



Small and Fast USB Interface Data Logger

PA-S1000 Series

NEW!

- Compact A5-size data logger*
- Insulation between channels and differential input method that are robust over noise*
- High-speed 1 μs simultaneous sampling of all channels*
- High-speed transfer and long period logging via USB 2.0*

PA-S1000 is a data logger that can store data in a storage device on your computer by connecting via USB to the computer.

- Small: compact shape with 151 mm width x 25 mm height x 210 mm depth. No need to worry about where to place it.
- A wide variety of input signals: voltages and resistance temperature sensors can be selected by channel, enabling a wide variety of measurements.
- Control software: an application that runs on Windows is attached. The application is easy to operate and has a plenty of functions such as various types of triggers and an alarm function.

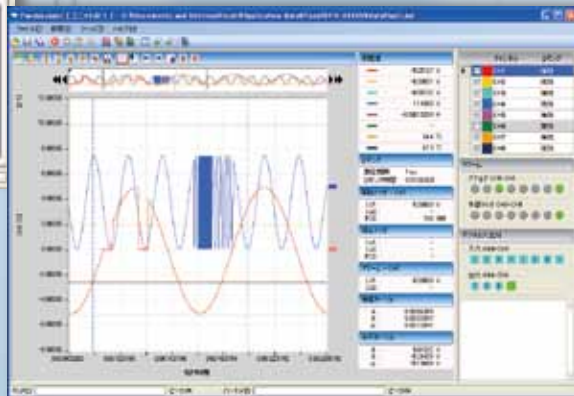


PA-S1000/4

Attached application software: PandaLogger



Easy setting on the logging setting screen



Displaying recorded data

CH	単位	換算	スケール
CH1	V/V _{ref}	電圧	無し
CH2	V/V _{ref}	電圧	無し
CH3	V/V _{ref}	電圧	無し
CH4	V/V _{ref}	電圧	無し
CH5	A	電圧	無し
CH6	V/V _{ref}	電圧	無し
CH7	Ω	抵抗	有り
CH8	Ω	抵抗	有り

Channel display setting screen



PA-S1000/8

Features

- Sampling rate of maximum 1 μs. Simultaneous sampling of all channels. Equipped with high-resolution 16-bit A/D converter.
- For input type, voltage or resistance temperature sensor can be arbitrarily set for each channel.
- Insulation between channels for analog input. Hard to be affected by other signal sources and robust over noise, enabling accurate measurement.
- High-speed transfer to your computer via USB 2.0. Waveforms can be displayed in real time while being stored in the storage. Depending on the storage capacity of your computer, high-speed signals can be logged in high resolution continuously for a long period of time.*
- 4-channel and 8-channel models are available.

* Depending on the number of channels, logging time at the maximum sampling speed is limited. For more information, please refer to the instruction manual.



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Specifications

Hardware		PA-S1000/4	PA-S1000/8
Number of analog channels		4	8
Analog input type		Voltage, platinum resistance temperature sensor (can be set by channel)	
Analog input method		Differential input, insulation between channels	
Input coupling		DC	
Input terminal shape		Screw type terminal block	
Input resistance (approx.)		10 MΩ (for voltage input setting)	
Maximum non-destructive input voltage (analog input to GND)	Voltage	150 V (DC + AC peak)	
	Pt100	50 V	
Insulation resistance (each analog terminal to digital GND)		50 MΩ or more (at 500 VDC)	
Supported platinum resistance temperature sensors		Pt100 (nominal 100 Ω) 3-wire type (measuring current: 1 mA)	
Platinum resistance temperature sensor resolution / temperature range		0.1°C / -200°C to 800°C	
Measurement range		±100 mV, ±200 mV, ±500 mV, ±1 V, ±2 V, ±5 V, ±10 V, ±20 V, ±50 V and ±100 V	
Accuracy*1 <small>(60 minutes or more after power activation) (23°C ± 5°C)</small>	Voltage	±100 mV range: ±1% of F.S. / ±200 mV range: ±0.5% of F.S. Other ranges: ±0.1% of F.S.	
	Platinum resistance temperature sensor	±0.25% of rdg ±2.5°C (not including sensor accuracy)	
Sampling time (measuring period)		1 μs to 1 s (simultaneous sampling of all channels)	
Sampling rate accuracy		±100 ppm	
Frequency characteristics		DC to 200 kHz (-3 dB)	
A/D resolution		16 bits	
Trigger hysteresis (approx.)		1% of full scale (for voltage input), 0.5°C (for Pt100)	
PC interface		USB 2.0 (High Speed) self-powered	
Rated power supply		100 to 240 VAC, 50 to 60 Hz (AC/DC adapter)	
Consumption current (approx.)		1.8 A at 12 V	3.5 A at 12 V
Operating environment		0 to 40°C, 20 to 80% RH (non condensing)	
Dimensions (mm, approx.)		151 (W) x 25 (H) x 210 (D)	
Weight (approx.) <small>*not including AC/DC adapter</small>		750 g	960 g

*1 Does not include errors due to noise, etc.

Digital Input/Output Part

Connector	D-Sub 25-pin Female
Digital input	TTL-level, non-isolated 8-channel Input filter for preventing chattering can be set: 1 to 127 ms
Digital input voltage	Low: 0.8 V or less, High: 2.0 V or more
Minimum pulse width for trigger detection	50 ns
Digital output	TTL-level, non-isolated 4-channel, open-collector
Digital output voltage	Low: 0.2 V or less (when drawing 100 mA), High: approx. 5 V (pulled up by internal 10 kΩ)
General purpose relay	2 pole (open to the connector on both coil and contact sides)
General purpose relay specifications	Coil side: 5 V/21.1 mA, model number: OMRON G6k-2G-Y5V or equivalent
Power output for external circuit	5 V, 100 mA or less and 12 V, 100 mA or less

Logging Part

Logging data specification	3 bytes/point (per channel)		
Sampling method	Normal Hard average (averaging A/D values within sampling time. The S/N ratio is increased without compromising frequency characteristics)		
Trigger	Start trigger	Detection condition	Slope, level, window-in, window-out, external trigger
		Position	Anywhere within up to 500 points
	Stop trigger	Detection condition	Slope, level, window-in, window-out, external trigger
		Position	Anywhere within the logging size
Alarm	Can be set for each analog channel, and for the digital output port		
	Detection condition	Slope, level, window-in, window-out, external trigger	
Digital input	Can be set to start trigger, stop trigger or alarm		
Logging size	Theoretically up to 1 terapoints (dependent on computer specifications or storage capacity)		
Internal memory	16 M points (value of the enabled channels in total) (The unit is equipped with 64 MB memory, and a point is used as a 3-byte data width)		

Application Software

Start time setting	Up to 31 days later, in 1 second units
Logging hours	Up to 999 hours (dependent on measuring period)
Logging data storage format	Binary, CSV
Waveform display	Waveforms can be displayed in real time while logging data is being stored. Waveforms of saved logging data can be displayed. Waveform display on two screens: general screen and zoom-up screen
Scaling	Arbitrary scale and unit can be set for each channel
Cursor measurement	ΔV, ΔT (display can be switched among clock time, relative time and seconds)

Operating environment

Supported OS	Windows XP/Vista/7 (for Vista and 7, both 32-bit and 64-bit versions are supported)
Display resolution	1152 x 864 or higher
CPU (recommended)	Intel Core2 Duo 2 GHz or higher
Memory (recommended)	1 GB or more

Accessories

USB cable (cable length: 1.5 m)
AC/DC adapter
Support CD (application software, instruction manual)
Written guarantee

Price

Model number	Standard price
PA-S1000/4	198,000 yen (207,900 yen including tax)
PA-S1000/8	328,000 yen (344,400 yen including tax)

- A demo unit is available free of charge. For more information, please contact your dealer or our company.
- Company names and product names are registered trademarks of their respective holders. The above contents are subject to change without notice for improvement of products.

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