PAPERLESS RECORDER

Industrial Multi-Channel Data Recorder — Product Catalogue

RK Technologies — Industrial Process Monitoring Solution

RK-NEX-1500

Up to 18 Channels · 3.5" TFT Color LCD · Thermocouple / RTD / Voltage / Current · RS-485 Modbus

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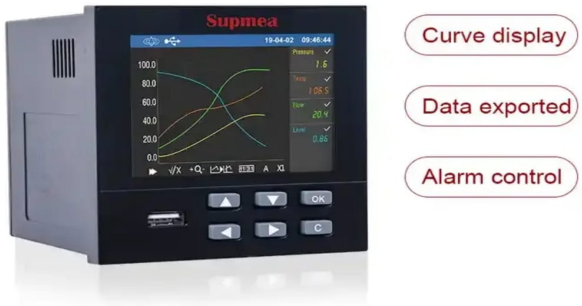
RK-NEX-1500

Industrial Paperless Recorder
Up to 18 Analog Input Channels · 3.5-inch TFT Color LCD · Weight: 0.37 kg

★ NEW ★
Field & Lab Ready

RK-NEX-1500 — Multi-Channel Paperless Recorder for Industrial Process Monitoring & Data Logging



PRODUCT OVERVIEW

The RK-NEX-1500 is an industrial paperless recorder featuring a 3.5-inch TFT true-color full-view LCD display. It supports connection of various industry-standard signals including current, voltage, thermocouple, and thermal resistance (RTD) sensors. The recorder provides real-time display, historical data recording, overrun alarm monitoring, automated reporting, RS-485 Modbus communication, USB data export, flow accumulation, and temperature/pressure compensation. Housed in a flame-retardant DIN panel-mount enclosure, it is suitable for demanding industrial environments.

TECHNICAL SPECIFICATIONS

Model	RK-NEX-1500 (Industrial Paperless Recorder)
Display	3.5-inch TFT True-Color LCD, 320×240 resolution, HD LED backlight

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Dimensions	96 × 96 × 100 mm (W × H × D) | Hole size: 92 × 92 mm
Mounting Panel Thickness	1.5 mm ~ 6.0 mm
Weight	0.37 kg
Power Supply	(85 ~ 264) VAC, (47 ~ 63) Hz | Optional: 24 VDC
Max Power Consumption	10 W
Internal Storage	64 MB Flash (optional: 96 MB, 128 MB)
External Data Export	USB 2.0 U-disk interface
Input Channels	Up to 18 analog signal input channels
Sampling Period	1 second
Alarm Outputs	Up to 4 relay alarm outputs — Normally open, 2A / 250VAC
Communication	1 × RS-485 | Modbus RTU protocol
Power Distribution Output	150 mA, 24 VDC
Power Down Protection	All data stored in Flash — no data loss on power failure; RTC battery backup
Operating Temperature	0°C ~ 50°C
Relative Humidity (Op.)	10% ~ 85% (no condensation)
Storage Temperature	-20°C ~ 60°C
Storage Humidity	5% ~ 95% (no condensation)
Shell Material	Flame retardant material

INPUT SIGNAL TYPES & ACCURACY

DC Voltage / Current Input

Signal Type	Maximum Allowable Error (%FS)
(1~5) V, (0~5) V, (0~10) V (4~20) mA, (0~20) mA, (0~10) mA, (0~100) mV	±0.1
(-20~20) mV, (0~20) mV	±0.2

Thermocouple Input (Without Cold Junction Error)

Type	Range (°C)	Max Error (°C)
B	600 ~ 1800	±2.4
E	-200 ~ 1000	±2.4
J	-200 ~ 1200	±2.4
K	-200 ~ -100 / -100 ~ 1300	±3.3 / ±2.0
S	-50~100 / 100~300 / 300~1600	±3.7 / ±2.0 / ±1.5
T	-200 ~ -100 / -100 ~ 400	±1.9 / ±1.6
R	-50~100 / 100~300 / 300~1600	±3.7 / ±2.0 / ±1.5
N	-200 ~ 1300	±3.0
WRe5-26	0 ~ 2310	±4.0
WRe3-25	0 ~ 2315	±4.0

RTD (Resistance Temperature Detector) Input

Type	Range (°C)	Max Error (°C)

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Cu50	-50 ~ 150	±1.0
Pt100	-200 ~ 650	±1.0
Pt1000	-200 ~ 200	±1.0

** Special type thermal resistance can be customized on request.*

OUTPUT SIGNAL

Alarm Output

Type	Range	Contact	Rating	Response
Alarm Output	0/1	Normally Open	2A / 250VAC	1 second

Current Transmission Output (Optional)

Signal Type	Range (mA)	Max Error (mA)
	4 ~ 20	±0.025
Current Output	0 ~ 20	±0.025
	0 ~ 10	±0.025

KEY FEATURES & HIGHLIGHTS

- ✔ Up to 18 analog input channels — current, voltage, thermocouple, and RTD sensor support
- ✔ 3.5-inch TFT true-color full-view LCD with high-definition LED backlight
- ✔ 4 display modes: Curve display, Bar graph display, Overview display (36 channels), Alarm record
- ✔ 4 relay alarm outputs with 2A/250VAC contact capacity — buzzer alert on overrun
- ✔ RS-485 communication with Modbus RTU protocol for SCADA/DCS integration
- ✔ USB 2.0 interface for direct data export to U-disk — no PC software needed on site
- ✔ 64 MB internal Flash storage (upgradeable to 96 MB or 128 MB)
- ✔ Power-down protection — all data and settings retained in Flash after power failure
- ✔ Internal RTC battery backup — real-time clock maintained even without mains power
- ✔ 150 mA / 24 VDC power distribution output for connected transmitters
- ✔ Flow accumulation function with temperature and pressure compensation option
- ✔ Custom boot screen / logo supported
- ✔ Display screenshot capture function
- ✔ DIN panel-mount (96×96 mm) — flame-retardant enclosure for industrial environments
- ✔ Wide power supply range: 85~264 VAC or optional 24 VDC

APPLICATION SCOPE

Metallurgy & Steel	Continuous temperature and process monitoring in furnaces and rolling mills
Oil & Gas	Multi-point pressure, flow, and temperature recording in pipelines
Chemical Plants	Process variable recording for reaction vessels, distillation, and storage tanks
Pharmaceutical	GMP-compliant temperature and humidity recording in production and storage
Food & Beverage	Cold chain and pasteurisation process monitoring
Heat Treatment	Furnace temperature profiling with multi-thermocouple input

Water Treatment	Flow accumulation and multi-parameter process logging
Building Materials	Kiln and drying process temperature recording
Papermaking & Textiles	Continuous process variable monitoring and alarm management
PID Control Systems	Integration with SCADA via RS-485 Modbus for closed-loop control

ORDERING CODE

RK-NEX-1500 — X — 0XX — 02 — N2/N4 — E1 — 1/2 — 0/1 — X — USB1 — V1/V2

Input Channels	X = 1 to 18 channels
Transmission Output	0 = None | XX = XX-channel 4~20mA output (1 ≤ XX ≤ 4)
Communication	0 = None | 2 = RS-485
Relay Output	N2 = 2 relay outputs | N4 = 4 relay outputs
Distribution Output	E1 = 1-channel 24VDC power distribution output (standard)
Storage Size	1 = 64 MB | 2 = 128 MB
Compensation Type	0 = None | 1 = Temperature & Pressure compensation
Flow Accumulation	X = 0 to 4 channels
USB Data Export	USB1 = USB transfer function (standard)
Power Supply	V1 = 24 VDC | V2 = 220 VAC (85~264 VAC)

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