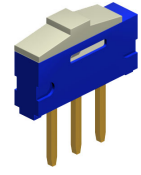
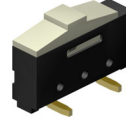
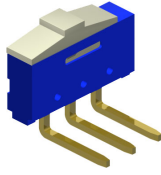


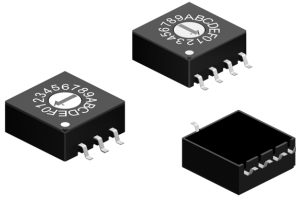
Changeover Slide Switch



SMT & THT Page 2

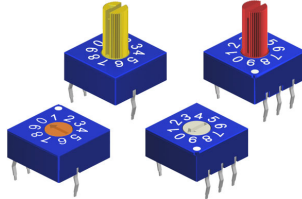
Rotary Switch

SMT vertical operation



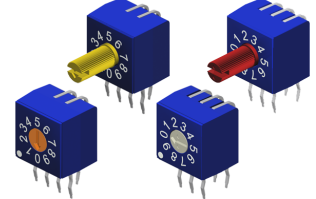
Page 3

THT vertical operation



Page 4 & 5

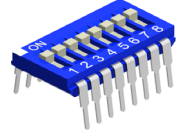
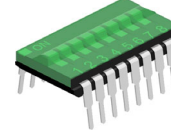
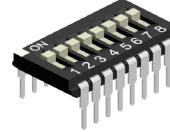
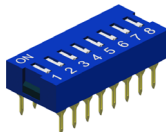
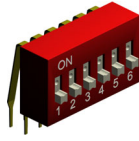
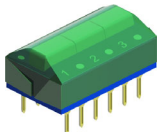
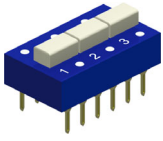
THT horizontal operation



Page 6 to 9

Slide Switch

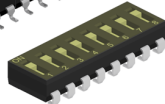
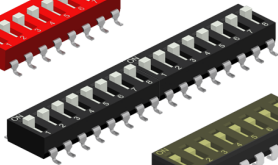
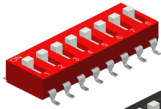
DIP Package "THT"



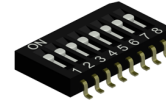
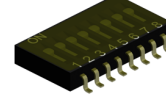
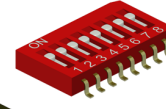
DDG / DDS Series Page 10 & 11

DAH / DAM Series Page 12 & 13

DIP Package "SMT"

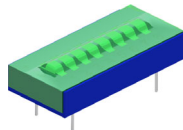
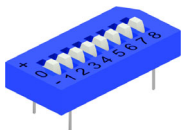


DSD / DSL Series Page 14



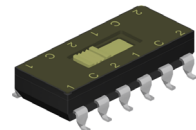
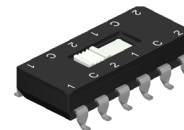
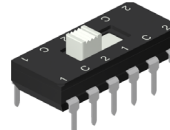
DHS Series Page 15

TRI-State "THT" & "SMT"



DTD / DTA / DTS Series Page 16

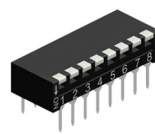
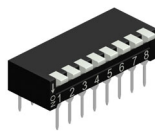
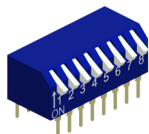
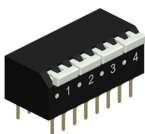
Selector "THT" & "SMT"



DSP Series Page 17

Piano Switch

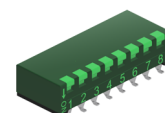
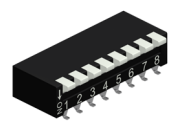
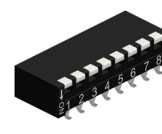
DIP Package "THT"



DPG / DPS Series Page 18 & 19

DPH / DPI Series Page 20 & 21

DIP Package "SMT"



DPA / DPM Series Page 22 & 23

DSS-10xx

Circuit diagram:

Switch position: (B) PT, (A) PT, (C-1) C-2, (C-2) C-2

PCB Hole Layout:

DSS-20xx

Circuit diagram:

Switch position: (B) PT, (A) PT, (C-1) C-2, (C-2) C-2

PCB Hole Layout:

DSS-30xx

Circuit diagram:

Switch position: (B) PT, (A) PT, (C-1) C-2, (C-2) C-2

PCB SMT Layout:

DSS-40xx

Circuit diagram:

Switch position: (B) PT, (A) PT, (C-1) C-2, (C-2) C-2

PCB SMT Layout:

SPECIFICATIONS

Electrical data

| | |
|---------------------------------------|-----------------------------|
| Contact Rating | 0.2A, 24V DC / 0.5A, 12V DC |
| -switching | 1 mA at 10mV |
| -minimum | |
| Contact Resistance | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 10000 MΩ min. at 500V DC |
| Withstanding Voltage | 500 V AC for 1 Minute |
| Capacitance between adjacent switches | 1.5 pF max. |

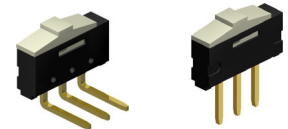
Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | - 25°C to +70°C |
| Storage Temperature | - 40°C to +85°C |
| Soldering Temperature | |
| -SMT reflow soldering | 250°C +0/-5°C for 10 sec. max. |
| -THT wave soldering | 250°C +0/-5°C for 10 sec. max. |
| Operating force | 800 gf max. |
| Mechanical Life | 5000 operations |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Suitable for signal switching and communication equipments
- All plastics used are UL 94V-0 grade fire retardant
- Gold plated contacts to ensure low contact resistance

- Tropical Version (black color) also for THT straight and right angle type available



How to order

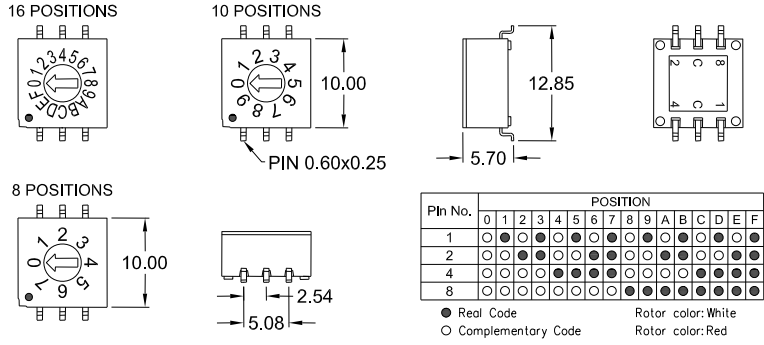
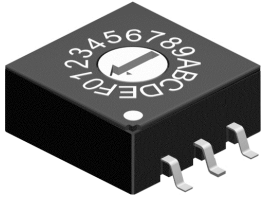
DSS – xx xx xx Z

| Type | |
|-------------------------------|-------------------|
| 10 | = Straight THT |
| 20 | = Right angle THT |
| <i>Tropical version only:</i> | |
| 30 | = Vertical SMT |
| 40 | = Horizontal SMT |

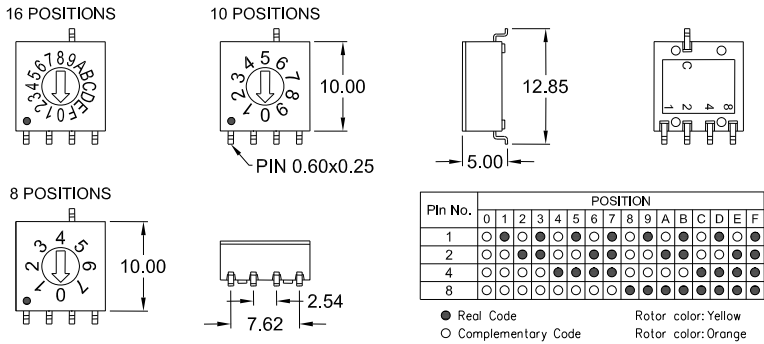
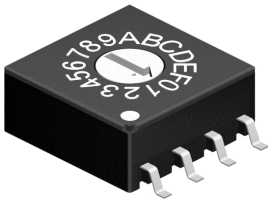
| Execution | |
|-----------|---|
| 10 | = Standard version (blue) Material: PA 66 |
| 20 | = Tropical version (black) Material: PA 6T |

| Packing option | |
|----------------|--|
| blank | = Tube packing |
| KD | = Reel packing for DSP-40xx series only |

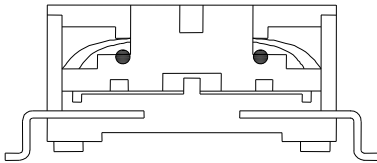
DRD-1 xx-XM Z (3:3 pin-out)



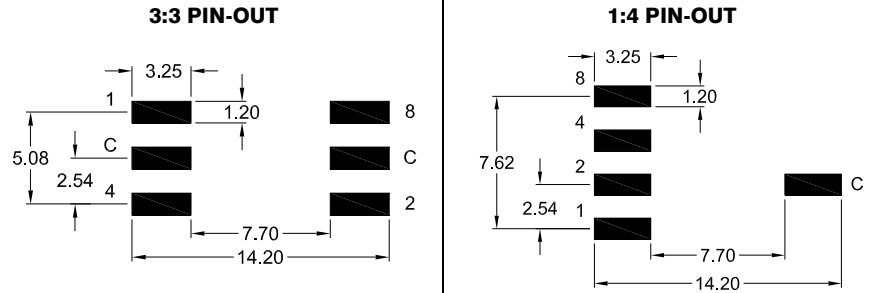
DRD-4 xx-XM Z (1:4 pin-out)



Construction



PCB SMT Layout



SPECIFICATIONS

Electrical data

| | |
|-----------------------|--------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 250 V AC for 1 Minute |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | -25°C to +70°C |
| Storage Temperature | -40°C to +85°C |
| Soldering Temperature | |
| -SMT reflow soldering | 250°C +0/-5°C for 10 sec. |
| Operating Force | 500 gf-cm max. (torque) |
| Mechanical Life | 2000 steps per position |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Molded-in terminals and fully sealed construction
- Standard 2.54mm pin to pin
- All plastics are UL 94V-0 grade fire retardant
- Reliable contact and long-term stability
- Binary decimal (8 or 10 positions) and hexadecimal (16 positions), real and complementary codes available
- Gold plated contacts to ensure low contact resistance. Terminals Tin plated.

How to order

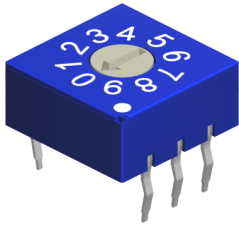
DRD – x xx – XX Z

| Rotor | |
|----------|---------------------------|
| 1 | = Flat Type (3:3 pin-out) |
| 4 | = Flat Type (1:4 pin-out) |

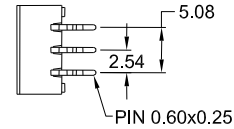
| Nbr of positions | |
|-------------------|--|
| 08; 10; 16 | |

| Code | |
|-----------|-----------------|
| RM | = Real |
| CM | = Complementary |

DRD-1 xx-XS Z (Flat Type)



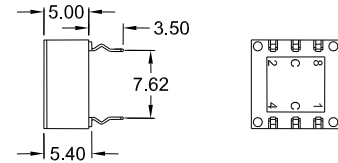
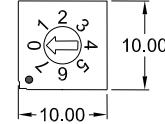
16 POSITIONS



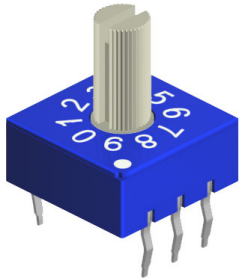
10 POSITIONS



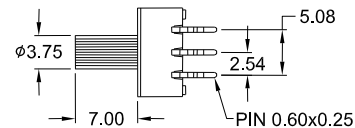
8 POSITIONS



DRD-2 xx-XS Z (Shaft Type)



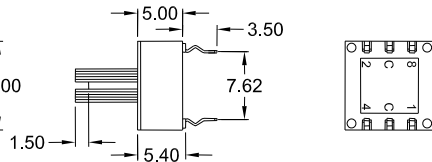
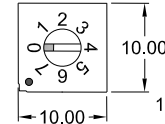
16 POSITIONS



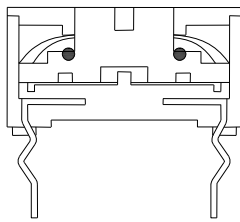
10 POSITIONS



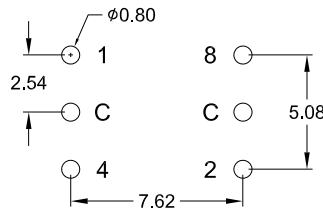
8 POSITIONS



Construction



PCB Hole Layout



Code

| Pin No. | POSITION | | | | | | | | | | | | | | | |
|---------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
| 1 | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● |
| 2 | ○ | ○ | ● | ○ | ○ | ● | ○ | ○ | ● | ○ | ○ | ● | ○ | ○ | ● | ○ |
| 4 | ○ | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 8 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

● Real Code Rotor color: White
○ Complementary Code Rotor color: Red

SPECIFICATIONS

Electrical data

| | |
|-----------------------|--------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 250 V AC for 1 Minute |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | - 25°C to +70°C |
| Storage Temperature | - 40°C to +85°C |
| Operating Force | 500 gf-cm max. (torque) |
| Mechanical Life | 2000 steps per position |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Molded-in terminals and fully sealed construction
- Standard 2.54mm pin to pin, and 7.62mm DIP space
- All plastics are UL 94V-0 grade fire retardant
- Reliable contact and long-term stability
- Binary decimal (8 or 10 positions) and hexadecimal (16 positions), real and complementary codes available
- Gold plated contacts to ensure low contact resistance. Terminals Tin plated.

How to order

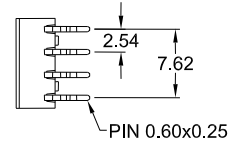
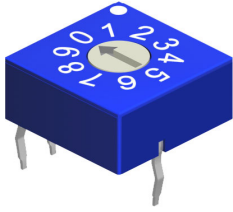
DRD – x xx – XX Z

| Rotor | |
|----------|--------------|
| 1 | = Flat Type |
| 2 | = Shaft Type |

| Nbr of positions | |
|-------------------|--|
| 08; 10; 16 | |

| Code | |
|-----------|----------------------------------|
| RS | = Real 7.62mm row space |
| CS | = Complementary 7.62mm row space |

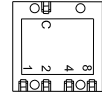
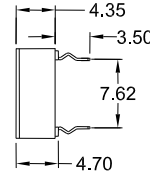
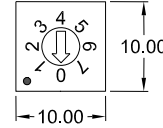
DRD-4 xx-XS Z (Flat Type)



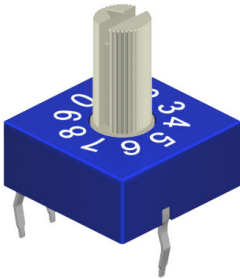
10 POSITIONS



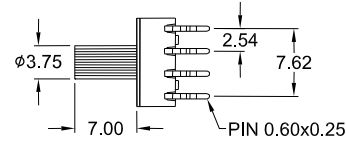
8 POSITIONS



DRD-5 xx-XS Z (Shaft Type)



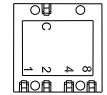
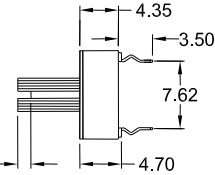
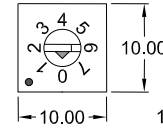
16 POSITIONS



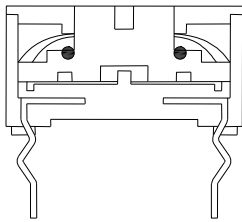
10 POSITIONS



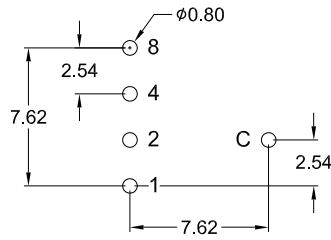
8 POSITIONS



Construction



PCB Hole Layout



Code

| Pin No. | POSITION | | | | | | | | | | | | | | | |
|---------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
| 1 | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● |
| 2 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 4 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 8 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

● Real Code Rotor color: Yellow
○ Complementary Code Rotor color: Orange

SPECIFICATIONS

Electrical data

| | |
|-----------------------|--------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 250 V AC for 1 Minute |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | -25°C to +70°C |
| Storage Temperature | -40°C to +85°C |
| Operating Force | 500 gf-cm max. (torque) |
| Mechanical Life | 2000 steps per position |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Molded-in terminals and fully sealed construction
- Standard 2.54mm pin to pin, and 7.62mm DIP space
- All plastics are UL 94V-0 grade fire retardant
- Reliable contact and long-term stability
- Binary decimal (8 or 10 positions) and hexadecimal (16 positions), real and complementary codes available
- Gold plated contacts to ensure low contact resistance. Terminals Tin plated.

How to order

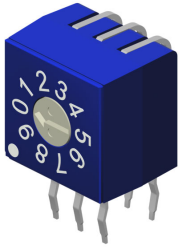
DRD - x xx - XX Z

| Rotor | |
|-------|--------------|
| 4 | = Flat Type |
| 5 | = Shaft Type |

| Nbr of positions | |
|------------------|--|
| 08; 10; 16 | |

| Code | |
|------|----------------------------------|
| RS | = Real 7.62mm row space |
| CS | = Complementary 7.62mm row space |

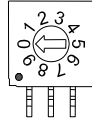
DRD-1 xx-XR Z (Flat Type)



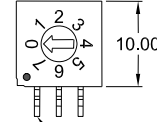
16 POSITIONS



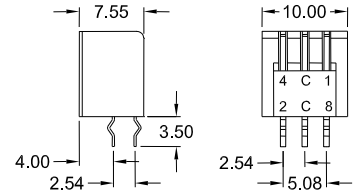
10 POSITIONS



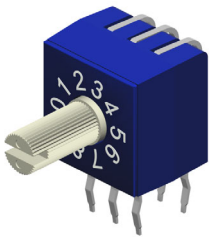
8 POSITIONS



PIN 0.60x0.25



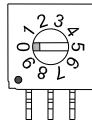
DRD-2 xx-XR Z (Shaft Type)



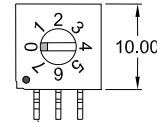
16 POSITIONS



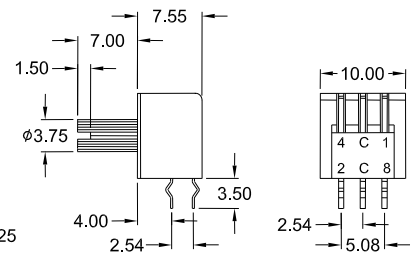
10 POSITIONS



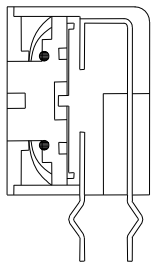
8 POSITIONS



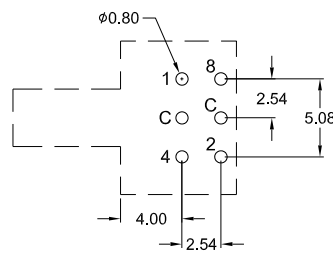
PIN 0.60x0.25



Construction



PCB Hole Layout



Code

| Pin No. | POSITION | | | | | | | | | | | | | | | |
|---------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
| 1 | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● |
| 2 | ○ | ○ | ● | ● | ○ | ○ | ● | ● | ○ | ○ | ● | ● | ○ | ○ | ● | ● |
| 4 | ○ | ○ | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ● | ● | ○ | ○ | ● | ● |
| 8 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

● Real Code Rotor color: White
○ Complementary Code Rotor color: Red

SPECIFICATIONS

Electrical data

| | |
|-----------------------|--------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 250 V AC for 1 Minute |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | -25°C to +70°C |
| Storage Temperature | -40°C to +85°C |
| Operating Force | 500 gf-cm max. (torque) |
| Mechanical Life | 2000 steps per position |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Molded-in terminals and fully sealed construction
- Standard 2.54mm grid dimension
- All plastics are UL 94V-0 grade fire retardant
- Reliable contact and long-term stability
- Binary decimal (8 or 10 positions) and hexadecimal (16 positions), real and complementary codes available
- Gold plated contacts to ensure low contact resistance. Terminals Tin plated.

How to order

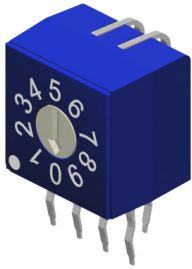
DRD – x xx – XX Z

| Rotor |
|----------------|
| 1 = Flat Type |
| 2 = Shaft Type |

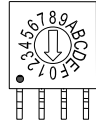
| Nbr of positions |
|------------------|
| 08; 10; 16 |

| Code |
|--------------------------------|
| RR = Real 2.54mm grid |
| CR = Complementary 2.54mm grid |

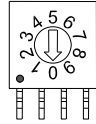
DRD-4 xx-XR Z (Flat Type)



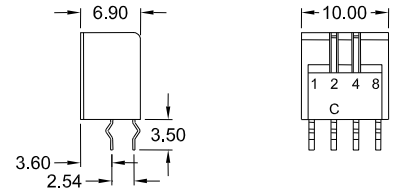
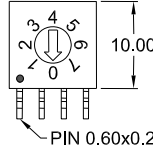
16 POSITIONS



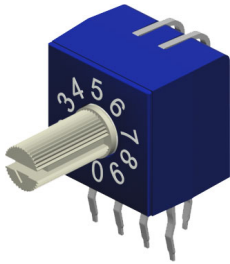
10 POSITIONS



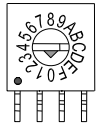
8 POSITIONS



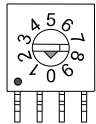
DRD-5 xx-XR Z (Shaft Type)



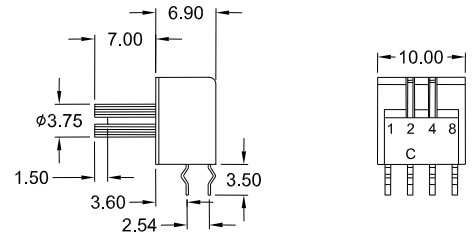
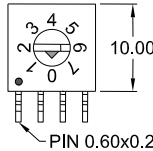
16 POSITIONS



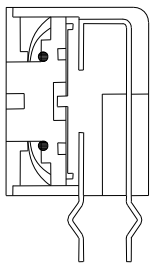
10 POSITIONS



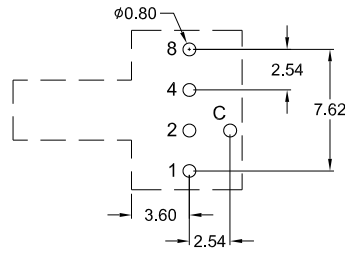
8 POSITIONS



Construction



PCB Hole Layout



Code

| Pin No. | POSITION | | | | | | | | | | | | | | | |
|---------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
| 1 | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● |
| 2 | ○ | ○ | ● | ● | ○ | ○ | ● | ● | ○ | ○ | ● | ● | ○ | ○ | ● | ● |
| 4 | ○ | ○ | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 8 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

● Real Code

○ Complementary Code

Rotor color: Yellow

Rotor color: Orange

SPECIFICATIONS

Electrical data

| | |
|-----------------------|--------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 250 V AC for 1 Minute |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | - 25°C to +70°C |
| Storage Temperature | - 40°C to +85°C |
| Operating Force | 500 gf-cm max. (torque) |
| Mechanical Life | 2000 steps per position |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Molded-in terminals and fully sealed construction
- Standard 2.54mm grid dimension
- All plastics are UL 94V-0 grade fire retardant
- Reliable contact and long-term stability
- Binary decimal (8 or 10 positions) and hexadecimal (16 positions), real and complementary codes available
- Gold plated contacts to ensure low contact resistance. Terminals Tin plated.

How to order

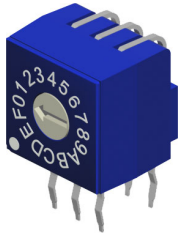
DRD – X XX – XX Z

| Rotor |
|-----------------------|
| 4 = Flat Type |
| 5 = Shaft Type |

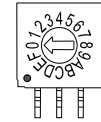
| Nbr of positions |
|-------------------|
| 08; 10; 16 |

| Code | Grid |
|---------------------------|-------------|
| RR = Real | 2.54mm grid |
| CR = Complementary | 2.54mm grid |

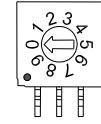
DRD-1 xx-XF Z (Flat Type)



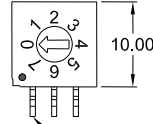
16 POSITIONS



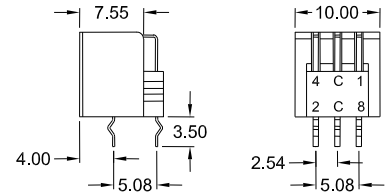
10 POSITIONS



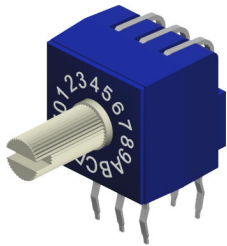
8 POSITIONS



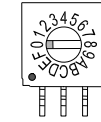
PIN 0.60x0.25



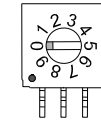
DRD-2 xx-XF Z (Shaft Type)



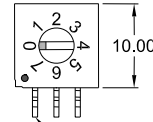
16 POSITIONS



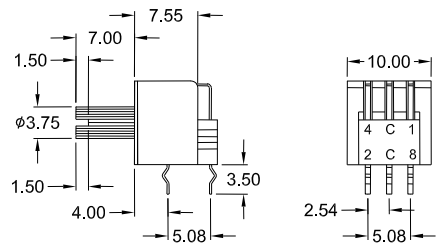
10 POSITIONS



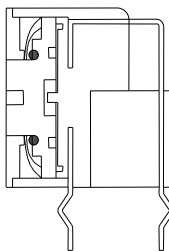
8 POSITIONS



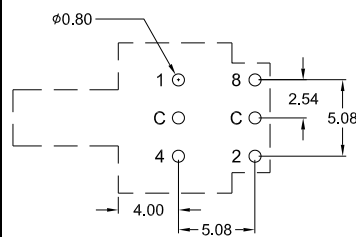
PIN 0.60x0.25



Construction



PCB Hole Layout



Code

| Pin No. | POSITION | | | | | | | | | | | | | | | |
|---------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
| 1 | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 2 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 4 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 8 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

● Real Code Rotor color: White
○ Complementary Code Rotor color: Red

SPECIFICATIONS

Electrical data

| | |
|-----------------------|--------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 250 V AC for 1 Minute |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | -25°C to +70°C |
| Storage Temperature | -40°C to +85°C |
| Operating Force | 500 gf-cm max. (torque) |
| Mechanical Life | 2000 steps per position |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Molded-in terminals and fully sealed construction
- Standard 2.54mm pin to pin, and 5.08mm DIP space
- All plastics are UL 94V-0 grade fire retardant
- Reliable contact and long-term stability
- Binary decimal (8 or 10 positions) and hexadecimal (16 positions), real and complementary codes available
- Gold plated contacts to ensure low contact resistance. Terminals Tin plated.

How to order

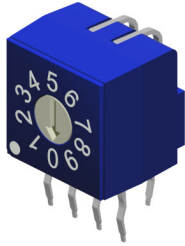
DRD – X XX – XX Z

| Rotor | |
|----------|--------------|
| 1 | = Flat Type |
| 2 | = Shaft Type |

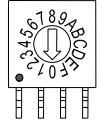
| Nbr of positions | |
|-------------------|--|
| 08; 10; 16 | |

| Code | |
|-----------|----------------------------------|
| RF | = Real 5.08mm row space |
| CF | = Complementary 5.08mm row space |

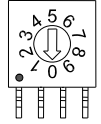
DRD-4 xx-XF Z (Flat Type)



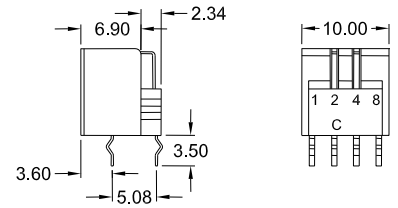
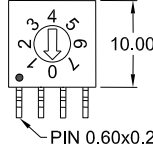
16 POSITIONS



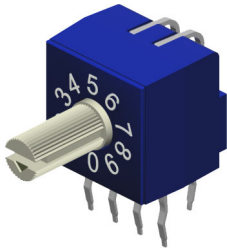
10 POSITIONS



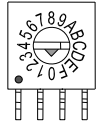
8 POSITIONS



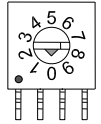
DRD-5 xx-XF Z (Shaft Type)



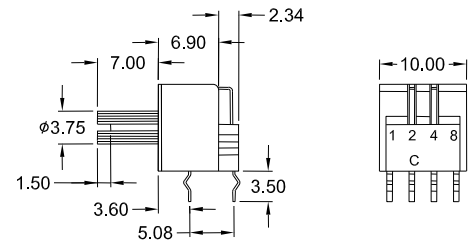
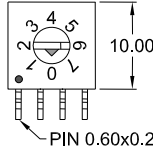
16 POSITIONS



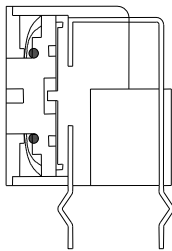
10 POSITIONS



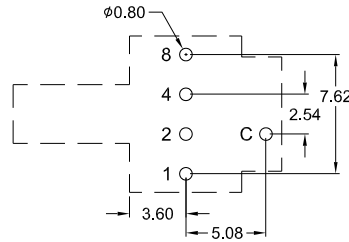
8 POSITIONS



Construction



PCB Hole Layout



Code

| Pin No. | POSITION | | | | | | | | | | | | | | | |
|---------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
| 1 | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ○ | ● |
| 2 | ○ | ○ | ● | ● | ○ | ○ | ● | ● | ○ | ○ | ● | ● | ○ | ○ | ● | ● |
| 4 | ○ | ○ | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 8 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

● Real Code

○ Complementary Code

Rotor color: Yellow

Rotor color: Orange

SPECIFICATIONS

Electrical data

| | |
|-----------------------|--------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 250 V AC for 1 Minute |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | -25°C to +70°C |
| Storage Temperature | -40°C to +85°C |
| Operating Force | 500 gf-cm max. (torque) |
| Mechanical Life | 2000 steps per position |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Molded-in terminals and fully sealed construction
- Standard 2.54mm pin to pin, and 5.08mm DIP space
- All plastics are UL 94V-0 grade fire retardant
- Reliable contact and long-term stability
- Binary decimal (8 or 10 positions) and hexadecimal (16 positions), real and complementary codes available
- Gold plated contacts to ensure low contact resistance. Terminals Tin plated.

How to order

DRD – x xx – XX Z

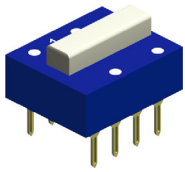
| Rotor |
|-----------------------|
| 4 = Flat Type |
| 5 = Shaft Type |

| Nbr of positions |
|-------------------|
| 08; 10; 16 |

| Code | | |
|-----------|-----------------|------------------|
| RF | = Real | 5.08mm row space |
| CF | = Complementary | 5.08mm row space |

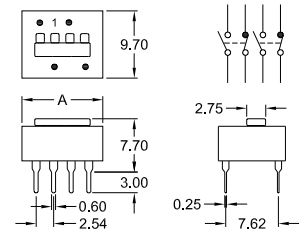
DPDT Contact Type

Standard Actuator only!



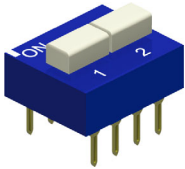
| Position | 1 | 2 | 3 |
|----------|-------|-------|-------|
| Dim. "A" | 11.70 | 21.70 | 31.80 |

Unit: mm



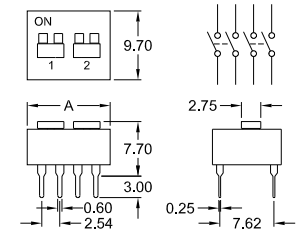
DPST Contact Type

Standard Actuator only!



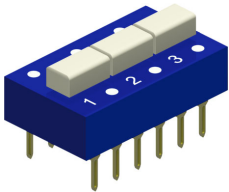
| Position | 1 | 2 | 3 | 4 | 5 | 6 |
|----------|------|-------|-------|-------|-------|-------|
| Dim. "A" | 6.70 | 11.70 | 16.70 | 21.70 | 26.70 | 31.80 |

Unit: mm



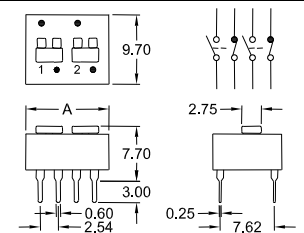
SPDT Contact Type

Standard Actuator only!

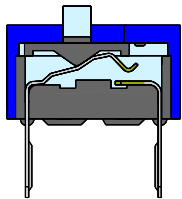


| Position | 1 | 2 | 3 | 4 | 5 | 6 |
|----------|------|-------|-------|-------|-------|-------|
| Dim. "A" | 6.70 | 11.70 | 16.70 | 21.70 | 26.70 | 31.80 |

Unit: mm



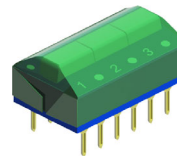
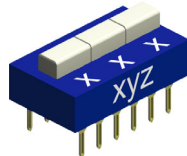
Construction



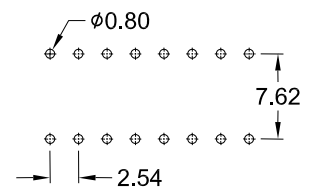
Options

1. Special top and/or side marking available

2. Tape sealed



PCB Hole Layout



SPECIFICATIONS

Electrical data

| | |
|---------------------------------------|--------------------------|
| Contact Rating | 25 mA, 24 V DC |
| -switching | 100 mA, 50 V DC |
| -non-switching | |
| Contact Resistance | 50 mΩ max. |
| -initial | 100 mΩ max. |
| -after life test | |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 500 V AC for 1 Minute |
| Capacitance between adjacent switches | 5 pF max. |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating temperature | -25°C to +70°C |
| Storage temperature | -40°C to +85°C |
| Operating force | 800 gf max. |
| Mechanical life | 2000 operations |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Tactile response is performed directly by larger contact pressure to ensure very stable contact
- All plastics used are UL 94V-0 grade fire retardant
- Epoxy sealed bottom to prevent the penetration of flux during wave soldering
- Gold plated (*tin on legs*) or Silver plated (*tin on legs*) contacts to ensure low contact resistance and long mechanical life
- Ideal for Data Processing, Telecommunication, Remote Control and Burglar Alarm System use, where manual programming is required
- Standard packing method Tube

How to order

DDX – x xx – XX Z

Series

DDG = Gold
(Type 2 Tin/Gold)
plated Contacts

DDS = Silver plated
Contacts

Contact Type

2 = DPST

3 = SPDT

6 = DPDT

Nbr of positions

see under
position/dimension
box
above

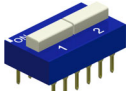
Example:
1 Position = **01**
2 Position = **02**
etc.

Actuator and Sealing

S = Standard Actuator

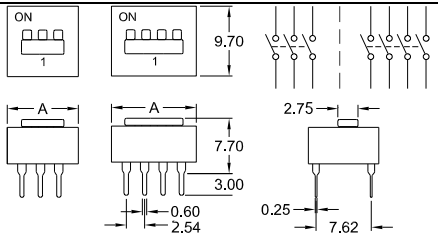
ST = Standard Actuator & Tape sealed

3PST Contact Type Standard Actuator only!

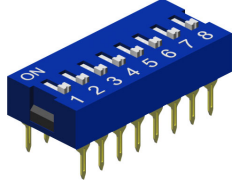


| Position | 1 | 2 | 3 | 4 |
|----------------------|-------|-------|-------|-------|
| 3PST Dim. "A" | 9.20 | 16.70 | 24.20 | 31.80 |
| 4PST Dim. "A" | 11.70 | 21.70 | 31.80 | |

Unit: mm

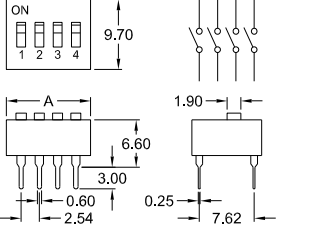


SPST Contact Type (rocker) Standard & Low Actuator possible.

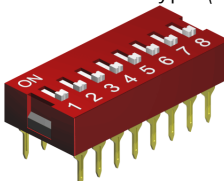


| Position | 1 | 2 | 3 | 4 | 5 | 6 |
|----------|-------|-------|-------|-------|-------|-------|
| Dim. "A" | 3.91 | 6.70 | 9.20 | 11.70 | 14.20 | 16.70 |
| Position | 7 | 8 | 9 | 10 | 12 | 15 |
| Dim. "A" | 19.20 | 21.70 | 24.20 | 26.70 | 31.80 | 39.50 |

Unit: mm

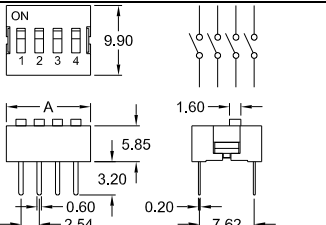


SPST Contact Type (slide) Standard Actuator only!

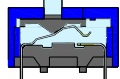


| Position | 2 | 3 | 4 | 5 | 6 |
|----------|-------|-------|-------|-------|-------|
| Dim. "A" | 6.44 | 8.98 | 11.52 | 14.06 | 16.60 |
| Position | 7 | 8 | 9 | 10 | 12 |
| Dim. "A" | 19.14 | 21.68 | 24.22 | 26.76 | 31.84 |

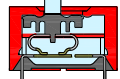
Unit: mm



Construction



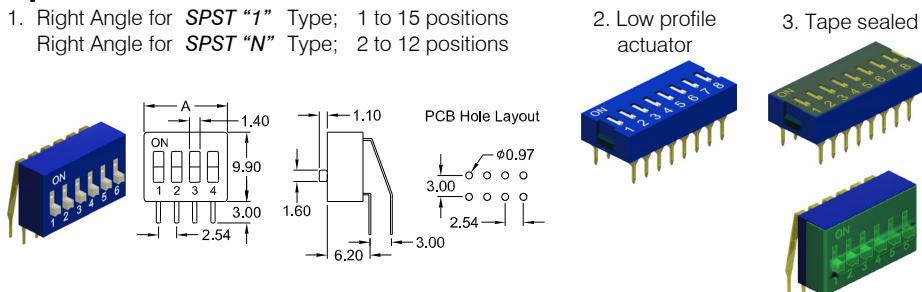
SPST "1"-Type (rocker)



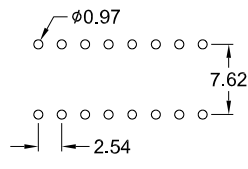
SPST "N"-Type (slide)

Options

- Right Angle for SPST "1" Type; 1 to 15 positions
Right Angle for SPST "N" Type; 2 to 12 positions
- Low profile actuator
- Tape sealed



PCB Hole Layout



SPECIFICATIONS

| Electrical data | Mechanical and Environmental data |
|---------------------------------------|--------------------------------------|
| Contact Rating | Operating temperature |
| -switching | -25°C to +70°C |
| -non-switching | Storage temperature |
| | -40°C to +85°C |
| Contact Resistance | Operating force |
| -initial | 800 gf max. |
| -after life test | Mechanical life |
| | 2000 operations |
| Insulation Resistance | Vibration |
| | 10 Hz – 50 Hz – 10 Hz for 6 hours |
| Withstanding Voltage | Color (Standard) |
| | SPST (rocker) "1" Type : blue |
| Capacitance between adjacent switches | SPST (slide) "N" Type : red |
| | others : blue |

FEATURES

| | |
|--|--|
| <ul style="list-style-type: none"> Tactile response is performed directly by larger contact pressure to ensure very stable contact All plastics used are UL 94V-0 grade fire retardant Epoxy sealed bottom to prevent the penetration of flux during wave soldering | <ul style="list-style-type: none"> Gold plated contacts (<i>tin on legs</i>) to ensure low contact resistance and long mechanical life Ideal for Data Processing, Telecommunication, Remote Control and Burglar Alarm System use, where manual programming is required Standard packing method Tube |
|--|--|

How to order

DDX – x xx – XXX Z

| Series | Contact Type | Nbr of positions | Actuator and Sealing |
|-----------------------------------|---|--|---|
| DDG = Gold plated Contacts | 1 = SPST (rocker) N = SPST (slide) 4 = 3PST (rocker) 5 = 4PST (rocker) | see under position/dimension box above Example: 1 Position = 01 2 Position = 02 etc. | S = Standard Actuator L = Low Profile Actuator LT = Low Profile Actuator & Tape sealed ST = Standard Actuator & Tape sealed SRA = Right Angle Type |

all in "ON" position

Dim. "A"

Extended Actuator

6.40, 1.00, 0.40, 8.50, 7.62, DIP Space

Circuit diagram

Low Profile Actuator

6.40, 3.40, 8.50, 7.62, DIP Space

PCB Hole Layout

Ø0.80, 7.62, 2.54

| Position | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 12 |
|----------|------|------|-------|-------|-------|-------|-------|-------|-------|
| Dim. "A" | 6.88 | 9.42 | 11.96 | 14.50 | 17.04 | 19.58 | 22.12 | 27.20 | 32.28 |

Unit: mm

Construction

Options

- Two kinds of pitch available as attached table
- Special marking and body color available
- Tape sealed

| Actuator Type | Pitch (mm) | |
|---------------|------------|--------|
| | Standard | Option |
| E | 7.62 | 8.50 |
| L | 8.50 | 7.62 |

SPECIFICATIONS

| Electrical data | | Mechanical and Environmental data | |
|---------------------------------------|---|-----------------------------------|-----------------------------------|
| Contact Rating | -switching 25 mA, 24 V DC -non-switching 100 mA, 50 V DC | Operating temperature | -25°C to +70°C |
| Contact Resistance | -initial 50 mΩ max. -after life test 100 mΩ max. | Storage temperature | -40°C to +85°C |
| Insulation Resistance | 1000 MΩ min. at 100 V DC | Operating force | 800 gf max. |
| Withstanding Voltage | 500 V AC for 1 Minute | Mechanical life | 2000 operations |
| Capacitance between adjacent switches | 5 pF max. | Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

| | |
|---|---|
| <ul style="list-style-type: none"> Same size as an IC, 7.62mm (.300"), can be assembled by any automatic IC Inserter Smaller size makes better heat convection during PC board wave soldering Tape sealed to withstand solder vapors and board washing | <ul style="list-style-type: none"> All plastics used are UL 94V-0 grade fire retardant Twin contact design to ensure stable contact Gold plated contacts to ensure low contact resistance, and tin plated terminal to prevent contamination during soldering (<i>gold/tin</i>) Standard packing method Tube |
|---|---|

How to order

DAH – 1 xx – XXxx Z

| Contact Type | Nbr of positions | Actuator, Sealing and DIP Space | | | | | | | | | | | | |
|-----------------|--|---|----------|---|-----------|---|------------|---|-------------|---|----------|--|------------|--|
| 1 = SPST | see under position/dimension box above Example: 2 Position = 02 3 Position = 03 etc. | <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 10%;">L</td> <td>= Low profile Actuator and DIP space 8.50mm</td> </tr> <tr> <td>LT</td> <td>= Low profile Actuator & Tape sealed & DIP space 8.50mm</td> </tr> <tr> <td>L01</td> <td>= Low profile Actuator and DIP space 7.62mm</td> </tr> <tr> <td>LT01</td> <td>= Low profile Actuator & Tape sealed & DIP space 7.62mm</td> </tr> <tr> <td>E</td> <td>= Extended Actuator and DIP space 7.62mm</td> </tr> <tr> <td>E01</td> <td>= Extended Actuator and DIP space 8.50mm</td> </tr> </tbody> </table> | L | = Low profile Actuator and DIP space 8.50mm | LT | = Low profile Actuator & Tape sealed & DIP space 8.50mm | L01 | = Low profile Actuator and DIP space 7.62mm | LT01 | = Low profile Actuator & Tape sealed & DIP space 7.62mm | E | = Extended Actuator and DIP space 7.62mm | E01 | = Extended Actuator and DIP space 8.50mm |
| L | = Low profile Actuator and DIP space 8.50mm | | | | | | | | | | | | | |
| LT | = Low profile Actuator & Tape sealed & DIP space 8.50mm | | | | | | | | | | | | | |
| L01 | = Low profile Actuator and DIP space 7.62mm | | | | | | | | | | | | | |
| LT01 | = Low profile Actuator & Tape sealed & DIP space 7.62mm | | | | | | | | | | | | | |
| E | = Extended Actuator and DIP space 7.62mm | | | | | | | | | | | | | |
| E01 | = Extended Actuator and DIP space 8.50mm | | | | | | | | | | | | | |

| Position | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 |
|----------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Dim. "A" | 2.50 | 5.04 | 7.58 | 10.12 | 12.66 | 15.20 | 17.74 | 20.28 | 22.82 | 25.36 | 30.43 |

Unit: mm

Construction

Options

- Two kinds of pitch available as attached table
- Special marking and body color available
- Tape sealed

| Actuator Type | Pitch (mm) | |
|---------------|------------|--------|
| | Standard | Option |
| E | 7.62 | 8.50 |
| L | 8.50 | 7.62 |

SPECIFICATIONS

| Electrical data | | Mechanical and Environmental data | |
|---------------------------------------|---|-----------------------------------|-----------------------------------|
| Contact Rating | -switching 25 mA, 24 V DC -non-switching 100 mA, 50 V DC | Operating temperature | -25°C to +70°C |
| Contact Resistance | -initial 50 mΩ max. -after life test 100 mΩ max. | Storage temperature | -40°C to +85°C |
| Insulation Resistance | 1000 MΩ min. at 100 V DC | Operating force | 800 gf max. |
| Withstanding Voltage | 500 V AC for 1 Minute | Mechanical life | 2000 operations |
| Capacitance between adjacent switches | 5 pF max. | Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- End stackable for standard 2.54mm (.100") integrated circuit pitch
- Same size as an IC, 7.62mm (.300"), can be assembled by any automatic IC Inserter
- Tape sealed to withstand solder vapors and board washing
- All plastics used are UL 94V-0 grade fire retardant
- Twin contact design to ensure stable contact
- Gold plated contacts to ensure low contact resistance, and tin plated terminal to prevent contamination during soldering (*gold/tin*)
- Standard packing method Tube

How to order

DAM – 1 xx – XXxx Z

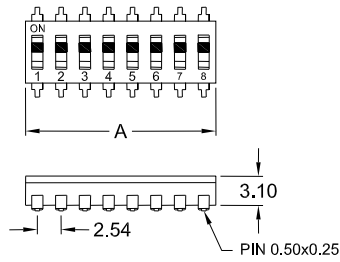
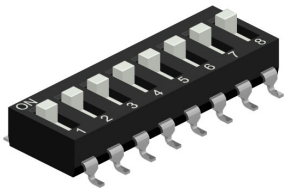
| Contact Type | Nbr of positions | Actuator, Sealing and DIP Space |
|--------------|--|--|
| 1 = SPST | see under position/dimension box above Example: 1 Position = 01 2 Position = 02 etc. | L = Low profile Actuator and DIP space 8.50mm LT = Low profile Actuator & Tape sealed & DIP space 8.50mm L01 = Low profile Actuator and DIP space 7.62mm LT01 = Low profile Actuator & Tape sealed & DIP space 7.62mm E = Extended Actuator and DIP space 7.62mm E01 = Extended Actuator and DIP space 8.50mm |

DSD / DSL Series

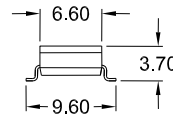
SLIDE END STACKABLE "SMT" TYPE



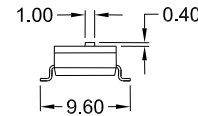
DSD Gull Wing Type



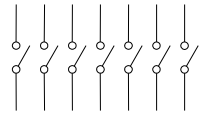
Low Profile Actuator



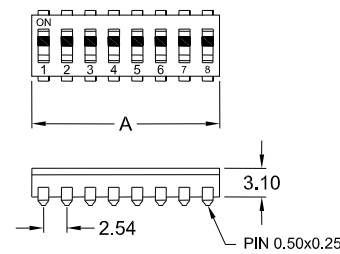
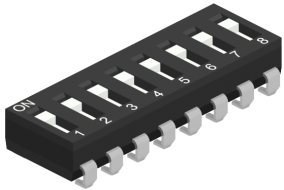
Extended Actuator



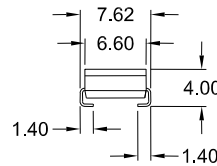
Circuit diagram



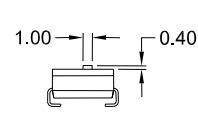
DSL J-Leg Type



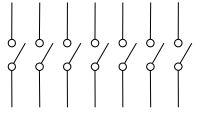
Low Profile Actuator



Extended Actuator



Circuit diagram



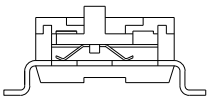
| Position | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 |
|----------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Dim. "A" | 2.50 | 5.04 | 7.58 | 10.12 | 12.66 | 15.20 | 17.74 | 20.28 | 22.82 | 25.36 | 30.43 |

DSL Series: 1 position switch is not available

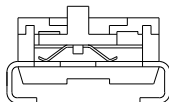
Unit: mm

Construction

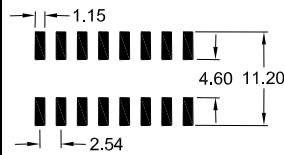
DSD



DSL



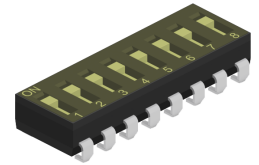
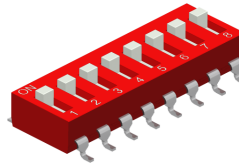
PCB SMT Layout



Options

1. Special marking and body color available

2. Tape sealed



SPECIFICATIONS

Electrical data

| | |
|---------------------------------------|--------------------------|
| Contact Rating | 25 mA, 24 V DC |
| -switching | 100 mA, 50 V DC |
| -non-switching | |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 500 V AC for 1 Minute |
| Capacitance between adjacent switches | 5 pF max. |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | -25°C to +70°C |
| Storage Temperature | -40°C to +85°C |
| Soldering Temperature | |
| -SMT reflow soldering | 250°C +0/-5°C for 10 sec. |
| Operating Force | 800 gf max. |
| Mechanical Life | 2000 operations |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- End stackable for standard 2.54mm (.100") integrated circuit pitch
- Tape sealed to withstand solder vapors and board washing
- All plastics used are UL 94V-0 grade fire retardant

- Twin contact design to ensure stable contact
- Gold plated contacts to ensure low contact resistance, and tin plated terminal to prevent contamination during soldering (*gold/tin*)

How to order

DSX – 1 xx – XX Z

Series

DSD = Gull Wing Type
DSL = J-Leg Type

Nbr of positions

see under position/dimension box above

Example:
1 Position = 01
2 Position = 02
etc.

Actuator, Sealing and Packing

L = Low Profile Actuator; Tube packing
LT = Low Profile Actuator & Tape sealed; Tube packing
LC = Low Profile Actuator; Reel packing
LD = Low Profile Actuator & Tape sealed; Reel packing
E = Extended Actuator; Tube packing

| Position | 2 | 4 | 6 | 8 | 10 |
|----------|------|------|------|-------|-------|
| Dim. "A" | 3.70 | 6.20 | 8.75 | 11.30 | 13.80 |

Unit: mm

Construction

PCB SMT Layout

Options

- 1. Special marking and body color available
- 2. Tape sealed

SPECIFICATIONS

| Electrical data | | Mechanical and Environmental data | |
|---------------------------------------|-------------------------|-----------------------------------|-----------------------------------|
| Contact Rating | 25 mA, 24 V DC | Operating Temperature | - 25°C to +70°C |
| -switching | 100 mA, 50 V DC | Storage Temperature | - 40°C to +85°C |
| -non-switching | | Soldering Temperature | |
| Contact Resistance | | -SMT reflow soldering | 250°C +0/-5°C for 10 sec. |
| -initial | 50 mΩ max. | Operating Force | 800 gf max. |
| -after life test | 100 mΩ max. | Mechanical Life | 1000 operations |
| Insulation Resistance | 500 MΩ min. at 100 V DC | Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |
| Withstanding Voltage | 300 V AC for 1 Minute | | |
| Capacitance between adjacent switches | 5 pF max. | | |

FEATURES

- End stackable for standard 1.27mm (.050") integrated circuit pitch
- Lowest profile DIP Switch, only 1.80mm above PCB
- Tape sealed to withstand solder vapors and board washing
- All plastics used are UL 94V-0 grade fire retardant
- Gold plated contacts, contact & solder area (*gold/gold*), to ensure low contact resistance

How to order

DHS – x xx – XX Z

Contact Type

1 = SPST

Nbr of positions

see under position/dimension box above

Example:
1 Position = **02**
2 Position = **04**
etc.

Actuator, Sealing and Packing

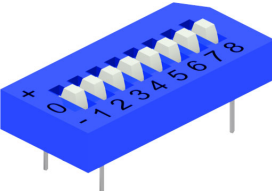
L = Low Profile Actuator; Tube packing
LT = Low Profile Actuator & Tape sealed; Tube packing
LC = Low Profile Actuator; Reel packing
LD = Low Profile Actuator & Tape sealed; Reel packing

DTD / DTA / DTS Series

SLIDE TRI-STATE "THT" & "SMT" TYPE

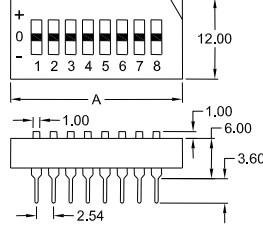
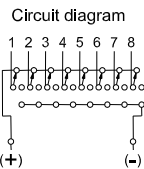


DTD

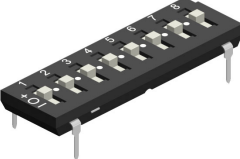


| | | | | |
|-----------------|----------|----------|-----------|----------|
| Position | 4 | 5 | 6 | 7 |
| Dim. "A" | 15.30 | 17.84 | 20.38 | 22.92 |
| Position | 8 | 9 | 10 | |
| Dim. "A" | 25.46 | 28.00 | 30.54 | |

Unit: mm

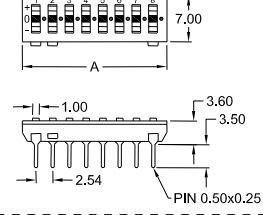
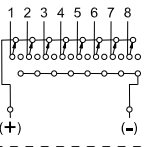



DTA




| | | | | |
|-----------------|----------|----------|----------|----------|
| Position | 2 | 3 | 4 | 5 |
| Dim. "A" | 6.88 | 9.42 | 11.96 | 14.50 |
| Position | 6 | 7 | 8 | 9 |
| Dim. "A" | 17.04 | 19.58 | 22.12 | 24.66 |

Unit: mm

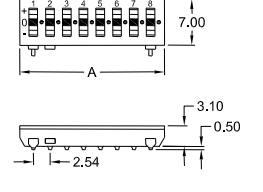
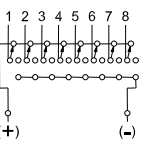



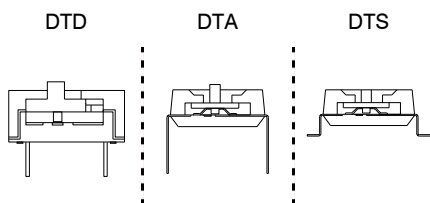
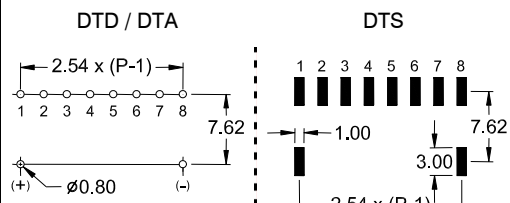
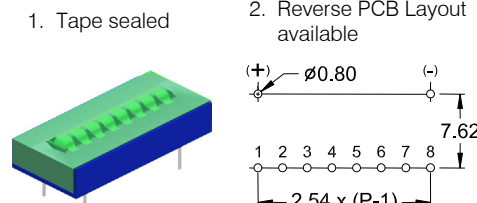
DTS



| | | | | |
|-----------------|-----------|-----------|--|--|
| Position | 10 | 12 | | |
| Dim. "A" | 27.20 | 32.28 | | |

Unit: mm

| | | |
|---|---|---|
| Construction | PCB Hole/SMT Layout | Options |
|  |  | <p>1. Tape sealed</p> <p>2. Reverse PCB Layout available</p>  |

SPECIFICATIONS

| | |
|--|--|
| <p>Electrical data</p> <p>Contact Rating</p> <ul style="list-style-type: none"> -switching 25 mA, 24 V DC -non-switching 100 mA, 50 V DC <p>Contact Resistance</p> <ul style="list-style-type: none"> -initial 50 mΩ max. -after life test 100 mΩ max. <p>Insulation Resistance 1000 MΩ min. at 100 V DC</p> <p>Withstanding Voltage 500 V AC for 1 Minute</p> <p>Capacitance between adjacent switches 5 pF max.</p> | <p>Mechanical and Environmental data</p> <p>Operating temperature -25°C to +70°C</p> <p>Storage temperature -40°C to +85°C</p> <p>Operating force 800 gf max.</p> <p>Mechanical life 2000 operations</p> <p>Vibration 10 Hz – 50 Hz – 10 Hz for 6 hours</p> |
|--|--|

FEATURES

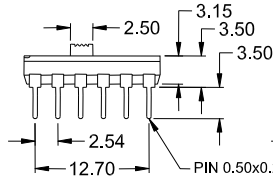
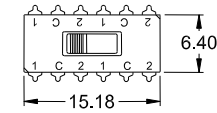
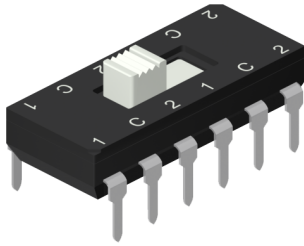
| | |
|---|---|
| <ul style="list-style-type: none"> • With three state (1-open-0) setting function, especially suitable for encoding/decoding of tri-state encoder/decoder integrated circuit to obtain more security codes than traditional two-state (1-0) operation. For instance, 9 bits with tri-state gets 19,683 (3⁹) codes, while two-state has 512 (2⁹) codes, gains 38 times in former • All plastics used are UL 94V-0 grade fire retardant | <ul style="list-style-type: none"> • Gold plated contacts to ensure low contact resistance, and tin plated terminal to prevent contamination during soldering (<i>gold/tin</i>) • Twin contacts designed to ensure stable contact • Ideal for Telecommunication, Transmitter, Remote Control and Burglar Alarm Systems which use integrated circuits with tri-state coding systems • Standard packing method Tube |
|---|---|

How to order

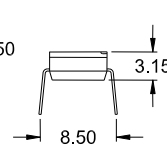
DTX – 1 xx – XX Z

| | | |
|--|--|---|
| Series | Nbr of positions | Actuator and Sealing |
| <p>DTD = Bottom Epoxy Sealed THT Type</p> <p>DTA = Low Profile THT Type</p> <p>DTS = Low Profile SMT Type</p> | <p style="text-align: center;">see under position/dimension box above</p> <p>Example: 2 Position = 02 3 Position = 03 etc.</p> | <p>E = Extended Actuator</p> <p>ET = Extended Actuator & Tape sealed</p> <p><i>Low Profile Actuator for DTA & DTS Series only!</i></p> <p>L = Low Profile Actuator</p> <p>LT = Low Profile Actuator & Tape sealed</p> |

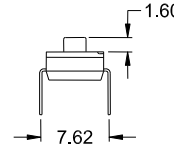
DSP-42-XX 01 Z (THT Type)



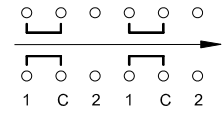
Low Profile Actuator



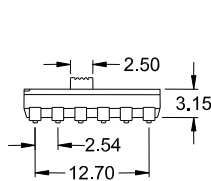
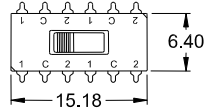
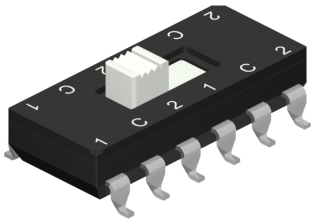
Extended Actuator



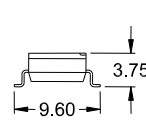
Circuit diagram



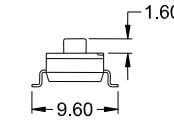
DSP-42-XX 02 Z (SMT Type)



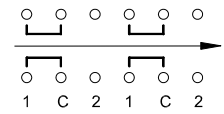
Low Profile Actuator



Extended Actuator

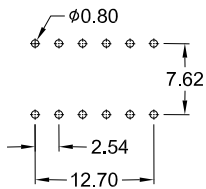


Circuit diagram

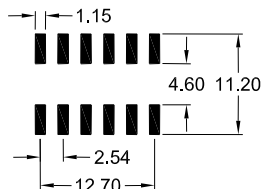


PCB Layout

DSP-42-XX 01 Z (THT Type)

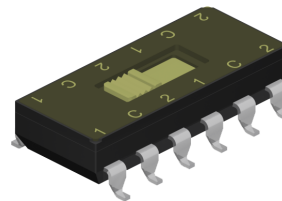


DSP-42-XX 02 Z (SMT Type)



Option

Tape sealed



Application

Ideal as Function and Band Selector Switch in Radio-Cassette, Recorder, Office Equipment, TV sets, VCR etc.

SPECIFICATIONS

Electrical data

| | |
|---------------------------------------|--------------------------|
| Contact Rating | 25 mA, 24 V DC |
| -switching | 100 mA, 50 V DC |
| -non-Switching | |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 500 V AC for 1 Minute |
| Capacitance between adjacent switches | 5 pF max. |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | - 25°C to +70°C |
| Storage Temperature | - 40°C to +85°C |
| Soldering Temperature | |
| -SMT reflow soldering | 250°C +0/-5°C for 10 sec. max. |
| -THT wave soldering | 250°C +0/-5°C for 10 sec. max. |
| Operating Force | 100 gf min / 1000 gf max. |
| Mechanical Life | 2000 operations |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Same size as an IC, 7.62mm (.300"), can be assembled by any automatic IC inserter
- Top tape sealed to withstand solder vapors and board washing
- All plastics used are UL 94V-0 grade fire retardant
- Gold plated contacts to ensure low contact resistance and tin plated terminal to prevent contamination during soldering

How to order

DSP – 42 – XX xx Z

Contact Type

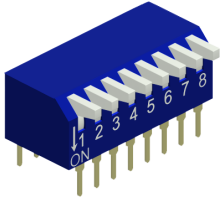
42 = 4PDT

Device Type, Actuator, DIP Space & Packing

| | |
|-------------|---|
| L01 | = THT Type; Low Profile Actuator DIP space 8.50mm; Tube packing |
| LT01 | = THT Type; Low Profile Actuator DIP space 8.50mm; Top sealed; Tube packing |
| E01 | = THT Type; Extended Actuator DIP space 7.62mm; Tube packing |
| L02 | = SMT Type; Low Profile Actuator; Tube packing |
| LT02 | = SMT Type; Low Profile Actuator; Top sealed; Tube packing |
| LC02 | = SMT Type; Low Profile Actuator; Reel packing |
| LD02 | = SMT Type; Low Profile Actuator; Top sealed; Reel packing |
| E02 | = SMT Type; Extended Actuator; Tube packing |
| EC02 | = SMT Type; Extended Actuator; Reel packing |

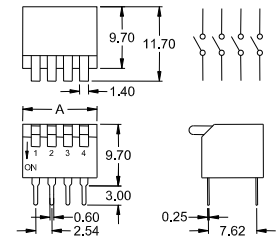


SPST Contact Type

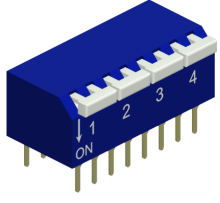


| | | | | | |
|-----------------|----------|----------|----------|-----------|-----------|
| Position | 2 | 3 | 4 | 5 | 6 |
| Dim. "A" | 6.70 | 9.20 | 11.70 | 14.20 | 16.70 |
| Position | 7 | 8 | 9 | 10 | 12 |
| Dim. "A" | 19.20 | 21.70 | 24.20 | 26.70 | 31.80 |

Unit: mm

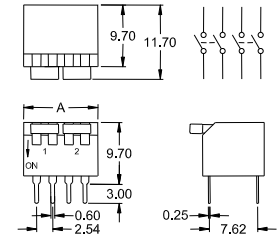


DPST Contact Type

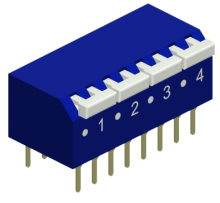


| | | | | | | |
|-----------------|----------|----------|----------|----------|----------|----------|
| Position | 1 | 2 | 3 | 4 | 5 | 6 |
| Dim. "A" | 6.70 | 11.70 | 16.70 | 21.70 | 26.70 | 31.80 |

Unit: mm

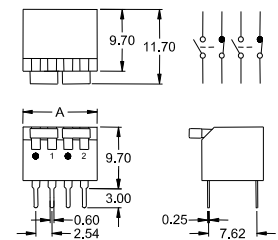


SPDT Contact Type

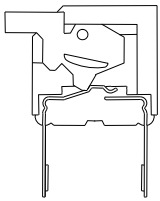


| | | | | | | |
|-----------------|----------|----------|----------|----------|----------|----------|
| Position | 1 | 2 | 3 | 4 | 5 | 6 |
| Dim. "A" | 6.70 | 11.70 | 16.70 | 21.70 | 26.70 | 31.80 |

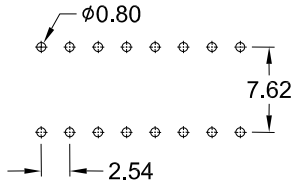
Unit: mm



Construction

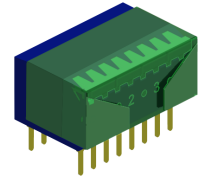
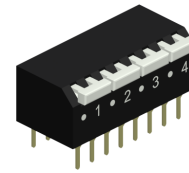
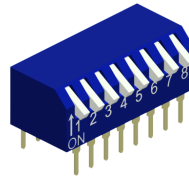


PCB Hole Layout



Options

- 1. Top side "OFF" and "ON" available
- 2. Black body color available
- 3. Tape sealed



SPECIFICATIONS

Electrical data

| | |
|---------------------------------------|--------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 500 V AC for 1 Minute |
| Capacitance between adjacent switches | 5 pF max. |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating temperature | - 25°C to +70°C |
| Storage temperature | - 40°C to +85°C |
| Operating force | 800 gf max. |
| Mechanical life | 1000 operations |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

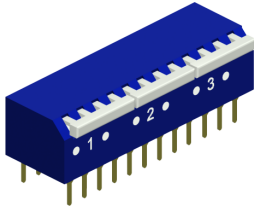
- Edge actuated (piano type) easy setting on closely racked PCB
- Tactile response is performed directly by larger contact pressure to ensure very stable contact
- All plastic are UL 94V-0 grade fire retardant
- Bottom epoxy sealed standard to ensure free of flux immersion during wave soldering
- Contact wiping on make and break
- Gold plated (*gold/gold*) or Tin plated contact to ensure low contact resistance and long operation life
- Ideal for Data Processing, Telecommunication, Remote Control and Burglar Alarm System use, where manual programming is required

How to order

DPX – x xx – XX Z

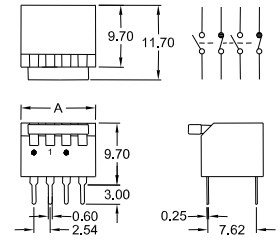
| | | | |
|---|---|---|---|
| <p>Series</p> <p>DPG = Gold plated Contacts</p> <p>DPS = Tin plated Contacts</p> | <p>Contact Type</p> <p>1 = SPST</p> <p>2 = DPST</p> <p>3 = SPDT</p> | <p>Nbr of positions</p> <p>see under position/dimension box above</p> <p>Example: 1 Position = 01 2 Position = 02 etc.</p> | <p>"ON/OFF" Position and Sealing</p> <p>A = Top side OFF</p> <p>AT = Top side OFF & Tape sealed</p> <p>B = Top side ON</p> <p>BT = Top side ON & Tape sealed</p> |
|---|---|---|---|

DPDT Contact Type

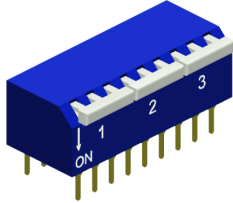


| Position | 1 | 2 | 3 |
|----------|-------|-------|-------|
| Dim. "A" | 11.70 | 21.70 | 31.80 |

Unit: mm

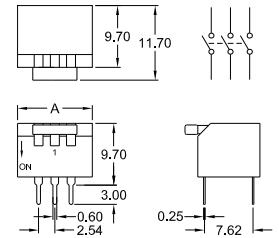


3PST Contact Type

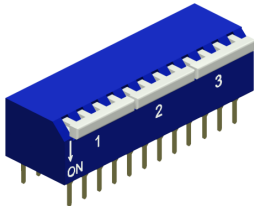


| Position | 1 | 2 | 3 | 4 |
|----------|------|-------|-------|-------|
| Dim. "A" | 9.20 | 16.70 | 24.20 | 31.80 |

Unit: mm

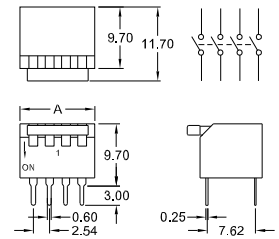


4PST Contact Type

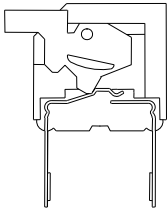


| Position | 1 | 2 | 3 |
|----------|-------|-------|-------|
| Dim. "A" | 11.70 | 21.70 | 31.80 |

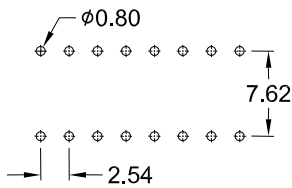
Unit: mm



Construction



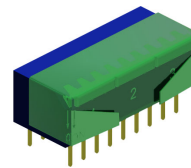
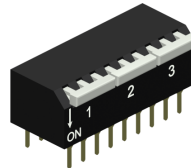
PCB Hole Layout



Options

1. Black body color available

2. Tape sealed



Application

Ideal for Data Processing, Telecommunication, Remote Control and Burglar Alarm System use, where manual programming is required.

SPECIFICATIONS

Electrical data

| | |
|---------------------------------------|--------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-Switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 500 V AC for 1 Minute |
| Capacitance between adjacent switches | 5 pF max. |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating temperature | - 25°C to +70°C |
| Storage temperature | - 40°C to +85°C |
| Operating force | 800 gf max. |
| Mechanical life | 1000 operations |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Edge actuated (piano type) easy setting on closely racked PCB
- Tactile response is performed directly by larger contact pressure to ensure very stable contact
- Bottom epoxy sealed standard to ensure free of flux immersion during wave soldering
- Contact wiping on make and break
- All plastics used are UL 94V-0 grade fire retardant
- Gold plated (*gold/gold*) or Tin plated contact to ensure low contact resistance and long operation life

How to order

DPX – x xx – XX Z

Series

DPG = Gold plated Contacts
DPS = Tin plated Contacts

Contact Type

4 = 3PST
5 = 4PST
6 = DPDT

Nbr of positions

see under position/dimension box above

Example:
1 Position = 01
2 Position = 02
etc.

Actuator and Sealing

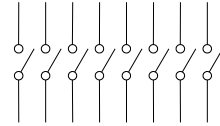
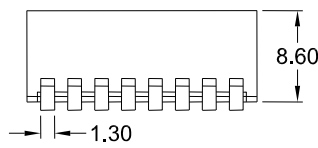
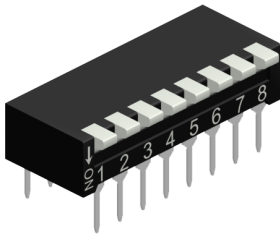
A = Top side OFF
AT = Top side OFF & Tape sealed
B = Top side ON
BT = Top side ON & Tape sealed

DPH Series

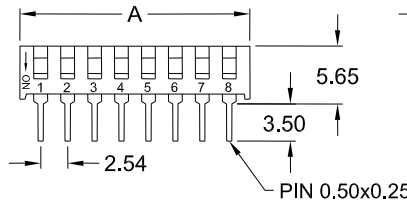
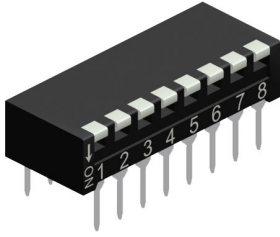
PIANO LOW PROFILE "THT" TYPE



Extended Actuator

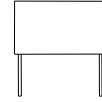
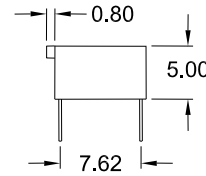


Low profile Actuator



Extended Actuator

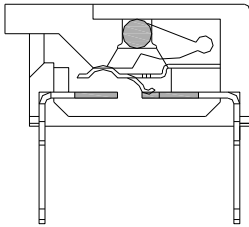
Low Profile Actuator



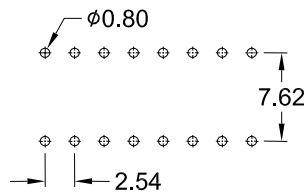
| Position | 2 | 4 | 6 | 8 | 10 |
|----------|------|-------|-------|-------|-------|
| Dim. "A" | 6.50 | 11.60 | 16.70 | 21.70 | 26.70 |

Unit: mm

Construction

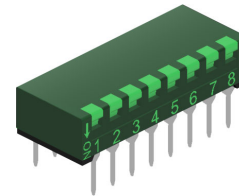


PCB Hole Layout



Option

Tape sealed



SPECIFICATIONS

Electrical data

| | |
|---------------------------------------|-------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 100 mΩ max. |
| -after life test | 200 mΩ max. |
| Insulation Resistance | 100 MΩ min. at 500 V DC |
| Withstanding Voltage | 500 V AC for 1 Minute |
| Capacitance between adjacent switches | 5 pF max. |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | - 25°C to +70°C |
| Storage Temperature | - 40°C to +85°C |
| Operating Force | 800 gf max. |
| Mechanical Life | 1000 operations |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Edge actuated (piano type) easy setting on closely racked PCB
- Tactile response is performed directly by larger contact pressure to ensure very stable contact
- All plastic are UL 94V-0 grade fire retardant
- Twin contact design to ensure stable contact
- Contact wiping on make and break
- Gold plated contacts to ensure low contact resistance, and tin plated terminal to prevent contamination during soldering (*gold/tin*)

How to order

DPH – 1 xx – XX Z

Nbr of positions

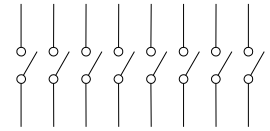
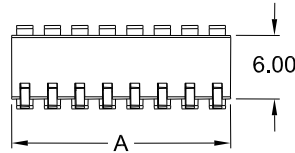
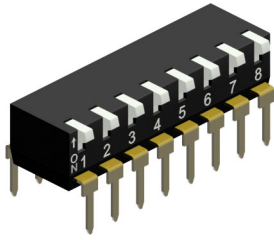
see under
position/dimension box
above

Example:
2 Position = 02
4 Position = 04
etc.

Actuator and "ON/OFF" Position

LA = Low Profile Actuator
EA = Extended Actuator
LAT = Low Profile Actuator & Tape sealed
the DPH Series is basically "Top Side OFF"

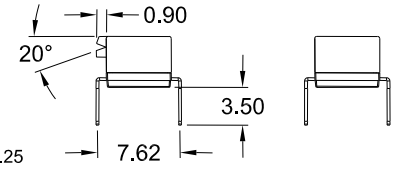
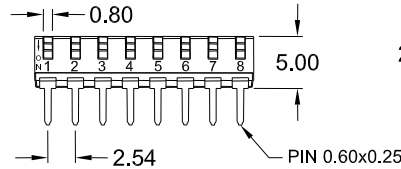
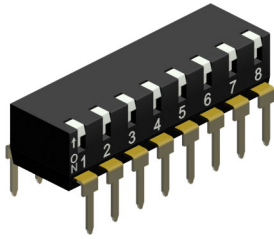
Extended Actuator



Extended Actuator

Low Profile Actuator

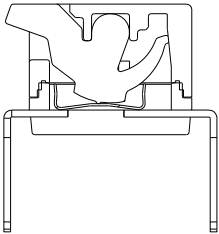
Low profile Actuator



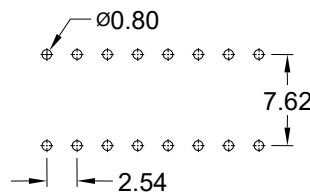
| Position | 2 | 4 | 6 | 8 | 10 |
|----------|------|-------|-------|-------|-------|
| Dim. "A" | 4.98 | 10.06 | 15.15 | 20.22 | 25.30 |

Unit: mm

Construction



PCB Hole Layout



Precautions in Handling

Do not wash the switch!
Washable Type not available.

SPECIFICATIONS

Electrical data

| | |
|---------------------------------------|-------------------------|
| Contact Rating | 25 mA, 24 V DC |
| -switching | 100 mA, 50 V DC |
| -non-switching | |
| Contact Resistance | |
| -initial | 100 mΩ max. |
| -after life test | 200 mΩ max. |
| Insulation Resistance | 100 MΩ min. at 500 V DC |
| Withstanding Voltage | 500 V AC for 1 Minute |
| Capacitance between adjacent switches | 5 pF max. |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | -20°C to +85°C |
| Storage Temperature | -40°C to +85°C |
| Operating Force | 800 gf max. |
| Mechanical Life | 2000 operations |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- End stackable for standard 2.54mm (.100") integrated circuit pitch
- Twin contact design to ensure stable contact
- All plastics used are UL 94V-0 grade fire retardant
- Gold plated contacts, contact & solder area (*gold/gold*), to ensure low contact resistance

How to order

DPI – 1 xx – XX 1 0 Z

Nbr of positions

see under position/dimension box above

Example:
2 Position = 02
4 Position = 04
etc.

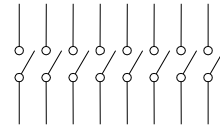
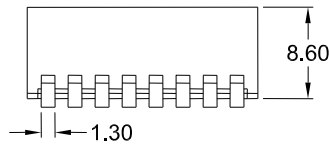
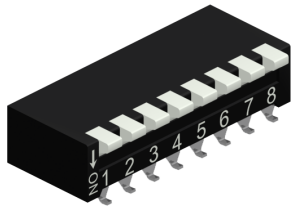
Actuator and "ON/OFF" Position

- EA** = Extended Actuator; Top side OFF
- EB** = Extended Actuator; Top side ON
- LA** = Low profile Actuator; Top side OFF
- LB** = Low profile Actuator; Top side ON

Packing

0 = Tube packing

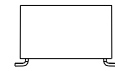
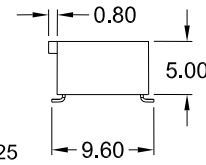
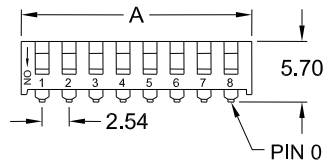
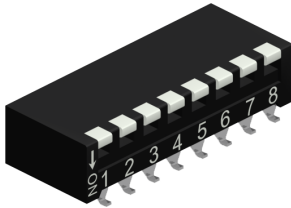
Extended Actuator



Extended Actuator

Low Profile Actuator

Low Profile Actuator



| Position | 2 | 4 | 6 | 8 | 10 |
|----------|------|-------|-------|-------|-------|
| Dim. "A" | 6.50 | 11.60 | 16.70 | 21.70 | 26.70 |

Unit: mm

| Construction | PCB SMT Layout | Option |
|--------------|----------------|--------------------|
| | | <p>Tape sealed</p> |

SPECIFICATIONS

Electrical data

| | |
|---------------------------------------|--------------------------|
| Contact Rating | |
| -switching | 25 mA, 24 V DC |
| -non-Switching | 100 mA, 50 V DC |
| Contact Resistance | |
| -initial | 50 mΩ max. |
| -after life test | 100 mΩ max. |
| Insulation Resistance | 1000 MΩ min. at 100 V DC |
| Withstanding Voltage | 500 V AC for 1 Minute |
| Capacitance between adjacent switches | 5 pF max. |

Mechanical and Environmental data

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | - 25°C to +70°C |
| Storage Temperature | - 40°C to +85°C |
| Soldering Temperature | |
| -SMT reflow soldering | 250°C +0/-5°C for 10 sec. |
| Operating Force | 800 gf max. |
| Mechanical Life | 1000 operations |
| Vibration | 10 Hz – 50 Hz – 10 Hz for 6 hours |

FEATURES

- Edge actuated (piano type) easy setting on closely racked PCB
- Twin contact design to ensure stable contact
- Tactile response is performed directly by larger contact pressure to ensure very stable contact
- Contact wiping on make and break
- All plastic are UL 94V-0 grade fire retardant
- Gold plated contacts to ensure low contact resistance, and tin plated terminal to prevent contamination during soldering (*gold/tin*)

How to order

DPA – 1 xx – XX Xx Z

| Nbr of positions | Actuator and "ON/OFF" Position | Packing and Sealing |
|--|--|---|
| <p>see under position/dimension box above</p> <p>Example: 2 Position = 02 4 Position = 04 etc.</p> | <p>EA = Extended Actuator; Top side OFF</p> <hr/> <p>LA = Low Profile Actuator; Top side OFF</p> | <p>00 = Tube packing 10 = Reel packing</p> <hr/> <p>00 = Tube packing 10 = Reel packing T0 = Tube packing & Tape sealed T1 = Reel packing & Tape sealed</p> |

Extended Actuator

Extended Actuator

Low profile Actuator

Low Profile Actuator

| Position | 2 | 4 | 6 | 8 | 10 |
|----------|------|-------|-------|-------|-------|
| Dim. "A" | 4.98 | 10.06 | 15.15 | 20.22 | 25.30 |

Unit: mm

| Construction | PCB SMT Layout | Precautions in Handling |
|--------------|----------------|--|
| | | <p>Do not wash the switch!</p> <p>Washable Type not available.</p> |

SPECIFICATIONS

| Electrical data | Mechanical and Environmental data |
|---|---|
| <p>Contact Rating</p> <ul style="list-style-type: none"> -switching 25 mA, 24 V DC -non-switching 100 mA, 50 V DC <p>Contact Resistance</p> <ul style="list-style-type: none"> -initial 100 mΩ max. -after life test 200 mΩ max. <p>Insulation Resistance 100 MΩ min. at 500 V DC</p> <p>Withstanding Voltage 500 V AC for 1 Minute</p> <p>Capacitance between adjacent switches 5 pF max.</p> | <p>Operating Temperature - 20°C to +85°C</p> <p>Storage Temperature - 40°C to +85°C</p> <p>Soldering Temperature</p> <ul style="list-style-type: none"> -SMT reflow soldering 250°C +0/-5°C for 10 sec. <p>Operating Force 800 gf max.</p> <p>Mechanical Life 2000 operations</p> <p>Vibration 10 Hz – 50 Hz – 10 Hz for 6 hours</p> |

FEATURES

| | |
|--|---|
| <ul style="list-style-type: none"> End stackable for standard 2.54mm (.100") integrated circuit pitch Twin contact design to ensure stable contact | <ul style="list-style-type: none"> All plastics used are UL 94V-0 grade fire retardant Gold plated contacts, contact & solder area (<i>gold/gold</i>), to ensure low contact resistance |
|--|---|

How to order

DPM – 1 xx – XX 1 xxZ

| | | |
|---|--|---|
| <p style="text-align: center;">Nbr of positions</p> <p style="text-align: center;">see under position/dimension box above</p> <p>Example: 2 Position = 02 4 Position = 04 etc.</p> | <p style="text-align: center;">Actuator and "ON/OFF" Position</p> <p>EA = Extended Actuator; Top side OFF</p> <p>EB = Extended Actuator; Top side ON</p> <hr/> <p>LA = Low profile Actuator; Top side OFF</p> <p>LB = Low profile Actuator; Top side ON</p> | <p style="text-align: center;">Packing</p> <p>10 = Tube packing</p> <p>11 = Reel packing</p> <hr/> <p>10 = Tube packing</p> <p>11 = Reel packing</p> <p>T0 = Tube packing & Tape sealed</p> <p>T1 = Reel packing & Tape sealed</p> |
|---|--|---|