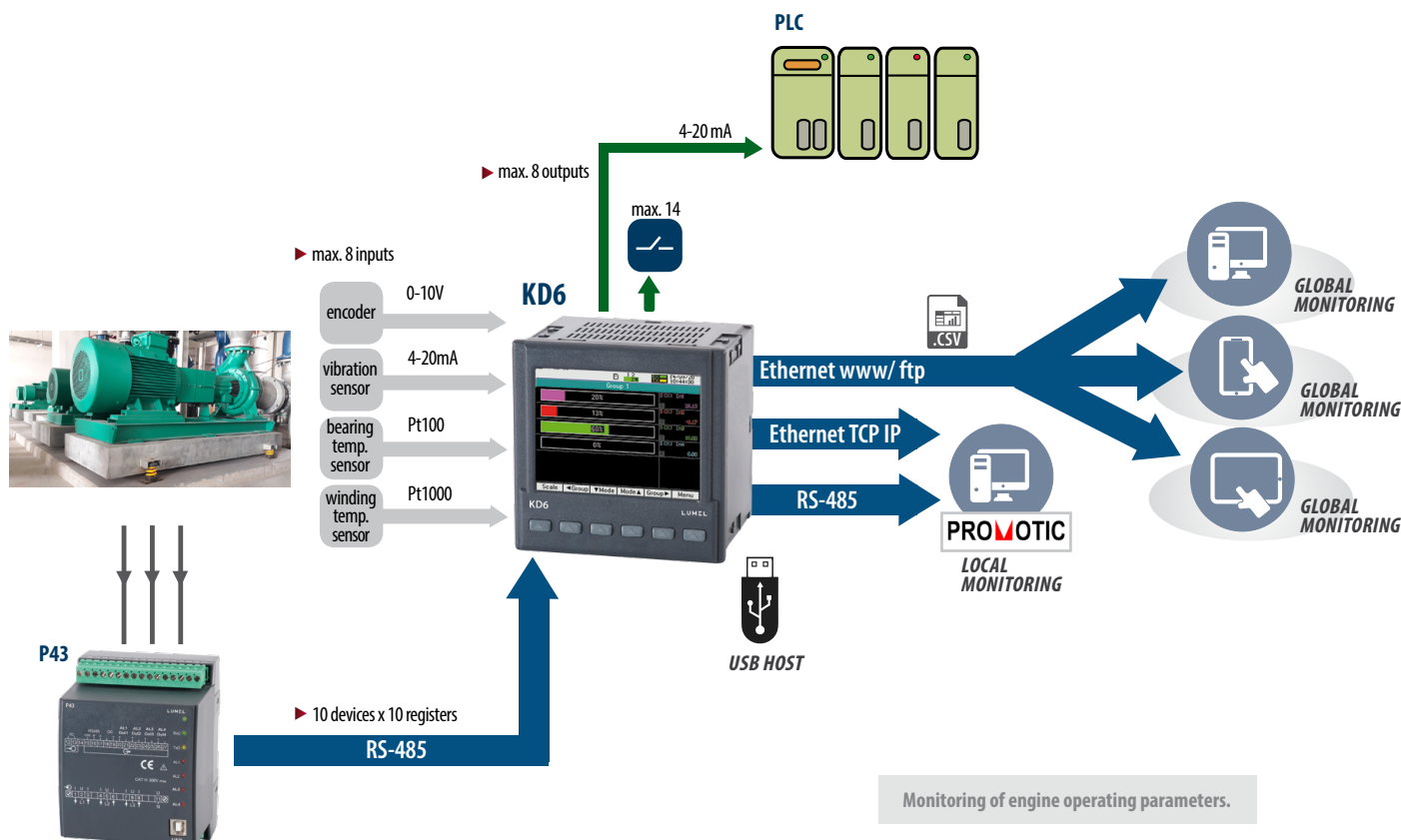




## KD6 - SCREEN RECORDER

- **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

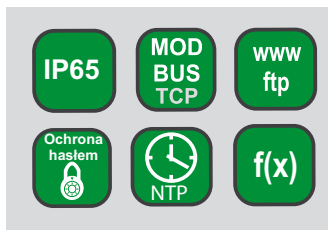


CURRENT, VOLTAGE, POWER, THD MEASUREMENT

Monitoring of engine operating parameters.

# KD6 - SCREEN RECORDER

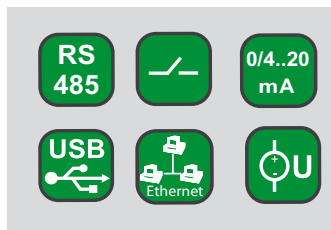
## FEATURES



## 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)                |        | -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,<br>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 |
|---------------|--------------------------------------------------------------------------------------|

### OUTPUTS

| Output type      | Properties                                                  |
|------------------|-------------------------------------------------------------|
| Analog           | current: 0/4 .. 20 mA programmable, 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<br>1x Modbus Slave interface | Transmission mode Modbus RTU: 8N2, 8E1, 8O1<br>Bauderate: 9.6, 19.2, 38.4, 57.6, 115.2 kbit/s<br>Address: 1...247 |
| Ethernet       | Modbus TCP/IP, NTP protocol<br>10/100 Base-T                  | WWW server, FTP server, DHCP client<br>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                 |

# KD6 - SCREEN RECORDER

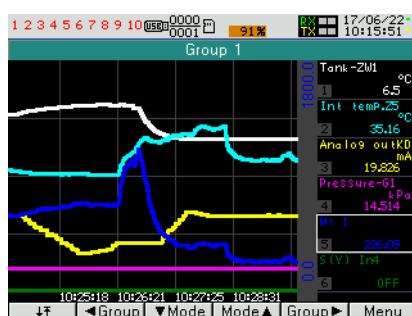
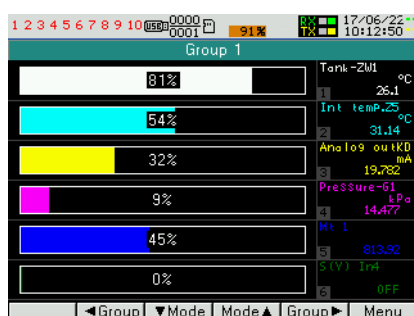
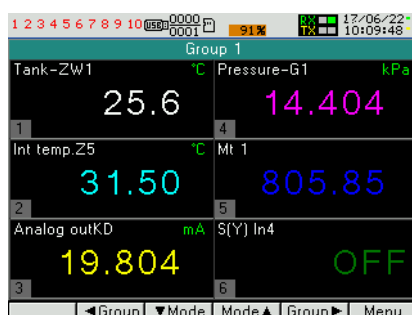
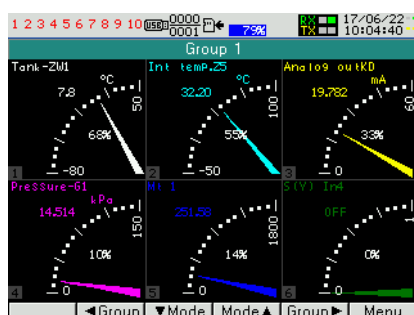
## RATED OPERATING CONDITIONS

|                                            |                                                                                   |                                               |
|--------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------|
| Supply voltage                             | → 85...253 V a.c. (40...50...60 ... 400 Hz), 90...300 V d.c.<br>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

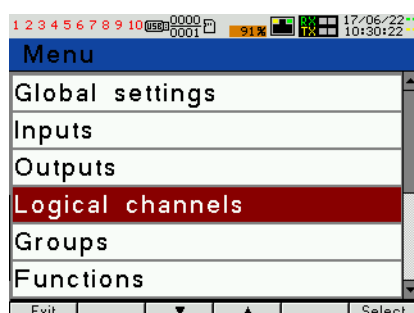
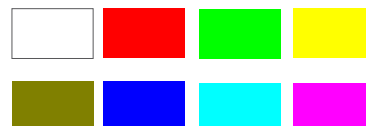


Various forms of data presentation:

- line charts
- digital indicators
- analog view
- bargraphs

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

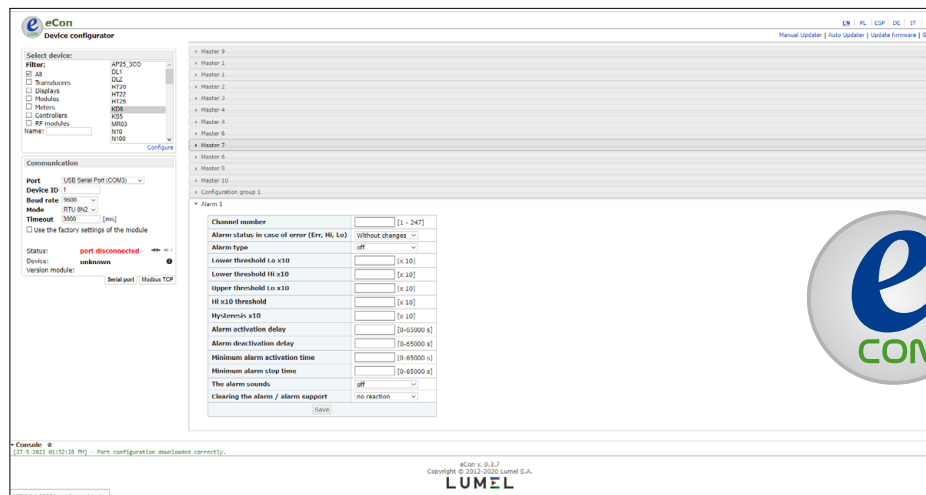
Available colors for digital indications:



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.

# KD6 - SCREEN RECORDER

## RECORDER CONFIGURATION WITH FREE eCON SOFTWARE

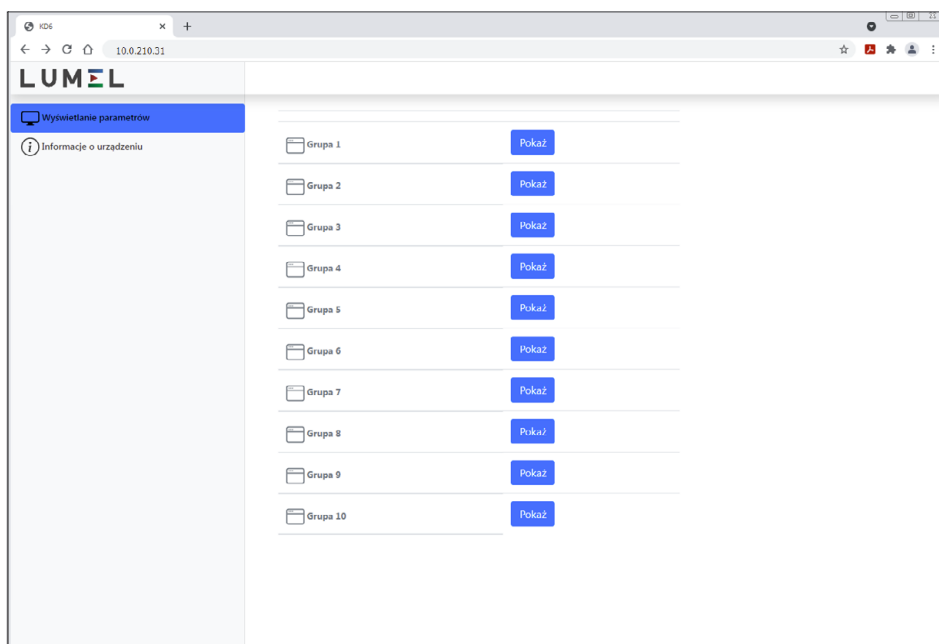


ability to configure and update of KD6  
with free eCon software  
(via RS-485 or Ethernet interface)

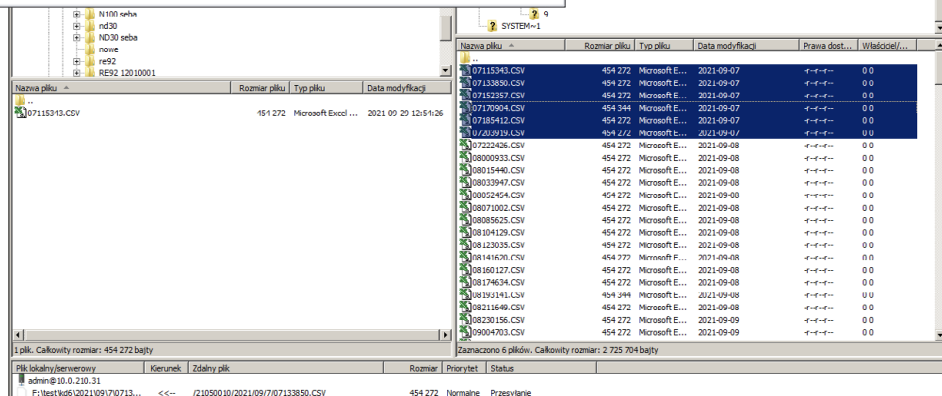
Saving the configuration to a file  
and loading to many of the same recorders  
or creating a backup copy.



## 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



# KD6 - SCREEN RECORDER

## ORDERING CODE

| KD6                                                                    | X | X | X | XX | X | X |
|------------------------------------------------------------------------|---|---|---|----|---|---|
| <b>I/O module – slot X*:</b>                                           |   |   |   |    |   |   |
| 4 x programmable measuring inputs module                               | 4 |   |   |    |   |   |
| <b>I/O module – slot Y:</b>                                            |   |   |   |    |   |   |
| without module                                                         |   | 0 |   |    |   |   |
| 6 x relay outputs module                                               |   | 1 |   |    |   |   |
| 4 x relay outputs module + 4 x binary inputs separated from each other |   | 2 |   |    |   |   |
| 4 x analog outputs module + 4 x binary inputs with common ground       |   | 3 |   |    |   |   |
| 4 x programmable measuring inputs module                               |   | 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

KD6-19\_en