

# COPAL ELECTRONICS

## Pressure transducer with amp PA-100

INSTRUCTION MANUAL Ver.1.1

Thank you very much for purchasing our products. In order to derive its desired characteristics and utilize it with high reliability, please read this manual thoroughly and understand the contents before operation. And please keep this manual and read again when necessary.

### 1. Cautions in Handling

**⚠ Caution :** This indicates the precaution in handling and/or the risk in misusing.

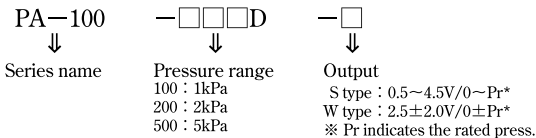
#### ⚠ Caution

- ◇ This product is not of waterproof and is not suitable for use in damp environments. To clean it of dipping is not suitable either.
- ◇ Never insert any foreign matter except the specified media into the pressure port, as this may cause malfunction.
- ◇ Never apply any unnecessary force to the pressure port, as this may malfunction.
- ◇ Never apply pressure exceeding the maximum pressure, as this may alter the performance characteristics or cause malfunction.
- ◇ Soldering condition is on 350°C, 3sec. and no dipping. Over heating will cause the performance characteristic deterioration or malfunction.
- ◇ Be sure to connect output terminals correctly. Wrong connection will cause damage of unit.
- ◇ Never apply voltage exceeding the specified, as this may cause malfunction.

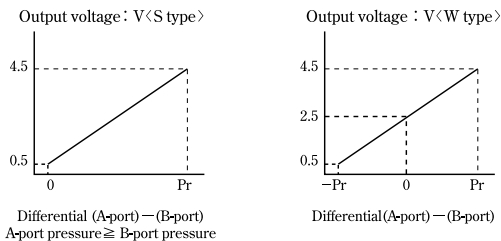
- ◆ Please supply a stable power source, otherwise may cause an unstable output.
- ◆ Supplied pressure to S type should be A-port pressure  $\geq$  B-port pressure. Wrong piping will cause malfunction.

### 2. Model number designation

※ Please make sure your purchased model number before use.



### 3. Output



### 4. How to Set

- (1) Keep the body and fit on PC board so as not to make a gap.
- (2) Solder the terminal pins on condition of 350°C, 3sec.
- (3) Connect the output terminals correctly.
- (4) Pipe the pressure ports up to the body. The gap may cause air leak.  
※ Recommended tube : 2.0~2.5mm I. D., 7mm O.D. max., made of silicon

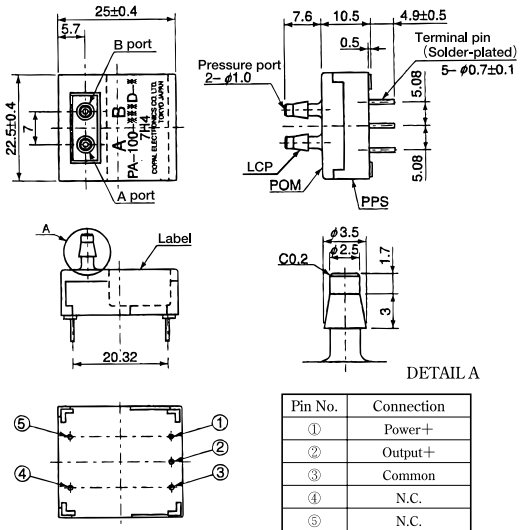
### 5. Specifications

Pressure range	100	200	500
Pressure reference	Differential		
Rated pressure	1kPa	2kPa	5kPa
Max. pressure	5kPa	10kPa	25kPa
Broken-down pressure	50kPa		
Operating temperature	-20~70°C		
Compensated temp.	0~50°C		
Operating humidity	35~85%RH		
Storage temperature	-20~80°C		
Media	Non-corrosive gases		
Net weight	Approx. 7g		
Supply voltage	4.5~5.5V DC		
Dissipation	5mA max.		
Output voltage (S type)	Zero	0.5±0.08V (Supply voltage = 5V)	* 1
	Span	4.0±0.08V (Supply voltage = 5V)	* 1
Output voltage (W type)	Zero	2.5±0.08V (Supply voltage = 5V)	* 1
	Span	2.0±0.08V (Supply voltage = 5V)	* 1
Linearity / Hysteresis	±0.5%FS		
Thermal error (0~50°C)	Zero	±5%FS	±2%FS
	Span	±2%FS	
Response	Approx. 5msec		
Output current	0.5mA max. (Load resistance 10kΩmin.)		
Gravitational effect	±2%FS * 2	±1%FS * 2	±0.4%FS * 2

- \* 1 : Output voltage is in proportion to supply voltage.
- \* 2 : On condition that the pressure port turns from up to down.

### 6. Outline dimensions (Unit : mm)

Unspecified tolerance : ± 0.2mm



### 7. Warranty

Nidec Copal Electronics warrants the products for the period of one year after the date of the customer's receipt. We will repair the troubled products caused by our improper designing and/or production control at our cost. Our warranty is limited to the products only, not on another damage that is caused by the product malfunction.

Please note that the repairing cost resulted from the following matters are out of our responsibility.

- (1) Trouble and damage caused by mishandling or careless usage against the handling manual.
- (2) Trouble and damage caused by improper remodeling, adjustment or repair.
- (3) Trouble and damage caused by natural disaster, fire or any other irresistible force.

For more detailed information please ask for the nearest distributor or the following sales center.

# COPAL ELECTRONICS

Nishi-Shinjuku Kimuraya Bldg., 7-5-25  
Nishi-Shinjuku Shinjuku-ku Tokyo 160-0023, Japan  
Phone. : (03) 3364-7055