**Data Sheet**

BK PRECISION
Sefram
a B&K Precision company

# Portable Multi-Channel Data Acquisition Recorder

## DAS240 Series




The DAS240 is ideal for measuring and recording common parameters such as voltage, current, temperature, pressure, and more with sampling rates up to 1,000 samples per second. It includes 20 universal analog inputs with convenient screw terminals, and an expandable design to support up to 200 channels. This data logger also provides digital inputs and alarm outputs for process monitoring applications.

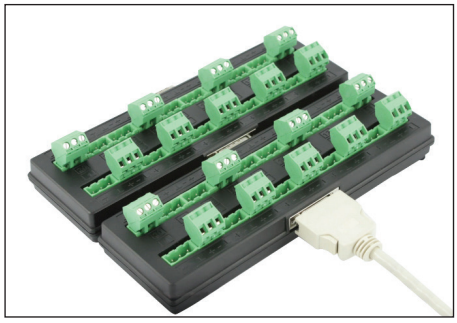
Measurements can be viewed graphically and numerically on the 10-inch color touchscreen. Icon driven menus make it easy to navigate through the user interface, and a channel setup screen displays the settings for all channels including measurement type, filter settings, and scaling.

The DAS240 provides LAN connectivity and LabVIEW™ drivers for remote control and logging data directly to a PC. Free additional software is also available for viewing acquired data, transferring files, and exporting to common file formats.

The DAS240 data acquisition recorder features 32 GB of solid-state memory for recording data over extended periods of time. When equipped with the optional internal battery (-BAT option), the DAS240 can run for up to 15 hours without connecting to external power.

### Main applications

- Temperature logging with thermocouples and platinum resistance temperature sensors
- Voltage measurements from ± 0.5 mV to ± 100 V (CAT I 100 V)
- 4-20 mA current loop measurements
- Frequency, pulse totalization and pulse rotation measurements, which can be expressed in RPM (rotations per minute)



Expandable 20-channel analog modules

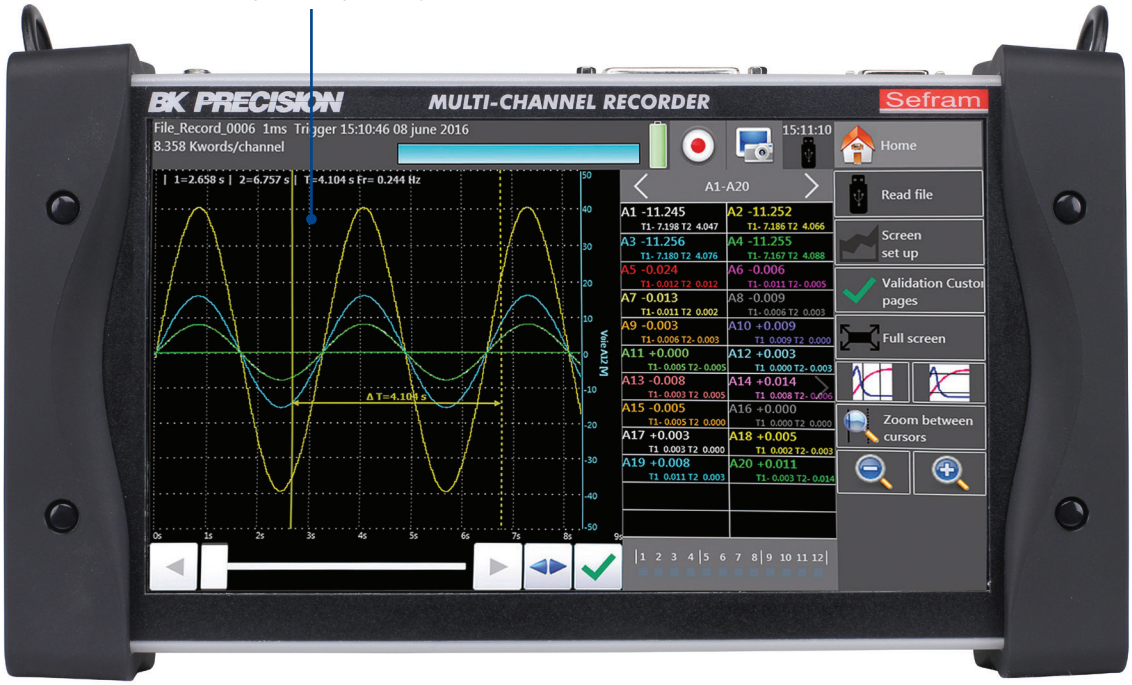
### Features and benefits:

- Wide 10" touchscreen TFT display
- Extended battery life of up to 15 hours (-BAT)
- 20 universal analog input channels, expandable to 200 channels
- Versatile temperature measurements supporting thermocouples and Pt100 / Pt1000 temperature sensors
- Measure voltage to ±100 V, resistance to 10 kΩ and current (with optional shunt input-terminal block)
- 16 bit vertical resolution
- Recording interval (sampling rate) up to 1 ms
- 12 logic input/output channels
- 4 timing logic input channels for pulse count, frequency and PWM measurements
- 4 alarm outputs
- 32 GB internal solid state memory
- 2 USB Host ports and 1 LAN interface
- Virtual Networking Computing (VNC) capability for replicating the instrument's front panel interface on a PC

Technical data subject to change
© B&K Precision Corp. 2026

## Front panel

**10” Touchscreen**
TFT display with 10-inch touchscreen to facilitate signal viewing and analysis



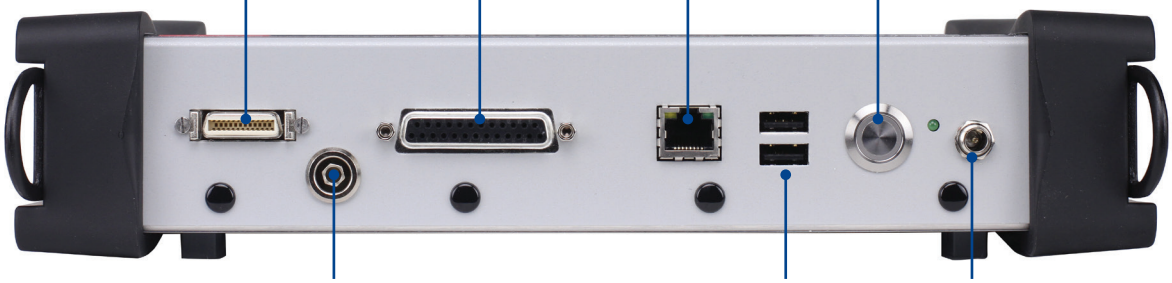

## Top input and connection panel

**Analog input**
Connect external channel modules for wire management and expandability up to 200 channels

**Alarm output/Logic input**
Pulse counter and frequency measurements

**LAN**
Remote control and monitoring

**Power button**

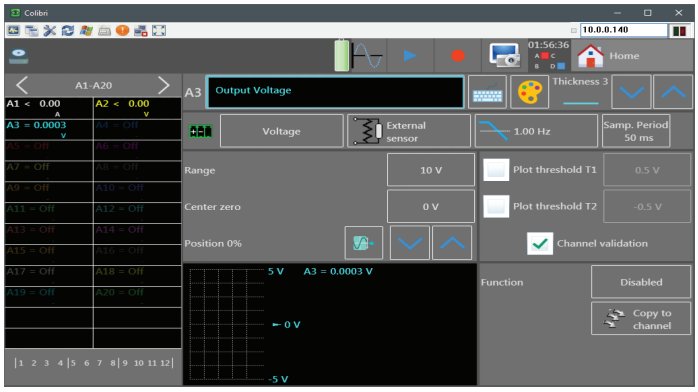


**Ground**

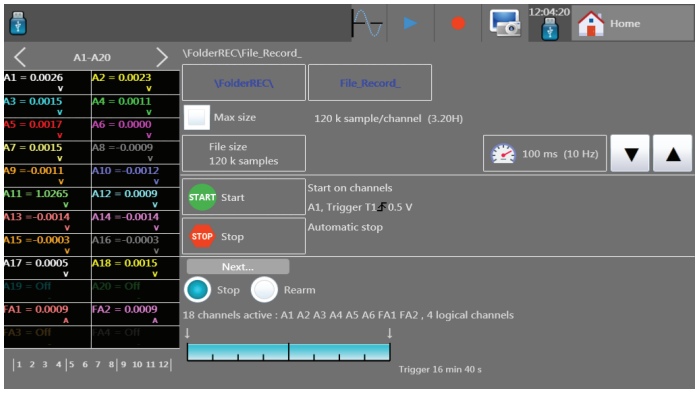
**USB host**
Save or load configuration and data acquisition files

**DC power**

# Flexible operation



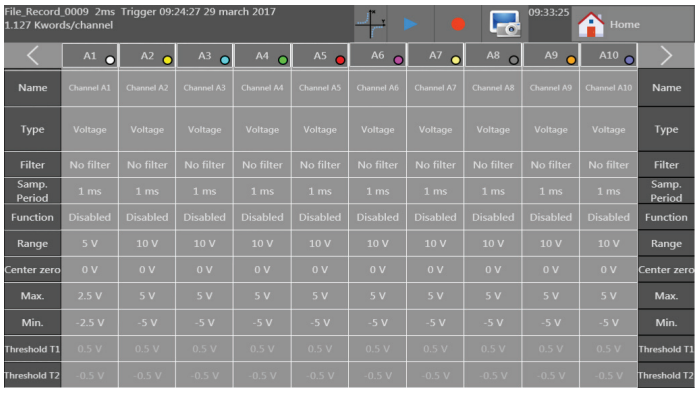

Large display with icon-driven menus for easy setup and operation.



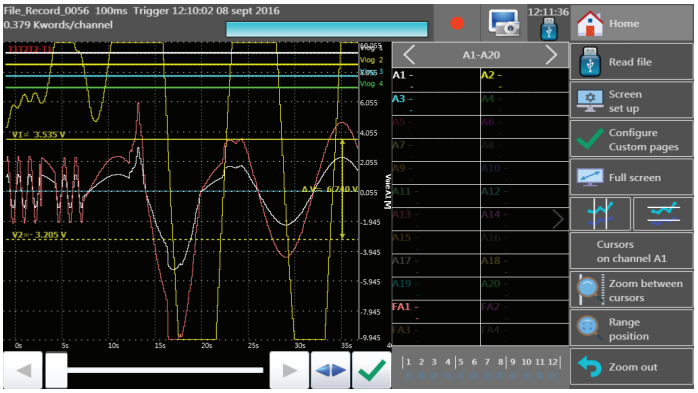

Comprehensive triggering capabilities: Configure triggers on analog and logic channels. Select from multiple combinations of thresholds, channels and conditions.



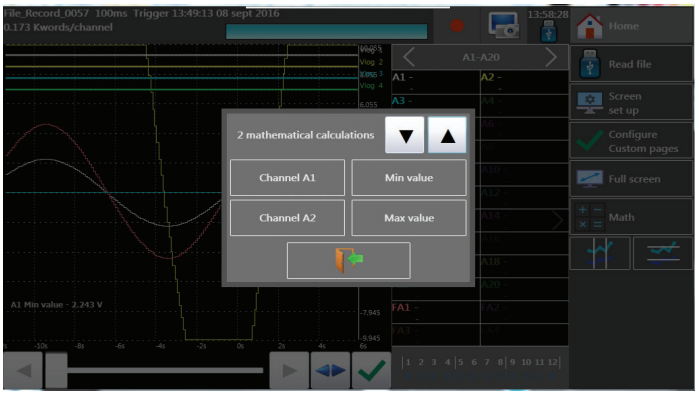

Numerical display of measured values




Channel setup displays all parameters on a single screen

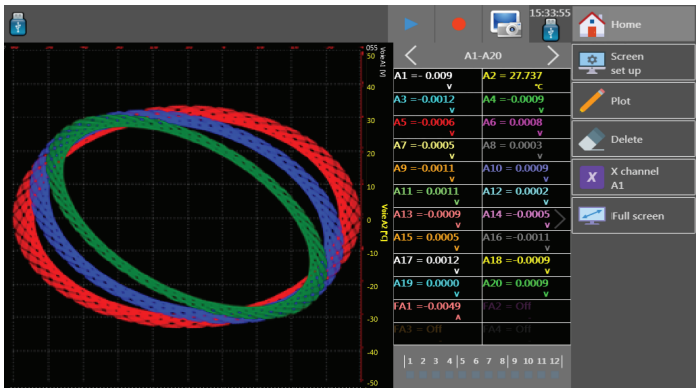



Measurement display with zoom and cursors

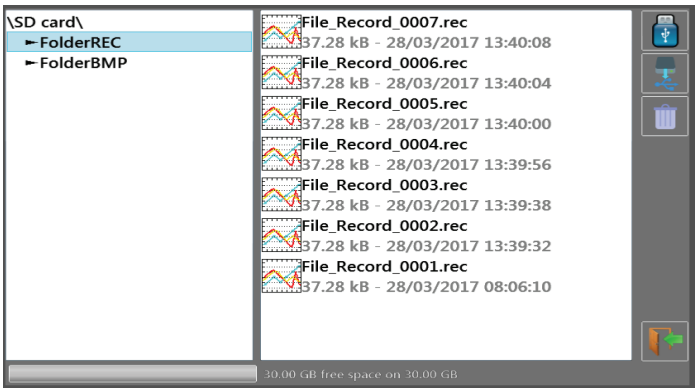



Math calculations between channels

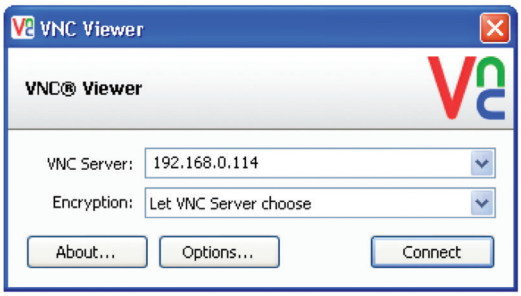
# The tools you need




XY mode for plotting one varying voltage versus another




Internal file management




## Virtual Network Computing (VNC) capability

The recorder's built-in VNC capability, based on the Remote Frame Buffer protocol (RFB), provides a graphical desktop sharing system to remotely control the instrument from another computer. VNC is platform independent and provides a means to control all functions of the instrument through a graphical interface replicating the instrument's front panel, using a mouse and keyboard.




## Expandable up to 200 analog channels

The DAS240 series provides a flexible and scalable analog channel concept. Each unit is supplied with one 20-channel analog module and 20 screw input terminal blocks. By daisy-chaining additional modules, the total number of channels can be incremented by 20 to a maximum of 200 channels (10 modules). These modules can be pre-wired to the UUT and stationary in multiple locations while the instrument is moved to each location for recording. This helps with wire management and setup time.

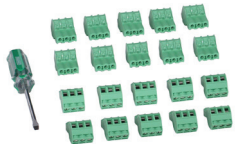
## Optional accessories




The 50 Ω shunt can be used to record the output from 4-20 mA loop sensors.



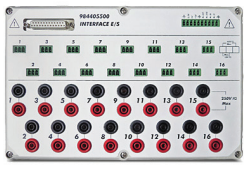
Rugged carrying case



Spare analog input connectors 20 pack



Logic channels patch cord



Isolated logic channel module

# Specifications

| Analog Channels | | |
|---|---|---|
| Analog Input Channels | 20 standard, expandable to 200 with optional 20-channel modules | |
| **DC Voltage** | | |
| Ranges | ± (0.5, 1, 2.5, 5, 10, 25, 50, 100) mV<br>± (0.5, 1, 2.5, 5, 10, 25, 50, 100) V | |
| Maximum input Voltage | 100 V DC | |
| Accuracy | 0.1% of the full scale ±10 µV | |
| **Temperature with Thermocouples** | | |
| Sensors Range by Type (Cold junction compensation: ±0.5 °C) | J | -210 °C to 1200 °C |
| | K | -250 °C to 1370 °C |
| | T | -200 °C to 400 °C |
| | S | -50 °C to 1760 °C |
| | B | 200 °C to 1820 °C |
| | E | -250 °C to 1000 °C |
| | N | -250 °C to 1300 °C |
| | C | 0 °C to 2320 °C |
| | L | -200 °C to 900 °C |
| | R | -40 °C to 1500 °C |
| **Temperature with Pt100 and Pt1000** | | |
| Current | 1 mA (Pt100), 100 µA (Pt1000) | |
| Range | -200 °C to 850 °C | |
| Measurements | 2 and 3 wires | |
| Accuracy (at 20 °C) | 0.4 °C ±0.1% of reading | |
| Compensated Resistance | 2 wires | 30 Ω max. |
| | 3 wires | 50 Ω max. |
| **Resistance** | | |
| Ranges | 1 kΩ and 10 kΩ | |
| Accuracy | 1 Ω (range 1 kΩ) and 10 Ω (range 10 kΩ) | |

| Logic Channels | |
|---|---|
| **Logic Input/Output** | |
| Number of Channels | 12 |
| Maximum Permitted Voltage | 24 V Cat I |
| Input Impedance | 4.7 kΩ |
| Sampling Rate | 1 ms max. |
| **Timing Input** | |
| Number of Channels | 4 (K1 to K4) |
| Maximum Permitted Voltage | 24 V Cat I |
| Input impedance | 4.7 kΩ |
| Sampling Rate | 1 ms max. |
| Pulse Counter | 0 to 10 Million, accuracy 0.1% |
| Frequency Measurement | 1 Hz to 10 kHz, accuracy 0.1% |
| PWM Measurement | 100 Hz to 2 kHz, accuracy 0.1% |
| **Alarm Output** | |
| Number of Channels | 4 Alarms (A, B, C, D) |
| Output Level | 0 to 5 V |

| Acquisition System | | |
|---|---|---|
| Resolution | 16 bit | |
| Acquisition System | Scan, one sample per channel | |
| Sampling Interval | V >50 mV | 1 ms to 20 min |
| | V ≤50 mV, thermocouples and Pt100 / Pt1000 | 2 ms to 20 min |
| Trigger | Date, delay, threshold, edge level, combination of thresholds (and/or), word on logic channels | |
| Pre-trigger | Variable from 0 to 100k samples | |

| General | |
|---|---|
| Internal Flash Drive Size | 32 GB |
| Maximum File Size | 2 GB |
| Operating Temperature | 0 °C to 40 °C, 80% RH (no condensation) |
| Storage Temperature | -20 °C to 60 °C |
| Display | 10" TFT touchscreen LCD, backlit, 1024 x 600 dots |
| Power Supply | 15 V / 4 A max with main adapter (100 / 240 VAC) |
| Interfaces | 2 x USB host, LAN (10/100 base-T with RJ45 socket) |
| Battery (-BAT) | Non removable, Lithium-ion |
| Typical Battery Life (-BAT) | 15 hours with standby mode, 10 hours without stand-by mode |
| Safety | Cat I 100 V, according to IEC61010-1 |
| Weight | DAS240 / 3.3 lbs (1.5 kg) |
| | DAS240-BAT / 4.5 lbs (2 kg) |
| Dimensions (W x H x D) | 2.6" x 11.7" x 6.9" (66 x 298 x 176 mm) |
| Warranty | Two Years |
| Supplied Accessories | Main adapter 100 / 240 V, 25 pin male connector[1] and backshell, 1 cable (1 meter) for measurement module connection, 1 measurement module (20 channels) with input terminals, stylus, soft wipe, screwdriver, calibration certificate and test report |

| Order Information for Optional Accessories | |
|---|---|
| 902401000 | 20-channel analog module with 20 input terminal blocks |
| 902401050 | Analog input terminal blocks 20 pack |
| 902408000 | Rugged carrying case |
| 902407000 | Logic channels patch cord |
| 902406500 | 4 to 20 mA / 50 Ω shunt |
| 902409000 | 19" rack-mount kit |
| 902409500 | US Mains power adapter |
| 978553000 | EU Mains power adapter |
| 917008000 | Isolated logic channel module |

[1] User configurable with solder cups

# About B&K Precision

For more than 70 years, B&K Precision has provided reliable and value-priced test and measurement instruments worldwide.

Our headquarters in Yorba Linda, California houses our administrative and executive functions as well as sales and marketing, design, service, and repair. Our European customers are most familiar with B&K through our French subsidiary, Sefram. Engineers in Asia know us through our B+K Precision Taiwan operation. The independent service centers in Singapore and Brasil service customers in Singapore, Malaysia, Vietnam, Indonesia and South America, respectively.




B&K Precision group member  Independent service center  Service center location

## Quality Management System

B&K Precision Corporation is an ISO9001 registered company employing traceable quality management practices for all processes including product development, service, and calibration.

ISO9001:2015  Certification body NSF-ISR
Certificate number 6Z241-IS8

NSF-ISR
Registered to ISO 9001

## Video Library

View product overviews, demonstrations, and application videos in English, Spanish and Portuguese.

http://www.youtube.com/user/BKPrecisionVideos

## Product Applications

Browse all of our supported product and mobile applications.

http://bkprecision.com/product-applications

Sefram
a B&K Precision company

## About Sefram

Established in 1947, Sefram has been designing and manufacturing data recorders for more than 70 years. Sefram joined the test and measurement division of Schlumberger in 1978, and has been a subsidiary of B&K Precision since 2004. Certified ISO 9001, Sefram's strategy is to provide innovative and high-quality test and measurement products for electronic and electrical applications.

Sefram Video Library