

# PRESSURE SENSORS



**NIDEC COPAL ELECTRONICS CORP.**

– For Gas delivery line (Inline process) –

## NEW PRODUCT

ULTRA HIGH PURITY PRESSURE SWITCHES

### PAS91

Relay output type available



Open collector



Relay output

#### [ Features ]

- Absolute pressure switch
- Relay output / Open collector output
- Small size of  $\phi 38$ mm, Gasket joint
- Dsub connector
- Switch output and analog output

#### [ Application ]

- Confirming atmospheric pressure in a vacuum chamber

#### [ Basic specification ]

- Rated pressure range: 750 Torr (14.5psi) abs
- Material of wetted surface: SUS316L
- Fitting: Gasket joint (9/16-18UNF)
- Switch output: 1 (magnet relay or open collector)
- Analog output: 1~5VDC, (0~5VDC\*, 0~10VDC\*)  
\*Please contact us separately.
- Supply voltage: 24VDC  $\pm 10\%$
- Standard: UL991 Equivalent\*  
(\*Third-party certification test report)

## NEW PRODUCT

HIGH PURITY ULTRA-MINIATURE PRESSURE SENSORS FOR INTEGRATED GAS SYSTEM

### PA-9205/9285



#### [ Features ]

- Ideal for gas integrated system
- I-shaped and T-shaped products available
- High purity by Integrally welded structure of sensing chip and fitting

#### [ Application ]

- For semiconductor gas integrated unit

#### [ Basic specification ]

- Rated pressure range:  
0~72.5psi, 0~145psi, -14.5~72.5psi, -14.5~145psi
- Material of wetted surface: SUS316L
- Fitting: Gasket joint (9/16-18UNF, male & female respectively),  
UJR (male & female respectively), W-seal 1.125 inch,  
C-seal 1.125 inch
- Analog output: 1~5VDC or 4~20mA (0~5VDC\*, 0~10VDC\*)  
\*Please contact us separately.
- Supply voltage: 24VDC  $\pm 10\%$

HIGH PURITY PRESSURE SWITCHES

### PS91

#### [ Features ]

- Capable of sensing high vacuum pressure continuously
- Ideal for confirming atmospheric pressure in a load chamber and supplied air pressure by oil-less sensor module

#### [ Basic specification ]

- Rated pressure range: -14.5~1.45psi
- Switch output: 2 (NPN/PNP)
- Material of wetted surface: SUS316L
- Fitting: Flange joint KF25 (NW25), Gasket joint (9/16-18 UNF)
- Supply voltage: 12~24VDC  $\pm 10\%$
- Standard: UL standard, CE Marking



HIGH PURITY SMALL PRESSURE GAUGES

### PG-35L

#### [ Features ]

- Capable of sensing high vacuum pressure continuously by oil-less sensor module
- Ideal for confirming atmospheric pressure in a load chamber and supplied air pressure

#### [ Basic specification ]

- Rated pressure range: -14.5~14.5psi, 14.5~145psi
- Switch output: 2 (NPN/PNP)
- Analog output: 1~5VDC, (0~5VDC\*, 0~10VDC\*)  
\*Please contact us separately.
- Material of wetted surface: SUS316L
- Fitting: Flange joint KF25 (NW25), Gasket joint (9/16-18UNF)
- Supply voltage: 12~24VDC  $\pm 10\%$  - Standard: UL standard, CE Marking



PRESSURE GAUGES FOR INTEGRATED GAS SYSTEM

### PG-20

#### [ Features ]

- External diameter  $\phi 20$ mm. Easily installable fitting block
- Excellent visibility with 3-1/2 LED display
- Rotatable display part (90° step, 270° full travel)

#### [ Basic specification ]

- Rated pressure range: 0~72.5psi, 0~145psi, -14.5~72.5psi, -14.5~145psi
- Material of wetted surface: Double-melted SUS316L
- Fitting: W-seal/C-seal 1.125/1.5 inch
- Switch output: 2 or 1 with Analog output 1~5 VDC, (0~5VDC\*, 0~10VDC\*) \*Please contact us separately.
- Supply voltage 12~24 VDC  $\pm 10\%$
- Standard: UL standard, UL991 Equivalent\*(\*Third-party certification test report), CE Marking

- Wide combination of output types (switch, current or voltage) available
- Integrally welded structure of sensing chip and fitting block



Pressure sensors with high reliability carry the future of semiconductor manufacturing equipment, medical care and other equipment.

– For High temperature –

## NEW PRODUCT

HIGH TEMPERATURE FLUID PRESSURE SENSORS

# PA-930N/A/S

up to 150°C

PCB separated type: PA-930S



+ Switch output: PA-930N



Standard: PA-930/PA-930A



### [ Features ]

- Absolute / gauge pressure sensor resistant to fluid with high temperature up to 150°C
- PCB-separable pressure sensor capable of sensing liquid with high temperature up to 150°C

### [ Basic specification ]

- Rated pressure range: 0~14.5 psi, 0~14.5 psi, -14.5~14.5 psi, -14.5~43.5 psi, 0~14.5 psi abs, 0~29 psi abs
- Analog output: 1~5VDC or Switch output: 1 (open collector or magnet relay) (0~5VDC\*, 0~10VDC\*) \*Please contact us separately.
- Material of wetted surface: SUS316L and Nickel alloy
- Fitting: Gasket joint (9/16-18UNF)
- Supply voltage: 12~24VDC ± 10%      - Standard: UL standard

– High pressure for Hydraulic system –

## NEW PRODUCT

OIL-LESS HIGH PRESSURE SENSORS WITH AMP

# PA-97\*S

OIL-LESS HIGH PRESSURE SWITCHES

# PS97



### [ Features ]

- Compact and lightweight
- High accuracy with digital compensation circuit
- Easy connection with a removable connector
- IP67 (when water-proof connector attached)

### [ Basic specification ]

- Rated pressure range: 0~145 psi, 0~290 psi, 0~507 psi, 0~725 psi, 0~1450 psi, 0~2900 psi, 0~5076 psi, 0~5801 psi, 0~7251 psi, 0~11603 psi
- Analog output: 1~5VDC or 0~5VDC or 0~10VDC or 4~20mA or 0.5~4.5VDC
- Material of wetted surface: SUS630
- Fitting: PS1/4, PS3/8, PT1/4 (NPS1/4, NPS3/8, NPT1/4)
- Supply voltage: 9~36VDC (Output 1~5VDC or 0~5VDC or 4~20mA), 5VDC (Output 0.5~4.5VDC), 14~36VDC (Output 0~10VDC)
- Standard: UL standard, CE Marking



### [ Basic specification ]

- Rated pressure range: 0~145 psi, 0~362 psi, 0~725 psi, 0~1450 psi, 0~2900 psi, 0~3625 psi, 0~5801 psi, 0~11603 psi
- Switch output: 1 NPN (DT04-3P), 2 NPN (M12×1)
- Material of wetted surface: SUS630
- Fitting: PS1/4, PT1/4 (NPS1/4, NPT1/4)
- Supply voltage: 9~36VDC
- Standard: UL standard, CE Marking

## COST-EFFECTIVE PRESSURE GAUGES

### PG-75

#### [ Features ]

- High reliability by Integrally welded structure of sensing chip and fitting
- Excellent display properties with 7 segment LED, 2-color LED red & green, 3 1/2digit, lights-out mode
- Ideal for confirming atmospheric pressure in a load chamber and supplied air pressure

#### [ Basic specification ]

- Rated pressure range: 0~14.5psi, 0~145psi, 0~507.6psi, -14.5~14.5psi, -14.5~145psi, -14.5~507.6psi
- Switch output: 2 (NPN/PNP)
- Analog output: 1~5VDC or 4~20mA, (0~5VDC\*, 0~10VDC\*)
- \*Please contact us separately.
- Fitting: PT1/4, PT1/8 (NPT1/4, NPT1/8)
- Material of wetted surface: SUS304, SUS316L
- Drip-proof structure: IP65
- Supply voltage: 10.8~30VDC
- Standard: UL standard, CE Marking



## COST-EFFECTIVE PRESSURE SENSORS

### PA-750/758

#### [ Features ]

- High corrosion resistance and drip-proof structure
- Easy connection with a removable connector
- Temperature-compensating circuit integrated (0~50°C)

#### [ Basic specification ]

- Rated pressure range: 0~14.5psi, 0~507.6psi, 0~145psi, 0~507.6psi, 0~14.5psi, -14.5~14.5psi, -14.5~45.5psi, 0~14.5psi abs
- Analog output: 1~5VDC or 4~20mA, (0~5VDC\*, 0~10VDC\*)
- \*Please contact us separately.
- Material of wetted surface: SUS304, SUS316L
- Fitting: PT1/4, PT1/8 (NPT1/4, NPT1/8)
- Supply voltage: 10.8~30VDC
- Standard: UL standard, CE Marking
- Drip-proof structure: IP65 (in compliance with IEC)



## DIFFERENTIAL PRESSURE SENSORS

### PA-838-D

#### [ Features ]

- Capable of sensing differential pressure of liquid media
- Ideal for monitoring a strainer not to be clogged up

#### [ Basic specification ]

- Rated pressure range: 0~1.45psi, 0~7.25psi, 0~14.5psi
- Analog output: 4~20mA, (0~5VDC\*, 0~10VDC\*)
- \*Please contact us separately.
- Material of wetted surface: SUS316L
- Supply voltage: 24VDC±10%
- Fitting: 2-NPT1/4 Female, 1/4 Flare fitting (7/16-20UNF)



## ULTRA-MINIATURE PRESSURE SENSORS

### P-7100

#### [ Features ]

- Suitable for installing inside the narrow space of the equipment by its small size and light weight
- High reliability (SUS316L diaphragm, oil-filled) by using double diaphragm structure
- High accuracy by using a digital compensation circuit employing the COB (chip on board) mounting

#### [ Basic specification ]

- Rated pressure range: 0~14.5psi, 0~145psi, -14.5~14.5psi, 0~19.3psi abs
- Material of wetted surface: SUS304, SUS316L
- Fitting: M5 Female screw, PT1/8 (NPT1/8)
- Analog output: 0.5~4.5VDC (Ratiometric)
- Supply voltage: 5VDC±0.5V
- Outline dimensions: φ17×18.7mm (M5 type)
- Net weight: Approx. 19g (M5 type)



## PRESSURE SENSORS WITH THE CONNECTION HEAD

### PA-840/848

#### [ Features ]

- High weather resistance thanks to the hard connection head
- Two types of fitting

#### [ Application ]

- Industrial equipment, plant equipment, water treatment devices

#### [ Basic specification ]

- Rated pressure range: -14.5~14.5psi, -14.5~507.6psi, 0~14.5psi, 0~145psi, 0~507.6psi, 0~14.5psi abs
- Analog output: 1~5VDC or 4~20mA, (0~5VDC\*, 0~10VDC\*)
- \*Please contact us separately.
- Material of wetted surface: SUS304, SUS316L
- Supply voltage: 24VDC±10%
- Fitting: PT1/4, PS1/4 (NPT1/4, NPS1/4)
- Drip-proof structure: IP67



## LIQUID LEAK SENSORS

### WL10

#### [ Features ]

- Operable in various area by to unique optical technology
- Can detect leakage without a douser and additional amplifying circuit
- PFA casing available for detecting leakage of corrosive liquid
- Detecting method: Infrared ray reflection

#### [ Basic specification ]

- Switch output: 1 (NPN/PNP)
- Casing material: PP/PFA
- Material of wetted surface: SUS316L
- Supply voltage: 12~24VDC±10%
- Outline dimensions: φ25×10.6mm
- Standard: UL standard, CE Marking



## HANDHELD DIGITAL MANOMETERS

### PG-100N/B

#### [ Features ]

- Pocket-sized handheld manometer
- Easy zero-point adjustment
- Display of pressure unit selectable (For oversea: kPa, mmHg, in., Hg, psi, bar, mmAq)
- AAA dry battery 1.5VDC×2. Battery life 1,000 hours minimum
- Compatible with gas and liquid
- Auto power-off time selectable

#### [ Basic specification ]

- Rated pressure range: -1.45~1.45psi, -14.5~14.5psi, -14.5~145psi, 0~14.5psi abs
- Fitting: M5 Female screw
- Accessories: Miniature fitting (φ6mm, O.D.), Tube fitting (φ4mm, I.D.)
- Supply voltage AAA dry battery 1.5VDC×2



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■ Specifications are subject to change without notice.

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