

# Touch-screen chart recorder and data logger - The KD7



- Intuitive setup via graphical MS Windows interface
- 32-bit ARM core, MS Windows CE operating system
- 3, 6 or 12 galvanically isolated measuring channels
- 24 data comms measuring channels
- 16 or 32 alarms and 8 or 16 digital inputs,
- 4 or 8 analog outputs,
- Flexible maths functions available as an option
- Clear, bright touch-screen display
- 24V Excitation outputs to power transmitters
- Alarm options, 2 per channel, relay or solid state
- Accepts signals from most industrial sensors
- Built in web server - monitor from anywhere
- Anti-tamper algorithm prevents data alteration
- Up to 4 GB of storage on compact flash
- Easy export to Excel or other application
- Multi-language ability
- Sealed IP65 from the front

Online pricing and model number selection tool  
[www.london-electronics.com/pl\\_kd7.htm](http://www.london-electronics.com/pl_kd7.htm)

## Measuring ranges - universal measuring inputs

Input	Menu	Full Range	Accuracy	Min. Range	Accuracy
Voltage	mV	+/-9999mV	0.15%	5mV	0.25%
Current	mA	+/-20.00mA	0.15%	1mA	0.25%
T/C J	TC J	-200 to +1200 °C	0.1%	100 °C	1%
T/C K	TC K	-200 to +1370 °C	0.1%	130 °C	0.7%
T/C N	TC N	-200 to +1300 °C	0.1%	200 °C	0.5%
T/C E	TC E	-200 to +1000 °C	0.1%	100 °C	1%
T/C R	TC R	0 to +1760 °C	0.2%	540 °C	0.3%
T/C S	TC S	0 to +1760 °C	0.2%	570 °C	0.3%
T/C T	TC T	-200 to +400 °C	0.1%	110 °C	0.9%
T/C B	TC B	400 to +1820 °C	0.2%	1000 °C	0.2%
PT100	PT100	-200 to +850 °C	0.15%	50 °C	0.25%
PT500	PT500	-200 to +850 °C	0.3%	50 °C	0.5%
PT1000	PT1000	-200 to +850 °C	0.3%	50 °C	0.5%
NI100	Ni100	-60 to +180 °C	0.15%	50 °C	0.25%
CU100	Cu100	-50 to +180 °C	0.15%	50 °C	0.25%
Potenti'o'r.	Pot. trans	50 to 2000 Ohms	0.15%	100 Ohms	0.25%
Resist'ce.	Res. trans	0 to 2000 Ohms	0.15%	100 Ohms	0.25%

The KD7 is a remarkable instrument. Designed originally as a paperless chart recorder, it has grown to become much more.

You can use it as a multi-channel display in one of 4 popular formats, analogue meter, digital meter, bargraph or chart.

Or, use it as a supervisory monitor, for example in a food storage area. It could accept up to 24 individual temperature sensors, and can apply high and low alarms to each measurement - ideal if you want to spot any deviations from desired temperature. Too warm and you risk bacterial growth, too cold and you risk freezing and possible damage to food texture.

It also accepts logic inputs from switches, so you can record alarm activity, building access, machine shutdowns etc.

It allows you to scale any 4-20mA or 0-10V signal into engineering units and you can name each channel with your own descriptive text.

**The KD7 complies with regulation 21 CFR Part 11, for electronic records and signatures, as issued by the Food and Drug Administration (FDA).**

The optional maths functions module adds versatility. Imagine you have a number of input channels and want to calculate the average value - easy! Or you may have RPM on one channel, torque on another and you want to compute horsepower - easy! Just type in your formula as you would write it down on paper and KD7 will do your calculations for you.

All connectors are detachable screw terminals, for easy installation and maintenance.

## Rear view of the 12 input version, with relay and solid state alarm outputs



## KD7 Specifications

### Programmable measuring inputs:

Number of measuring channels	3, 6 or 12
Input resistance	> 10 M.
Max. sampling rate	350 ms
Isolation between channels	100 V d.c.
Isolation from input to ground	500 V d.c.

### Standard inputs

Number of measuring channels	6 or 12
Voltage measurement	0...10 V
Current measurement	0/20 mA/4/20 mA

Isolation between channels	500 V d.c.
Isolation from input to ground	500 V d.c.
Measurement accuracy	0,25% of range
Measurement time each input	minimum 100 ms

### Admissible overload in the measuring system

to EN 60051-8

### Logic inputs 8 or 16, with a common 0V

Control signal	0/5... 24 V d.c.
Switching frequency	up to 50 Hz (depending on equipment configuration)
Isolation from case	500 V d.c.

### Analog outputs:

<b>Current:</b> 4 or 8 galvanically isolated	
Output signal	0...5 mA, 0...20 mA or 4...20 mA
Accuracy	0.2%
Load resistance	< 500 Ohms
Isolation from the case	500 V d.c.

### Voltage: 4 or 8 galvanically isolated

Output signal	0...5 V, 1...5 V
Resistance	500 Ohms min.
Accuracy	0.2%
Isolation from the case	500 V d.c.

### Alarms:

#### Electromagnetic relays: 8 or 16, programmable

Load capacity for resistive load	250 V a.c./1 A 30 V d.c./1 A
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#### OptoMOS relays: 8 or 16, programmable

Load capacity for resistive load	85 V d.c., 100 mA 60 V a.c., 70 mA 300 mA/10 ms
Current peak value	8 Ohms approx.
OptoMOS resistance	SMD type F 125 V/ 125 mA (SIBA) or BSMD-S0.125 A (TME)
Over current protection	

### Interfaces:

RS-232 transmission protocol	Modbus Slave
Baud rate	300... 256000 bit/s
Transmission mode	ASCII/RTU
RS-485	Modbus Master
RS-485	Modbus Slave
Transmission modes	ASCII/RTU
Ethernet 10 Base-T	Socket RJ45,
Server	WWW
USB V.1.1 Device	Socket USB-B

### Excitation outputs for external transmitters

2 x 24 V d.c./30 mA

### General recorder parameters:

Frontal face dimensions	144 x 144 mm
Depth behind the panel	155 mm
Colour graphical screen	LCD 5,7" of TFT
Resolution	320 x 240 pixels,
External data carrier	CompactFlash up to 4 GB

Internal RAM memory (buffer)	6 MB
Built-in maths operators and functions	Arithmetical, Logic, Integral
Working temperature	0 to 50°C
Relative air humidity	< 75% no condensation

Supply voltage	90 to 253 V a.c. or 18 to 30 V d.c.
Power consumption (max.)	< 30 VA

Fuse	RFS 1.6 A 250 V for a.c. supply
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### Housing protection class:

From front	IP 65 acc. EN 60529
From rear	IP 20 acc. EN 60529

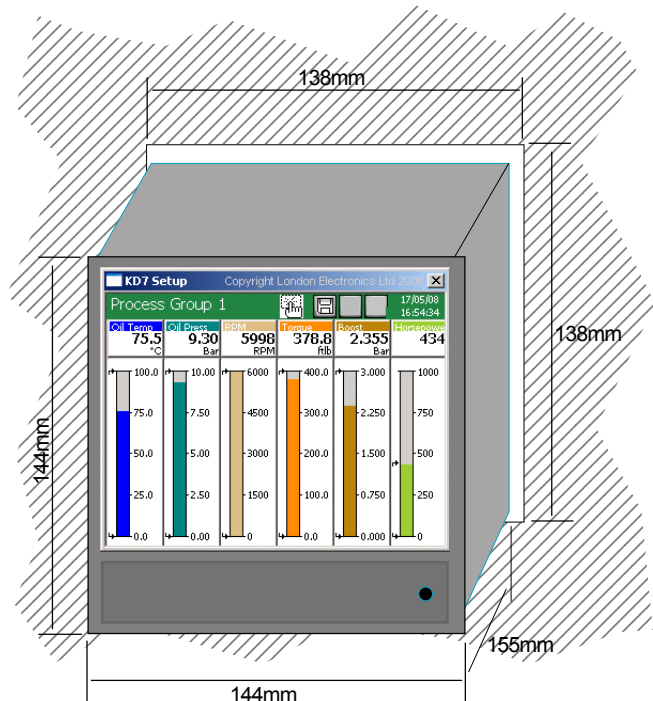
### Operational safety:

Installation category	EN 61010-1 II
Pollution level	2

### Electromagnetic compatibility:

Noise emissions	EN 61000-6-4
Noise immunity	EN 61000-6-2

<b>Weight</b>	< 2 kg
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## Ordering Code

**KD7** = Basic unit

see [http://www.london-electronics.com/pl\\_kd7.htm](http://www.london-electronics.com/pl_kd7.htm)  
for a detailed ordering guide and pricing tool