

- 1-6 universal inputs
- Compact design
- Automatic chart winding
- Low-maintenance with 64 m roll of paper
- Wide range power supply
- Simple installation
- Easy start-up



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Model:
 KLS



Description

The Kobold hybrid recorder of type KLS is used for reliable long-duration recording and monitoring of analogue signals. The multifunctional device is suited for universal use and is configurable. One to six-channel variants can be supplied.

The inputs are electrically isolated and are measured with a clock cycle of 125 ms/channel. All conventional analogue signals (standard signals, +/- voltages or currents, Pt 100, Pt 500, Pt 1000 or thermocouples) can be measured by means of universal inputs.

Thermocouples and 4-20 mA current signals are thus monitored for line break (open circuit).

If the unit is removed from the housing for panel mounting, the measuring circuits are not interrupted. Used paper can be easily removed online and automatically rewound. This facilitates especially the visual cyclical inspection and monitoring of your measurements.

The device is adjusted with keys on the front panel. The dialog is shown on the front display.

The display is a 2x16-segment LC display for dialog operation, read-out display and messages.

The popular option "Alphanumeric" rounds off the measurement and prints the following:

- Date and time of day
- Measuring point designation
- Installation position
- Instantaneous values
- Zoom area with unit
- Chart speed
- 12 adjustable message texts
- Limit violations
- Power-fail detection with printout

The recorder can also be equipped and delivered with the option "Digital inputs/outputs". This contains 4 control inputs, 4 relay outputs and one RS485 interface.

Suitable software is required for configuration with a PC.

The device can be protected against undesirable operation with a code or control input.

Applications

- Chemical-, industrial-, environmental-, climatic measurement technology
- Power supply
- Quality assurance
- Plant and equipment manufacturing
- Laboratory applications

Technical Details

Input

Voltage: max. 50 V
0..1 V, 0..10 V
± 20/50/100/200 mV, ± 1/2/5/10 V

Input resistor: 1 M Ω

Current: max. 100 mA; 0...20 mA;
4...20 mA (line break \leq 2 mA)
± 400 μ A; ± 1/2/4/20/40 mA
input resistor 50 Ω

Resistance thermometer: Pt 100; Pt 500; Pt 1000; Ni 100
(two or three-wire connection)
measuring current: approx. 1 mA

Thermocouples: (DIN IEC 584)
type: B/J/K/L/N/R/S/T or U

Basic accuracy: \pm 0.25 % of full scale value

Switch-on drift: \pm 0.2 % of full scale value

Temperature drift: 0.25 % / 10 K

Sampling cycle: 125 ms/channel

Resolution: 12 bit

Max. allowed potential difference: DC 60 V, AC 60 Vp
(channel-channel)

Display: 2 x 16 position LCD

Recording system: 1 to 4 replaceable pens
or chamber print head

Ink capacity under reference conditions:

Continuous line system: approximately 600 m

Dot print head: 0, 5, 10, 20, 60, 120, 240, 300
and 600 mm/h;
fixed, event or
externally adjustable

Power supply: 90...253 V_{AC} (50/60 Hz)
or 18...30 V_{DC/AC} (50/60 Hz)

Power: max. 20 VA

Operating temperature: 0 to +50°C

Storage temperature: -20 to +70°C

Rel. humidity: 10...75 %

Housing: stainless steel V2A,
for panel mounting

Protection: IP 54, front

Dimensions: 144 x 144 x 215 mm (HxWxD)

Weight: approximately 4 kg

Technical Details

Digital inputs and outputs (option)

Inputs: 4 control inputs
 logical "0": -3 to +5 V
 logical "1": +12 to +30 V
 duration > 20 ms
 bounce time < 5 ms
 input resistance approx. 10 kΩ
 selectable functions: locking the front parameterization, functions with alphanumeric option:
 print date/time of day, instantaneous values, message text, feed switching, registering stop

Internal auxiliary voltage: 24 V_{DC}, max. 25 mA

Relay outputs: 4 N/O contacts (programmable as N/C contact) max. 250 V, 3 A

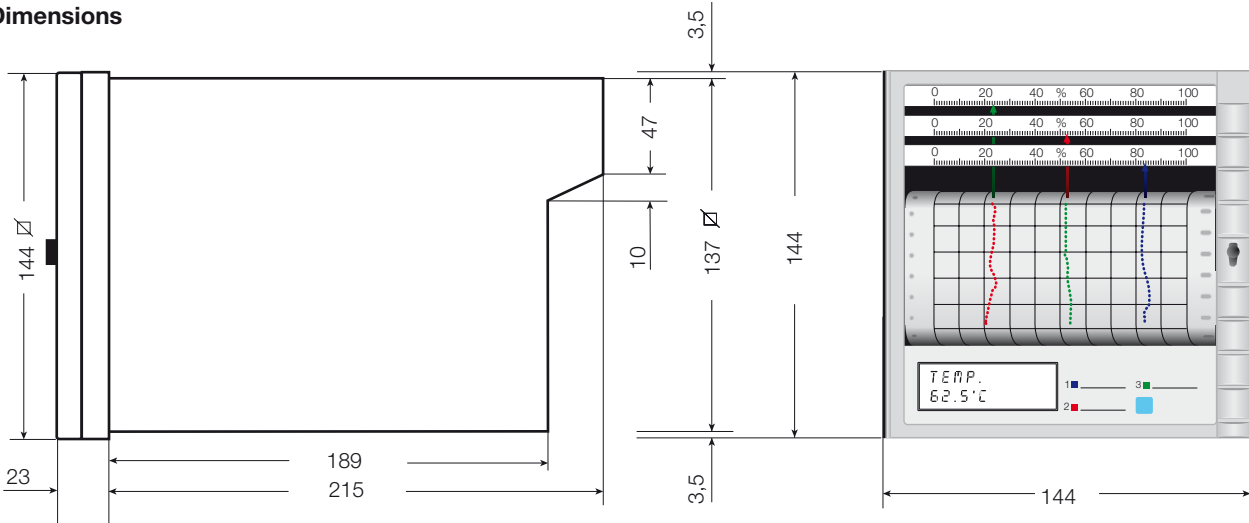
Interface: RS 485, rear
 line length max. 1000 m
 device address adjustable

Alphanumeric (option)

Real-time clock: non battery-backed buffer with power failure minimum 50 hours automatic summer /normal time

Text printouts: date and time of day, measuring point designation, device designation, instantaneous value, unit, zoom area, chart speed, 12 adjustable message texts (with 15 characters each), limit violations, feed switching, power-failure times (on/off)

Dimensions



Order Details (Example: KLS-1000)

Input	Model	Alphanumeric	Supply	Digital inputs /outputs
1 channel line recorder	KLS-1...	...0... = without ...1... = Date, time of day and text block	...0... = 90...253 V _{AC} ...3... = 18...30 V _{DC/AC}	...0... = without ...4... = 4 relays, 4 control inputs and RS 485
2 channel line recorder	KLS-2...			
3 channel line recorder	KLS-3...			
3 channel line recorder 1 channel point recorder	KLS-4...			
6 channel point recorder	KLS-6...			

Example of Connections

