

# DPC-100 SERIES DPH-100 SERIES

Related Information

- General terms and conditions..... F-17
- Sensor selection guide ..... P.661~
- Glossary of terms..... P.1373~
- General precautions ..... P.1405



[panasonic-electric-works.net/sunx](http://panasonic-electric-works.net/sunx)



\* Passed the UL 991 Environment Test

\* UL 61010C-1 compatible, Passed the UL 991 Environment Test based on SEMI S2-0200. [Category applicable for semiconductor manufacturing: TWW2, Process Equipment] [Applicable standards: UL 61010C-1] [Additional test / evaluation standards as per intended use: UL 991, SEMI S2-0200]



## Single axis type Direct installation using a hexagonal wrench

### Breakthrough construction

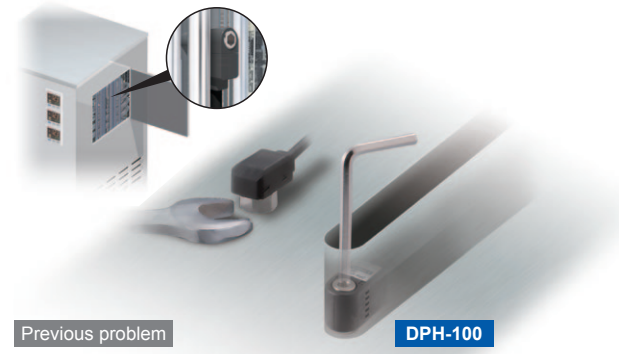
Obstructions can be avoided and installation from above can be done much more easily using a hexagonal wrench. This also eliminates wasted installation space and contributes to a smaller installation footprint.



Previous problem  
**Large space needed to turn the spanner!**

### Flexible design! Sensor heads can be embedded **New concept**

Because the bolts can be turned from directly above, embedding the sensor heads into narrow spaces is possible. In addition, the flat installation leaves no worries for danger of objects striking against the sensor and damaging it.



Previous problem  
**Projection sticks out after installation. Easy to knock against objects.**

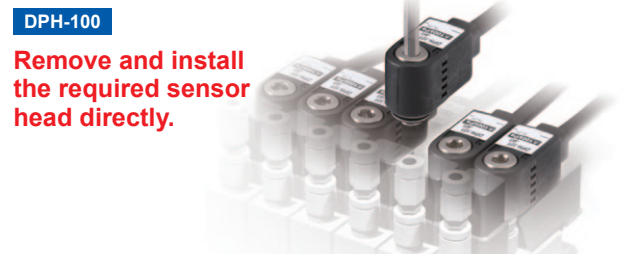
**DPH-100**  
**Embedded installation greatly increases design flexibility!**

### Quick maintenance

During maintenance, the sensor head needed to be removed can be easily removed from directly above.



Spanner does not fit!  
It cannot be turned either!



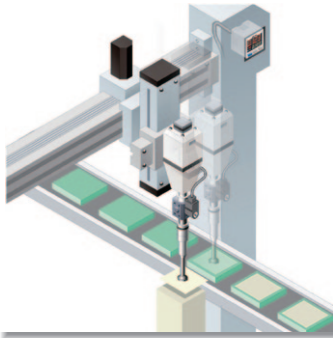
**DPH-100**  
**Remove and install the required sensor head directly.**

To remove ③, you have to remove the sensors in order starting from ①.

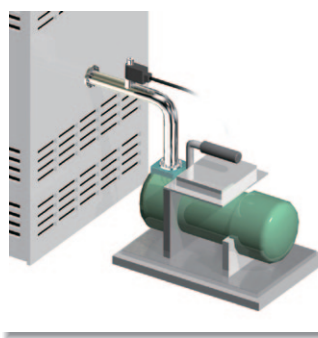
- FIBER SENSORS
- LASER SENSORS
- PHOTOELECTRIC SENSORS
- MICRO PHOTOELECTRIC SENSORS
- AREA SENSORS
- LIGHT CURTAINS
- PRESSURE / FLOW SENSORS**
- INDUCTIVE PROXIMITY SENSORS
- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- SIMPLE WIRE-SAVING UNITS
- WIRE-SAVING SYSTEMS
- MEASUREMENT SENSORS
- STATIC CONTROL DEVICES
- ENDOSCOPE
- LASER MARKERS
- PLC / TERMINALS
- HUMAN MACHINE INTERFACES
- ENERGY CONSUMPTION VISUALIZATION COMPONENTS
- FA COMPONENTS
- MACHINE VISION SYSTEMS
- UV CURING SYSTEMS
- Selection Guide
- Pressure/Digital Display
- Pressure/Head-separated
- Flow
- Other Products
- DPC-L100/DPH-L100
- DPS-400/DPH-100
- DPC-100/DPH-100**
- DP5/DPH

**APPLICATIONS**

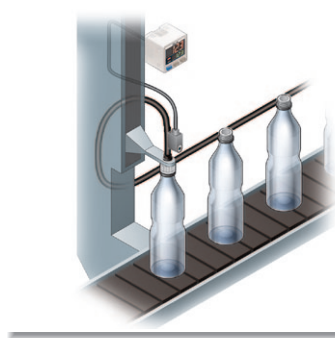
**Confirming vacuum breakdown**



**Confirming reference pressure**

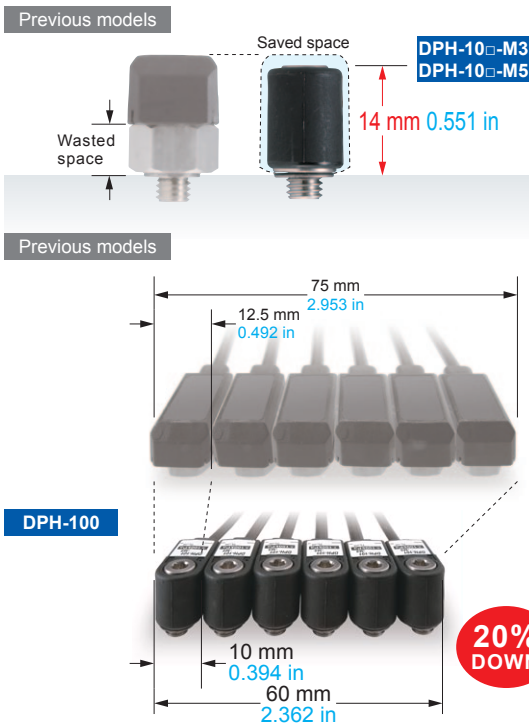


**Air-leak test**



**Mounting space-saving**

Space saving during installation



Because the dead zone caused by the nut is eliminated, the narrowed-down thickness after installation contributes to space saving.

**Easy adjustment**

Sensor heads can be turned after installation

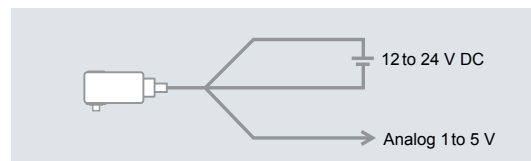


**Free-turning**

After installation, you can alter the cable direction with the pressure port still secured in place. In addition, the cable does not get twisted during installation.

**Independent use of sensor head possible**

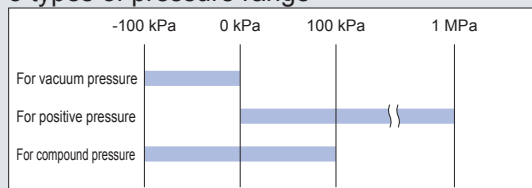
Separate analog voltage output for each sensor head



The analog voltage output from the sensor head can be picked up directly.

**Sensor head line-up**

3 types of pressure range



Stainless steel pressure ports come in 3 shapes



FIBER SENSORS

LASER SENSORS

PHOTOELECTRIC SENSORS

MICRO PHOTOELECTRIC SENSORS

AREA SENSORS

LIGHT CURTAINS

**PRESSURE / FLOW SENSORS**

INDUCTIVE PROXIMITY SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS

SIMPLE WIRE-SAVING UNITS

WIRE-SAVING SYSTEMS

MEASUREMENT SENSORS

STATIC CONTROL DEVICES

ENDOSCOPE

LASER MARKERS

PLC / TERMINALS

HUMAN MACHINE INTERFACES

ENERGY CONSUMPTION VISUALIZATION COMPONENTS

FA COMPONENTS

MACHINE VISION SYSTEMS

UV CURING SYSTEMS

Selection Guide

Pressure/ Digital Display

Pressure/ Head-separated

Flow

Other Products

**DPC-L100/ DPH-L100**

**DPS-400/ DPH-100**

**DPC-100/ DPH-100**

**DP5/DPH**

- FIBER SENSORS
- LASER SENSORS
- PHOTOELECTRIC SENSORS
- MICRO PHOTOELECTRIC SENSORS
- AREA SENSORS
- LIGHT CURTAINS
- PRESSURE / FLOW SENSORS**
- INDUCTIVE PROXIMITY SENSORS
- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- SIMPLE WIRE- SAVING UNITS
- WIRE- SAVING SYSTEMS
- MEASUREMENT SENSORS
- STATIC CONTROL DEVICES
- ENDOSCOPE
- LASER MARKERS
- PLC / TERMINALS
- HUMAN MACHINE INTERFACES
- ENERGY CONSUMPTION VISUALIZATION COMPONENTS
- FA COMPONENTS
- MACHINE VISION SYSTEMS
- UV CURING SYSTEMS

### Dual display + Direct setting

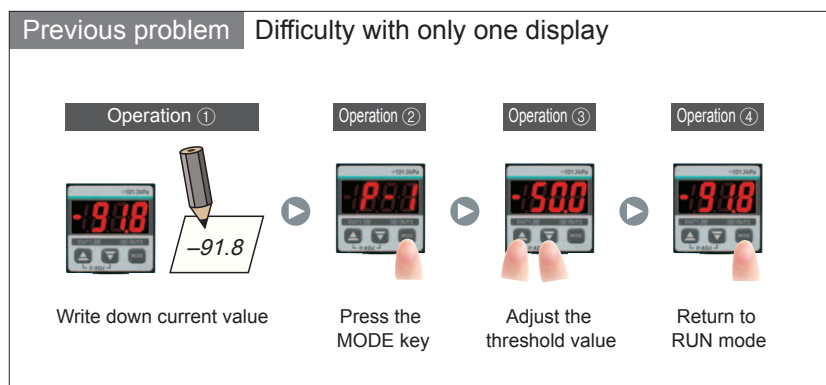
Equipped with a 30 mm 1.181 in square compact-sized dual display.  
 "Current value" and "Threshold value" can be checked at the same time.  
 The threshold value can be changed in RUN mode directly.



**The current value and the threshold value can be checked simultaneously!**

Because direct setting is possible

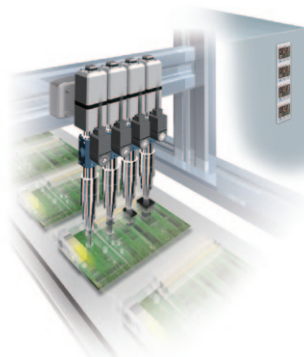
Operation is as easy as analog



### High-speed response time at 500 μs

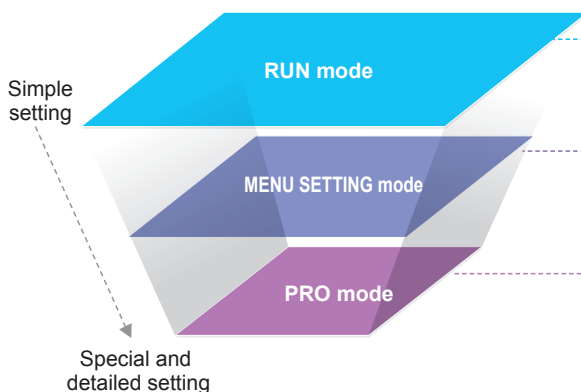
Reduced tact time. Response time contributes to even greater productivity.

**Response time at 500 μs**



### The controller'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.

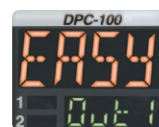


#### RUN mode



Settings such as threshold value adjustment and key lock operation can be carried out while the sensor is operating.

#### MENU SETTING mode



Basic settings such as output mode setting and NO / NC switching can be carried out.

#### PRO mode



High-level function settings such as hysteresis adjustment and the copy function can be carried out.

- Selection Guide
- Pressure/ Digital Display
- Pressure/ Head-separated
- Flow
- Other Products
- DPC-L100/ DPH-L100**
- DPS-400/ DPH-100**
- DPC-100/ DPH-100**
- DP5/DPH**



### 3-color display lets you view the controller status at a glance

The main display color switches between green and red in accordance with the ON / OFF status of output during RUN mode. In addition, the display always appears orange while setting is in progress, so that the status of the controller can be viewed at a glance.

<b>RUN</b>	<b>While setting is in progress</b>
<b>RUN mode</b>	<b>MENU SETTING mode</b>
<b>PRO mode</b>	<b>PRO mode</b>

Display in red or green depending on output ON / OFF.

Orange while setting is in progress.

### Copy function reduces man-hours and human error

Controllers can be connected to a master controller one by one, and a copy of the setting details for the master controller can be transmitted as data to the slave controllers. If making the same settings for multiple controllers, this prevents setting errors from occurring with the other controllers and also reduces the number of changes required to instruction manuals when equipment designs are changed.

**Copying via copy unit**

Copy unit **SC-SU1**

**Copying via wiring**

\* Other wires are not connected.

**Details transmitted**

Details copied

**Details received**

### Sensor head auto-recognition

The controller will automatically recognize sensor heads when they are connected, even for sensor heads with different rated pressure ranges. There is no need to use the controller to change settings.

	<b>DPH-101</b> □ Compound pressure ±100 kPa	<div style="font-size: 2em; color: #00a0e3;">Auto-recognition</div> <div style="font-size: 2em; color: #00a0e3;">Initial setting not needed</div>	
	<b>DPH-102</b> □ Positive pressure +1 MPa		
	<b>DPH-103</b> □ Vacuum pressure -101 kPa		

### 1 model to suit a wide variety of applications

### DPC-100 original functions



FIBER SENSORS

LASER SENSORS

PHOTOELECTRIC SENSORS

MICRO PHOTOELECTRIC SENSORS

AREA SENSORS

LIGHT CURTAINS

PRESSURE / FLOW SENSORS

INDUCTIVE PROXIMITY SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS

SIMPLE WIRE-SAVING UNITS

WIRE-SAVING SYSTEMS

MEASUREMENT SENSORS

STATIC CONTROL DEVICES

ENDOSCOPE

LASER MARKERS

PLC / TERMINALS

HUMAN MACHINE INTERFACES

ENERGY CONSUMPTION VISUALIZATION COMPONENTS

FA COMPONENTS

MACHINE VISION SYSTEMS

UV CURING SYSTEMS

Selection Guide

Pressure/ Digital Display

Pressure/ Head-separated

Flow

Other Products

DPC-L100/ DPH-L100

DPS-400/ DPH-100

DPC-100/ DPH-100

DP5/DPH

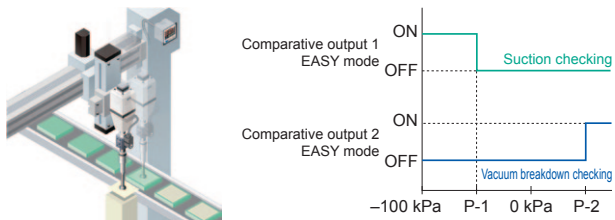
- FIBER SENSORS
- LASER SENSORS
- PHOTOELECTRIC SENSORS
- MICRO PHOTOELECTRIC SENSORS
- AREA SENSORS
- LIGHT CURTAINS
- PRESSURE / FLOW SENSORS**
- INDUCTIVE PROXIMITY SENSORS
- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- SIMPLE WIRE-SAVING UNITS
- WIRE-SAVING SYSTEMS
- MEASUREMENT SENSORS
- STATIC CONTROL DEVICES
- ENDOSCOPE
- LASER MARKERS
- PLC / TERMINALS
- HUMAN MACHINE INTERFACES
- ENERGY CONSUMPTION VISUALIZATION COMPONENTS
- FA COMPONENTS
- MACHINE VISION SYSTEMS
- UV CURING SYSTEMS
- Selection Guide
- Pressure/Digital Display
- Pressure/Head-separated
- Flow
- Other Products

- DPC-L100/DPH-L100
- DPS-400/DPH-100
- DPC-100/DPH-100
- DP5/DPH

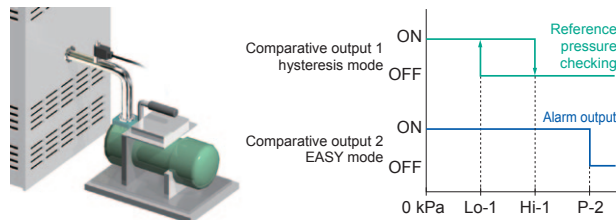
## Equipped with independent two output and three output modes

Equipped with two independent comparative outputs, and separate sensing modes can be selected for each of them. Two comparative outputs are provided, so that one of the outputs can be used as a warning output. In addition, if an output is not being used, it can be disabled.

**Vacuum breakdown can also be checked during suction applications!**

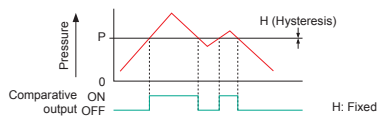


**Reference pressure alarm output is possible during reference pressure checking!**



### 1 EASY mode

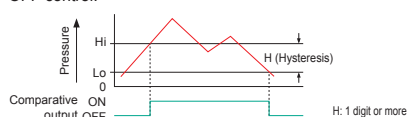
This mode is used for comparative output ON / OFF control.



Notes: 1) Hysteresis can be fixed to one of eight different levels.  
2) "P-1" appears in the sub display for comparative output 1, and "P-2" appears for comparative output 2.

### 2 Hysteresis mode

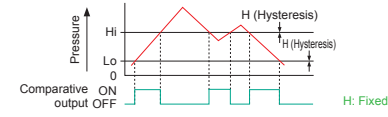
This mode is used for setting comparative output hysteresis to the desired level and for carrying out ON / OFF control.



Note: "Hi-1" or "Lo-1" appears in the sub display for comparative output 1, and "Hi-2" or "Lo-2" appears for comparative output 2.

### 3 Window comparator mode

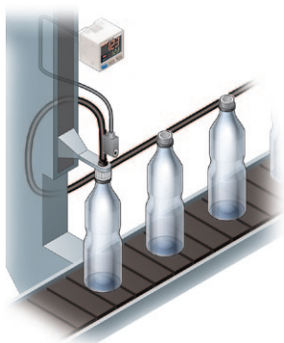
This mode is used for setting comparative output ON and OFF at pressures within the setting range.



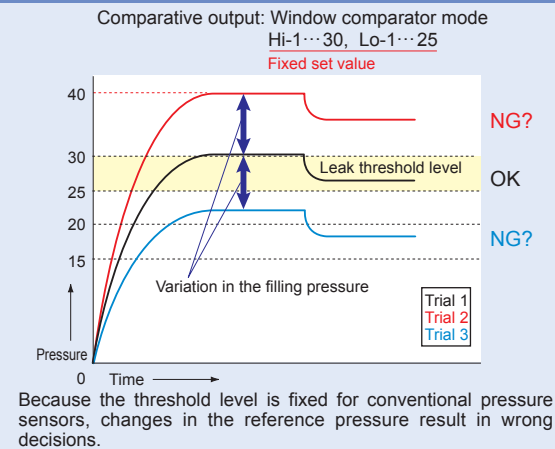
Notes: 1) Hysteresis can be fixed to one of eight different levels.  
2) "Hi-1" or "Lo-1" appears in the sub display for comparative output 1, and "Hi-2" or "Lo-2" appears for comparative output 2.

## Equipped with auto-reference / remote zero-adjustment functions, More precise pressure management is possible with a minimum of effort

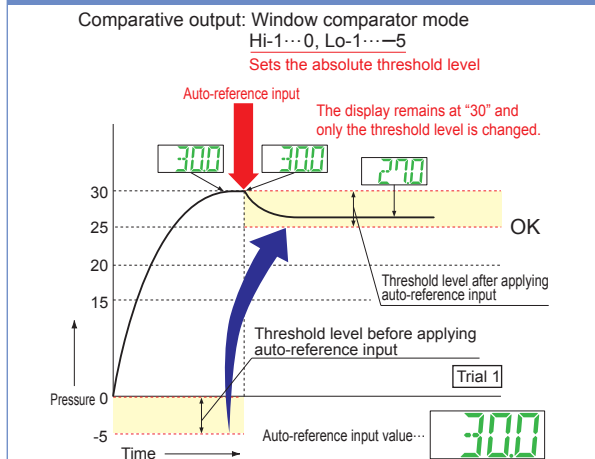
If the reference pressure of the device changes, the auto-reference function partially shift the comparative output judgment level by the amount that the reference pressure shifts, and the remote zero-adjustment function can reset the display value to zero via external input. These functions are ideal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



### Without auto-reference and remote zero-adjustment functions

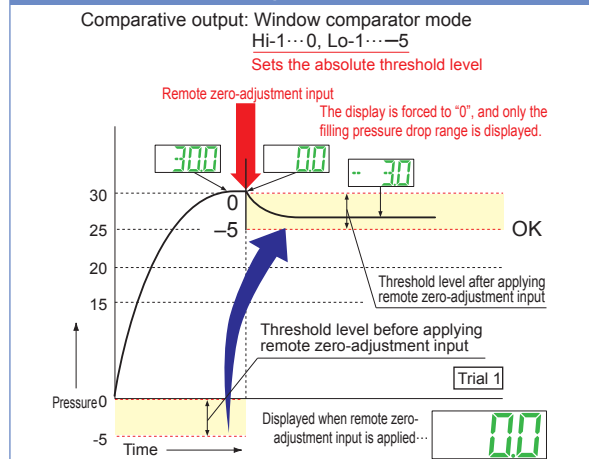


### With auto-reference function applied



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



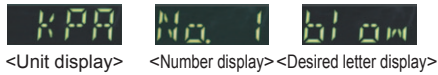
When remote zero-adjustment input is applied, the reference pressure is forced to "0". If the reference pressure changes to "20" or "40", the remote zero-adjustment input adjusts the reference pressure to "0" every time the reference pressure changes, so any variation in the filling pressure can be ignored.

### 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.



Indicates desired values and letters



<Unit display> <Number display> <Desired letter display>

### Tight installation to panels is possible

An exclusive mounting bracket (MS-DP1-2) that is suitable for 1 to 6 mm 0.039 to 0.236 in panel thickness is available.

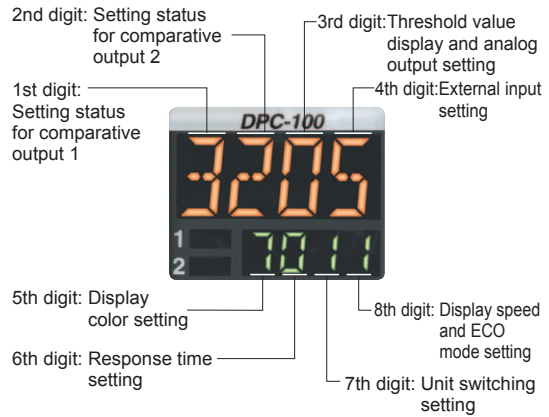


Takes up much less space



### Setting details can be understood at a glance

The **DPC-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.



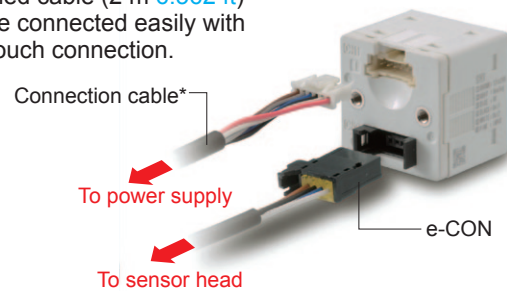
### An exclusive mounting bracket (MS-DP1-6) that supports tight installation is available

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



### Power supply 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: 5 m 16.404 ft type is also available.

### Types without connector attached cable are also available

**DPC-10□-J**

Commercially-available connectors can be used for cable connections. Only the required length of cable needs to be used, which contributes to a reduced amount of wastage for unneeded cable.

Environmentally friendly



FIBER SENSORS

LASER SENSORS

PHOTOELECTRIC SENSORS

MICRO PHOTOELECTRIC SENSORS

AREA SENSORS

LIGHT CURTAINS

PRESSURE / FLOW SENSORS

INDUCTIVE PROXIMITY SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS

SIMPLE WIRE-SAVING UNITS

WIRE-SAVING SYSTEMS

MEASUREMENT SENSORS

STATIC CONTROL DEVICES

ENDOSCOPE

LASER MARKERS

PLC / TERMINALS

HUMAN MACHINE INTERFACES

ENERGY CONSUMPTION VISUALIZATION COMPONENTS

FA COMPONENTS

MACHINE VISION SYSTEMS

UV CURING SYSTEMS

Selection Guide

Pressure/ Digital Display

Pressure/ Head-separated

Flow

Other Products

DPC-L100/ DPH-L100

DPS-400/ DPH-100

DPC-100/ DPH-100

DP5/DPH