



sifam tinsley
PRECISION INSTRUMENTATION

CONVERTERS & RECORDERS
www.sifamtinsley.co.uk



DATASHEET

Issue 1



Multifunction Meters
Transducers & Isolators
Temperature Controllers
Converters & Recorders
Digital Panel Meters
Current Transformers
kWh Energy Meters
Analogue Panel Meters
Shunts
Digital Bargraphs
Digital Multimeters
Protection Relays
Synchroscope Series
Rotary Switches
Power Supplies
Test & Measurement

KD10

**PROCESS RECORDER
WITH TOUCH SCREEN**



SUBJECT TO CHANGE WITHOUT NOTICE

This datasheet superseded all previous versions – please keep for future reference

Product Features:

- Up to 52 measurement channels
- Color graphic LCD screen
- Data archiving
- Data registration in CSV or SQLite3
- Visualization of measurements in digital form
- Built-in USB HOST 2.0 interface
- Modern and convenient to use Ethernet
- Programming of parameters
- PowerArchive program

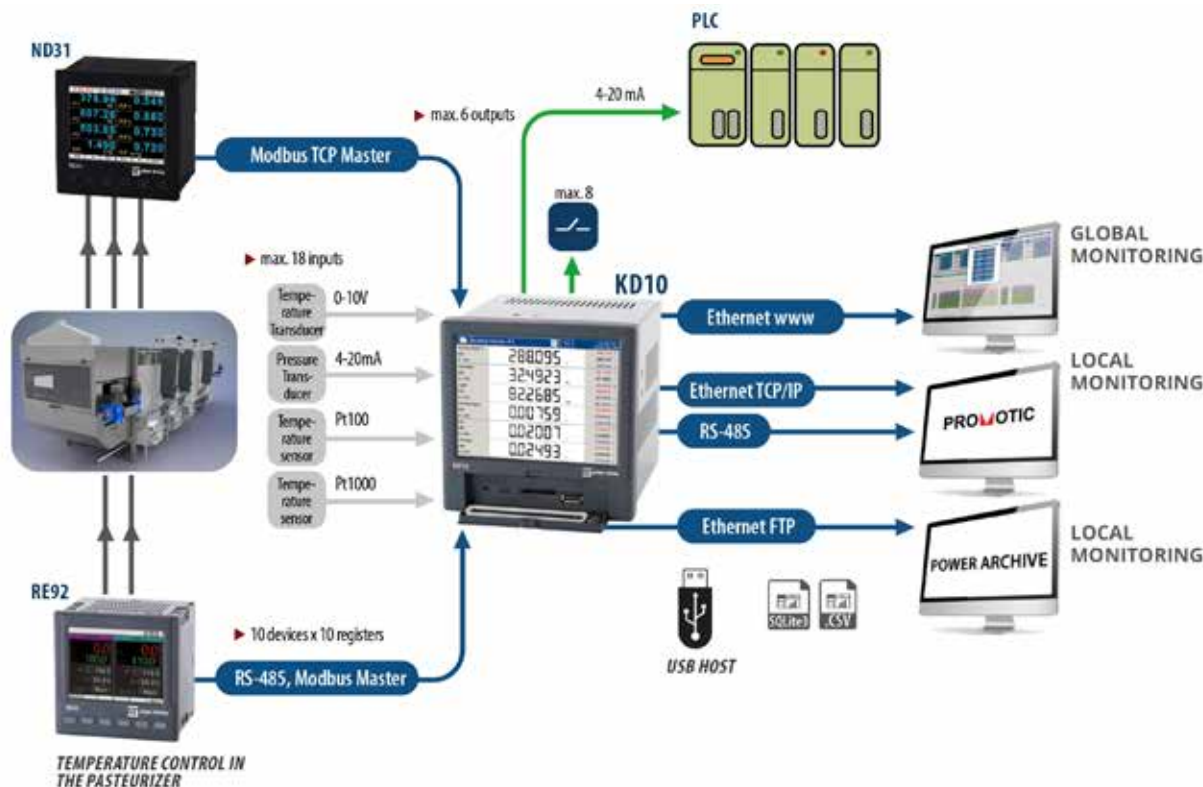
KD10 PROCESS RECORDER WITH TOUCH SCREEN



Product Features

- **Up to 52 measurement channels** (max. 18 analog channels).
- **Inputs:**
 - programmable measurement (6, 12 or 18),
 - measurement 2x Pt100 / Pt1000 / resistance,
 - binary (0, 4 or 6) RS-485 Modbus RTU Master, Modbus TCP Master,
 - RS-485 Modbus RTU Master, Modbus TCP Master (up to 32 devices, up to 10 registers from one slave device).
- **Outputs:**
 - relay (0, 4 or 8),
 - analog 0/4...20mA (0, 3 or 6),
 - RS-485 Modbus RTU Slave, Modbus TCP Slave.
- **Color graphic LCD screen** with 5.6" TFT touch panel, 640 x 480 pixels, fully user-configurable.
- Data archiving via SD card (up to 32GB)
- Data registration in CSV or SQLite3 formats with a digital signature.
- Advanced alarms, mathematical functions, and signal scaling.
- Visualization of measurements in digital form, analog indicators, line charts, bar graphs.
- Built-in USB HOST 2.0 interface.
- **Modern and convenient to use Ethernet** 10/100 BASE-T:
 - protocol: MODBUS TCP/IP, HTTP, FTP,
 - services: www server, ftp server, DHCP client.
- Programming of parameters using free KD10 Setup software.
- PowerArchive program for managing archival data.
- External dimensions: 144 x 144 x 104 mm.

Monitoring of Production Line Parameters and the Pasturisation Process



Features



Inputs



Outputs



Galvanic Isolation



Technical Data

Inputs

Input Type		Indication range	Rated range	Class
RDT	PT100	-200...850 °C	-328...1562 °C	0,1
	PT1000	-200...850 °C	-328...1562 °C	
Fe-CuNi (J)		-205...1200 °C	-150...1200 °C	
NiCr-NiAl (K)		-205...1372 °C	-150...1372 °C	
PtRh10-Pt (S)		-50...1768 °C	-50...1768 °C	
PtRh13-Pt (R)		-50...1768 °C	-50...1768 °C	
NiCr-CuNi (E)		-205...1000 °C	-150...1000 °C	
NiCrSi-NiSi (N)		-205 ...1372 °C	-205...1372 °C	
Voltage 60mV		-75...75mV	-60...60mV	
Voltage 150mV		-155...155mV	-150...150mV	
Voltage 300mV		-310...310mV	-300...300mV	
Voltage 10V		-13...13V	-10...10V	
Current 0...20mA		-24...24mA	-20...20mA	
Current 4...20mA		3,6...22mA	4...20mA	
400 Ω		0...440 Ω	0...400 Ω	
4000 Ω		0...4040 Ω	0...4000 Ω	

Additional Inputs

Input type	Properties
Binary inputs	Control signal 0...2/8...24 V d.c. Switching frequency up to 50 Hz

Outputs

Output type	Properties
Analog outputs	Current: 0/4 .. 20 mA programmable, load resistance $\leq 500 \Omega$
Relay outputs	8 or 4 programmable electromagnetic relays, normally open (NO), contact rating 250 V / 1.5 A AC or 30 V / 1 A DC

Digital Interface

Interfacet type	Properties	
RS-485	1x Modbus Master interface (optional)	Modbus RTU transmission mode: 8N2, 8E1, 8O1, 8N1 Baud rate: 1.2, 2.4, 4.8, 9.6, 19.2, 38.4, 57.6, 115.2, 230.4 kbps/s Address: 1...247
	1x Modbus Slave interface	
Ethernet	Modbus Protocol TCP/IP (Master, Slave)	Web server, FTP server, DHCP client
	10/100 Base-T	RJ45 port
USB	HOST 2.0	

External Features

Display area	5.6" TFT color graphic display with touch panel, 640 x 480 pixels	
Overall dimensions	144 x 144 x 104 mm	Panel cut-out: 138 x 138 mm
Weight	1,5 kg	
Protection rating	Front panel IP54	Terminal side: IP20

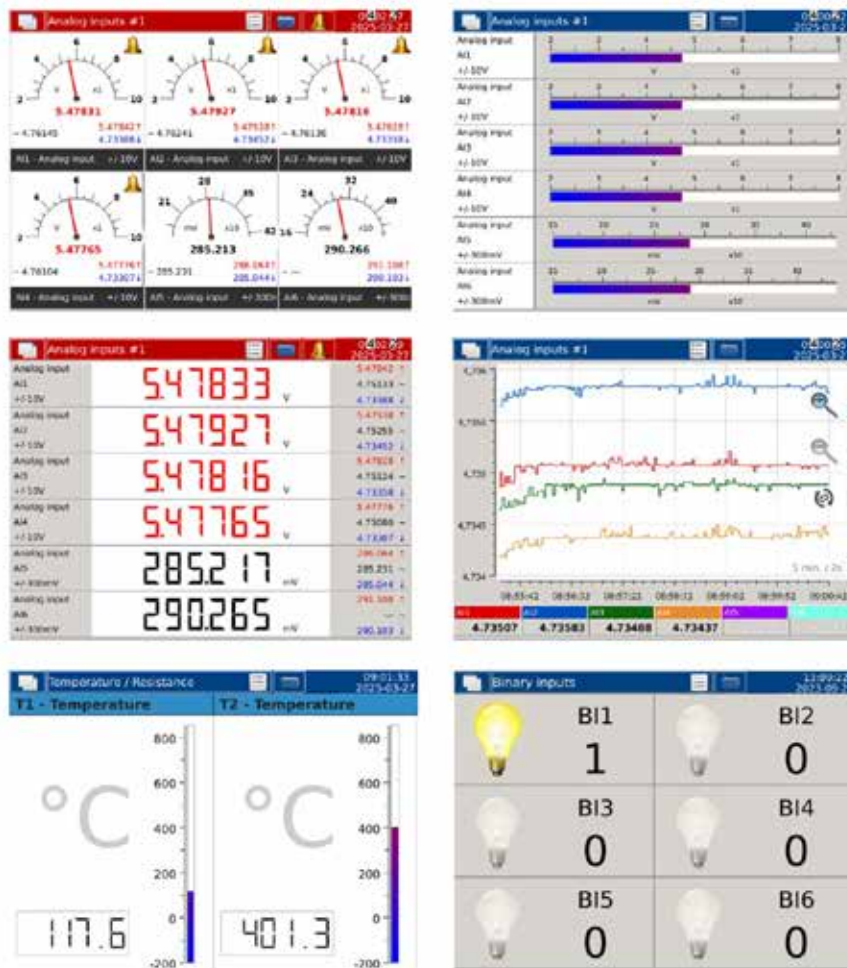
Rated Operating Conditions

Power Supply	→ 85...253 V a.c. (40...50...60 ... 400 Hz), 90...300 V d.c.	power consumption $\leq 20 \text{ VA}$
Supply voltage	0...23...55°C	
Relative humidity	below 75%	non-condensing

Safety and Compatibility Requirements

Electromagnetic compatibility	noise immunity	wg PN-EN 61000-6-2
	interference emission	wg PN-EN 61000-6-4
Pollution degree	2	wg PN-EN 61010-1
Installation category	III	wg PN-EN 61010-1
Maximum working voltage relative to earth	• for power supply circuits and relay outputs: 300 v for measurement inputs: 50 v for rs-485, ethernet, and analog output circuits: 50 v	wg PN-EN 61010-1
Altitude above sea level	< 2000 m	

Data Visualisation



Various forms of data presentation:

- line charts
- digital indicators
- analog view
- bargraphs
- binary input status
- totalizer

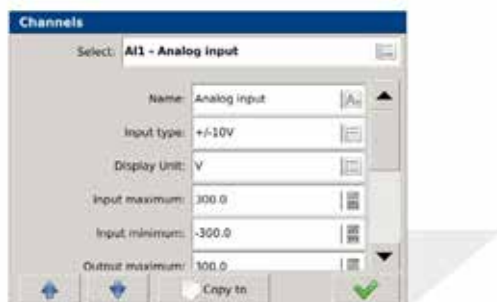
32 sets of measured values selected by the user (6 parameters per page)



easy-to-use, intuitive menu; home screen bar: view selection list, file manager, alarm window, time and date



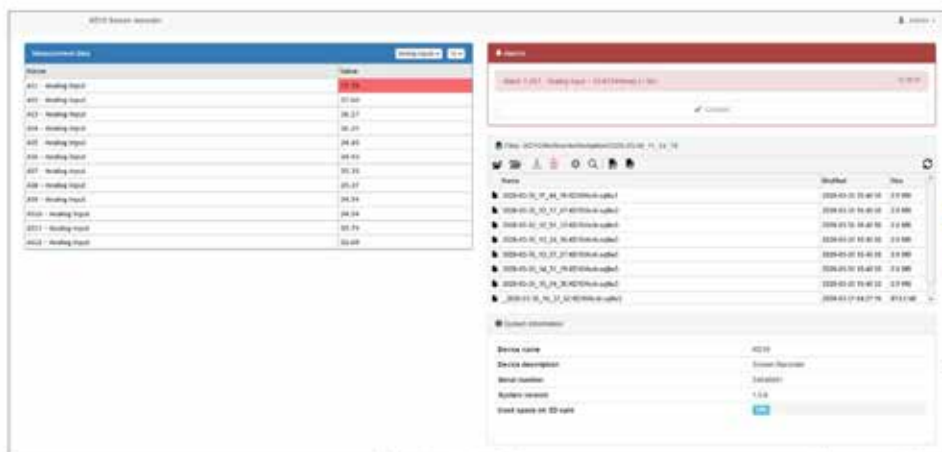
Recorder Configuration with Free KD10 Setup Software



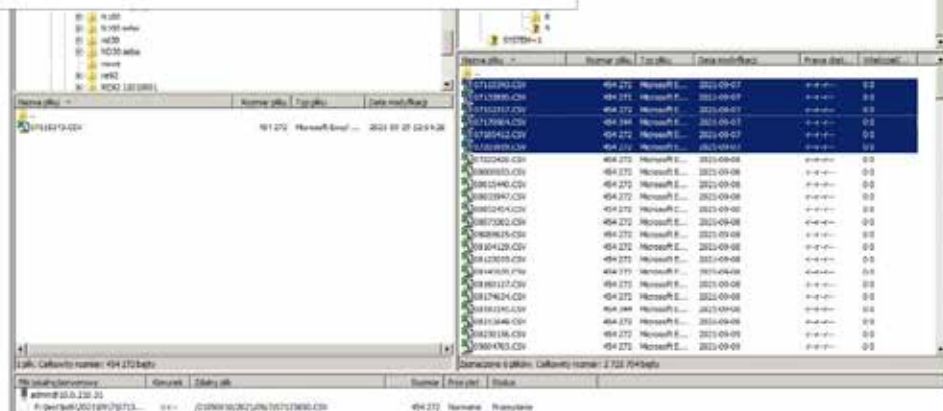
KD10 configuration via PC using the free KD10 Setup software (by copying the configuration file to an SD memory card)

Saving configuration to a file and loading to multiple identical recorders or creating a backup copy.

Remote readout of parameters through ethernet: WWW Server, FTP



WWW server for remote reading of measurement data; FTP server for downloading archival data in SQLite3 or CSV files





Review of Archival data in the Power Archive Software



Presentation of data obtained from the recorder as tables, graphical charts or reports

Verification of the authenticity and correctness of an archive file using digital signature

Ordering Codes

KD10 Screen Recorder	X	X	XX	X	X
Measurement inputs:					
6 programmable measurement inputs	1				
12 programmable measurement inputs	2				
18 programmable measurement inputs	3				
Additional inputs/outputs¹:					
none	0				
8 relay outputs	1				
6 binary inputs, 4 relay outputs	2				
6 binary inputs, 3 analog outputs	3				
4 binary inputs, 6 analog outputs ²	4				
Version:					
standard			00		
special*			XX		
Language:					
multilanguage polish/english				M	
other*				X	
Acceptance tests:					
No additional requirements					0
With an additional quality control certificate					1
With a calibration certificate					2
As agreed with the customer*					X

¹ option unavailable for 18 programmable measurement inputs

² Modbus RTU Master is unavailable

*only upon agreement with the manufacturer

ORDERING EXAMPLE - code: **KD10 3000M0** means:

KD10 - KD10 recorder

3 - 18 measurement inputs

0 - without additional inputs / outputs

00 - standard version

M - Polish-English language version

0 - without additional requirements



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Contact



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