Dual Display Digital Pressure Sensor

DP-100 SERIES

Dual 3-color display makes operation easier!

The dual display means that the "current value" and the "threshold value", it makes direct setting of threshold value

Equipped with a 30 mm 1.181 in square compact-sized dual display. Because the current value and the threshold value can be checked at the same time, the threshold value can be set and checked smoothly without having to switch screen modes. ON / OFF operations are still carried out while the threshold values are being set, so setting to the same sensitivity as dial control-type sensors is possible. And naturally a key lock function is also equipped.

3-color display (Red, Green, Orange)

The main display changes color in line with changes in the status of output ON / OFF operation, and it also changes color while setting is in progress. The sensor status can therefore be understood easily, and operating errors can be reduced.

Readable digital display

12 segments are used and an alphanumeric display has been adopted. This improves visual checking of letters and numbers.
APPLICATIONS

Confirming suction of electronic component
Confirming reference pressure
Air-leak test for PET bottles

BASIC PERFORMANCE

All models in the line-up are compound pressure types
No sensor settings are required to switch between positive pressure and negative pressure, so that the number of registered part numbers can be decreased.

Low pressure type
Ideal for applications such as suction.
No mis-operations due to vacuum breakdown occur.

Low pressure type ideal for applications such as checking reference pressure. Can also be used for simple suction.

Realizes high performance
The low pressure type displays measurements in 0.1 kPa at a resolution of 1/2,000 and has a response time of 2.5 ms (variable up to 5,000 ms), ±0.5 % F.S. temperature characteristics and ±0.1 % F.S. repeatability, giving it high performance.

Resolution: 1/2,000
Response time: 2.5 ms
Temperature characteristics: ±0.5 % F.S.
Repeatability: ±0.1 % F.S.

Displays measurements in 0.1 kPa

FUNCTIONS

Copy function reduces man-hours and human error
Sensors can be connected to a master sensor one by one, and a copy of the setting details for the master sensor can be transmitted as data to the other sensors. If making the same settings for multiple sensors, this prevents setting errors from occurring with the other sensors and also reduces the number of changes required to instruction manuals when equipment designs are changed.

The sensor’s setting operation mode has a 3-level configuration to suit the frequency of use
The setting levels are clearly separated into “RUN mode” for operation settings that are carried out daily, “MENU SETTING mode” for basic settings, and “PRO mode” for special and detailed setting. These make setting operations easy to understand and easy to carry out.
Equipped with independent dual output and three output modes

Equipped with two independent comparative outputs, and separate sensing modes can be selected for each of them. Since there are two comparative outputs, one of the comparative outputs can…. One of the comparative outputs can even be used for alarm output. In addition, if an output is not being used, it can be disabled.

Vacuum breakdown can also be checked during suction applications!

Reference pressure alarm output is possible during reference pressure checking!

If the reference pressure of the device changes, the auto-reference function partially shift the comparative output judgment level by the amount that the reference pressure shifts, and the remote zero-adjustment function can reset the display value to zero via external input. These functions are ideal for places where the reference pressure fluctuates wildly, or where fine settings are desired.

With auto-reference function applied

Comparative output: Window comparator mode

Hi: 1…0, Lo: 1…5

Sets the absolute threshold level

Auto-reference input

The display remains at “30” and only the threshold level is changed.

Threshold level after applying Auto-reference input

When auto-reference input is applied, the reference pressure “30” is added to the threshold level. If the reference pressure changes to “20” or “40”, the auto-reference input compensates for this every time by changing the threshold level, so any variation in the filling pressure can be ignored.

With remote zero-adjustment function applied

Comparative output: Window comparator mode

Hi: 1…0, Lo: 1…5

Sets the absolute threshold level

Remote zero-adjustment input

The display is forced to “0”, and only the filling pressure drop range is displayed.

Threshold level after applying Remote zero-adjustment input

When remote zero-adjustment input is applied, the reference pressure is forced to “0”. If the reference pressure changes to “20” or “40”, the remote zero-adjustment input adjusts the reference pressure to “0” every time the reference pressure changes, so any variation in the filling pressure can be ignored.
**FUNCTIONS**

**Sub display can be customized**

The sub display can be set to indicate any other desired values or letters apart from the threshold value. This eliminates the need for tasks such as affixing a label to the device to indicate the normal pressure value.

**Setting details can be understood at a glance**

The DP-100 setting details appear in the digital display. Because the settings are in numeric form that can be easily understood, it is useful for times such as when receiving technical support by telephone.

- 1st digit: Setting status for comparative output 1
- 2nd digit: Setting status for comparative output 2
- 3rd digit: Threshold value setting
- 4th digit: Display color setting
- 5th digit: Response time setting
- 6th digit: Display unit setting
- 7th digit: Display refresh rate setting
- 8th digit: ECO mode setting

**MOUNTING**

**Tight installation to panels is possible**

An exclusive mounting bracket that is suitable for 1 to 6 mm 0.039 to 0.236 in panel thickness is available.

**Space savings can also be obtained if an L-shaped mounting bracket is used.**

**NEW** **Short pressure port type is lightweight and takes up little space**

Compact size with a depth of only 30 mm 1.181 in, so that it can easily fit into narrow spaces. Further, 10 g lighter than standard types. This reduces the loads on movable parts such as robot arms.

**Cable can be connected with one-touch connection**

The accessory connector attached cable (2 m 6.562 ft) can be connected easily with one-touch connection.

* Options: 1 m 3.281 ft / 3 m 9.843 ft / 5 m 16.404 ft types are also available. Please see P.600 for information about the recommended commercially available connectors.
### ORDER GUIDE

<table>
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<tr>
<th>Type</th>
<th>Appearance</th>
<th>Rated pressure range</th>
<th>Model No.</th>
<th>Pressure port</th>
<th>Comparative output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Standard</td>
<td>For low pressure</td>
<td>–100.0 to +100.0 kPa</td>
<td>DP-101</td>
<td>M5 female thread + R (PT) 1/8 male thread</td>
<td>NPN open-collector transistor</td>
</tr>
<tr>
<td>Multi-function</td>
<td>For high pressure</td>
<td>–100.0 to +1.000 MPa</td>
<td>DP-102</td>
<td>M5 female thread + G 1/8 male thread</td>
<td>PNP open-collector transistor</td>
</tr>
<tr>
<td>Europe Standard</td>
<td>For low pressure</td>
<td>–100.0 to +100.0 kPa</td>
<td>DP-101-N</td>
<td>M5 female thread + NPT 1/8 male thread</td>
<td>NPN open-collector transistor</td>
</tr>
<tr>
<td>Multi-function</td>
<td>For high pressure</td>
<td>–100.0 to +1.000 MPa</td>
<td>DP-102-N</td>
<td>M5 female thread + NPT 1/8 male thread</td>
<td>PNP open-collector transistor</td>
</tr>
<tr>
<td>North America Standard</td>
<td>For low pressure</td>
<td>–100.0 to +100.0 kPa</td>
<td>DP-101-M</td>
<td>M5 female thread + R (PT) 1/8 male thread</td>
<td>NPN open-collector transistor</td>
</tr>
<tr>
<td>Multi-function</td>
<td>For high pressure</td>
<td>–100.0 to +1.000 MPa</td>
<td>DP-102-M</td>
<td>M5 female thread + NPT 1/8 male thread</td>
<td>PNP open-collector transistor</td>
</tr>
</tbody>
</table>

**Type without connector attached cable**

Type without connector attached cable CN-14A-C2 is available. When ordering this type, suffix “-J” to the Model No. (e.g.) Type without connector attached cable of DP-101-N is “DP-101-N-J”
## OPTIONS

<table>
<thead>
<tr>
<th>Designation</th>
<th>Model No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connector attached cable</td>
<td>CN-14A-C1</td>
<td>Length: 1 m 3.281 ft</td>
</tr>
<tr>
<td>CN-14A-C2(Note)</td>
<td>Length: 2 m 6.562 ft</td>
<td></td>
</tr>
<tr>
<td>CN-14A-C3</td>
<td>Length: 3 m 9.843 ft</td>
<td></td>
</tr>
<tr>
<td>CN-14A-C5</td>
<td>Length: 5 m 16.404 ft</td>
<td></td>
</tr>
<tr>
<td>Connector attached cable (Flexible cable)</td>
<td>CN-14A-R-C1</td>
<td>Length: 1 m 3.281 ft 0.2 mm² 4-core cabtyre cable with connector on one end</td>
</tr>
<tr>
<td>CN-14A-R-C2</td>
<td>Length: 2 m 6.562 ft</td>
<td></td>
</tr>
<tr>
<td>CN-14A-R-C3</td>
<td>Length: 3 m 9.843 ft</td>
<td></td>
</tr>
<tr>
<td>CN-14A-R-C5</td>
<td>Length: 5 m 16.404 ft</td>
<td></td>
</tr>
<tr>
<td>M8 connector attached cable</td>
<td>CN-24A-C2</td>
<td>Length: 2 m 6.562 ft For M8 plug-in connector type</td>
</tr>
<tr>
<td>CN-24A-C5</td>
<td>Length: 5 m 16.404 ft</td>
<td></td>
</tr>
<tr>
<td>Connector</td>
<td>CN-14A</td>
<td>Set of 10 housings and 40 contacts</td>
</tr>
<tr>
<td>Sensor mounting bracket</td>
<td>MS-DP1-1</td>
<td>Allows sensors to be installed to face in the direction of the floor or ceiling. Multiple sensors can also be mounted closely.</td>
</tr>
<tr>
<td>Panel mounting bracket</td>
<td>MS-DP1-2</td>
<td>Allows installation to panels with thickness of 1 to 6 mm 0.039 to 0.236 in.</td>
</tr>
<tr>
<td>Front protection cover</td>
<td>MS-DP1-3</td>
<td>Protects the adjustment surfaces of sensors. (Can be attached when using the panel mounting bracket)</td>
</tr>
<tr>
<td>Panel mounting bracket for DP2 / DP3 replacement</td>
<td>MS-DP1-4</td>
<td>The existing panel mounting holes can be used as they are to replace the existing model with the DP-100. This means that only DP-100 series parts are needed for replacement parts even when using previous models.</td>
</tr>
</tbody>
</table>

Note: The connector attached cable CN-14A-C2 is supplied with the DP-100 series. (Excluding M8 plug-in connector type).

Recommended connector.
Contact: SPHD-001T-P0.5, Housing: PAP-04V-S (Manufactured by J.S.T. Mfg. Co., Ltd.)
Note: Contact the manufacturer for details of the recommended products.

Recommended crimping tool.
Model No.: YC-610R (Manufactured by J.S.T. Mfg. Co., Ltd.)
Note: Contact the manufacturer for details of the recommended products.

![Connector attached cable](image1)
![M8 connector attached cable](image2)

![Sensor mounting bracket](image3)
![Panel mounting bracket](image4)

![Front protection cover](image5)
![Panel mounting bracket for DP2 / DP3 replacement](image6)
Dual Display Digital Pressure Sensor  
**DP-100 SERIES**

<table>
<thead>
<tr>
<th>Item</th>
<th>Type</th>
<th>Standard</th>
<th>Multi-function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model No.</td>
<td>Asia (Note 2)</td>
<td>DP-101A-N</td>
<td>DP-102A-N</td>
</tr>
<tr>
<td></td>
<td>Europe</td>
<td>DP-101A-E-P</td>
<td>DP-102A-E-P</td>
</tr>
<tr>
<td></td>
<td>North America (Note 2)</td>
<td>DP-101A-N-P</td>
<td>DP-102A-N-P</td>
</tr>
</tbody>
</table>

- **Model No.**
  - DP-101A
  - DP-102A

**Rated pressure range**

- Standard: -100.0 to +100.0 kPa
- Multi-function: -100.0 to +100.0 kPa

**Set pressure range**

- Standard: -100.0 to +100.0 kPa
- Multi-function: -100.0 to +100.0 kPa

**Pressure withstandability**

- Standard: 500 kPa 1.5 MPa
- Multi-function: 500 kPa 1.5 MPa

**Applicable fluid**

- Standard: Non-corrosive gas
- Multi-function: Non-corrosive gas

**Power consumption**

- Standard: 12 to 24 V DC ±10 % Ripple P-P 10 % or less
- Multi-function: 12 to 24 V DC ±10 % Ripple P-P 10 % or less

**Selectable unit**

- Standard: For low pressure: kPa, kgf/cm², bar, psi, mmHg, inHg, For high pressure: MPa, kPa, kgf/cm², bar, psi
- Multi-function: For low pressure: kPa, kgf/cm², bar, psi, mmHg, inHg, For high pressure: MPa, kPa, kgf/cm², bar, psi

**Voltage withstandability**

- Standard: 50 MΩ, or more, with 500 V DC megger between all supply terminals connected together and enclosure
- Multi-function: 50 MΩ, or more, with 500 V DC megger between all supply terminals connected together and enclosure

**Hysteresis**

- Standard: ±0.1 % F.S. (within ±2 digits)
- Multi-function: ±0.1 % F.S. (within ±2 digits)

**Response time**

- Standard: 2.5 ms, 5 ms, 10 ms, 25 ms, 50 ms, 100 ms, 250 ms, 500 ms, 1,000 ms, 5,000 ms, selectable by key operation
- Multi-function: 2.5 ms, 5 ms, 10 ms, 25 ms, 50 ms, 100 ms, 250 ms, 500 ms, 1,000 ms, 5,000 ms, selectable by key operation

**Environmental resistance**

- Standard: 35 to 85 % RH, Storage: 35 to 85 % RH
- Multi-function: 35 to 85 % RH

**Insulation resistance**

- Standard: 50 MO, or more, with 500 V DC megger between all supply terminals connected together and enclosure
- Multi-function: 50 MO, or more, with 500 V DC megger between all supply terminals connected together and enclosure

**Protection**

- Standard: IP40 (IEC) (Refer to p.1001 for details of standards.)
- Multi-function: IP40 (IEC) (Refer to p.1001 for details of standards.)

**Ambient temperature**

- Standard: -10 to +50 °C to +122 °F, Storage: -20 to +60 °C to +140 °F (No dew condensation or icing allowed)
- Multi-function: -10 to +50 °C to +122 °F, Storage: -20 to +60 °C to +140 °F (No dew condensation or icing allowed)

**Ambient humidity**

- Standard: 35 to 85 % RH, Storage: 35 to 85 % RH
- Multi-function: 35 to 85 % RH

**Environmental resistance**

- Standard: 100 m/s ± 2 % (up to +60 °C), Storage: ±1 % F.S. (at +20 °C ± 6 °C)
- Multi-function: 100 m/s ± 2 % (up to +60 °C), Storage: ±1 % F.S. (at +20 °C ± 6 °C)

**Pressure port**

- Standard: Asia: M5 female thread + G 1/8 male thread, North America: M5 female thread + NPT 1/8 male thread
- Multi-function: Asia: M5 female thread + G 1/8 male thread, North America: M5 female thread + NPT 1/8 male thread

**Material**

- Standard: enclosure: PBT (glass fiber reinforced), LCD display: Acrylic, Pressure port: Brass (nickel plated), Switch part: Silicone rubber
- Multi-function: enclosure: PBT (glass fiber reinforced), LCD display: Acrylic, Pressure port: Brass (nickel plated), Switch part: Silicone rubber

**Connecting method / Cable length**

- Standard: Connector / Total length up to 100 m (328.084 ft) (less than 10 m 328.084 ft when conforming to CE marking) is possible with 0.3 mm², or more, cable.
- Multi-function: Connector / Total length up to 100 m (328.084 ft) (less than 10 m 328.084 ft when conforming to CE marking) is possible with 0.3 mm², or more, cable.

**Weight**

- Standard: Net weight: 49 g approx. (DP-10B-M: 30 g approx.), Gross weight: 135 g approx. (DP-10B-M: 125 g approx.)
- Multi-function: Net weight: 49 g approx. (DP-10B-M: 30 g approx.), Gross weight: 135 g approx. (DP-10B-M: 125 g approx.)

**Accessories**

- Standard: CN-14A-C2 (Connector attached cable 2 m 6.562 ft), 1pc. (Excluding M8 plug-in connector type)
- Multi-function: CN-14A-C2 (Connector attached cable 2 m 6.562 ft), 1pc. (Excluding M8 plug-in connector type)

**Notes:**

1. Where measurement conditions have not been specified precisely, the conditions used were an ambient temperature of +20 °C ± 6 °F.
2. Model Nos. of Asia type having the suffix "M" are short pressure port type. Model Nos. of North America type having the suffix "P" are PNP output type.
I/O CIRCUIT AND WIRING DIAGRAMS

DP-100

I/O circuit diagram

Standard type

Terminal No.

Color code of connector attached cable

1. (Black) Comparative output 1

2. (White) Comparative output 2

Internal circuit

Users’ circuit

Terminal arrangement diagram

Symbols … D: Reverse supply polarity protection diode

ZD1, ZD2: Surge absorption zener diode

Tr1, Tr2: NPN output transistor

Multi-function type

Terminal No.

Color code of connector attached cable

1. (Brown) +V

2. (White) Comparative output 1

3. (Black) Comparative output 1

Internal circuit

Users’ circuit

Symbols … D1, D2: Reverse supply polarity protection diode

ZD1: Surge absorption zener diode

Tr1: PNP input transistor

Tr2: NPN output transistor

DP-100-P

I/O circuit diagram

Standard type

Terminal No.

Color code of connector attached cable

1. (Brown) +V

2. (Black) Comparative output 1

Internal circuit

Users’ circuit

Symbols … D: Reverse supply polarity protection diode

ZD1, ZD2: Surge absorption zener diode

Tr1, Tr2: NPN output transistor

Multi-function type

Terminal No.

Color code of connector attached cable

1. (Brown) +V

2. (White) Comparative output 1

Internal circuit

Users’ circuit

Symbols … D1, D2: Reverse supply polarity protection diode

ZD1: Surge absorption zener diode

Tr1: PNP input transistor

Tr2: NPN output transistor

Terminal arrangement diagram

Symbols … D: Reverse supply polarity protection diode

ZD1, ZD1: Surge absorption zener diode

Tr1: PNP input transistor

Tr2: NPN output transistor

Symbols … D, D: Reverse supply polarity protection diode

ZD1: Surge absorption zener diode

Tr1, Tr2: NPN output transistor
## I/O CIRCUIT AND WIRING DIAGRAMS

### DP-11□ E-P-J

#### I/O circuit diagram

**Standard type**

<table>
<thead>
<tr>
<th>Terminal No.</th>
<th>Color code of connection cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brown +V</td>
</tr>
<tr>
<td>2</td>
<td>(Black) Comparative output 2</td>
</tr>
<tr>
<td>3</td>
<td>(White) Analog voltage output or External input</td>
</tr>
<tr>
<td>4</td>
<td>(Blue) D V</td>
</tr>
</tbody>
</table>

**Multi-function type**

<table>
<thead>
<tr>
<th>Terminal No.</th>
<th>Color code of connection cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brown +V</td>
</tr>
<tr>
<td>2</td>
<td>(Black) Comparative output 1</td>
</tr>
<tr>
<td>3</td>
<td>(White) Analog voltage output or External input</td>
</tr>
<tr>
<td>4</td>
<td>(Blue) D V</td>
</tr>
</tbody>
</table>

Symbols: …D: Reverse supply polarity protection diode  
ZD1, ZD2: Surge absorption zener diode  
Tr1, Tr2: PNP output transistor  
Tr1, Tr2: NPN input transistor

#### Terminal arrangement diagram

<table>
<thead>
<tr>
<th>Terminal No.</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+V</td>
</tr>
</tbody>
</table>
| 2            | Standard type: Comparative output 2  
Multi-function type: Analog voltage output or External input |
| 3            | ±V          |
| 4            | Comparative output 1               |

## PRECAUTIONS FOR PROPER USE

- Never use this product as a sensing device for personnel protection.  
- In case of using sensing devices for personnel protection, use products which meet laws and standards, such as OSHA, ANSI or IEC etc., for personnel protection applicable in each region or country.  
- The DP-100 series is designed for use with non-corrosive gas. It cannot be used with liquid or corrosive gas.

### Connection

- Do not apply stress directly to the connection cable leader or to the connector.

### Conditions in use for CE conformity

- The DP-100 series is a CE conformity product complying with EMC Directive. The harmonized standard with regard to immunity that applies to this product is EN 61000-6-2 and the following condition must be met to conform to that standard.

### Conditions

- The sensor should be connected less than 10 m 32.808 ft from the power supply.  
- The signal line to connect with this sensor should be less than 30 m 98.425 ft.

### Mounting

- The MS-DP1-1 sensor mounting bracket is available separately, and it should be used for mounting. When tightening the sensor to the sensor mounting bracket, use a tightening torque of 0.5 N·m or less.

- The MS-DP1-2 panel mounting bracket (optional) and the MS-DP1-3 front protection cover (optional) are also available.

---

**Connector attached cable [CN-14A-R]-□**

**Panel mounting bracket MS-DP1-2 (optional)**

**Front protection cover MS-DP1-3 (optional)**

**Sensor mounting bracket MS-DP1-1 (Optional)**

**M3 (length 6 mm 0.236 in) screws with washers**
PRECAUTIONS FOR PROPER USE

Piping
- If connecting a commercially-available coupling to the pressure port, attach a 12 mm (0.472 in) spanner (14 mm (0.551 in) spanner for DP-100-E type) to the hexagonal section of the pressure port to secure it, and tighten at a torque of 9.8 N·m or less. Hold the short port type DP-100M by hand to fix it in place, and mount it using a tightening torque of 1 N·m or less. If it is tightened using excessive torque, it may damage the coupling or the pressure port. In addition, wrap sealing tape around the coupling when connecting it to prevent leaks.

Others
- Use within the rated pressure range.
- Do not apply pressure exceeding the pressure withstandability. The diaphragm will get damaged and correct operation shall not be maintained.
- Do not use the instrument during transient time (0.5 sec. approx.) after the power supply is switched on.
- Avoid dust, dirt, and steam.
- Take care that the sensor does not come in direct contact with water, oil, grease, or organic solvents, such as, thinner, etc.
- Do not insert wires, etc., into the pressure port. The diaphragm will get damaged and correct operation shall not be maintained.
- Do not operate the keys with pointed or sharp objects.

RUN mode
- This is the normal operating mode.

PRO mode
- If the mode selection key is pressed and held for 5 sec. in RUN mode, the mode will switch to PRO mode.
- If the mode selection key is pressed while a setting is being made, the mode will switch to RUN mode. In this case, the settings that have been changed will be entered.

Setting item | Description
--- | ---
Sub display switching | Changes the information in the sub display during RUN mode operation to the desired alphanumeric display.
Display refresh rate switching | Changes the display refresh rate for the pressure value displayed in the main display.
Hysteresis fix value switching | Sets the response time for EASY mode and window comparator mode. (8 steps)
Linked display color switching (standard type only) | Allows the display color for the main display to be switched in line with the output operation for comparative output 1 or comparative output 2.
ECO mode setting | Allows power consumption to be reduced by dimming the display or turning it off.
Setting check code | Allows the setting details to be checked via codes.
Setting copy mode | Allows the setting details for the master sensor to be copied to slave sensors.
Reset setting | Resets the settings to the factory settings.

Table of codes

<table>
<thead>
<tr>
<th>Code</th>
<th>1st digit</th>
<th>2nd digit</th>
<th>3rd digit</th>
<th>4th digit</th>
<th>5th digit</th>
<th>6th digit</th>
<th>7th digit</th>
<th>8th digit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Std mode</td>
<td></td>
<td>ECO mode</td>
<td></td>
<td></td>
<td></td>
<td>Standard</td>
<td>type only</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td>EASY</td>
<td>NO</td>
<td>OFF</td>
<td>OFF</td>
<td>P-1, Lo1</td>
<td>Hi-1</td>
<td>Green</td>
<td>when ON</td>
</tr>
<tr>
<td>0.6</td>
<td>Hi-2</td>
<td>NC</td>
<td>hiysect</td>
<td>NO</td>
<td>P-2, Lo2</td>
<td>Hi-2</td>
<td>Red when</td>
<td>ON</td>
</tr>
<tr>
<td>0.7</td>
<td>Window</td>
<td>NO</td>
<td>-</td>
<td>NC</td>
<td>ADJ</td>
<td>-</td>
<td>Always</td>
<td>red</td>
</tr>
<tr>
<td></td>
<td>comparator</td>
<td>NC</td>
<td>-</td>
<td>NO</td>
<td>-</td>
<td>-</td>
<td>Always</td>
<td>green</td>
</tr>
<tr>
<td>1</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Setting item | Description
--- | ---
Threshold value setting | The threshold values for ON / OFF operation can be changed directly by pressing the increment key (UP) and the decrement key (DOWN).
Zero-adjustment function | This forces the pressure value display to be reset to zero when the pressure port is open on the atmospheric pressure side.
Key lock function | Stops key operations from being accepted.
Peak hold / bottom hold function | Displays the peak value and bottom value for fluctuating pressure. The peak value appears in the main display, and the bottom value appears in the sub display.

MENU SETTING mode
- If the mode selection key is pressed and held for 2 sec. in RUN mode, the mode will switch to MENU SETTING mode.
- If the mode selection key is pressed while a setting is being made, the mode will switch to RUN mode. In this case, the settings that have been changed will be entered.

Setting item | Description
--- | ---
Comparative output 1 output mode setting | Sets the output mode for comparative output 1.
Comparative output 2 output mode setting (standard type only) | Sets the output mode for comparative output 2.
Analog voltage output / external input switching (multi-function type only) | Allows switching between analog voltage output and auto-reference input / remote zero-adjustment input.
NO / NC switching | Sets normally open (NO) or normally closed (NC).
Response time setting | Sets the response time. The response time can be selected from 2.5 ms, 5 ms, 10 ms, 25 ms, 50 ms, 100 ms, 250 ms, 500 ms, 1,000 ms, and 5,000 ms.
Display color switching for main display | Allows the color for the main display to be changed. The colors can be set to “red / green” or “green / red” to correspond to ON / OFF output, or it can be fixed at “red” or “green” all the time.
Unit switching (high pressure type only) | Pressure unit can be changed.
**DIMENSIONS (Unit: mm in)**

The CAD data in the dimensions can be downloaded from the SUNX website: http://www.sunx.com

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**DP-100**

![Diagram of DP-100 sensor]

- **Sensor**
  - **Connector**
  - **Male thread**
  - **Female thread**
  - **Thread depth**

**DP-100-M**

![Diagram of DP-100-M sensor]

- **Sensor**
  - **Connector**
  - **Male thread**
  - **Female thread**
  - **Thread depth**

**DP-11E-P-J**

![Diagram of DP-11E-P-J sensor]

- **Sensor**
  - **Connector**
  - **Male thread**
  - **Female thread**
  - **Thread depth**

**CN-14A-C□ CN-14A-R-C□**

- **Connector attached cable** (Optional, CN-14A-C2 is attached to the sensor)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Length L</th>
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<tbody>
<tr>
<td>CN-14A(R)-C1</td>
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<tr>
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</tbody>
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*Selection Guide*

**Digital Display**

**DP4**

**DP-M**

**DP5 / DP6**

**Other Products**

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*SUNX*
DIMENSIONS (Unit: mm in)

MS-DP1-1

Assembly dimensions

Mounting drawing with DP-101

Connected to DPX-DP4

Front protection cover (MS-DP1-3)

Panel thickness dimensions 1 to 6 mm 0.393 to 0.236 in

Material: Cold rolled carbon steel (SPCC) (Uni-chrome plated)

Two M3 (length 6 mm 0.236 in) screws with washers are attached

MS-DP1-2 MS-DP1-3

Assembly dimensions

Mounting drawing with DP-101

Connector

MS female thread, 4.0157 deep

Material: POM (Panel mounting bracket)

Polycarbonate (Front protection cover)

MS-DP1-4

Assembly dimensions

Mounting drawing with DP-101

Front protection cover (DPX-04)

Panel thickness dimensions 1 to 3.2 mm 0.039 to 0.126 in

Material: Panel mounting bracket body … Nylon 6

Panel mounting bracket … Stainless steel (SUS304)

Spacer … Cold rolled carbon steel (SPCC) (Uni-chrome plated)

Panel mounting bracket (Optional), Front protection cover (Optional)

Assembly dimensions

Sensor mounting bracket (Optional)

Panel mounting bracket (Optional)

Panel cut-out dimensions

When 1 unit is installed

When "n" units are installed horizontally in series

When "n" units are installed vertically in series

Note: The panel thickness should be 1 to 6 mm 0.393 to 0.236 in.

Panel mounting bracket (Optional)

Panel cut-out dimensions

Note: The panel thickness should be 1 to 3.2 mm 0.039 to 0.126 in.

The CAD data in the dimensions can be downloaded from the SUNX website: http://www.sunx.com