

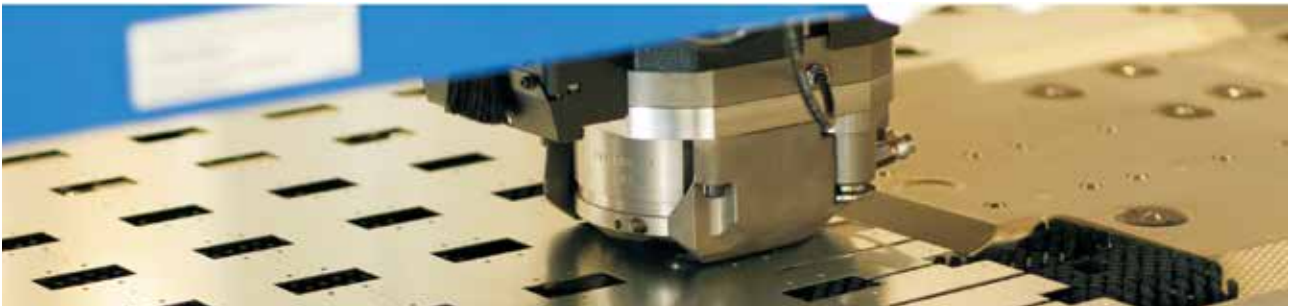
Automation for a Changing World

# Delta Multifunction Pressure Sensor DPA Series



[www.deltaww.com](http://www.deltaww.com)

 **DELTA**  
Smarter. Greener. Together.



## Features

- Energy-saving mode
- Various unit conversion functions
- Analog output function
- 10 sets of output response time setup
- Various output modes
- 3 sets of color display
- Fast zero reset
- Safety control function
- Easy code display
- Parameter copy function

## Various Unit Conversion Functions

DPA Series offers 6 kinds of globally adopted pressure units.



## Fast Parameter Copy

DPA Series is able to fast copy the internal parameters to other slaves and saves repeated parameter setup time.



## 3-Color LCD Display (Green, Red, Orange)

The large LED with a green, red and orange 3-color LCD display allows users to set the display color according to the ambient environment, such as when the pressure is within normal range or exceeds the allowed range. The display's color is orange when in parameter setup mode. This makes it easy for reading and reduces operation errors.

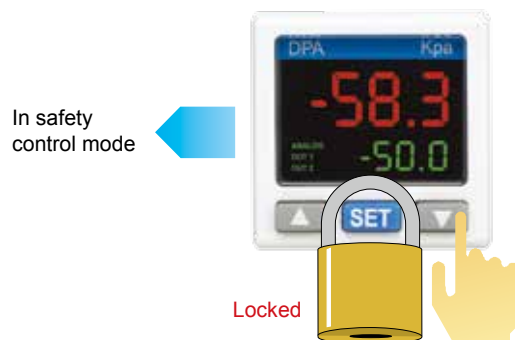


Color for upper / lower limit display (green / red)

Parameter set up (orange)

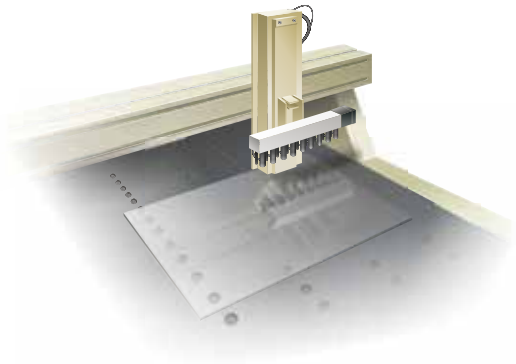
## Safety Control Mode

The safety control mode prevents operators from carelessly touching relevant parameters and affecting the operation and production of the equipment.

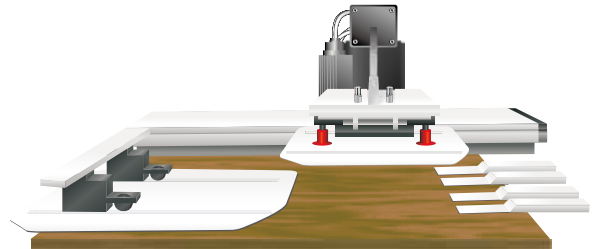


# Field Applications

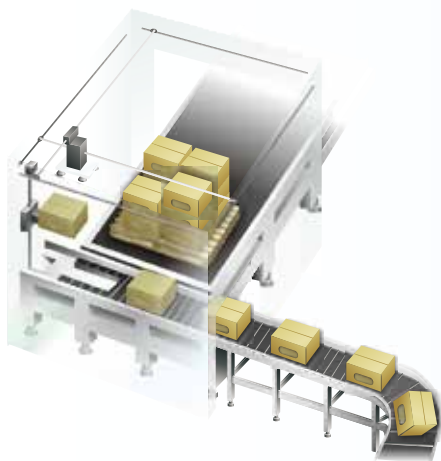
- **Mechanical Processing Industry**  
Mechanical product processing and fixing



- **Solar Energy Industry**  
Turnkey module lines suction



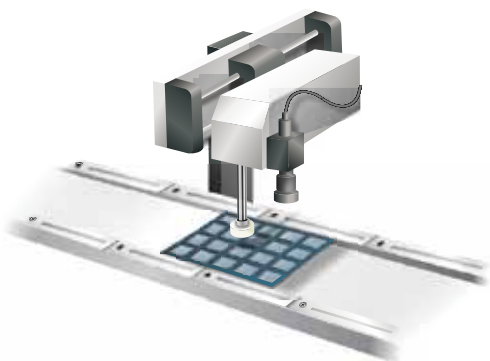
- **Food Packaging Industry**  
Drinks, cans suction and packaging



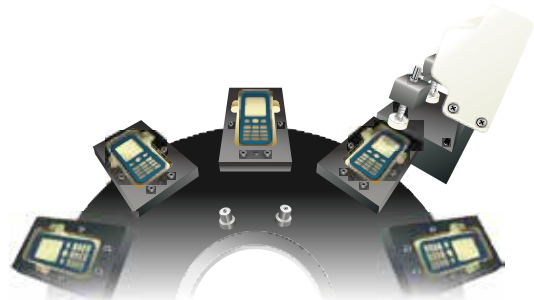
- **Semiconductor Industry**  
Wafer suction and loading



- **Electronic Component Industry**  
IC component suction and confirmation

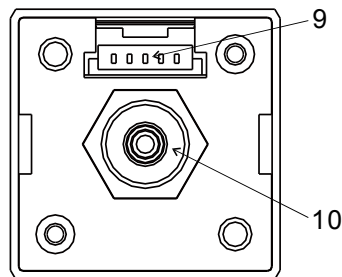
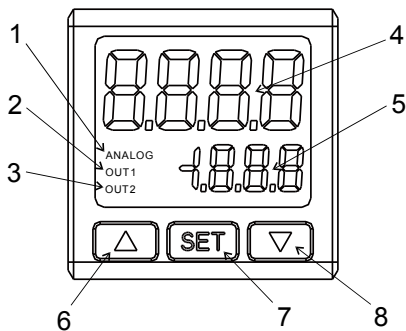


- **Automatic Assembly Industry**  
Automation component assembly and confirmation



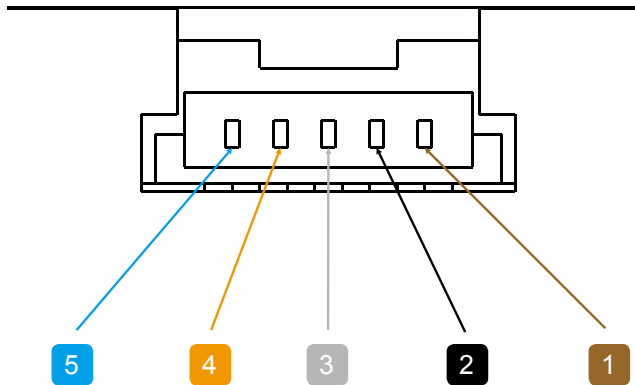
# Specifications

Power supply	Voltage range	12 ~ 24 V <sub>DC</sub> +/- 10% no isolation
	Power consumption	40 mA Max.; current output type 60 mA Max.
Pressure measurement	Pressure type	Non-corrosive gas, gauge type
	Measurable range	DPA01: -100 kPa ~ 100 kPa DPA10: -100 kPa ~ 1,000 kPa
	Max. durable pressure	DPA01: 200 kPa DPA10: 1,500 kPa
	Measurement accuracy	+/- 3% entire process
	Temperature inaccuracy	+/- 2% entire process
Display	Setup display	2-line LCD display, 4 digits for measured value and 3.5 digits for setup display
	Status display	LCD output status display
	Display mode	3 colors for different modes
	Cycle	250 ms, 500 ms, 1,000 ms
Output	Number of outputs	Built-in 2 NPN or PNP transistor digital outputs and 1 analog output
	Transistor output	NPN: Max. durable pressure 30V/100 mA, residual voltage 1.5V PNP: Max. durable pressure 30V/100 mA, residual voltage 1.5V
	Analog output	1 ~ 5V: Min. output load resistance 1,000 Ω 4 ~ 20 mA: Max. output load resistance 400 Ω; linear inaccuracy < 2% entire process
	Response time	2 ms, 4 ms, 10 ms, 30 ms, 50 ms, 100 ms, 250 ms, 500 ms, 1,000 ms, 5,000 ms
	Output inaccuracy	Linear inaccuracy: < +/- 2% entire process
Pore Size	P	Outer diameter PT1/8, inner diameter M5
	N	Outer diameter NPT1/8, inner diameter M5
	R	Outer diameter Rc1/8, inner diameter M5
Shock Resistance		10 ~ 550 Hz, 100 mm, 3 axes for 2 hours
Vibration Resistance		Max. 100 m/s <sup>2</sup> , 3 axes 6 directions, 3 times each
Operating Ambient Temperature		0°C ~ +50°C
Storage Temperature		-20°C ~ +65°C
Altitude		< 2,000 m
Operating Relative Humidity		35% ~ 80% RH (non-condensing)



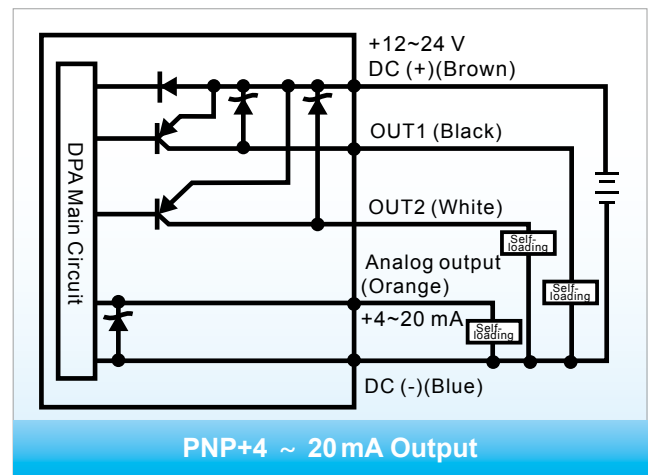
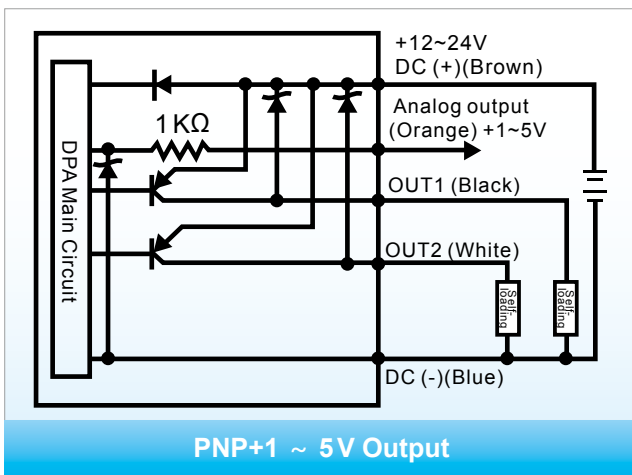
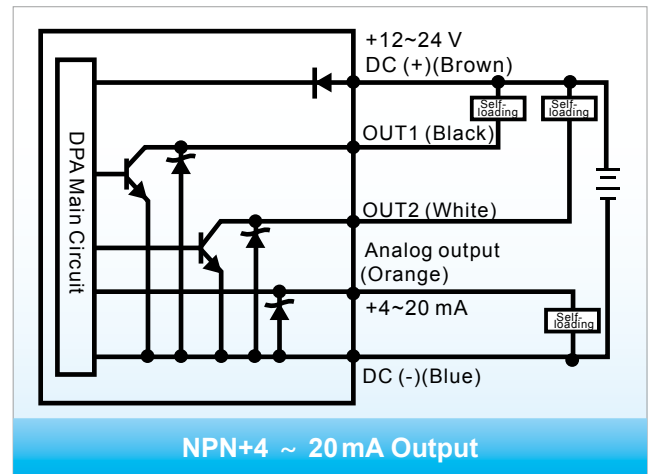
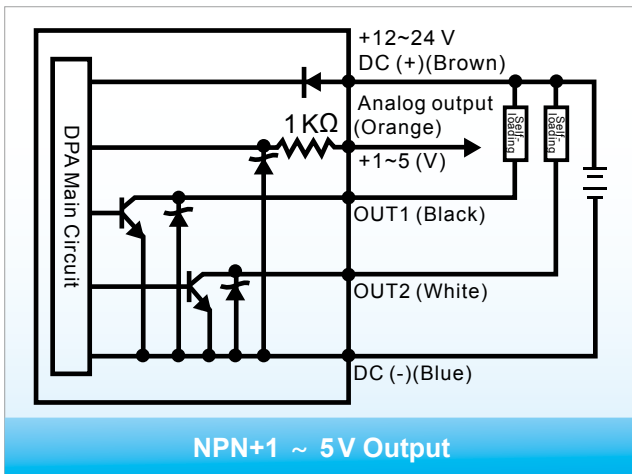
- 1 Analog output indicator
- 2 Digital output 1 indicator
- 3 Digital output 2 indicator
- 4 Pressure/parameter display
- 5 SV/setup item display
- 6 UP key
- 7 SET key
- 8 DOWN key
- 9 Power supply and output terminals
- 10 Pressure input pore

# Terminals



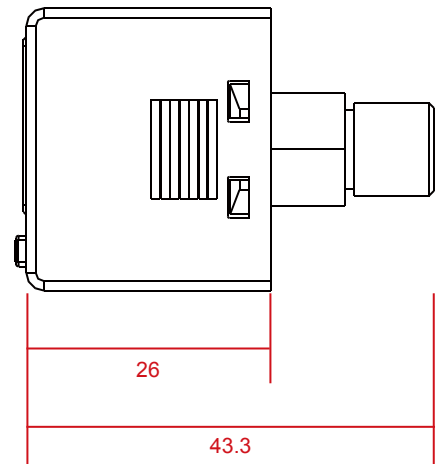
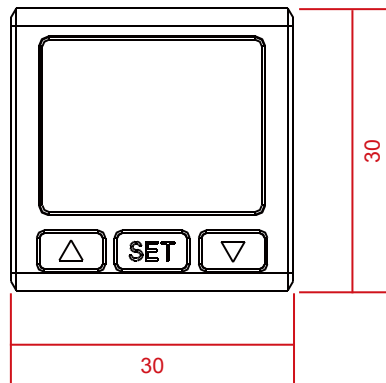
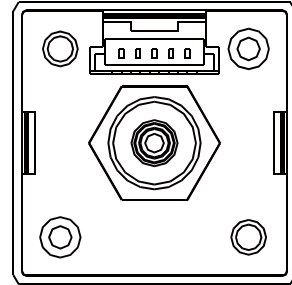
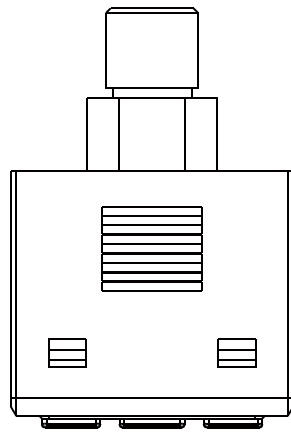
- 1 Positive power supply input (brown)
- 2 Digital output 1 signal (black)
- 3 Digital output 2 signal (white)
- 4 Analog output signal (orange)
- 5 Negative power supply input (blue)

# Various Output Control Modes





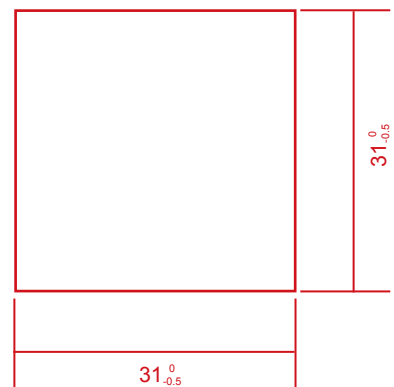
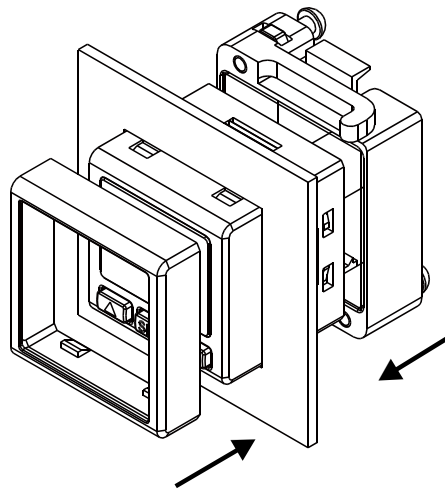
## Dimensions



Dimensions are in mm

## Panel Accessory

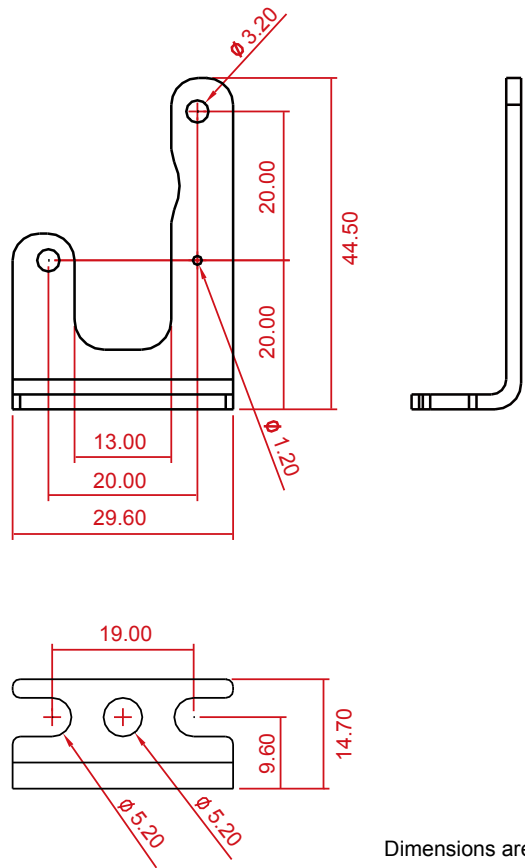
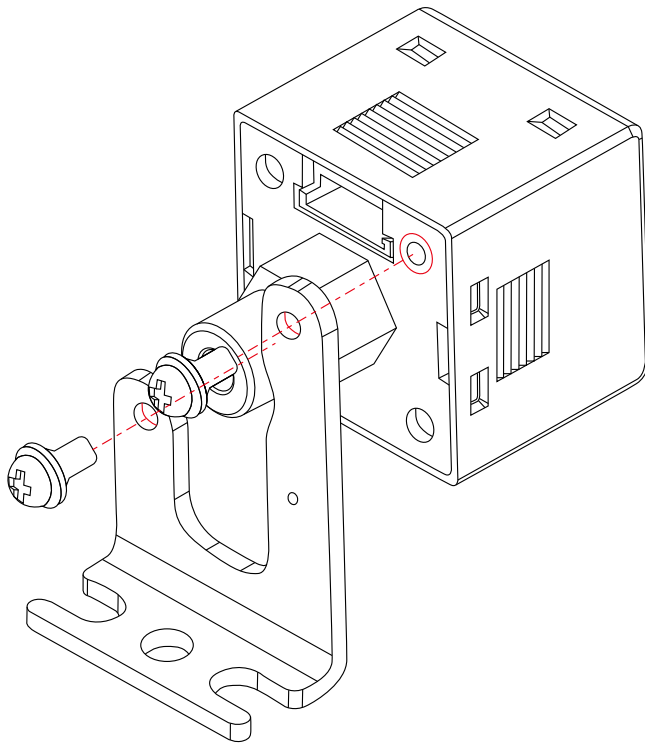
Delta Part Number: DPA-PFKit



Dimensions are in mm

# Shelf Accessory

Delta Part Number: DPA-FMKit



Dimensions are in mm

## Ordering Information

**DPA** **0** **1** **N** **P**

### Range for Pressure Measurement

- 01** -100 kPa~100 kPa
- 10** -100 kPa~1,000 kPa

### Pressure Pore Type

- P** Outer pore 1/8 PT, inner pore M5
- N** Output pore 1/8 NPT, inner pore M5

### Output Type

- N** NPN output + 4~20 mA
- M** NPN output + 1~5 V
- P** PNP output + 4~20 mA
- Q** PNP output + 1~5 V

### Product Name

DPA Series pressure sensor



Smarter. Greener. Together.

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