FUJI ELECTRIC

Paperless

Video Chart Recorder

Type: PHR

Long Term Record Data Saving
Max. 3years in Compact Flash

Saved Data playback
Saved data in Memorry card can be easily called out and played back on display

PC support softwares (Data Viewer/Parameter Loader)
Supplied in a CD-ROM as a part of standard accessory

Compact size
160 (W) X 144 (H) X 185 (D) mm
1.5 kg compact size

9-point recording
Twelve types of thermocouples, 2 types of resistance bulbs and voltage/current input are available

VIDEO CHART RECORDER

ECNO:1010

Memory Card Data Saving

Provides easiness, flexibility and variety in the handing of record data.

Status Display
Allows you to display screen name, calendar, alarm information, recording status, writing status of measured data in Compact Flash, and fitting status of the card into the recorder slot.

Time display
Indicates the time and time scale of recorded data.

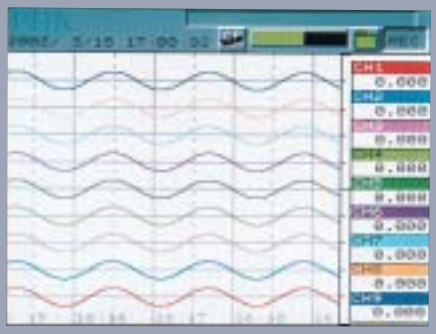
Trend Display
Allows you to view measured result in waveforms.

Digital Display
Allows you to view measured values in a digital form.

Key panel
Allows you to perform the recording start/stop, selection of display, setting, data display/change.

About 3 years' worth of data can be recorded in Compact Flash (256 MB).

Wide variety of display mode

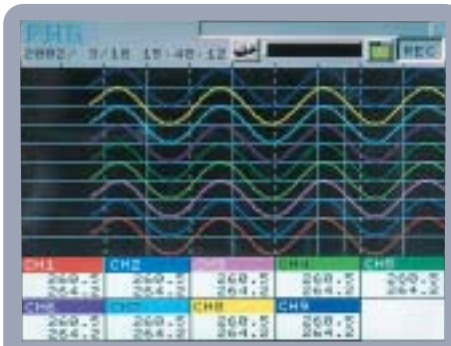


Trend recording (horizontal)
Measured result is horizontally displayed in real time.

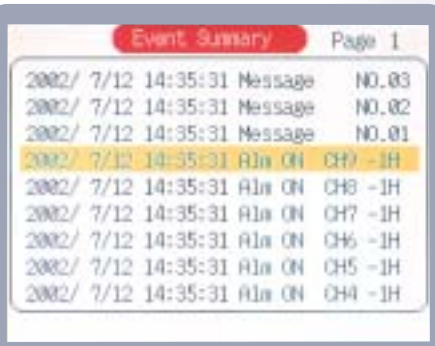
Trend recording (vertical)
Measured result is vertically displayed in real time.

Bar graph
Measured values are displayed in bar graph.

Digital display
Channel No., Tag No. engineering unit, and alarm information are displayed in digital form, in addition to measured values.



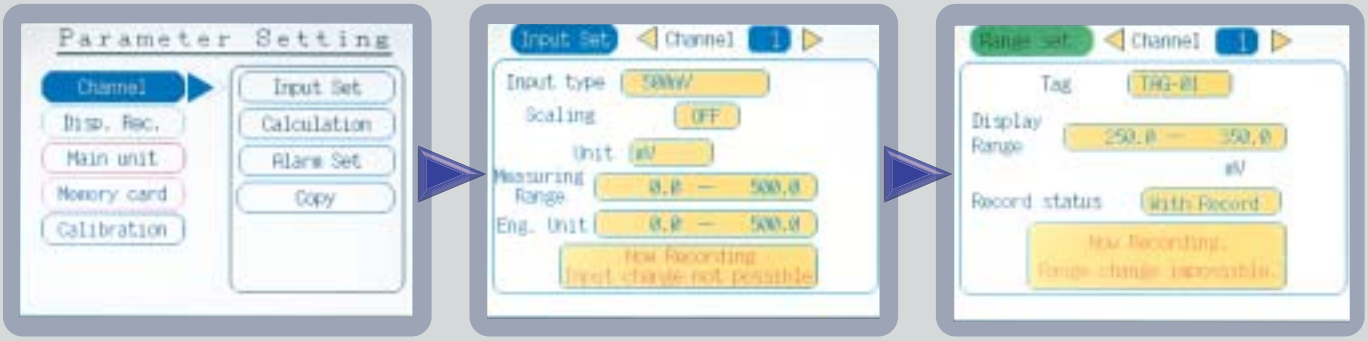
Historical trend display
Past data saved to Compact Flash can be viewed. Scroll function is usable.



Event summary display
Alarm status and external control input status for each channel are displayed.

Easy operation without the help of the instruction manual

The onscreen guidance enable you to set/change various data easily.



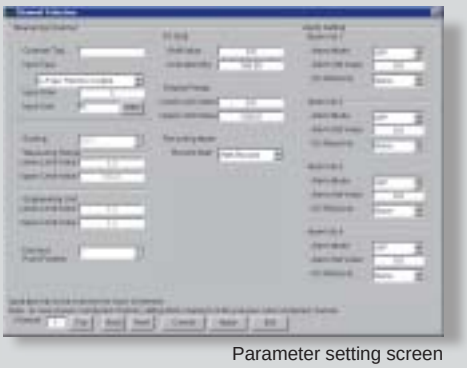
Setting Menu screen | **Input Set screen** | **Record Range Set screen**

A convenient PC support software package is included as standard

Past data saved to Compact Flash can be viewed on personal computer.

Historical trend data screen

Parameters for the recorder can be easily set and changed from personal computer.



Parameter setting screen

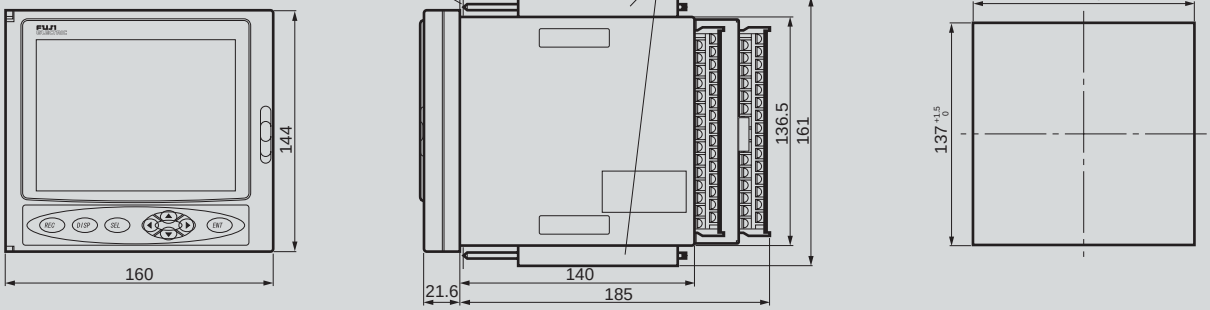
Before use, install PC support software supplied as standard.
- O/S: Windows 95/98
- Required storage capacity: 64 MB
- A PC card adapter is optional.

Type: SDCF-31-03 (Sundisk Co.)

Before use, install PC support software supplied as standard.
- O/S: Windows 95/98
- Required capacity of memory: 64 MB
- A communication cable between recorder and pc is optional.

Type: PHZP0201

Outline Diagram and Panel Cut (Unit: mm)



Specifications

General specifications	
Mounting method	panel flush mounted
Material	Molding resin (case, bezel)
External dimensionsand mass	160 x 144 x 185 mm, about 1.5 kg
Power supply voltage	100V to 240V AC, 50/60 Hz
Power consumption	About 20 VA (without option)
External terminals	Screw terminals (M3 thread)
Input unit	
No. of inputs	9
Measuring cycles	100ms/9 points
Input signal	Thermocouple: 12 types (B, R, S, K, E, J, T, N, W, L, U, PN) Resistance bulb 2 types (Pt100, JPt100) DC voltage (50mV, 500mV, 5V) DC current (connecting optional shunt resistor to input terminal)
Input types	Selected from the key panel (the same type should be set for every 2 channels)
Burn-out function	Equipped with thermocouple and resistance bulb inputs as standard.
Calculation function	Primary delay filter, scaling
Display unit	
Display	5.7" TFT color LCD (320 X 240 dots)
Life of backlight	50,000 hours
Display contents	•Trend display (in vertical and horizontal direction) selected in the refreshment cycles of 1 sec to 2 hours •Bar graph (in refreshment cycle of 1 sec) •Digital display (in refreshment cycle of 1 sec) •Event summary display (alarm and message summary) •Historical trend display •Parameter display/set
Recording function	
Recording medium	Compact Flash card
Memory capacity	256MB, max.
Recording method	Writing starts in fixed cycles by turning ON the REC key on the front panel. Data is recorded in a new file every time the recording starts.
Data save cycles	Links to refreshment cycle of the trend display
Data format	ASCII About 166 bytes per sampling (at 9 channel inputs)
Trend data	Maximum value and minimum value are saved from the data that are sampled in measuring cycles.
Event data	Alarm data and message data are saved.
Storage capacity	About 3 years in saving cycles of 1 minute. (at recording of 9 channels by using 256MB Compact Flash)
Amount of memory used	The display unit displays how much the memory card has been used via bar graphs. The recording will stop if the amount of recorded data exceeds the capacity.
Alarm function	
No. of settings	Up to 4 alarms are settable for each channel.
Type of alarm	High/Low limits
Indication	Alarm status is displayed on digital display unit when an alarm occurs. Histories are displayed in the alarm summary.
Relay output	10 points (option)
Reference performance	
Indication accuracy	±(0.15%+1 digit) of input range Accuracy of the next range is ±(0.3%+1 digit). Thermocouple B: 400°C to 600°C, thermocouples R and S: 0°C to 300°C, thermocouples K, E, J, T, L, and U: -200°C to -100°C
Indication resolution	0.1°C
Reference junction compensation accuracy	±0.5°C Thermocouples R, S, B and W: ±1.0°C
Input resistance	About 1MΩ
Others	
Clock	With calendar function
Memory backup	Parameter settings are saved to the internal non-volatile memory. The clock is backed up by a built-in lithium battery. Trend data is not backed up, but saved to Compact Flash.
Optional specifications	
Alarm output/DI	10 relay outputs and 5 DI are added. Alarm output: 1a contact Output for each channel or common channel is possible. DI input: No voltage contact 5 inputs Recording start/stop or message setting are possible
PC support software (standard-supplied CD-ROM)	
O/S	Windows 95/98/XP/2000
Required memory capacity	64 MB or more
Contents	The following types are included as standard. 1) Data viewer software It allows you to view the past trend recorded data from the data saved to the Compact Flash on PC. Historical trend and event display functions are provided. 2) Parameter loader software It allows you to perform setting/change of various parameters on PC.

Scope of supply

This product includes panel-mounting attachments, support software package (CD-ROM), Compact Flash (16 MB), waterproof front panel packing, and noise filter for power cable.

Option

Name of product	Type	Specifications
Shunt resistor for dc current input	PHZP0101	10Ω ±0.1%
Loader communication cable	PHZP0201	Three-meter cable with connector

Code Symbols

Optional specifications	Type
Without alarm output/DI	PHR11B11-N10YV
With alarm output/DI	PHR11B11-N11YV

Note)
Note that the same channel group should be set to the same input type.

Cannel group	
ch. 1,2	group1
ch. 3,4	group2
ch. 5,6	group3
ch. 7,8	group4
ch. 9	group5

Input type	
Thermocouple, 50mV	type1
Resistance bulb	type2
500mV	type3
5V	type4

Note 1)
Windows Excel is a registered trademark of Microsoft Corporation of the U.S.
Note 2)
Compact Flash is a registered trademark of Sundisk Corporation.

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