This is a paperless recorder that displays measured data on the LCD in real time and stores data in CompactFlash. The type of input such as thermocouple, resistance bulb, D.C. voltage (current), etc. can be arbitrarily set to 6 channels at the maximum. The data stored in CompactFlash can be regenerated on the screen, and the use of supplied support software allows the data to be regenerated on a PC screen. The data recorded in ASCII format can be directly read in a spreadsheet such as Excel, which facilitates the processing on a PC. (The data recorded in binary format cannot be read in.)

FEATURES

1. Large capacity storage by CompactFlash
Measured data is periodically stored in CompactFlash. Large storage capacity of up to 512MB allows display files for approximately 4 years to be recorded continuously at the display refresh cycle of 30 seconds (in the case of ASCII data format, 6 channels).

2. Quick search and display of past data
Data stored in CompactFlash can be displayed in succession by scrolling the screen.

3. Various display capability
Depending on the object of measurement, the most suitable display format can be selected from a variety of formats including bar graph display, trend display, digital display, etc.

4. PC support software supplied as standard
Loader software that enables easy display and change of set data and data viewer software that regenerates the data stored in CompactFlash are supplied as standard.

5. Compact size
160 (W) x 144 (H) x 185 (D) mm (Panel mounting), 1.5kg compact size

6. 6-point recording (Option)
12 types of thermocouples, 5 types of resistance bulbs and DC voltage/current input can be recorded up to 6 points.

7. Screen saver function
If the non-operation exceeds the setting value of parameter, “LCD lights-out time”, recorder turns off the backlight. Setting range of this parameter is 0 to 60 minutes. If the setting value is "0", this function doesn’t work, so the backlight remains on during power on. Screen saver function makes the life of backlight expand and power consumption reduce.

8. Ethernet function (Option)
FTP, Web server, e-mail and MODBUS-TCP are available using 10Base-T.

SPECIFICATIONS

**Input system**

<table>
<thead>
<tr>
<th>Input types</th>
<th>Reference range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermocouple</td>
<td>B: 400.0 to 1760.0°C</td>
</tr>
<tr>
<td></td>
<td>R: 0.0 to 1760.0°C</td>
</tr>
<tr>
<td></td>
<td>S: 0.0 to 1760.0°C</td>
</tr>
<tr>
<td></td>
<td>K: -200.0 to 1370.0°C</td>
</tr>
<tr>
<td></td>
<td>E: -200.0 to 800.0°C</td>
</tr>
<tr>
<td></td>
<td>J: -200.0 to 1100.0°C</td>
</tr>
<tr>
<td></td>
<td>T: -200.0 to 400.0°C</td>
</tr>
<tr>
<td></td>
<td>N: 0.0 to 1300.0°C</td>
</tr>
<tr>
<td></td>
<td>W: 0.0 to 1760.0°C</td>
</tr>
<tr>
<td></td>
<td>L: -200.0 to 900.0°C</td>
</tr>
<tr>
<td></td>
<td>G: -200.0 to 400.0°C</td>
</tr>
<tr>
<td></td>
<td>PN: 0.0 to 1300.0°C</td>
</tr>
<tr>
<td>Resistance bulb</td>
<td>JPt100: -200.0 to 600.0°C</td>
</tr>
<tr>
<td></td>
<td>Pt100: -200.0 to 600.0°C</td>
</tr>
<tr>
<td></td>
<td>Pt100: -200.0 to 180.0°C</td>
</tr>
<tr>
<td></td>
<td>Pt50: -200.0 to 600.0°C</td>
</tr>
<tr>
<td></td>
<td>Cu50: -50.0 to 200.0°C</td>
</tr>
<tr>
<td>DC voltage</td>
<td>50mV: 0.00 to 50.00mV</td>
</tr>
<tr>
<td></td>
<td>500mV: 0.00 to 500.00mV</td>
</tr>
<tr>
<td></td>
<td>1-5V: 0.000 to 5.000V</td>
</tr>
</tbody>
</table>

Note: B, R, S, K, E, J, T: JIS C 1602, DIN IEC 584-1
N: NICO5IL/NISIL (IEC 584)
W: 5% Re-26% Re (Woskins Mfg. Co. USA)
L: Fe-Cu -Ni (DIN 43710)
U: Cu-Cu -Ni (DIN 43710)
P: Platinum
JPt100: JIS C 1604-1989 (Old JIS Pt 100)
Pt100, Pt50: JIS C 1604, DIN IEC 751
Selection of input types:  
By key operation on the front panel. Note that the same input type (thermocouple, resistance bulb, voltage) should be selected for channel 4 and 5. Refer to “Setting method of input types” for details.

Burn-out function:  
Equipped in thermocouple and resistance bulb inputs as standard, and overswings the recording to 100% side. Thermocouple burn-out current: approx. 0.2 μA

Input filter function:  
Settable for each channel (primary delay filter). Time constants are settable in the range from 0 to 900 sec.

Scaling function: Possible by DC voltage (current) input.  
Scaling range: -32767 to 32767  
Decimal position: settable at any point  
Unit symbol: settable up to 7 digits and 125+12 types

Subtraction function:  
Subtraction between each channel is allowed.

Square rooter function:  
Square rooter can be performed against the input value per each channel.

**Indication system**  
**Indicator:**  
5.7" STN color LCD (320 x 240 dots) with backlight  
Note) The LCD may have some pixels that do not stay on or off. Due to the characteristics of liquid crystal, the brightness may not be uniform, which is not a failure.

**Color of indication:**  
14 colors

**Applicable language:**  
English, French, German, Italian (switchable)

**Life of backlight:**  
50,000 hours (20°C) (the complete indicator unit should be replaced when replacing backlight).

**Trend display:**  
Direction: vertical and horizontal  
Number of channels: 6 channels or 4 channels or 3 channels for the screen (Input: 6 points at the maximum).  
Display refreshment cycles: select from 1 second to 12 hours. No numerical value display. Scale display/no-display can be selected.

**Bar graph display:**  
Direction: vertical  
Number of channels: 6 channels or 4 channels or 3 channels for the screen (Input: 6 points at the maximum).  
Display refreshment cycles: 1 second.

**Digital display:**  
Number of channels: 6 channels or 4 channels or for the screen (Input: 6 points at the maximum).  
Display refreshment cycles: 1 second.

**Event summary display:**  
Alarm summary and message summary can be displayed.

**Ethernet log display:**  
E-mail sending, FTP server log in/off and MODBUS TCP/IP communication start/stop can be displayed.

**Parameter display/set:**  
Already-set Data Display and Set Change Display screen

**TAG indication:**  
Number of characters to be displayed:  
Up to 8 characters at 6 channels on one screen or up to 16 (= 8 x 2) characters at 4 channels on one screen.  
Characters to be displayed:  
Alphanumeric characters  
Tag, unit and channel number display:  
It depends on the screen. See below table.

<table>
<thead>
<tr>
<th>Screen</th>
<th>Number of channel on one screen</th>
<th>Items</th>
<th>TAG1</th>
<th>TAG2</th>
<th>unit ch number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trend</td>
<td>4 or less</td>
<td>x</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>more than 5</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Bar graph</td>
<td>4 or less</td>
<td>x</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>more than 5</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital</td>
<td></td>
<td>all items are displayed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

x: only 1 item can be displayed. +: only 2 items can be displayed.

**Historical trend display:**  
The past data can be displayed from the Compact Flash or internal memory. The past data file can be read and displayed with scroll display function or jump the cursor to the position which you entered date and time. Scale display/no-display can be selected.

**Number of screen groups:**  
1 group (Up to 6 channels per 1 group can be registered.)

**Keyboard**  
**No. of Keys:** 8  
**Function:** Use to select various screens and set various parameters.

**Recording function**  
**External memory media:** Compact Flash card (Format as FAT32, FAT16 or FAT, or recorder can’t read and write.)

**Recording capacity:**  
2GB maximum (compact flash). Limiting the recording file to 64MB is recommended (for 112 hours if display refresh cycle is 1 second. See Table 1 (p. 61). (When the size of the recording file comes to be 256MB or more, a new file is created automatically and recording is maintained.)  
* Please change the compact flash every six month to prevent the data losing.

**Recording method:** Turning ON the REC key allows measured data to be written at fixed cycles. Recorded as a new file whenever the recording starts.
Data save cycles: Linked to the display refreshment cycles on the “Trend display” screen. However, they are automatically set to about 1 minute if the refreshment cycles are set to less than 1 minute.

Trend data: Average, instance or min. and max. measured values out of measured data that are sampled at the measuring cycles are saved.

Event data: Saves alarm data and power ON data when the power turns off and on during recording.

Storage capacity: Approximately 4 years when the display refresh cycle is 30 seconds (in the case of 6-channel recording in ASCII data format, and 512MB Compact Flash is used). Refer to Table 1.

Memory usage: Indicates the memory which has already been used on the screen. When all the memory is used up, you can stop recording or delete the oldest recording file to save the newest data.

Compact flash card form: PHZP1301-512 (CF card) If a card other than the above is used, no operation assurance is ensured. Meanwhile, as for other CF cards for which operation check will have been completed, the results will be posted on our company’s homepage sequentially. Please refer to this website.

Recommended PC card adaptor: SanDisk Corp. SDAD-38

Data format: Either of ASCII or binary format can be selected. (Switching cannot be made while the recording is in progress. In the case of ASCII format, the data can be directly read on Excel, etc.) Note: The data recorded in binary format cannot be read directly. Approximately 118 bytes per sample (for 6-channel input in ASCII format) or approximately 28 bytes (for 6-channel input in binary format)

Alarm function

No. of settings: Up to 4 alarms for each channel are settable.

Type of alarm: High/Low limits

Indication: Status (alarm types) is displayed on digital display unit when an alarm occurs. History display on alarm summary (Alarm start/cancel time and alarm types)

Hysteresis: Set within the recording range of 0 to 100% (it is effective only in case of high/low limit alarm)

Relay output: Number of points; 10

Alarm latch function: Keeps alarm indication and alarm output turning on after alarm reset. ON/OFF operation is performed according to key setting.

Power supply

Rated power voltage: 100 to 240V AC

Range of operating voltage: 90 to 264V AC

Supply frequency: 50/60Hz (both employable)

Power consumption

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>100V AC</td>
<td>About 32VA</td>
</tr>
<tr>
<td>240V AC</td>
<td>About 42VA</td>
</tr>
</tbody>
</table>

Structure

Mounting method:
Panel-mounted (vertical panel)

Thickness of panel:
2 to 26 mm

Materials: PC-ABS for case and bezel

Color: Black

External dimensions:
Panel-mounted: 160 (W) x 144 (H) x 185 (D) mm

Mass: Approx. 1.5 kg (no option)

External terminal board:
Screw terminals (M3 thread)
RJ45 : Ethernet terminal (option)

Normal operating condition

Power voltage: 90 to 264V AC

Supply frequency: 50/60 Hz ±2% (both employable)

Ambient temperature: Panel-mounted
0 to 50°C (without Ethernet option*)
0 to 40°C (with Ethernet option**)

Note) In case of 30°C or more of ambient temperature, this display might be fogged little bit (This is not out of order).

Ambient humidity: 20 to 80% RH

Vibration: 10 to 60Hz 0.2m/s² or less

Shock: None

Magnetic field: 400 A/m or less

Signal source resistance:
Thermocouple input .... 1kΩ or less
Resistance bulb input... 10Ω/wire or less
Voltage input... 0.1% or less of input resistance

Mounting posture:
Forward tilt 0°, backward tilt within 30°, horizontal 0°

Warm-up time: One hour or more after power ON

Environmental protection:
IEC IP50 (Front)/20 (Terminal)

Installation category:
II

Pollution degree: 2

Operating altitude:
2000m max.

*1: In case of the 12th digit of ordering code is "Y".
*2: In case of the 12th digit of ordering code is "E".
Safety and EMC standard

Safety standard: Based on IEC 61010-1
EMC standard: Based on EN 61326

Transportation/storage conditions

Temperature: –10 to +60°C
Humidity: 5 to 90%RH, no condensation
Vibration: 10 to 60Hz, 2.45m/s² or lower
Shock: 294m/s² or lower (packed state)

Reference standard

Accuracy/resolution:

<table>
<thead>
<tr>
<th>Input types</th>
<th>Digital indication accuracy</th>
<th>Digital indication resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermocouple B</td>
<td>± (0.15%+1 digit)</td>
<td>0.1°C</td>
</tr>
<tr>
<td>R</td>
<td>± (0.3%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>± (0.5%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>± (0.75%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>± (0.3%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>± (0.5%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>± (0.3%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>± (0.5%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>± (0.3%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>PN</td>
<td>± (0.5%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>Resistance bulb JPt100</td>
<td>± (0.15%+1 digit)</td>
<td>0.1°C</td>
</tr>
<tr>
<td>Pt100</td>
<td>± (0.5%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>Ni100</td>
<td>± (0.5%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>Cu50</td>
<td>± (0.5%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>DC voltage 50mV</td>
<td>± (0.15%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>500mV</td>
<td>± (0.3%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>1-5V</td>
<td>± (0.5%+1 digit)</td>
<td></td>
</tr>
<tr>
<td>0-5V</td>
<td>± (0.5%+1 digit)</td>
<td></td>
</tr>
</tbody>
</table>

Note 1) Digital indication accuracy is a percentage (%) of the value in the measuring range on page 1.
Note 2) No error of reference contact compensation of thermocouple is included.

Error of reference contact compensation:

K, E, J, T, N, U, PN: ±0.5°C
R, S, B, W: ±1.0°C
(when measured at 0°C or more)

Max. input voltage:

Thermocouple, resistance bulb, DC voltage: ±10V DC (continuous)

Input resistance:

Thermocouple, DC voltage: About 1MΩ

Withstand voltage:

Power terminal – ground: 2000V AC, 1 min
Input terminal – ground: 500V AC, 1 min
Alarm terminal – ground: 2000V AC, 1 min
Alarm terminal – alarm terminal: 750V AC, 1 min
Communication terminal – ground: 500V AC, 1 min

Effect on operation

Effect of power supply fluctuation conditions:

For the fluctuation in the range from 90 to 264V AC (frequency: 50/60Hz)
Reading change (100V AC base): ±(0.2%+1 digit) or lower.
For the fluctuation in the range from 47 to 63Hz (power voltage: 100V AC)
Reading change (50Hz base): ±(0.2%+1 digit) or lower.

Effect of input signal resistance:

Thermocouple input: (0.5μV/V+1 digit) or less
DC voltage: Fluctuation for resistance value equivalent to 0.1% of the input resistance: ±(0.2%+1 digit) or lower.
Resistance bulb (for wiring resistance of 10μV for 1 line (the same for 3 lines))
Reading change: ±(0.2%+1 digit) or lower.

Effect of ambient temperature:

Reading change: ±(0.3%+1 digit)/10°C or lower.

Effect of Mounting position:

For the backward 30° slant
Reading change: ±(0.2%+1 digit) or lower.

Effect of vibration:

When sine wave of 10 to 60Hz with the acceleration of 0.2m/s² is applied in each direction for 2 hours.
Reading change: ±(0.2%+1 digit) or lower.

Effect of external noise:

Normal mode noise (50, 60Hz±0.1Hz) …20dB or more
Common mode noise (50, 60Hz±0.1Hz) …120dB or more
(Thermocouple input: minus terminal-ground)
(Resistance bulb input: b Line-ground)

Additional function (option)

1) Alarm relay output/DI (11th digit of code symbol: “1“)
A card with 10-point relay output and 5-point DI input can be mounted.
Terminal structure:

M3 screw terminal

Alarm relay output:

Contact output (SPST:10 points), Individual channel or common output (OR output) allowed.
DO1: Contact capacity; 150V/3A AC, 30V/3A DC (resistive load)
DO2-10: Contact capacity; 240/3A AC, 30V/3A DC (resistive load)
DI input: No-voltage contact input (5 points)
The following control is allowed by contact input.
(1) Recording start/stop
(2) LCD turns on
(3) E-mail sending
On pulse width: 200msec or longer
Off pulse width: 200msec or longer

[ Ethernet (Option) ]
The following can be performed through the Ethernet function.
■ HTTP server (Internet Explorer 6 is compatible) Note 1
Measurement display:
Digitally displays the measurement of each channel of the recorder and alarm occurrence status.
Event summary display:
Displays event summary including alarm ON/OFF.
Main unit information display:
Displays memory use conditions and information on the main unit such as the battery end warning.
Integrated value display:
Digitally displays the integrated value of each channel of the recorder.
■ FTP server (Internet Explorer 6 is compatible.) Note 1
File download: Record files stored in compact flash (CF) can be downloaded from the browser.
File delete: Record files stored in CF can be deleted from the browser.
Access authentication:
Authenticates access authority to FTP server.
■ SMTP (e-mail client)
Transmits e-mails to specified address under the following conditions.
(1) When an alarm turns on or off
(2) When DI is set to ON or OFF
(3) When an error occurs to the main unit (such as low battery or no memory space)
(4) At specified intervals
■ MODBUS TCP/IP
Data read: Settings can be read through MODBUS TCP/IP communication.
Data write: Settings can be written through MODBUS TCP/IP communication.
Note1: Neither Netscape nor Mozilla Firefox is available.

Required memory:
64MB or larger
Disk drive:
Windows 2000/XP-capable CD-ROM drive
Hard disk capacity:
Free capacity of 30MB or larger required
Printer:
Windows 2000/XP-capable printer and printer driver
Note) PC loader communication cable (type PH2P1801) is separately required.

■ Data viewer software
Major function: Regenerates the past trend record on the PC from the data in the Compact Flash. Provided with historical trend display and event display functions.
O/S:
Windows 2000/XP
Required memory:
64MB or larger
Disk drive:
Windows 2000/XP-complaint CD-ROM drive
Hard disk drive:
Free capacity of 30MB or larger required
Printer:
Windows 2000/XP-capable printer and printer driver

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record range voluntary setting</td>
<td>Recording range can be set by channel.</td>
</tr>
<tr>
<td>Input type setting</td>
<td>Input can be set by channel. (Key operation on the front face)</td>
</tr>
<tr>
<td>(Key operation on the front face)</td>
<td>The same input type is selected for channel 4 and 5.</td>
</tr>
<tr>
<td>Access authentication</td>
<td>Authenticated access authority to FTP server.</td>
</tr>
<tr>
<td>Skip function</td>
<td>Skips arbitrary channel display/recording.</td>
</tr>
<tr>
<td>Trend display</td>
<td>Time display: Time is displayed at the top of the trend display screen.</td>
</tr>
<tr>
<td>(Time is displayed at the top of the trend display screen.)</td>
<td>Alarm display: On occurrence of an alarm and the restoration, alarm is displayed in the alarm display field.</td>
</tr>
<tr>
<td>TAG name display</td>
<td>By channel. Maximum of 8 characters.</td>
</tr>
<tr>
<td>Screen name display</td>
<td>Displays the screen name (maximum of 16 characters).</td>
</tr>
<tr>
<td>Unit creation</td>
<td>Industrial units can be arbitrarily created, Maximum of 7 digits, 12 types.</td>
</tr>
<tr>
<td>Scaling function</td>
<td>Arbitrary scaling is allowed in the case of DC voltage input. Decimal point position can also be arbitrarily set in the range from -32,767 to 32,767.</td>
</tr>
<tr>
<td>PV shift</td>
<td>Shift the zero point and slant of the reading.</td>
</tr>
<tr>
<td>Input filter</td>
<td>Prevents sudden fluctuation of input for each channel (primary delay filter).</td>
</tr>
<tr>
<td>Time constant: 0 to 900 seconds.</td>
<td></td>
</tr>
<tr>
<td>Burnout function</td>
<td>Displays the break of thermocouple/resistance bulb input by scaling out to 100% side.</td>
</tr>
<tr>
<td>Historical trend display</td>
<td>Regenerates and displays the data stored in the compact flash by scrolling the screen or jump to time when you entered.</td>
</tr>
</tbody>
</table>

Support software
The following software is provided as standard.
• PC/AT-compatible machine
• Operation on PC98-series machines by NEC is not guaranteed.
• Operation on self-made or shop-brand PCs is not guaranteed.
■ Loader software for PC
Major function: Performs various parameter setting/change of the main unit
O/S: Windows 2000/XP
Table 1. Recording capacity

Input point: 6
Data format: ASCII

The recording can be made for the period of time listed in the tables shown below. When the number of input points is 3, the period is approximately 1.6 times of those listed in the table.

In binary format, the period is approximately 4 times as long as those listed in the table.

<table>
<thead>
<tr>
<th>CompactFlash size</th>
<th>256MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display refreshment cycle</td>
<td>1 sec</td>
</tr>
<tr>
<td>Recordable capacity(about)</td>
<td>26 days</td>
</tr>
</tbody>
</table>

When Compact Flash is not used, up to 600K bytes of the recording data and the event data can be stored in the main unit. (In case of 6-channel in Max./Min. recording, approximately 21,000 data can be stored. For 5 hour at the display refresh cycle of 1 second. The number of the save data varies depending on the number of the event data.)

ORDERING CODE

<table>
<thead>
<tr>
<th>Digit</th>
<th>Specifications</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>&lt;Number of input points&gt;</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>11</td>
<td>&lt;Alarm (relay) output/DI input&gt;</td>
<td>Without</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>&lt;Communication&gt;</td>
<td>Without any communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

STANDARD ACCESSORY

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel mounting bracket</td>
<td>2</td>
</tr>
<tr>
<td>CD-ROM</td>
<td>1</td>
</tr>
<tr>
<td>Noise filter for the power supply</td>
<td>1</td>
</tr>
</tbody>
</table>

OPTIONAL ITEMS

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shunt resistor for DC current input</td>
<td>PHZP0101</td>
<td>10Ω ±0.1%</td>
</tr>
<tr>
<td>PC loader communication cable</td>
<td>PHZP1801</td>
<td>With USB-A and USB miniB * 3m</td>
</tr>
<tr>
<td>CD-ROM with Instruction manual and 2 support software</td>
<td>PHZP2101</td>
<td></td>
</tr>
<tr>
<td>PC card adapter Manufactured by SanDisk</td>
<td>SODA-38</td>
<td>For Compact Flash</td>
</tr>
<tr>
<td>Compact Flash Manufactured by HAGIWARA SYS-COM</td>
<td>PHZP1301-512</td>
<td>512MB</td>
</tr>
</tbody>
</table>

* Shape of this cable is shown below

USB (A) Plug – USB (Mini-B) Plug
OUTLINE DIAGRAMS (Unit : mm)

PANEL MOUNTING

In the case of 3, 6-point input

PANEL CUTOUT

Mounting one unit

137 +1.5 0

Mounting n unit

(160 × n−22) +2 0

n : Number of units to be mounted

Do not use the water proof packing in case of mounting n unit

EXTERNAL CONNECTION DIAGRAMS (M3 screw)

In the case of 3, 6-point input

Alarm (relay) output / digital input terminal

Source terminal

AC100 to 240V 50/60Hz

(Voltage) +

(Thermocouple) +

(Resistance bulb) +

(Thermocouple) +

(Thermocouple) +

Input terminal

Note1: For current input, connect an optional shunt resistance to a voltage input terminal.

Note2: Do not use any input terminal which is not needed.
SELECTING INPUT TYPE
The input types of channel 4 and 5 is the same.
Channel 5 can only be allocated the input type that is the same as channel 4.
The following input types are available.

<table>
<thead>
<tr>
<th>Input category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermocouple, 50mV</td>
<td>K, E, J, T, R, S, B, N, W, L, U, and PN thermocouples, 50mV</td>
</tr>
<tr>
<td>Resistance bulb</td>
<td>Pt100, JPt100, Ni100, Pt50, Cu50</td>
</tr>
<tr>
<td>500mV</td>
<td>500mV</td>
</tr>
<tr>
<td>5V</td>
<td>1 to 5V, 0 to 5V</td>
</tr>
</tbody>
</table>

Note) Arbitrary input type can be selected for any channels other than channel 4 and 5 irrespective of the type allocated to other channels.

Example of channel input type selection

<table>
<thead>
<tr>
<th>Channel</th>
<th>Input type</th>
<th>Input category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>K thermocouple</td>
<td>Thermocouple, 50mV</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1-5V</td>
<td>5V</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>500mV</td>
<td>500mV</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>K thermocouple</td>
<td>Thermocouple, 50mV</td>
<td>The input type of the thermocouple and 50mV is the same.</td>
</tr>
<tr>
<td>5</td>
<td>50mV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Pt100</td>
<td>Resistance bulb</td>
<td></td>
</tr>
</tbody>
</table>

Fuji Electric
Your distributor:
Coulton Instrumentation Ltd
17 Somerford Business Park, Christchurch, BH23 3RU, UK
Tel: +44 1202 480 303
E-mail: sales@coulton.com
Web: www.coulton.com

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