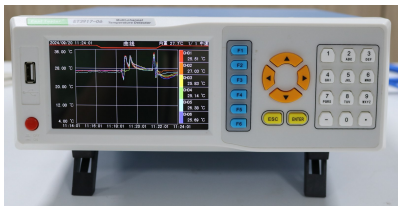
ET3917 Multi-Channel Temperature Detectors (Full Function)

ET3917 Series — Thermocouple · RTD · Voltage · Current



OVERVIEW

The ET3917 series multi-channel temperature detectors (full-function type) offer a clear interface, flexible operation and large-volume data storage. They accept 10 thermocouple types (J, K, T, E, S, N, B, R, WRe3-25, WRe5-26) and 4 RTD types (PT1000, PT100, CU100, CU50), and additionally support 10 V and 100 V voltage inputs and a 20 mA current input — for production lines, laboratories and R&D departments across the lighting, power tool, household appliance, motor, heating appliance, pharmaceutical, petrochemical, chemical, metallurgy and electric power industries.

FEATURES

- Multi-channel testing: 6 to 48 channels, configured to requirements
- 5-inch industrial true-colour LCD
- Voltage measurement: 10 V and 100 V ranges
- Current measurement: 20 mA range
- High-speed, high-performance 32-bit ARM microprocessor — simultaneous multi-channel acquisition, recording, display and alarming
- Each measurement module supports 6 channels, up to 48 channels; module count configured to requirements
- Data displayed as numeric values, curves and bar graphs; numeric interface shows 6 / 12 / 18 / 24 channels at once with auto page-turning (selectable intervals)
- 6-digit display, range −999.99 to 9999.99
- Built-in GB2312 Chinese character library with full-pinyin input
- Per-channel parameter settings: high/low alarm limits, temperature calibration, display unit and free naming
- Audible and visual alarm when a measured value exceeds its set limits; relay alarm output optional
- Hardware real-time clock with lithium-battery backup; maximum clock error ±1 min/year
- Channels isolated from each other, strong anti-interference; isolation voltage peak up to 400 V
- History data stored on an 8 GB TF card; export via USB flash drive
- Sampling: slow 1 s/channel, medium 0.5 s/channel, fast 0.2 s/channel
- Standard interfaces: USB Device, USB Host, RS232 — SCPI programming protocol supported

TECHNICAL PARAMETERS

Item	ET3917 Series
Models	ET3917-06 / -12 / -18 / -24 / -30 / -36 / -48
Channels	6 to 48 channels (6 per module)

Item	ET3917 Series
Thermocouple measurement accuracy	0.02 % FS
RTD measurement accuracy	0.1 % FS
Voltage accuracy	Max. 0.02 % FS (see voltage / current sheet)
Current accuracy	0.02 % FS (see voltage / current sheet)
Resolution	0.001
Supported thermocouple types	K, J, T, E, S, N, B, R, WRe3-25, WRe5-26
Thermocouple measurement range	78 mV
Supported RTD types	PT1000, PT100, CU100, CU50
Voltage ranges	10 V, 100 V
Current range	20 mA
Cold-junction compensation accuracy	±0.5 °C
Measurement speed	Slow 1 s/channel, medium 0.5 s/channel, fast 0.2 s/channel
Display modes	Numeric values, curves, bar graphs
Calibration	Isolated correction factor for each channel
Alarm	Isolated alarm setting (upper-upper, upper, lower, lower-lower limits)
Data record interval	1 s
Data storage	8 GB TF card
Interfaces (standard)	USB Device, USB Host, RS232 · SCPI protocol

THERMOCOUPLE SHEET (ET3917)

Type	Temperature Range	Accuracy	Resolution
K	−200 to 1372 °C	±0.54 °C	0.01 °C
J	−200 to 1100 °C	±0.43 °C	0.01 °C
T	−100 to 400 °C	±0.54 °C	0.01 °C
E	−50 to 830 °C	±0.36 °C	0.01 °C
S	−50 to 1760 °C	±1.00 °C	0.01 °C
N	−200 to 1300 °C	±0.83 °C	0.01 °C
B	600 to 1820 °C	±1.15 °C	0.01 °C
R	−50 to 1768 °C	±1.02 °C	0.01 °C
WRe3-25	0 to 1500 °C	±1.90 °C	0.01 °C
WRe5-26	0 to 1500 °C	±1.44 °C	0.01 °C

Accuracies exclude the error of the thermocouple itself and of cold-junction compensation.

RTD SHEET (ET3917)

Type	Temperature Range	Accuracy	Resolution
PT1000	−200 to 650 °C	±0.75 °C	0.01 °C
PT100	−50 to 850 °C	±1 °C	0.01 °C
CU100	−50 to 150 °C	±1 °C	0.01 °C
CU50	−50 to 150 °C	±2 °C	0.01 °C

Accuracies exclude the error of the thermal resistance itself.

VOLTAGE / CURRENT SHEET (ET3917 ONLY)

Range	Accuracy	Resolution
10 V	±0.002 V	0.001 V
100 V	±0.1 V	0.01 V
20 mA	±0.004 mA	0.001 mA

GENERAL INFORMATION

Power supply	AC 220 V ±10 %, or AC 110 V ±10 %, 45–65 Hz
Display	5-inch industrial true-colour display, 854 × 480
Working temperature	0 °C to 40 °C
Storage temperature	−10 °C to 70 °C
Relative humidity	< 80 %
Communication ports	USB Device, USB Host, RS232 (standard) · SCPI protocol · relay alarm output optional
Dimensions	260 × 300 × 100 mm (W × D × H)