

Product Guide

To The Next
Generation

NIDEC COPAL ELECTRONICS

Switches

[S]: Surface mount type available

DIP Rotary switches

[S]



S-4000

- Positions: 10
- Code: Real
- Contact Rating:
Non-switching 100mA 50VDC
Switching 10mA 2.4VDC
- 4.8mm square

[S]



SA-7000

- Positions: 10 or 16
- Code: Real or complement
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 5VDC
- 7.2mm square

[S]

Washable

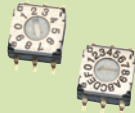


S-7000

- Positions: 6, 10 or 16
- Code: Real or complement
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 5VDC
- 7.2mm square

[S]

Washable



SH-7000

- Positions: 10 or 16
- Code: Real, complement or gray
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 5VDC
- 7.1mm square

[S]

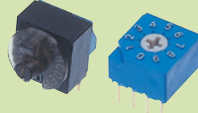
Washable



DRS/DRR/SMR/SMRR

- Positions: 10 or 16
- Code: Real or complement
- Contact Rating:
Non-switching 100mA 50VDC
Switching 30mA 15VDC
- 7.5mm square

Washable

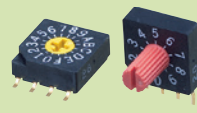


S-1000A/2000A

- Positions: 10 or 16
- Code: Real or complement
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 5VDC
- 10mm square

[S]

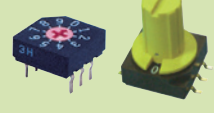
Washable



SC-1000/2000

- Positions: 10 or 16
- Code: Real or complement
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 5VDC
- 10mm square

[S]



SD-1000/2000

- Positions: 10 or 16
- Code: Real or complement
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 5VDC
- 10mm square

Washable



SA-5000

- Positions: 10 or 16
- Code: Real or complement
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 5VDC
- 11mm square

Washable



S-8000

- Positions: 8
- Code: Real or complement
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 5VDC
- 7.2mm square

Washable



RD

- Positions: 8 or 12
- Code: Real or complement
- Contact Rating:
Switching 1A 30VDC
- 17.8 x 12 x 17.8mm

DIP switches

[S]

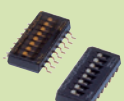


CVS (1mm pitch)

- Positions: 1, 2, 3, 4 or 8
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 6VDC, 25mA 24VDC
- 4.7 x 2 ~ 9 x 1.45mm

[S]

Washable



CHS (Half pitch)

- Positions: 1, 2, 4, 6, 8 or 10
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 6VDC, 25mA 24VDC
- 5.4 x 2.5 ~ 14.3 x 2.5mm

[S]



CHP (Half pitch)

- Positions: 2, 4 or 8
- Contact rating:
Non-switching 100mA 50VDC
Switching 100mA 6VDC, 25mA 24VDC
- 5.9 x 4.6 ~ 12.1 x 4.6mm

[S]

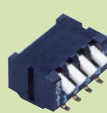
Washable



CFS (Full pitch)

- Positions: 1 ~ 10 available
- Contact rating:
Non-switching 100mA 50VDC
Switching 100mA 6VDC, 25mA 24VDC
- 6.4 x 3.95 ~ 2.69 x 4.5mm

[S]



CFP (Full pitch)

- Positions: 2, 3, 4, 5, 6, 8 or 10
- Contact rating:
Non-switching 100mA 50VDC
Switching 100mA 6VDC, 25mA 24VDC
- 8.6 x 7.5 ~ 22.8 x 6.7mm

[S]

Washable



CYP (Full pitch)

- Positions: 2, 4, 6, 8 or 10
- Contact rating:
Non-switching 100mA 50VDC
Switching 100mA 6VDC, 25mA 24VDC
- 6 x 6.48 ~ 26.8 x 5mm

[S]



CES (Full pitch)

- Positions: 2, 4, 6, or 8
- Contact rating:
Non-switching 100mA 50VDC
Switching 100mA 6VDC, 25mA 24VDC
- 10 x 7.66 ~ 22.9 x 10mm

Slide switches

[S]

Washable



CJS

- Ideal for replacing jumper pins
- Circuits: 1; On-On, On-Off-On
- Contact rating:
Non-switching 100mA 50VDC
Switching 100mA 6VDC, 25mA 24VDC

[S]

Washable



CAS

- Ideal for replacing jumper pins
- Circuits: 1, 2 or Dual; On-On
- Contact rating:
Non-switching 100mA 50VDC
Switching 100mA 6VDC, 25mA 24VDC

[S]



CL-SA

- Circuits: 1; On-On
- Contact Rating:
Non-switching 500mA 50VDC
Switching 500mA 12VDC
- Side by side mounting possible

[S]



CL-SB

- Circuits: 1 or 2; On-On, On-Off-On
- Contact rating:
Non-switching 200mA 50VDC
Switching 200mA 12VDC
- Gold/silver contacts, Wide variety lineup

[S]



CRFS

- DC~1GHz frequency spectrum
- Circuits: 2; On-On, On-On-On
- Contact rating:
Non-switching 100mA 50VDC
Switching 100mA 12VDC

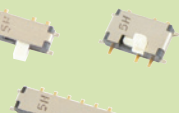
[S]



CMS

- Circuits: 2 or 4; On-On and more
- Contact Rating:
Non-switching 100mA 50VDC
Switching 100mA 12VDC

[S]



CUS

- Circuits: 1 or 2; On-On and more
- Contact Rating:
Non-switching 100mA 50VDC
Switching 300mA 4VDC

[S]



CSS

- Circuits: 1; On-On, On-Mom and more
- Contact Rating:
Non-switching 100mA 50VDC
Switching: 100mA 12VDC

[S]



MFS

- Circuits: 1, 2 or 4; On-On and more
- Contact Rating: Refer to webpage
- Shorting or Non-shorting contacts
- Wide variety of current ratings

Washable



ASE

- Circuits: 1 or 2; On-On, On-Off-On
- UL recognized
- Contact Rating: UL 50mA 48VAC/DC
- Terminal style: 0.2"/0.3" right angle, or straight PC
- Gold Contacts

Slide Switches



AS

- Circuits: 1 or 2
- Circuits: On-On, On-Off-On
- Contact Rating: 50mA 60 VAC/DC
- Terminal style : 0.2"/0.3" right angle, or straight PC
- Gold Contacts



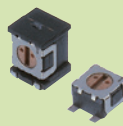
8SS

- Poles: 1 or 2
- Circuits: On-On; On-Off-On
- Contact Ratings: Silver: 6A 125 VAC
- UL recognized
- PC or solder lug terminals

Rotary selector switches



Washable



CS-32

- Poles: 1
- Positions: 3
- Contact Rating: Non-switching 0.5 VA Switching 100 mA 16 VDC
- 3.4 mm square



Washable



CS-4

- Poles: 1 or 2
- Positions: 2, 3 or 4
- Contact Rating: Non-switching 0.5 VA Switching 100 mA 16 VDC
- 4.5 × 5 mm



Washable



CS-7

- Poles: 1
- Positions: 4
- Contact Rating: Non-switching 100 mA 50 VDC Switching 100 mA 5 VDC
- 7.1 × 7.3 mm

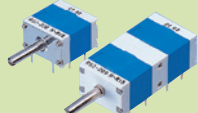
Washable



SS-10/S-2050

- SS-10: 1 pole 5, 6, 7 position; 2 pole 3 position / S-2050: 1 pole 4 position
- Contact Rating: Non-switching 100 mA 50 VDC Switching 100 mA 5 VDC
- 10 mm square

Washable



RS/RG

- Poles: 1, 2, 3, 4, 5 or 6
- Positions: 1 ~ 3 pole: 2 thru 12 Contacts 4 ~ 6 pole: 2 thru 6 Contacts
- Contact Rating: 1 A 30 VDC
- Shorting or non-shorting



MR

- 1 pole 10 position; 2 pole 5 position; 3 pole 3 position; 4 pole 2 position
- Contact Rating: 500 mA 125 VAC
- 36° angle of throw
- 16 mm diameter
- Variable stopper available

Washable



MRB

- Poles: 1
- Positions: 3
- Contact Rating: 0.4 VA 12 VDC
- 45° angle of throw



SRF

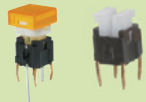
- Poles: 1
- Positions: 2, 3 or 4
- Contact Rating 2 and 3 Positions: 6 A 125 VAC and 3 A 250 VAC / 4 Positions: 3 A 125 VAC and 1 A 250 VAC

Illuminated switches (Pushbutton)



CFPB

- Circuit: SPST Off-Mom
- Contact Rating: 5 mA 20 VDC
- Red, orange, yellow or green LED
- 6 mm, 9 mm, 11 mm and 12 mm square cap sizes / Red, orange, white/clear, blue, green and yellow colored caps available



LTM/LTR

- Circuit: SPST Off-Mom
- Contact Rating: LTR 10 mA 12 VDC LTM 50 mA 48 VDC
- Illuminated or non-illuminated
- Red, blue, yellow or green LED
- Normal or bright LED
- Wide variety of cap styles, colors



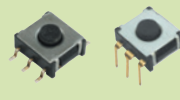
TP/TPL

- Circuit: DPDT On-Mom or On-On
- Contact Rating: 0.1 A 30 VDC
- Illuminated or non-illuminated
- Alternate action option
- Red, yellow or green LED
- Wide variety of cap styles and colors

Tactile switches



Washable



SMT1/TME1

- Poles: 1
- Circuit: Off-Mom
- Contact Rating: 50 mA 48 VDC
- Gold or silver Contacts
- Gull wing SMT terminals on SMT1
- Straight PC terminals on TME1
- Sharp tactile feel



Washable [SMTE3]



SMT3/SMTE3

- Poles: 1
- Circuit: Off-Mom
- Contact Rating: 30 mA 24 VDC
- Gold or silver contacts
- J-hook SMT terminals
- Sharp tactile feel

Pushbutton switches



Washable



CF-CA

- Poles: 1
- Circuit: Off-Mom
- Contact Rating: 50 mA 32 VDC
- Gold or silver contacts
- Gull wing right angle SMT terminals
- 3 actuator lengths availables

Washable



FP/CFP2

- Poles: 1 or 2
- Circuits: On-Mom
- Contact Rating: 0.4 VA, 28 VDC
- Right angle, vertical or straight PC terminals
- Gold Contacts
- Terminal pins: Kinked/Straight

Washable



APE

- Poles: 1 or 2
- Circuits: On-Mom
- UL recognized
- Contact Rating: UL) 50 mA 48 VAC/DC
- Terminal style : 0.2"/0.3" right angle, or straight PC
- Gold Contacts

AP

- Poles: 1 or 2
- Circuits: On-Mom; Off-Mom; On-Mom
- Contact Rating: 50 mA 48 VAC/DC
- Terminal style : 0.2" right angle, or straight PC
- Gold Contacts



Washable



CFPA

- Poles: 1
- Circuits: On-Mom
- Contact Rating: 0.4 VA 28 VDC max
- Right angle gull wing terminals
- Gold Contacts

Detect switches



CL-DA

- Poles: 1
- Circuits: On-Mom; Off-Mom
- Contact Rating: 100 mA 12 VDC
- Gull wing SMT terminals
- Side actuated



CL-DB

- Poles: 1
- Circuit: Off-Mom
- Contact Rating: 1 mA 5 VDC
- Gull wing SMT terminals
- Horizontal or vertical actuation

Toggle switches

Washable



FT/CFT2

- Poles: 1 or 2
- Circuits: On-Mom; Mom-Off-Mom; On-On; On-Off-On
- Contact Rating: 0.4 VA, 28 VDC
- Terminal style: Right angle, vertical or straight PC
- Gold contacts
- Terminal pins: Kinked/Straight

Washable



ATE

- Poles: 1 or 2
- Circuits: On-On; Mom-Off-Mom; On-Off-Mom; On-Off-On; On-Mom
- UL recognized
- Contact Rating: UL) 50 mA 48 VAC/DC
- Terminal style : 0.2"/0.3" right angle, or straight PC
- Gold Contacts

Washable



ATE4/ATLE4

- Poles: 2 or 4
- Circuits: On-On; On-Off-On
- Contact Rating: 50 mA 48 VAC/DC
- Terminal style : 0.2"/0.3" right angle, or straight PC
- Gold Contacts
- Locking lever option



CT-TA

- Poles: 1
- Circuits: On-Mom; Mom-Off-Mom; On-Off-Mom; On-Off-On; On-On
- Contact Rating: 50 mA 48 VAC/DC
- Right angle SMT terminals
- Gold contacts
- Reflow solderable/locking lever option

CF-DA

- Poles: 1
- Circuit: Off-Mom
- Contact Rating: 100 mA 30 VDC
- Quick connect terminals
- Snap-in panel mount

Toggle switches



8 Series

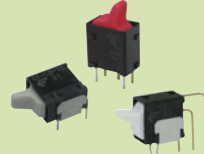
- Poles: 1, 2, 3 or 4
- Circuits: On-Mom; On-Off-Mom; On-On; Mom-Off-Mom; On-Off-Mom
- UL recognized and CSA certified

- Solder lug or PC terminals
- Contact Rating: Silver: 3A 250 VAC; 6A 125 VAC; 4A 30 VDC; Gold: 25mA 20 VDC
- Wide variety of actuators

ET

- Poles: 1, 2, 3, 4 or 6
- Multiple circuit options
- Contact Rating: 3A 125VAC thru 30A 125VAC; 3A 250 VAC thru 25A 250 VAC
- Solder lug, quick connect and screw terminal options

Lever switches



CF-LD

- Poles: 1
- Circuit: On-On
- Contact Rating: 0.4 VA, 28 VAC/DC
- Straight, right angle or vertical PC terminal
- Gold Contacts
- Ultra-miniature

Lever/Rocker switches

Washable



FL

- Poles and Circuits: 1 or 2, On-Mom; Mom-Off-Mom; On-Off-On; On-On; Mom-Off-On; Mom-On; On-Off-Mom
- Gold contacts
- Contact Rating: 0.4 VA, 28 VDC
- Straight or right angle PC terminals

Lever/Rocker switches

Washable



ALE

- Poles and Circuits: 1 or 2, On-Mom; On-Off-Mom; On-On; On-Off-On; Mom-Off-Mom
- Contact Rating: 50 mA 60 VAC/DC
- Gold contacts
- Straight or right angle PC terminals
- UL recognized



8 Series

- Poles and Circuits: 1 thru 4, On-On; On-Off-On; Mom-Off-Mom; On-Mom
- Solder lug or PC terminals
- Contact Rating: Silver: 3A 250 VAC; 6A 125 VAC; 4A 30 VDC; Gold: 25mA 20 VDC
- UL recognized and CSA certified

Rocker switches



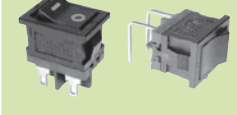
SLP8A

- Poles and circuits: 1, Off-On
- Contact Rating: 8A 127 VAC; 4A 250 VAC
- Quick connect terminals
- Compact size and long life
- UL recognized, CQC and ENEC certified



SLE6/SLE10

- Poles and circuits: 1 or 2, On-Off
- Contact Rating: 6A 125 VAC; 4A 250 VAC/10A 125 VAC; 5A 250 VAC
- Quick connect terminals
- UL recognized, CSA, VDE and SEMKO certified



SLE210K

- Poles and circuits: 2, On-Off
- Contact Rating: 10A 125/250 VAC
- High inrush ratings: 60A and 100A at 125/250 VAC
- Left or right angle PC, solder lug or quick connect terminals
- UL recognized, SEMKO certified



SL10K

- Poles and circuits: 2, On-Off
- Contact Rating: 10A 125/250 VAC
- High inrush ratings: 60A and 100A at 125/250 VAC
- Quick connect terminals
- UL recognized, CSA and VDE certified



SLE10K

- Poles and circuits: 2, On-Off
- Contact Rating: 10A 125 VAC; 6A 250 VAC
- High inrush ratings: 60A at 125 VAC, 36A at 250 VAC
- Quick connect terminals
- UL recognized, CSA, VDE certified



SLA215K

- Poles: 2
- Circuit: On-Off
- Contact Rating: 15A 125/250 VAC
- Solder and quick connect terminal
- UL recognized, CSA and ENEC certified



CF-LA

- Poles and circuits: 1 or 2, On-Off
- Contact Rating: 16A 125/250 VAC
- High inrush ratings: 160 A
- Straight PC, right or left angle PC, solder lug or quick connect terminals
- UL recognized, CSA, VDE and SEMKO certified



HLS

- Poles: 1, 2 or 3
- Circuits: On-On; Off-On
- Contact Rating: 8A 125 VAC; 12A 125 VAC; 5A 250 VAC; 6A 250 VAC
- Solder or quick connect terminals
- UL recognized and CSA certified

Trimmer Potentiometers

[S]: Surface mount type available

[S]

Washable



ST-2

- Turns: 1
- Resistance range: 100 Ω ~ 1 M Ω
- Resistance tolerance: $\pm 20\%$
- Power rating: 0.1W (70°C), 0W (125°C)
- J-hook or gull wing SMT terminals
- Top adjustment

[S]

Washable

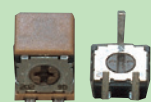


ST-32

- Turns: 1
- Resistance range: 10 Ω ~ 2 M Ω
- Resistance tolerance: $\pm 20\%$
- Power rating: 0.125W (70°C), 0W (125°C)
- J-hook or gull wing SMT terminals
- Top adjustment or side adjustment

[S]

Washable



ST-4/42

- Turns: 1
- Resistance range: 10 Ω ~ 2 M Ω
- Resistance tolerance: $\pm 20\%$
- Power rating: 0.25W (70°C), 0W (125°C)
- Straight PC or J-hook or gull wing SMT terminals
- Top, rear or side adjustment

[S]

Washable



ST-5

- Turns: 14
- Resistance range: 10 Ω ~ 2 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.25W (70°C), 0W (120°C)
- Gull wing SMT terminals
- Top adjustment or side adjustment

[S]

Washable



ST-7

- Turns: 3
- Resistance range: 50 Ω ~ 1 M Ω
- Resistance tolerance: $\pm 20\%$
- Power rating: 0.25W (70°C), 0W (125°C)
- J-hook or gull wing SMT terminals
- Top adjustment

[S]

Washable



SM-3/31

- Turns: SM-3 have 11 turns; SM-31 have 5 turns
- Resistance range: 50 Ω ~ 2 M Ω
- Resistance tolerance: $\pm 20\%$
- Power rating: 0.125W (70°C), 0W (150°C)
- J-hook or gull wing SMT terminals
- Top adjustment or side adjustment

[S]

Washable



SM-42/43

- Turns: SM-42 have 11 turns; SM-43 have 5 turns
- Resistance range: 10 Ω ~ 2 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.25W (85°C), 0W (150°C)
- J-hook or gull wing SMT terminals
- Top adjustment or side adjustment

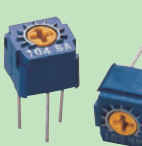
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Washable



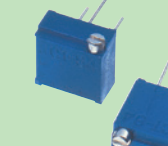
FT-63

- Turns: 1
- Resistance range: 10 Ω ~ 2 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.5W (70°C), 0W (125°C)
- Straight PC terminals
- Top or side adjustment



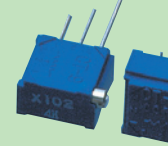
CT-6

- Turns: 1
- Resistance range: 10 Ω ~ 2 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.5W (70°C), 0W (120°C)
- Straight PC terminals
- Top or side adjustment



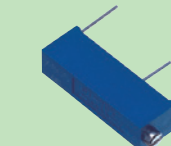
CT-94

- Turns: 18
- Resistance range: 10 Ω ~ 2 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.5W (70°C), 0W (125°C)
- Straight PC terminals
- Top or side adjustment



CT-9

- Turns: 18
- Resistance range: 10 Ω ~ 2 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.5W (70°C), 0W (120°C)
- Straight PC terminals
- Top or side adjustment



CT-20

- Turns: 15
- Resistance range: 10 Ω ~ 5 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.5W (70°C), 0W (120°C)
- Straight PC terminals
- Side adjustment



TM-7

- Turns: 3
- Resistance range: 50 Ω ~ 2 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.5W (70°C), 0W (120°C)
- Straight PC terminals
- Top or side adjustment

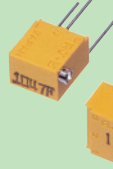
Washable



RJ-4

- Turns: 1
- Resistance range: 10 Ω ~2 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.5W (70°C), 0W (120°C)
- Straight PC terminals
- Top or side adjustment

Washable



RJ-5

- Turns: 14
- Resistance range: 10 Ω ~2 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.25W (85°C), 0W (120°C)
- Straight PC terminals
- Top or side adjustment

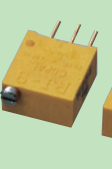
Washable



RJ-6

- Turns: 1
- Resistance range: 10 Ω ~5 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.5W (70°C), 0W (120°C)
- Straight PC terminals
- Top, rear or side adjustment

Washable



RJ-9

- Turns: 18
- Resistance range: 10 Ω ~5 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.5W (70°C), 0W (120°C)
- Straight PC terminals
- Top or side adjustment

Washable



RJ-13

- Turns: 1
- Resistance range: 10 Ω ~5 M Ω
- Resistance tolerance: $\pm 10\%$
- Power rating: 0.75W (70°C), 0W (120°C)
- Straight PC terminals
- Top or side adjustment
- Panel mount version available

Circuit Fuses, Attenuators

[S] : Surface mount type available

Resettable circuit fuses

[S]



P.R.C.P.

- Polymer PTC thermistor
- Slow properly to trip, and not respond at surge or rush current
- Max. Voltage: 6~72 VDC, 240 VAC
- Hold Current: 0.05~13A
- SMT/Radial leaded types available
- UL recognized, TÜV certified

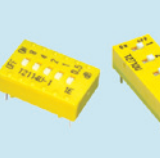
[S]



C-FAP

- Integrated MOSFET and current detection circuit; 1 or 2 per package
- Fast response; Less than 1 μ sec
- DFN: small SMT package
- Impulse voltage: 250~850 Vmax
- Small energy consumption (100nJ)
- UL recognized

Attenuators



T2114/T2710

- Step type variable attenuator
- Circuit: Unbalanced type (T2710); Unbalanced/Balanced type (T2114)
- Impedance: 600 Ω
- Frequency: DC ~150 kHz
- Attenuation value: 0.5, 1, 2, 4, 8 dB; 15.5 dB total/1, 2, 4, 8, 16 dB; 31 dB total

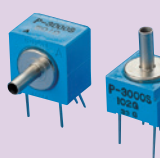
Pressure Sensors

Pressure transducer modules



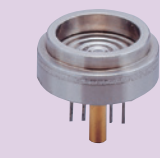
P-2000

- Pressure range: 0~981 kPa
- Non-corrosive gases
- Power: 1.5mA DC



P-3000S

- Pressure range: 0~686 kPa; 0~ ± 98.1 kPa differential; 0~98.1 kPa absolute
- Non-corrosive gases
- Power: 1.5mA DC



P-8300

- Pressure range: 0~981 kPa; 0~98.1 kPa absolute
- Corrosive gases and liquids
- Power: 1.5mA DC



P-8305

- Pressure range: 0~10 kPa
- Corrosive gases and liquids
- Power: 1.5mA DC



P-8505

- Pressure range: 0~1000 kPa
- Corrosive gases and liquids
- Power: 1.5mA DC

Pressure transducers with Amp.



P-7100

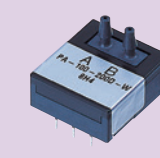
- Pressure range: 100 kPa~1.0 MPa; 0~133.3 kPa abs.
- Corrosive gases and liquids
- Output: 0.5~4.5 VDC
- Power: 5 ± 0.5 VDC

CE



PA-20

- Pressure range: 0~100 kPa; -100~300 kPa
- Non-corrosive gases
- Output: 1~5 VDC
- Power: 10.8~30 VDC



PA-100

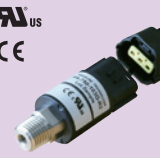
- Pressure range: -5~5 kPa differential
- Non-corrosive gases
- Output: 0.5~4.5 VDC
- Power: 5 VDC



PA-500

- Pressure range: 0~3.5 MPa; 0~100 kPa; -100~300 kPa; 0~100 kPa absolute
- Corrosive gases and liquids
- Output: 1~5 VDC/4~20 mA
- Power: 10.8~30 VDC/24 VDC

CE



PA-750/758

- Pressure range: 0~3.5 MPa; 0~100 kPa; -100~300 kPa; 0~100 kPa absolute
- Corrosive gases and liquids
- Output: 1~5 VDC/4~20 mA
- Power: 10.8~30 VDC/24 VDC



PA-800

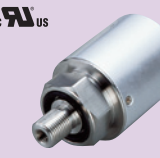
- Pressure range: 0~981 kPa; 0~98.1 kPa
- Corrosive gases and liquids
- Output: 1~5 VDC
- Power: 12~24 VDC



PA-838-D

- Pressure range: 0~100 kPa differential
- Corrosive gases and liquids
- Output: 4~20 mA
- Power: 24 VDC

CE



PA-830/838

- Pressure range: 0~98.1 kPa; 0~98.1 kPa absolute (PA-830); 0~98.1 kPa (PA-838)
- Corrosive gases and liquids
- Output: 1~5 VDC/4~20 mA
- Power: 12~24 VDC/24 VDC



PA-840/848

- With IP67 degree of protection
- Pressure range: 0~3.5 MPa; -0.1~0.35 MPa; 0~0.1 MPa abs.
- Corrosive gases and liquids
- Output: 1~5 VDC/4~20 mA
- Power: 10.8~26.4 VDC/21.6~26.4 VDC



PA-850/858

- Pressure range: 0~1000 kPa; 0~100 kPa; -100~100 kPa (PA-850 only); -100~300 kPa; 0~100 kPa abs.
- Corrosive gases and liquids
- Output: 1~5 VDC/4~20 mA
- Power: 10.8~30 VDC/24 VDC



PA-860/868

- For high pressure media
- Pressure range: 0~35 MPa
- Hydraulic oil
- Output: 1~5 VDC for PA-860; 4~20 mA/DC for PA-868
- Power: 12~24 VDC

CE



PA-920S/928S

- Ideal for gas feed line
- Pressure range: 0~1 MPa; -0.1~1 MPa
- Corrosive gases and liquids
- Output: 1~5 VDC/4~20 mA
- Power: 12~24 VDC/24 VDC

CE



PA-930/930-A

- Suitable for high temp. media (150°C)
- Pressure range: 0~1000 kPa; -100~300 kPa; 0~100 kPa/0~200 kPa abs.
- Corrosive gases and liquids
- Output: 1~5 VDC
- Power: 12~24 VDC

Pressure switches



PS20

- Pressure range: 0~100 kPa; -100~300 kPa compound
- Non-corrosive gases
- One switch output
- Power: 10.8~30 VDC



PS6

- Pressure range: 0~1000 kPa; 0~100 kPa
- Non-corrosive gases
- One or two switch output
- Analog output: 1~5 VDC
- Power: 12~24 VDC
- 2 digit LED display



PS40

- Pressure range: 0~1000 kPa; 0~100 kPa
- Non-corrosive gases
- One or two switch output
- Analog output: 1~5 VDC
- Power: 10.8~30 VDC
- Two LED indicators



PS30

- Pressure range: -100~1000 kPa
- Non-corrosive gases
- Two switch output
- Power: 12~24 VDC
- 2.5 digit LED display



PS60

- Pressure range: -100~1000 kPa
- Non-corrosive gases
- Two switch output
- Power: 12~24 VDC
- 3 digit LED display
- DIN rail mountable



PS8

- Pressure range: 0~98.1 kPa; 0~98.1 kPa
- Corrosive gases and liquids
- Two switch output
- Power: 12~24 VDC
- Two LED indicators



PS83

- Pressure range: 0~98.1 kPa; 0~98.1 kPa abs.
- Corrosive gases and liquids
- Two switch output
- Power: 12~24 VDC
- Two LED indicators



PS85

- Pressure range: -100~1000 kPa; 0~100 kPa abs.
- Corrosive gases and liquids
- Two switch output
- Power: 10.8~30 VDC
- Two LED indicators



PS86

- For high pressure media
- Pressure range: 0~35 MPa
- Corrosive gases and liquids
- One switch output
- Power: 10.8~30 VDC
- Two LED indicators



PS91

- Suitable for high vacuum pressure
- Pressure range: -100~10 kPa
- Corrosive gases and liquids
- Two switch output
- Power: 12~24 VDC
- Two LED indicators

Pressure gauges



PAS91/PAS91N

- Absolute pressure switch
- Tested for conformance to UL991
- Pressure range: 0~100 kPa abs.
- Corrosive gases and liquids
- Relay output available, 1 switch output
- Analog output: 1~5; 0~5; 0~10 VDC
- Power: 24 VDC/12~24 VDC



PG-20

- Pressure range: 0~1.0 MPa; -0.1~1.0 MPa
- Corrosive gases and liquids
- One or two switch output
- Output: 1~5 VDC
- Power: 12~24 VDC
- 3.5 digit LED display



PG-30

- Pressure range: -100~1000 kPa
- Non-corrosive gases
- Corrosive gases and liquids
- Two switch output
- Output: 1~5 VDC
- Power: 10.8~30 VDC
- 3 digit LED display



PG-35

- Pressure range: -100~1000 kPa; 0~100 kPa abs.
- Corrosive gases and liquids
- Two switch output
- Output: 1~5 VDC
- Power: 10.8~30 VDC
- 3 digit LED display



PG-35H

- For high pressure media
- Pressure range: -0.1~35 MPa
- Corrosive gases and liquids
- Two switch output
- Output: 1~5 VDC
- Power: 10.8~30 VDC
- 3 digit LED display



PG-35L

- Suitable for high vacuum pressure
- Pressure range: -100~1000 kPa
- Corrosive gases and liquids
- Two switch output
- Output: 1~5 VDC
- Power: 10.8~30 VDC
- 3 digit LED display



PG-75

- Pressure range: -100~100 kPa and -0.1~3.5 MPa; 0~100 kPa and 0~3.5 MPa
- Corrosive gases and liquids
- Two switch output
- Output: 1~5 VDC or 4~20 mA
- Power: 10.8~30 VDC
- 3.5 digit LED display



PG-200/208

- Pressure range: 0~1000 kPa; 0~100 kPa; 0~100 kPa abs. (PG-200 only)
- Corrosive gases and liquids
- One or two switch output
- Output: 0~1 VDC or 4~20 mA
- Power: 10~24 VDC; 5~10 VDC (PG-200 only) or 3.6 VDC lithium battery
- 3.5 digit LCD display

Handheld digital manometers



PG-100N

- Pressure range: -100~1000 kPa compound
- Non-corrosive gases
- Power: 2 AAA batteries
- 3.5 digit LCD display



PG-100B

- Pressure range: -100~1000 kPa compound; 0~100 kPa absolute
- Corrosive gases and liquids
- Power: 2 AAA batteries
- 3.5 digit LCD display

Pressure Indicators



PZ-30

- Input signal: 1~5V or 4~20 mA
- Two switch output
- Output: 1~5 VDC or 4~20 mA
- Power: 10.8~30 VDC
- 3 digit LED display



PZ-200

- Input signal: 1~5V or 4~20 mA
- Four switch output
- Output: 4~20 mA
- Power: 10.8~30 VDC
- 3.5 digit LCD display

Liquid leak sensors



WL10

- Unique one piece detector
- Two housing materials: Polypropylene (PP) for use in water, Perfluoroalkoxy alkane (PFA) for use with corrosive fluids
- Power: 12~24 VDC
- 2 or 4 meter cable leads

Potentiometers

[W]: Wire wound type

[P]: Conductive plastic type

[C]: Cermet type

[O]: Optical contactless type

Sensing potentiometers



JT22

- Optical contactless
- Turns: Single
- Effective electrical angle: 120° or 320°
- Linearity: ±3%
- Output voltage: +0.5~+4.5 V
- Rotational life: 100,000,000 cycles



JT30

- Optical contactless
- Turns: Single
- Effective electrical angle: 120° or 340°
- Linearity: ±1.5% or 2.0%
- Output voltage: +0.5~+4.5 V
- Rotational life: 200,000,000 cycles



J40S/J45S/J50S

- Wirewound
- Turns: Single
- Effective electrical angle: 350°, 353°, 355°
- Linearity: ±0.15% or 0.10%
- Resistance range: 500~50K Ω
- Rotational life: 1~10 million cycles



M22L10

- Wirewound
- Turns: 10
- Effective electrical angle: 3600°
- Linearity: ±0.2%
- Resistance range: 1K~20K Ω
- Rotational life: 5 million cycles



MC1003

- Conductive plastic
- Turns: 3
- Effective electrical angle: 1080°
- Linearity: ±1%
- Resistance range: 5K~20K Ω
- Rotational life: 1 million cycles

Sensing potentiometers

P



JC10

- Turns: 1
- Effective electrical angle: $324^\circ \pm 5^\circ$
- Linearity: $\pm 2\%$
- Resistance range: 2K~20K Ω
- Rotational life: 5 million cycles

P



JC22E

- Turns: 1
- Effective electrical angle: $320^\circ \pm 5^\circ$
- Linearity: $\pm 1\%$
- Resistance range: 1K~10K Ω
- Rotational life: 10 million cycles

P



JC22S

- Conductive plastic
- Turns: 1
- Effective electrical angle: $340^\circ \pm 5^\circ$
- Linearity: $\pm 0.5\%$
- Resistance range: 200~10K Ω
- Rotational life: 20 million cycles

P



JC30S/40S

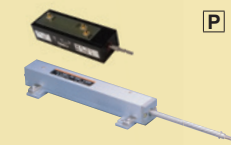
- Conductive plastic
- Turns: 1
- Effective electrical angle: $343^\circ \pm 5^\circ$ / $345^\circ \pm 5^\circ$
- Linearity: $\pm 0.5\%$ / $\pm 0.3\%$
- Resistance range: 500~20K Ω
- Rotational life: 30 million cycles

P



CRV16

- Conductive plastic
- Turns: 1
- Effective electrical angle: $220^\circ \pm 10^\circ$
- Linearity: $\pm 2\%$
- Resistance range: 2K~10K Ω
- Rotational life: 500,000 cycles



JCL/JCL B

- Rectilinear type
- Effective electrical travel: 10~50mm/100~500mm
- Linearity: $\pm 0.5\%$
- Resistance range: 1k~10 k Ω
- Rotational life: 20 million cycles / 4~20 million cycles

C



JP-30

- Turns: 1
- Effective electrical angle: $300^\circ \pm 1^\circ$
- Linearity: $\pm 0.5\%$
- Resistance range: 500~100 k Ω
- Rotational life: 3 million cycles

Manual setting potentiometers

W



M-1303/1305

- Turns: 3 on M-1303 and 5 on M-1305
- Effective electrical angle: 1080° on M-1303 and 1800° on M-1305
- Linearity: $\pm 0.5\%$
- Resistance range: 100~20 k Ω
- Rotational life: 15,000 cycles

W



M-22S10/22E10

- Turns: 10
- Effective electrical angle: 3600°
- Linearity: $\pm 0.2\%$
- Resistance range: 100~50K Ω
- Rotational life: 25,000 cycles

C



JP-30B

- Effective electrical angle: $300^\circ \pm 1^\circ$
- Linearity: $\pm 0.5\%$
- Resistance range: 500~100 k Ω
- Rotational life: 100,000 cycles

Encoders

O: Optical type

M: Magnetic type

Sensing rotary encoders

O



RE12

- Incremental
- Miniature size
- Input voltage: 5VDC
- Quasi-sinusoidal A phase
- Resolution: 100, 200 or 300 P/R

O



RE12D

- Incremental
- Miniature size
- Input voltage: 5VDC
- Square wave, A and B phases
- Resolution: 100, 200 or 300 P/R

O



RE20F

- Incremental
- Input voltage: 5VDC
- Quasi-sinusoidal, A or A and B phase
- Resolution: 100 or 300 P/R A phase only; 100 P/R A & B phase

O



RE30E

- Incremental
- Input voltage: 5 VDC or 24 VDC
- Square wave, A, B and Z phase
- Resolution: 100~1024 P/R

O



REC20/RES20

- Incremental
- Input voltage: 5 VDC
- Square wave, A and B phases
- Resolution: 25 P/R

O



REC20D(W)/RES20D(W)

- Incremental
- Input voltage: 5 VDC
- Square wave, A and B phases
- Resolution: 25 P/R
- Panel seal types (W) available

M



RMS20

- Incremental
- Input voltage: 5 VDC
- Square wave, A and B phases
- Resolution: 100, 250 or 256 P/R

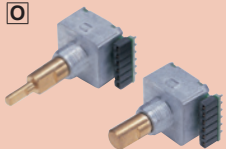
O



REC16/RES16

- Incremental
- Input voltage: 5 VDC
- Square wave, A and B phases
- Resolution: 25 or 50 P/R
- Push switch option available

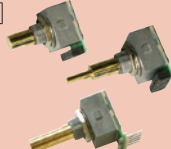
O



REC16D/16F

- Incremental
- Input voltage: 5 VDC
- Square wave, A and B phases
- Resolution: 25 P/R
- Single/double shaft; Push switch option available

O



REC16K/16L/16M

- Incremental
- Detent & smooth feel
- Input voltage: 5 VDC
- Square wave, A and B phases
- Resolution: 25 P/R
- Single/double shaft; Push switch option available

O



CJ25

- Joystick, encoder and pushbutton switch in one package
- Power supply: 5 VDC / 20 mA max
- Resolution: 5 P/R (20 position)
- Square wave, A and B phases
- Joystick: 4 or 8 direction

Micro Blowers

Resin material in full compliance with

U: UL94 V0

F: FDA standards

Aerodynamic bearings provide compact yet high power, long life and low vibration

U



TF037C-2100

- Operating voltage range: 10~30 VDC
- Rotation speed: 6,000~45,000 r/min
- Min. flowrate: 5 l/min
- Static pressure: e.g. 4 kPa max. at 40,000 r/min, 80 l/min, at 24 VDC
- With fixing leg
- Weight: 94 g
- Driver set also available

U



TF037C-2000

- Operating voltage range: 10~30 VDC
- Rotation speed: 6,000~45,000 r/min
- Min. flowrate: 5 l/min
- Static pressure: e.g. 4 kPa max. at 40,000 r/min, 80 l/min, at 24 VDC
- Without fixing leg
- Weight: 90 g

U



TF037E-2000

- Operating voltage range: 10~30 VDC
- Rotation speed: 6,000~45,000 r/min
- Min. flowrate: 5 l/min
- Static pressure: e.g. 4 kPa max. at 40,000 r/min, 80 l/min, at 24 VDC
- With fixing leg, and quick fastener P14 (inlet / outlet)
- Weight: 165 g

F



TF037F-2000

- Operating voltage range: 10~30 VDC
- Rotation speed: 6,000~45,000 r/min
- Min. flowrate: 5 l/min
- Static pressure: e.g. 4 kPa max. at 40,000 r/min, 80 l/min, at 24 VDC
- Weight: 72 g
- Driver set also available

F



TF029B-1000

- Operating voltage range: 12~27 VDC
- Rotation speed: 10,000~50,000 r/min
- Min. flowrate: 10 l/min
- Static pressure: e.g. 2 kPa at 36,000 r/min, 100 l/min
- Weight: 55 g
- Driver set also available

Brushless DC Fans



F16FB

- Miniature side flow fan
- Air flow: 0.012 m³/min
- Static pressure: 5.5 Pa
- Noise: 3 db (A)
- Rated voltage: 5 VDC



F16EA

- Air flow: 0.012 m³/min
- Static pressure: 4.7 Pa
- Noise: 3 db (A)
- Rated voltage: 3.3 VDC
- 16mm square



F17FA

- Air flow: 0.01 m³/min
- Static pressure: 6 Pa
- Noise: 5 db (A)
- Rated voltage: 3.3 VDC
- 17mm square



F17HA

- Air flow: 0.015 m³/min or 0.018 m³/min
- Static pressure: 10.0 Pa or 17.0 Pa
- Noise: 7 db (A) or 15 db (A)
- Rated voltage: 5 VDC
- 17mm square



F251R

- Air flow: 0.04 m³/min or 0.05 m³/min
- Static pressure: 20.0 Pa or 30.0 Pa
- Noise: 11 db (A) or 15 db (A)
- Rated voltage: 5V or 12 VDC
- 25mm square



F310R

- Air flow: 0.09 m³/min or 0.06 m³/min
- Static pressure: 14.0 Pa or 23.0 Pa
- Noise: 13 db (A) or 17 db (A)
- Rated voltage: 5 V or 12 VDC
- 30mm square



F412R/F410T

- Air flow: 0.11 m³/min or 0.15 m³/min
- Static pressure: 15.0 Pa or 26.0 Pa / 10.0 Pa or 23.0 Pa
- Noise: 16 db (A) or 23 db (A) / 12 db (A) or 18 db (A)
- Rated voltage: 5 V or 12 VDC
- 41mm square / 40mm square



F614T

- Air flow: 0.36 m³/min
- Static pressure: 20 Pa
- Noise: 23 db (A)
- Rated voltage: 4 V or 12 VDC
- 50mm square

Polygon Laser Scanners

Polygon mirrors and scanner motors



Polygon Mirrors

- No.1 in global market share in the world
- Excellent processing technology provides high reflectivity
- Flexibly customize a variety of configuration and sizes
- Achievements of monthly production of 1 million or more
- An ideal solution for LiDAR long-distance detection

for LiDAR



Automotive Grade Drone Topography

NIDEC COPAL ELECTRONICS' advanced and unique technologies are bearing fruit in various industries.



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