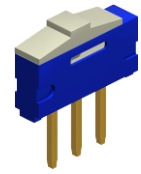
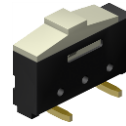
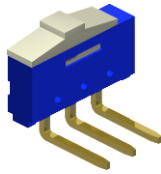
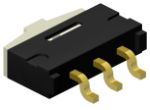


DIP & ROTARY SWITCH

Type	click on page numbers	Page
Changeover Slide Switch "DSS" Series	2.54mm Pin to Pin THT & SMT	2
Rotary Switch "DRD" Series	3:3 & 1:4 Pin-out SMT 2.54mm Pin to Pin	3
	3:3 Pin-out straight THT 2.54 x 7.62mm footprint	4
	1:4 Pin-out straight THT 2.54 x 7.62mm footprint	5
	3:3 Pin-out right angle THT 2.54 x 2.54mm footprint	6
	1:4 Pin-out right angle THT 2.54 x 2.54mm footprint	7
	3:3 Pin-out right angle THT 2.54 x 5.08mm footprint	8
	1:4 Pin-out right angle THT 2.54 x 5.08mm footprint	9
Slide Switch "DDG" & "DDS" Series	Standard Profile 2.54mm DIP Type THT	10 & 11
Slide Switch "DAH" Series	Auto Inserting 2.54mm DIP Type THT	12
Slide Switch "DAM" Series	End Stackable 2.54mm DIP Type THT	13
Slide Switch "DSD" & "DSL" Series	End Stackable 2.54mm DIP Type SMT	14
Slide Switch "DHS" Series	HALF PITCH (1.27mm) SMT	15
Slide TRI-STATE Switch "DTD" / "DTA" & "DTS" Series	Standard Profile 2.54mm DIP Type THT & SMT	16
Selector Slide Switch "DSP" Series	Standard 2.54mm DIP Type THT & SMT	17
Piano Switch "DPG" & "DPS" Series	Standard Profile 2.54mm DIP Type THT	18 & 19
Piano Switch "DPH" Series	Low Profile 2.54mm DIP Type THT	20
Piano Switch "DPI" Series	Low Profile, End Stackable 2.54mm DIP Type THT	21
Piano Switch "DPA" Series	Low Profile 2.54mm DIP Type SMT	22
Piano Switch "DPM" Series	Low Profile, End Stackable 2.54mm DIP Type SMT	23

Part-Number	Page	Part-Number	Page	Part-Number	Page	Part-Number	Page
DAH-1xx-E01Z	12	DDS-5xx-SRAZ	11	DPM-1xx-EB11Z	23	DRD-4xx-CRZ	7
DAH-1xx-EZ	12	DDS-5xx-STZ	11	DPM-1xx-LA10Z	23	DRD-4xx-CSZ	5
DAH-1xx-L01Z	12	DDS-5xx-SZ	11	DPM-1xx-LA11Z	23	DRD-4xx-RFZ	9
DAH-1xx-LT01Z	12	DDS-6xx-STZ	10	DPM-1xx-LAT0Z	23	DRD-4xx-RMZ	3
DAH-1xx-LTZ	12	DDS-6xx-SZ	10	DPM-1xx-LAT1Z	23	DRD-4xx-RRZ	7
DAH-1xx-LZ	12	DHS-1xx-LCZ	15	DPM-1xx-LB10Z	23	DRD-4xx-RSZ	5
DAM-1xx-E01Z	13	DHS-1xx-LDZ	15	DPM-1xx-LB11Z	23	DRD-5xx-CFZ	9
DAM-1xx-EZ	13	DHS-1xx-LTZ	15	DPM-1xx-LBT0Z	23	DRD-5xx-CRZ	7
DAM-1xx-L01Z	13	DHS-1xx-LZ	15	DPM-1xx-LBT1Z	23	DRD-5xx-CSZ	5
DAM-1xx-LT01Z	13	DPA-1xx-EA00Z	22	DPS-1xx-ATZ	18	DRD-5xx-RFZ	9
DAM-1xx-LTZ	13	DPA-1xx-EA10Z	22	DPS-1xx-AZ	18	DRD-5xx-RRZ	7
DAM-1xx-LZ	13	DPA-1xx-LA00Z	22	DPS-1xx-BTZ	18	DRD-5xx-RSZ	5
DDG-1xx-LTZ	11	DPA-1xx-LA10Z	22	DPS-1xx-BZ	18	DSD-1xx-EZ	14
DDG-1xx-LZ	11	DPA-1xx-LAT0Z	22	DPS-2xx-ATZ	18	DSD-1xx-LCZ	14
DDG-1xx-SRAZ	11	DPA-1xx-LAT1Z	22	DPS-2xx-AZ	18	DSD-1xx-LDZ	14
DDG-1xx-STZ	11	DPG-1xx-ATZ	18	DPS-2xx-BTZ	18	DSD-1xx-LTZ	14
DDG-1xx-SZ	11	DPG-1xx-AZ	18	DPS-2xx-BZ	18	DSD-1xx-LZ	14
DDG-2xx-STZ	10	DPG-1xx-BTZ	18	DPS-3xx-ATZ	18	DSL-1xx-EZ	14
DDG-2xx-SZ	10	DPG-1xx-BZ	18	DPS-3xx-AZ	18	DSL-1xx-LCZ	14
DDG-3xx-STZ	10	DPG-2xx-ATZ	18	DPS-3xx-BTZ	18	DSL-1xx-LDZ	14
DDG-3xx-SZ	10	DPG-2xx-AZ	18	DPS-3xx-BZ	18	DSL-1xx-LTZ	14
DDG-4xx-LTZ	11	DPG-2xx-BTZ	18	DPS-4xx-ATZ	19	DSL-1xx-LZ	14
DDG-4xx-LZ	11	DPG-2xx-BZ	18	DPS-4xx-AZ	19	DSP-42-E01Z	17
DDG-4xx-SRAZ	11	DPG-3xx-ATZ	18	DPS-4xx-BTZ	19	DSP-42-E02Z	17
DDG-4xx-STZ	11	DPG-3xx-AZ	18	DPS-5xx-ATZ	19	DSP-42-EC02Z	17
DDG-4xx-SZ	11	DPG-3xx-BTZ	18	DPS-5xx-AZ	19	DSP-42-L01Z	17
DDG-5xx-LTZ	11	DPG-3xx-BZ	18	DPS-5xx-BTZ	19	DSP-42-L02Z	17
DDG-5xx-LZ	11	DPG-4xx-ATZ	19	DPS-5xx-BZ	19	DSP-42-LC02Z	17
DDG-5xx-SRAZ	11	DPG-4xx-AZ	19	DPS-6xx-ATZ	19	DSP-42-LD02Z	17
DDG-5xx-STZ	11	DPG-4xx-BTZ	19	DPS-6xx-AZ	19	DSP-42-LT01Z	17
DDG-5xx-SZ	11	DPG-4xx-BZ	19	DPS-6xx-BZ	19	DSP-42-LT02Z	17
DDG-6xx-STZ	10	DPG-5xx-ATZ	19	DRD-1xx-CFZ	8	DSS-1010Z	2
DDG-6xx-SZ	10	DPG-5xx-AZ	19	DRD-1xx-CMZ	3	DSS-2010Z	2
DDS-1xx-LTZ	11	DPG-5xx-BTZ	19	DRD-1xx-CRZ	6	DSS-3020Z	2
DDS-1xx-LZ	11	DPG-5xx-BZ	19	DRD-1xx-CSZ	4	DSS-4020KDZ	2
DDS-1xx-SRAZ	11	DPG-6xx-ATZ	19	DRD-1xx-RFZ	8	DSS-4020Z	2
DDS-1xx-STZ	11	DPG-6xx-AZ	19	DRD-1xx-RMZ	3	DTA-1xx-ETZ	16
DDS-1xx-SZ	11	DPG-6xx-BTZ	19	DRD-1xx-RSZ	4	DTA-1xx-EZ	16
DDS-2xx-STZ	10	DPH-1xx-EAZ	20	DRD-2xx-CFZ	8	DTA-1xx-LTZ	16
DDS-2xx-SZ	10	DPH-1xx-LATZ	20	DRD-2xx-CMZ	3	DTA-1xx-LZ	16
DDS-3xx-STZ	10	DPH-1xx-LAZ	20	DRD-2xx-CSZ	4	DTD-1xx-ETZ	16
DDS-3xx-SZ	10	DPI-1xx-EA10Z	21	DRD-2xx-RFZ	8	DTD-1xx-EZ	16
DDS-4xx-LTZ	11	DPI-1xx-EB10Z	21	DRD-2xx-RRZ	6	DTS-1xx-ETZ	16
DDS-4xx-LZ	11	DPI-1xx-LA10Z	21	DRD-2xx-RSZ	4	DTS-1xx-EZ	16
DDS-4xx-SRAZ	11	DPI-1xx-LB10Z	21	DRD-4xx-CFZ	9	DTS-1xx-LTZ	16
DDS-4xx-STZ	11	DPM-1xx-EA10Z	23	DRD-4xx-CMZ	3		
DDS-4xx-SZ	11	DPM-1xx-EA11Z	23				
DDS-5xx-LTZ	11	DPM-1xx-EB10Z	23				
DDS-5xx-LZ	11						

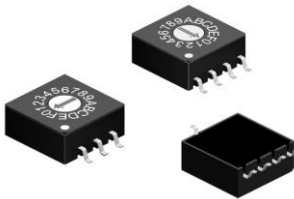
Changeover Slide Switch



SMT & THT Page 2

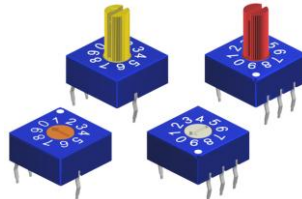
Rotary Switch

horizontal SMT



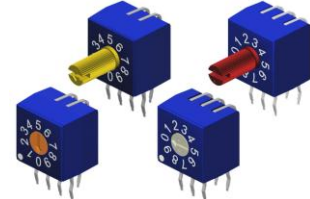
Page 3

horizontal THT



Page 4 & 5

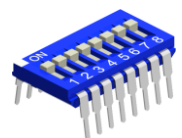
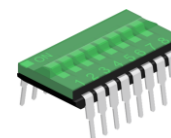
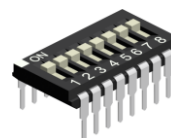
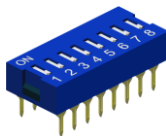
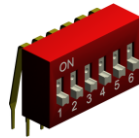
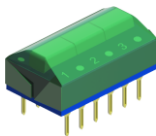
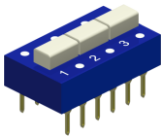
vertical THT



Page 6 to 9

Slide Switch

DIP Package "THT"



DDG / DDS Series Page 10 & 11

DAH / DAM Series Page 12 & 13

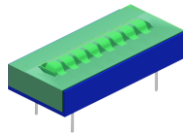
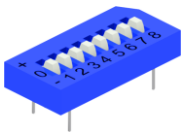
DIP Package "SMT"



DSD / DSL Series Page 14

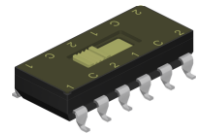
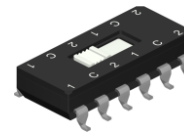
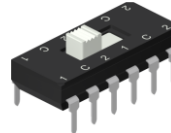
DHS Series Page 15

TRI-State "THT" & "SMT"



DTD / DTA / DTS Series Page 16

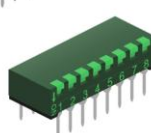
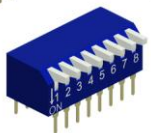
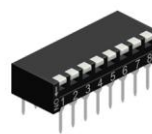
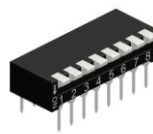
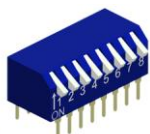
Selector "THT" & "SMT"



DSP Series Page 17

Piano Switch

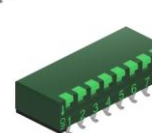
DIP Package "THT"



DPG / DPS Series Page 18 & 19

DPH / DPI Series Page 20 & 21

DIP Package "SMT"



DPA / DPM Series Page 22 & 23

<p>DSS-10xx</p>			<p>Circuit diagram</p>	<p>Switch position</p> <p>(B) (A) PT PT C-1 C-2</p>	<p>PCB Hole Layout</p>
<p>DSS-20xx</p>			<p>Circuit diagram</p>	<p>Switch position</p> <p>(B) (A) PT PT C-1 C-2</p>	<p>PCB Hole Layout</p>
<p>DSS-30xx</p>			<p>Circuit diagram</p>	<p>Switch position</p> <p>(B) (A) PT PT C-1 C-2</p>	<p>PCB SMT Layout</p>
<p>DSS-40xx</p>			<p>Circuit diagram</p>	<p>Switch position</p> <p>(B) (A) PT PT C-1 C-2</p>	<p>PCB SMT Layout</p>

SPECIFICATIONS

Electrical data

Contact Rating	
-switching	0.2A, 24V DC / 0.5A, 12V DC
-minimum	1 mA at 10mV
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.

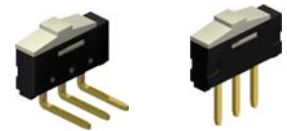
Mechanical and Environmental data

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

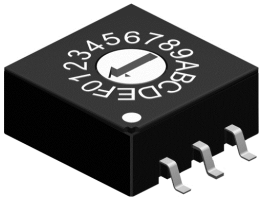


How to order

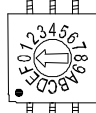
DSS – xx xx XX Z

Type	Execution	Packing option
10 = Straight THT	10 = Standard version (blue) Material: Nylon 66	blank = Tube packing
20 = Right angle THT	20 = Tropical version (black) Material: Nylon 9T	KD = Reel packing for DSP-40xx series only
<i>Tropical version only:</i>		
30 = Vertical SMT		
40 = Horizontal SMT		

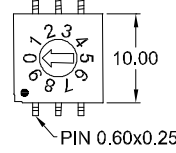
DRD-1 xx-XM Z (3:3 pin-out)



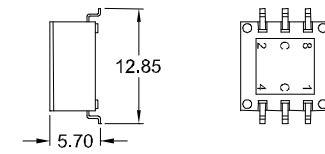
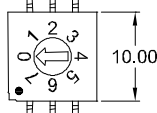
16 POSITIONS



10 POSITIONS



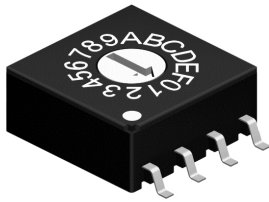
8 POSITIONS



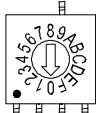
Pin No.	POSITION															
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

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

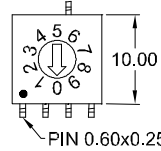
DRD-4 xx-XM Z (1:4 pin-out)



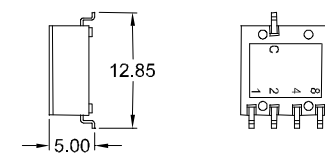
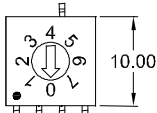
16 POSITIONS



10 POSITIONS



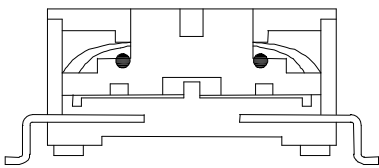
8 POSITIONS



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

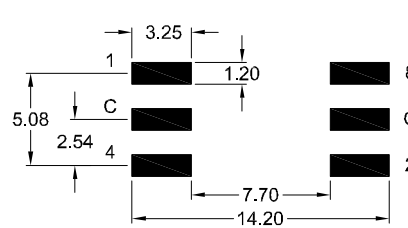
● Real Code Rotor color: Yellow
○ Complementary Code Rotor color: Orange

Construction

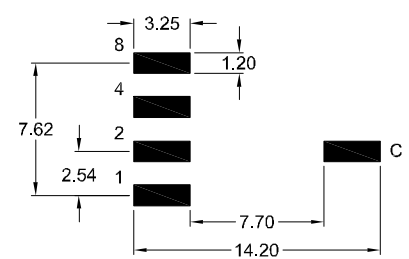


PCB SMT Layout

3:3 PIN-OUT



1:4 PIN-OUT



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

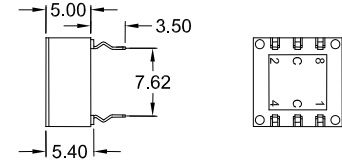
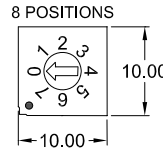
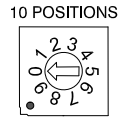
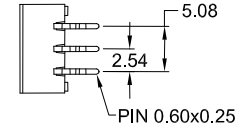
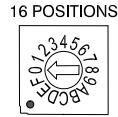
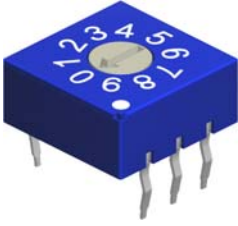
Rotor	
1	= Flat type (3:3 pin-out)
4	= Flat type (1:4 pin-out)

Nbr of positions	
08; 10; 16	

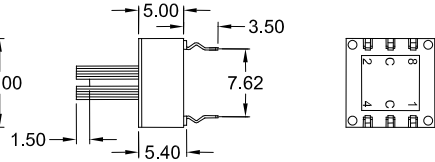
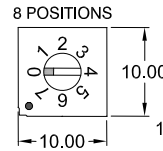
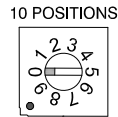
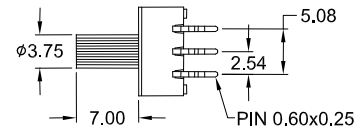
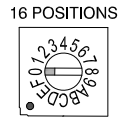
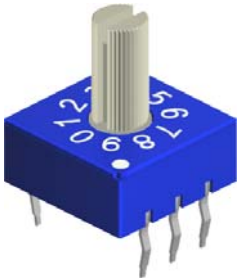
Code	
RM	= Real
CM	= Complementary



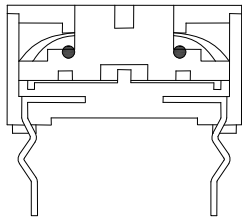
DRD-1 xx-XS Z (Flat Type)



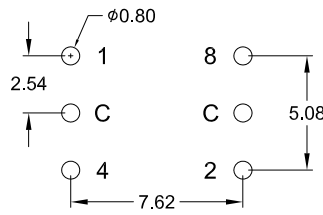
DRD-2 xx-XS Z (Shaft Type)



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
- 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

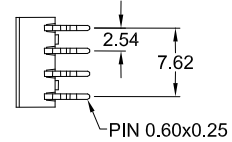
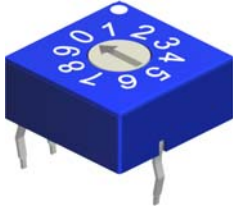
DRD – x xx – XX Z

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

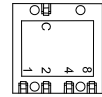
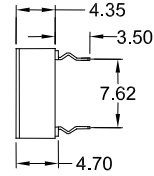
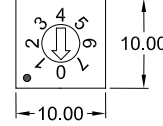
DRD-4 xx-XS Z (Flat Type)



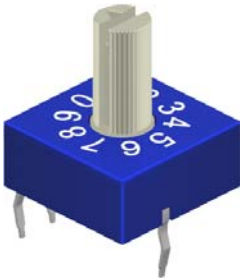
10 POSITIONS



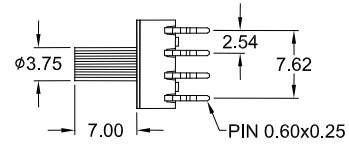
8 POSITIONS



DRD-5 xx-XS Z (Shaft Type)



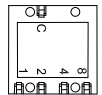
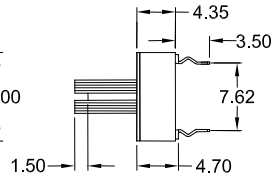
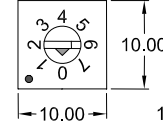
16 POSITIONS



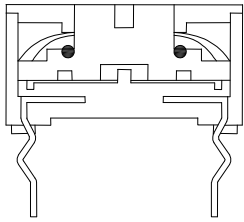
10 POSITIONS



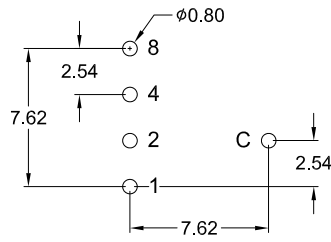
8 POSITIONS



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
- 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

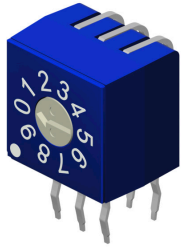
DRD - x xx - XX Z

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

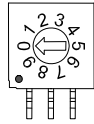
DRD-1 xx-XR Z (Flat Type)



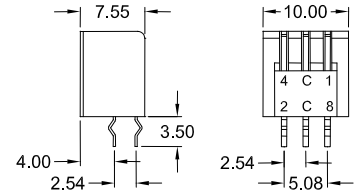
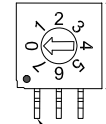
16 POSITIONS



10 POSITIONS

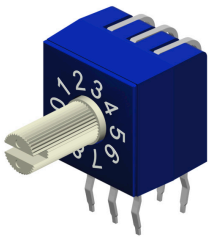


8 POSITIONS



PIN 0.60x0.25

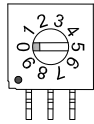
DRD-2 xx-XR Z (Shaft Type)



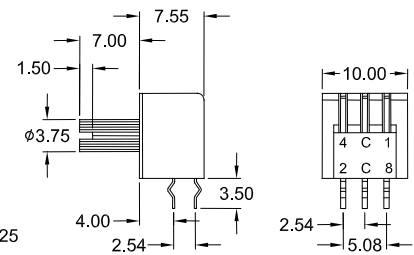
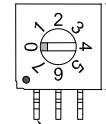
16 POSITIONS



10 POSITIONS

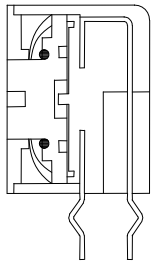


8 POSITIONS

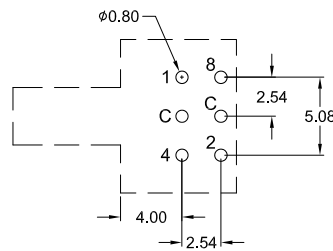


PIN 0.60x0.25

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

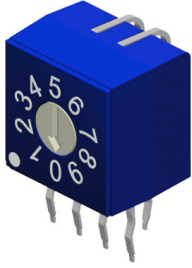
DRD - x xx - XX Z

Rotor
1 = Flat type
2 = Shaft type

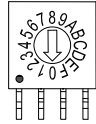
Nbr of positions
08; 10; 16

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

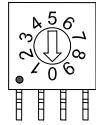
DRD-4 xx-XR Z (Flat Type)



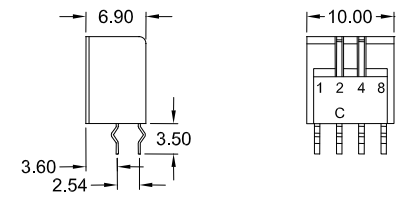
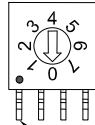
16 POSITIONS



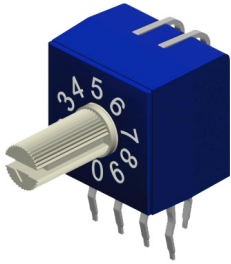
10 POSITIONS



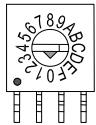
8 POSITIONS



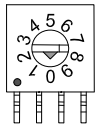
DRD-5 xx-XR Z (Shaft Type)



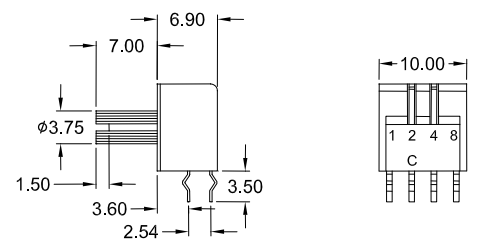
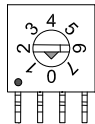
16 POSITIONS



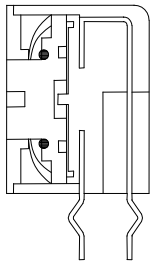
10 POSITIONS



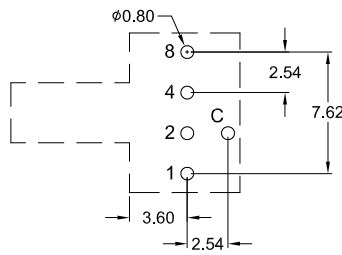
8 POSITIONS



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

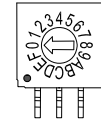
Nbr of positions
08; 10; 16

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

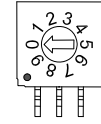
DRD-1 xx-XF Z (Flat Type)



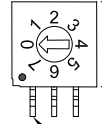
16 POSITIONS



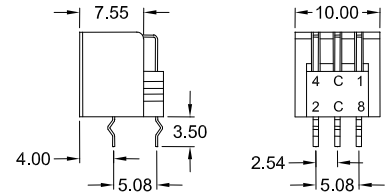
10 POSITIONS



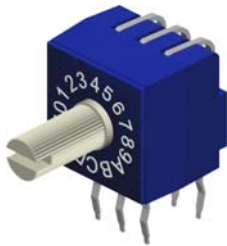
8 POSITIONS



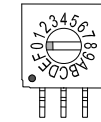
10.00
PIN 0.60x0.25



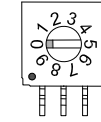
DRD-2 xx-XF Z (Shaft Type)



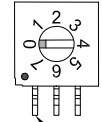
16 POSITIONS



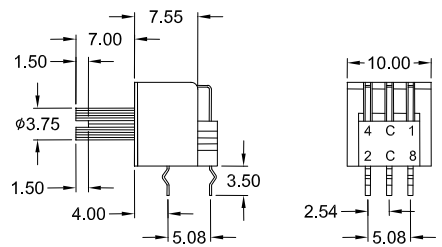
10 POSITIONS



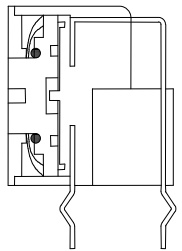
8 POSITIONS



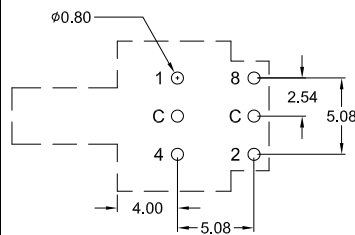
10.00
PIN 0.60x0.25



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
- 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

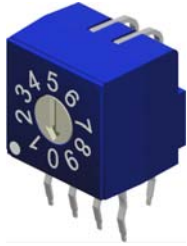
DRD – x xx – XX Z

Rotor	
1	= Flat type
2	= Shaft type

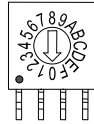
Nbr of positions	
08; 10; 16	

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

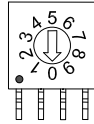
DRD-4 xx-XF Z (Flat Type)



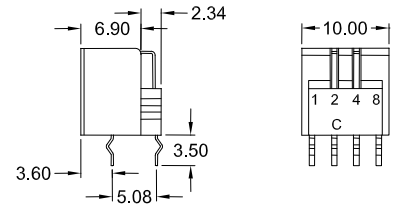
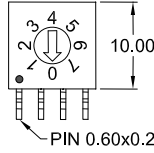
16 POSITIONS



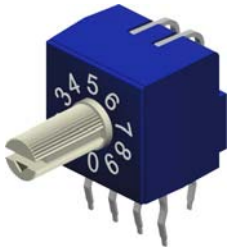
10 POSITIONS



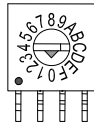
8 POSITIONS



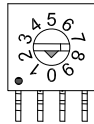
DRD-5 xx-XF Z (Shaft Type)



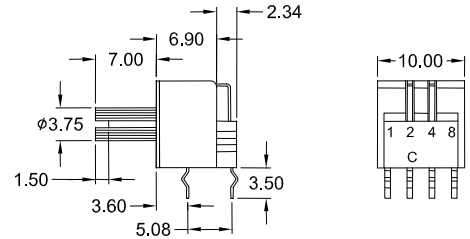
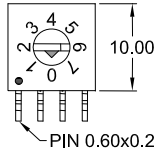
16 POSITIONS



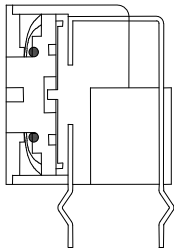
10 POSITIONS



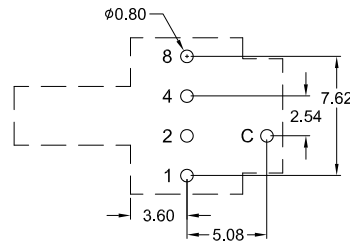
8 POSITIONS



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
- 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	

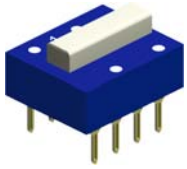
Code	
RF	= Real 5.08mm row space
CF	= Complementary 5.08mm row space

DDG / DDS Series

SLIDE STANDARD PROFILE "THT" TYPE

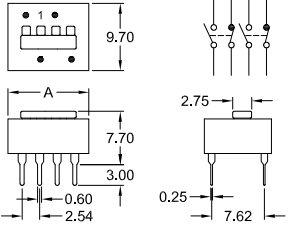


DPDT Contact Form Standard Actuator only!

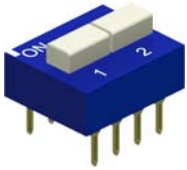


Position	1	2	3
Dim. "A"	11.70	21.70	31.80

Unit: mm

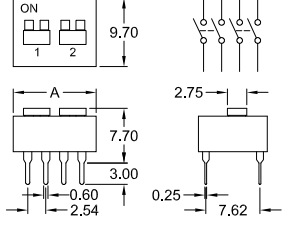


DPST Contact Form Standard Actuator only!

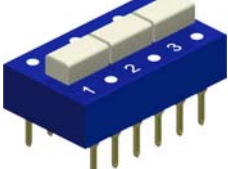


Position	1	2	3	4	5	6
Dim. "A"	6.70	11.70	16.70	21.70	26.70	31.80

Unit: mm

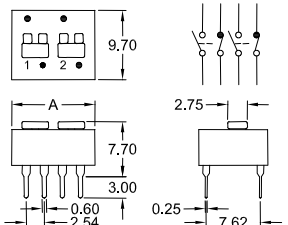


SPDT Contact Form Standard Actuator only!

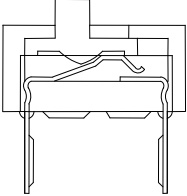


Position	1	2	3	4	5	6
Dim. "A"	6.70	11.70	16.70	21.70	26.70	31.80

Unit: mm

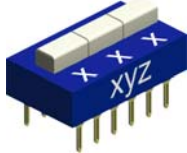


Construction



Options

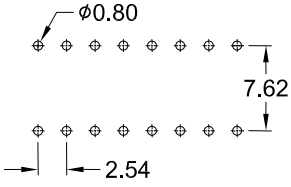
1. Special top and/or side marking available



2. Tape sealed



PCB Hole Layout



SPECIFICATIONS

Electrical data

Contact Rating	25 mA, 24 V DC
-switching	100 mA, 50 V DC
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	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
- Bottom epoxy sealed standard
- Contact wiping on make and break
- Gold plated (*gold/gold*) or silver plated (*silver/tin*) 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

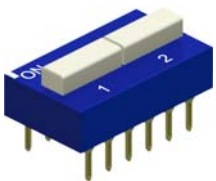
Series	Contact Form	Nbr of positions	Actuator and Sealing
DDG = Gold plated Contacts DDS = Silver plated Contacts	2 = DPST 3 = SPDT 6 = DPDT	see under position/dimension box above Example: 1 Position = 01 2 Position = 02 etc.	S = Standard Actuator ST = Standard Actuator & Tape sealed

DDG / DDS Series

SLIDE STANDARD PROFILE "THT" TYPE

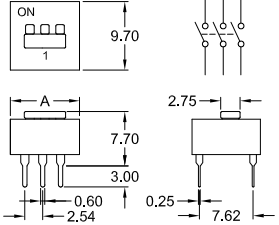


3PST Contact Form Standard Actuator only!

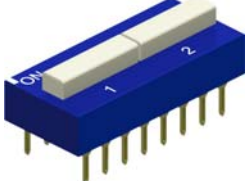


Position	1	2	3	4
Dim. "A"	9.20	16.70	24.20	31.80

Unit: mm

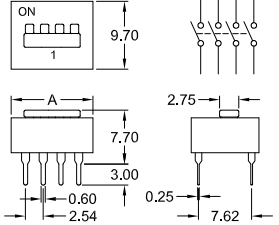


4PST Contact Form Standard Actuator only!




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

Unit: mm

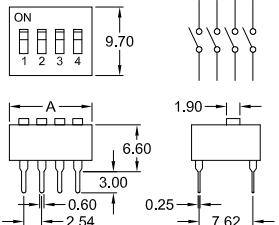


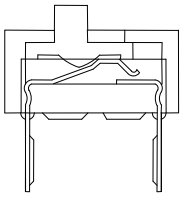


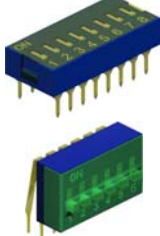
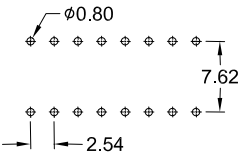
SPST Contact Form Standard & Low Actuator possible.



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



Construction	Options	PCB Hole Layout
	<p>1. Right Angle for SPST Contact Form; 1 to 15 positions</p>  <p>2. Low profile actuator</p>  <p>3. 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
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
- Bottom epoxy sealed standard
- Contact wiping on make and break
- Gold plated (*gold/gold*) or silver plated (*silver/tin*) 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 – XXX Z

Series	Contact Form	Nbr of positions	Actuator and Sealing
<p>DDG = Gold plated Contacts</p> <p>DDS = Silver plated Contacts</p>	<p>1 = SPST</p> <p>4 = 3PST</p> <p>5 = 4PST</p>	<p>see under position/dimension box above</p> <p>Example: 1 Position = 01 2 Position = 02 etc.</p>	<p>S = Standard Actuator</p> <p>L = Low Profile Actuator</p> <p>LT = Low Profile Actuator & Tape sealed</p> <p>ST = Standard Actuator & Tape sealed</p> <p>SRA = Right Angle Type</p>

Extended Actuator

Dimensions: 6.40, 1.00, 0.40, 8.50, 7.62

DIP Space

Low Profile Actuator

Dimensions: 6.40, 3.40, 4.30, 8.50, 7.62

DIP Space

Circuit diagram

PCB Hole Layout

Dimensions: $\phi 0.80$, 7.62, 2.54

Position	2	3	4	5	6	7	8	10	12
Dim. "A"	6.68	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	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
Contact Resistance		Operating force	800 gf max.
-initial	50 mΩ max.	Mechanical life	2000 operations
-after life test	100 mΩ max.	Vibration	10 Hz – 50 Hz – 10 Hz for 6 hours
Insulation Resistance	1000 MΩ min. at 100 V DC		
Withstanding Voltage	500 V AC for 1 Minute		
Capacitance between adjacent switches	5 pF max.		

FEATURES

- 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
- 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

DAH – 1 xx – XXxx Z

<h4>Contact Form</h4> <p>1 = SPST</p>	<h4>Nbr of positions</h4> <p style="text-align: center;">see under position/dimension box above</p> <p>Example: 2 Position = 02 3 Position = 03 etc.</p>	<h4>Actuator, Sealing and DIP Space</h4> <p>L = Low profile Actuator and DIP space 8.50mm</p> <p>LT = Low profile Actuator & Tape sealed & DIP space 8.50mm</p> <p>L01 = Low profile Actuator and DIP space 7.62mm</p> <p>LT01 = Low profile Actuator & Tape sealed & DIP space 7.62mm</p> <p>E = Extended Actuator and DIP space 7.62mm</p> <p>E01 = Extended Actuator and DIP space 8.50mm</p>
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all in "ON" position

Extended Actuator

Circuit diagram

Low Profile Actuator

PCB Hole Layout

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	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		Operating force	800 gf max.
Contact Resistance	50 mΩ max.	Mechanical life	2000 operations
-initial	100 mΩ max.	Vibration	10 Hz – 50 Hz – 10 Hz for 6 hours
-after life test	1000 MΩ min. at 100 V DC		
Insulation Resistance	500 V AC for 1 Minute		
Withstanding Voltage	5 pF max.		
Capacitance between adjacent switches			

FEATURES

- End stackable for standard 2.54mm (.100") integrated circuit pitch
- All plastics used are UL 94V-0 grade fire retardant
- Same size as an IC, 7.62mm (.300"), can be assembled by any automatic IC Inserter
- Twin contact design to ensure stable contact
- Tape sealed to withstand solder vapors and board washing
- 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 Form	Nbr of positions	Actuator, Sealing and DIP Space																		
1 = SPST	see under position/dimension box above Example: 1 Position = 01 2 Position = 02 etc.	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">L</td> <td>=</td> <td>Low profile Actuator and DIP space 8.50mm</td> </tr> <tr> <td>LT</td> <td>=</td> <td>Low profile Actuator & Tape sealed & DIP space 8.50mm</td> </tr> <tr> <td>L01</td> <td>=</td> <td>Low profile Actuator and DIP space 7.62mm</td> </tr> <tr> <td>LT01</td> <td>=</td> <td>Low profile Actuator & Tape sealed & DIP space 7.62mm</td> </tr> <tr> <td>E</td> <td>=</td> <td>Extended Actuator and DIP space 7.62mm</td> </tr> <tr> <td>E01</td> <td>=</td> <td>Extended Actuator and DIP space 8.50mm</td> </tr> </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																		

DSD / DSL Series

SLIDE END STACKABLE "SMT" TYPE



DSD Gull Wing Type

PIN 0.50x0.25

DSL J-Leg Type

PIN 0.50x0.25

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		PCB SMT Layout	Options	
DSD	DSL		1. Special marking and body color available	2. 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
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

DHS Series

SLIDE HALF PITCH (1.27mm) "SMT" TYPE



Circuit diagram

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

Unit: mm

<p>Construction</p>	<p>PCB SMT Layout</p>	<p>Options</p> <div style="display: flex; justify-content: space-around;"> <div style="width: 45%;"> <p>1. Special marking and body color available</p> </div> <div style="width: 45%;"> <p>2. Tape sealed</p> </div> </div>
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SPECIFICATIONS

<p>Electrical data</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Contact Rating</td> <td>25 mA, 24 V DC</td> </tr> <tr> <td>-switching</td> <td>100 mA, 50 V DC</td> </tr> <tr> <td>-non-switching</td> <td></td> </tr> <tr> <td>Contact Resistance</td> <td></td> </tr> <tr> <td>-initial</td> <td>50 mΩ max.</td> </tr> <tr> <td>-after life test</td> <td>100 mΩ max.</td> </tr> <tr> <td>Insulation Resistance</td> <td>500 MΩ min. at 100 V DC</td> </tr> <tr> <td>Withstanding Voltage</td> <td>300 V AC for 1 Minute</td> </tr> <tr> <td>Capacitance between adjacent switches</td> <td>5 pF max.</td> </tr> </table>	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	500 MΩ min. at 100 V DC	Withstanding Voltage	300 V AC for 1 Minute	Capacitance between adjacent switches	5 pF max.	<p>Mechanical and Environmental data</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Operating Temperature</td> <td>- 25°C to +70°C</td> </tr> <tr> <td>Storage Temperature</td> <td>- 40°C to +85°C</td> </tr> <tr> <td>Soldering Temperature</td> <td></td> </tr> <tr> <td>-SMT reflow soldering</td> <td>250°C +0/-5°C for 10 sec.</td> </tr> <tr> <td>Operating Force</td> <td>800 gf max.</td> </tr> <tr> <td>Mechanical Life</td> <td>1000 operations</td> </tr> <tr> <td>Vibration</td> <td>10 Hz – 50 Hz – 10 Hz for 6 hours</td> </tr> </table>	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
Contact Rating	25 mA, 24 V DC																																
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Mechanical Life	1000 operations																																
Vibration	10 Hz – 50 Hz – 10 Hz for 6 hours																																

FEATURES

<ul style="list-style-type: none"> ● 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 	<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
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How to order

DHS – x xx – XX Z

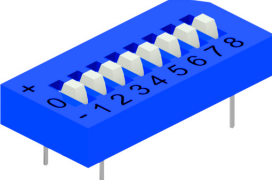
<p>Contact Form</p> <p>1 = SPST</p>	<p>Nbr of positions</p> <p style="text-align: center; font-size: small;">see under position/dimension box above</p> <p style="font-size: x-small;">Example: 1 Position = 02 2 Position = 04 etc.</p>	<p>Actuator, Sealing and Packing</p> <p>L = Low Profile Actuator; Tube packing</p> <p>LT = Low Profile Actuator & Tape sealed; Tube packing</p> <p>LC = Low Profile Actuator; Reel packing</p> <p>LD = Low Profile Actuator & Tape sealed; Reel packing</p>
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DTD / DTA / DTS Series

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

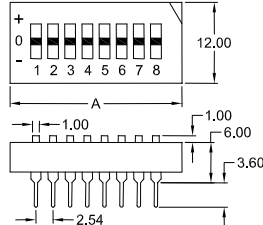
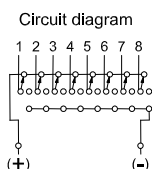


DTD

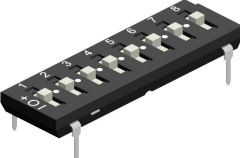


Position	4	5	6	7
Dim. "A"	15.30	17.84	20.38	22.92
Position	8	9	10	
Dim. "A"	25.46	28.00	30.54	

Unit: mm

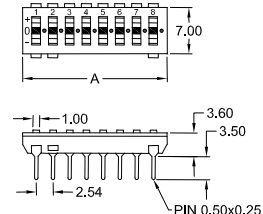
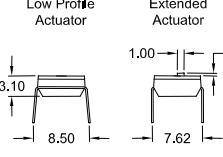
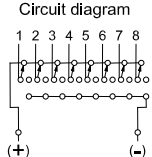



DTA




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

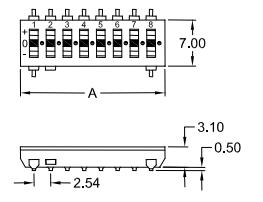
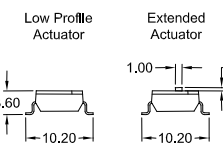
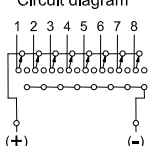




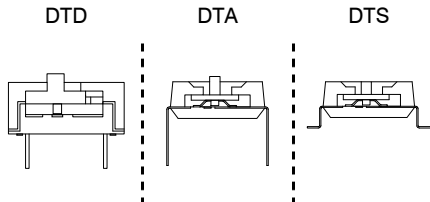
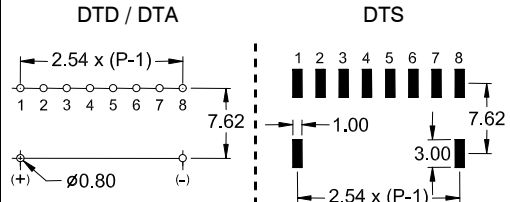
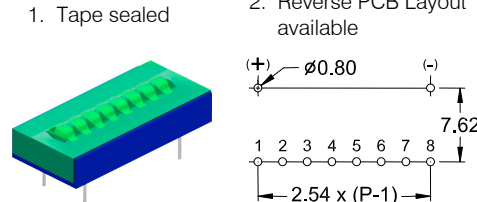
DTS



Position	10	12		
Dim. "A"	27.20	32.28		

Unit: mm

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

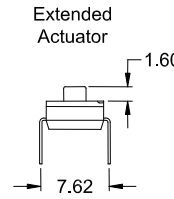
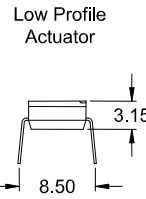
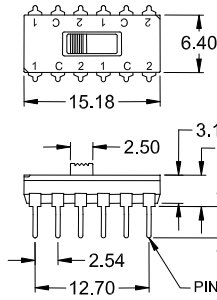
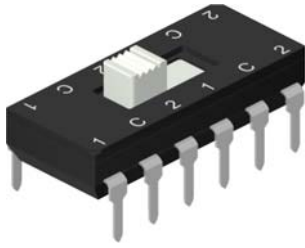
<ul style="list-style-type: none"> With three state (1-open-0) setting function, especially suitable for encoding/decoding of tri-state encoder/decoder integrated circuit to obtain more security codes than traditional two-state (1-0) operation. For instance, 9 bits with tri-state gets 19,683 (3⁹) codes, 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
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How to order

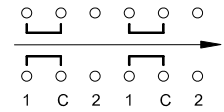
DTX – 1 xx – XX Z

<p>Series</p> <p>DTD = Bottom Epoxy Sealed THT Type</p> <p>DTA = Low Profile THT Type</p> <p>DTS = Low Profile SMT Type</p>	<p>Nbr of positions</p> <p>see under position/dimension box above</p> <p>Example: 2 Position = 02 3 Position = 03 etc.</p>	<p>Actuator and Sealing</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>
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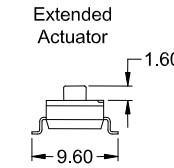
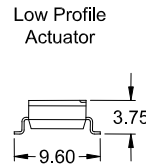
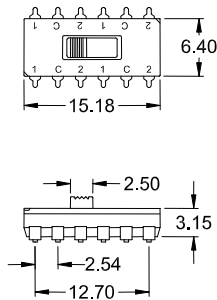
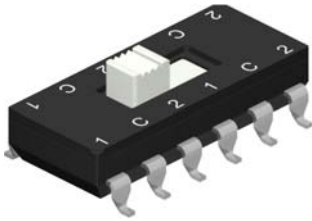
DSP-42-XX 01 Z (THT Type)



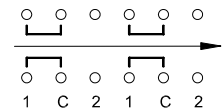
Circuit diagram



DSP-42-XX 02 Z (SMT Type)

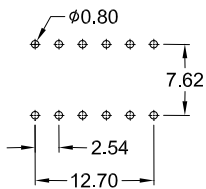


Circuit diagram

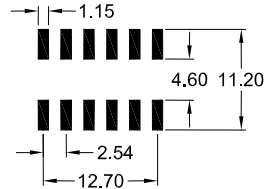


PCB Layout

DSP-42-XX 01 Z (THT Type)

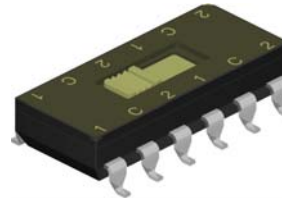


DSP-42-XX 02 Z (SMT Type)



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

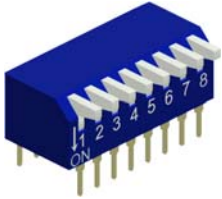
Contact Form

42 = 4PDT

Device Type, Actuator, DIP Space & Packing

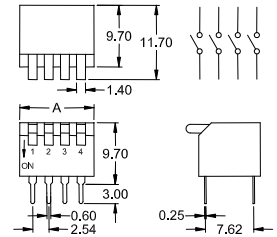
L 01	=	THT Type; Low Profile Actuator DIP space 8.50mm; Tube packing
LT 01	=	THT Type; Low Profile Actuator DIP space 8.50mm; Top sealed; Tube packing
E 01	=	THT Type; Extended Actuator DIP space 7.62mm; Tube packing
L 02	=	SMT Type; Low Profile Actuator; Tube packing
LT 02	=	SMT Type; Low Profile Actuator; Top sealed; Tube packing
LC 02	=	SMT Type; Low Profile Actuator; Reel packing
LD 02	=	SMT Type; Low Profile Actuator; Top sealed; Reel packing
E 02	=	SMT Type; Extended Actuator; Tube packing
EC 02	=	SMT Type; Extended Actuator; Reel packing

SPST Contact Form

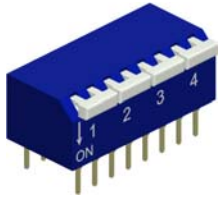


Position	2	3	4	5	6
Dim. "A"	6.70	9.20	11.70	14.20	16.70
Position	7	8	9	10	12
Dim. "A"	19.20	21.70	24.20	26.70	31.80

Unit: mm

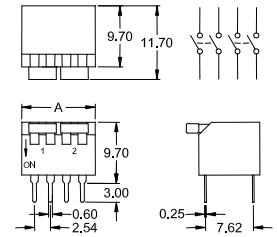


DPST Contact Form

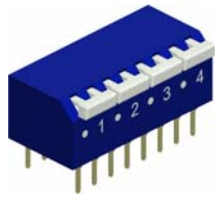


Position	1	2	3	4	5	6
Dim. "A"	6.70	11.70	16.70	21.70	26.70	31.80

Unit: mm

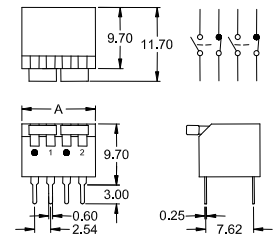


SPDT Contact Form

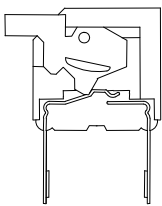


Position	1	2	3	4	5	6
Dim. "A"	6.70	11.70	16.70	21.70	26.70	31.80

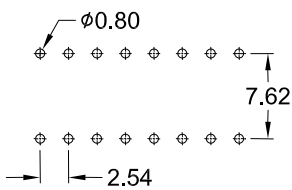
Unit: mm



Construction

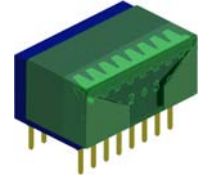
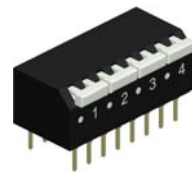
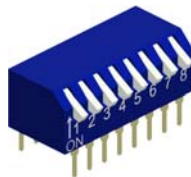


PCB Hole Layout



Options

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



SPECIFICATIONS

Electrical data

Contact Rating	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	1000 operations
Vibration	10 Hz – 50 Hz – 10 Hz for 6 hours

FEATURES

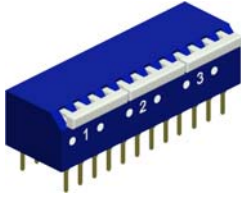
- Edge actuated (piano type) easy setting on closely racked PCB
- Tactile response is performed directly by larger contact pressure to ensure very stable contact
- All plastic are UL 94V-0 grade fire retardant
- Bottom epoxy sealed standard to ensure free of flux immersion during wave soldering
- Contact 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

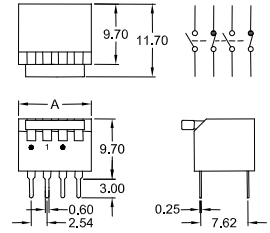
Series	Contact Form	Nbr of positions	"ON/OFF" Position and Sealing
DPG = Gold plated Contacts	1 = SPST	see under position/dimension box above	A = Top side OFF
DPS = Tin plated Contacts	2 = DPST	Example: 1 Position = 01 2 Position = 02 etc.	AT = Top side OFF & Tape sealed
	3 = SPDT		B = Top side ON
	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

DPDT Contact Form

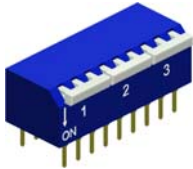


Position	1	2	3
Dim. "A"	11.70	21.70	31.80

Unit: mm

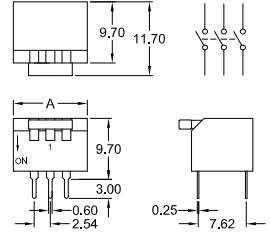


3PST Contact Form

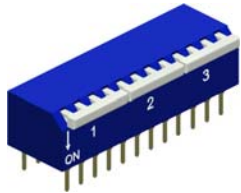


Position	1	2	3	4
Dim. "A"	9.20	16.70	24.20	31.80

Unit: mm

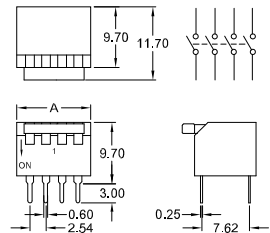


4PST Contact Form

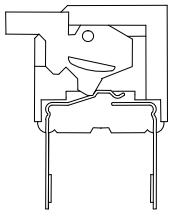


Position	1	2	3
Dim. "A"	11.70	21.70	31.80

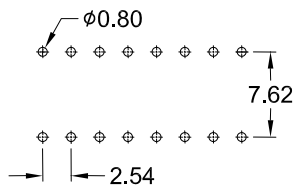
Unit: mm



Construction



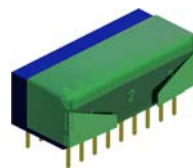
PCB Hole Layout



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

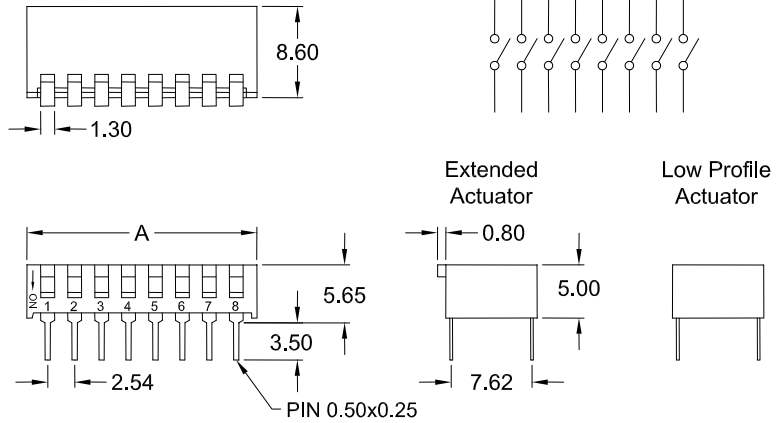
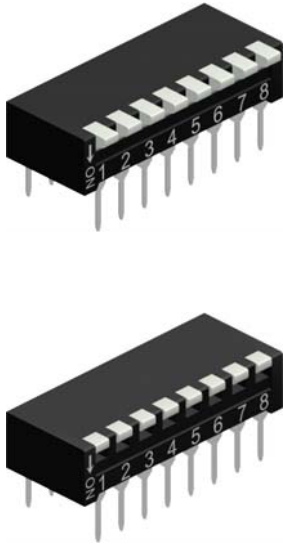
How to order

DPX – x xx – XX Z

<p>Series</p> <p>DPG = Gold plated Contacts</p> <p>DPS = Tin plated Contacts</p>	<p>Contact Form</p> <p>4 = 3PST</p> <p>5 = 4PST</p> <p>6 = DPDT</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>Actuator 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>
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DPH Series

PIANO LOW PROFILE "THT" TYPE



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

Unit: mm

<p>Construction</p>	<p>PCB Hole Layout</p>	<p>Option</p> <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
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

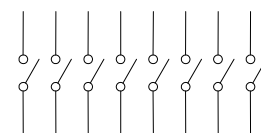
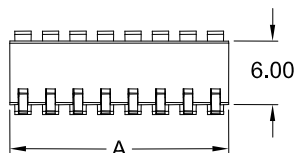
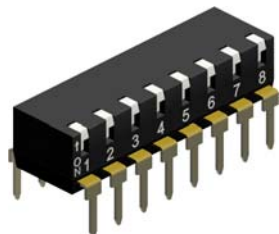
see under position/dimension box above

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

Actuator and "ON/OFF" Position

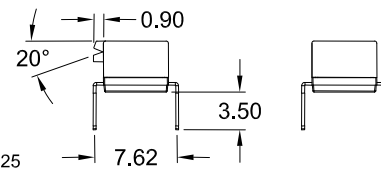
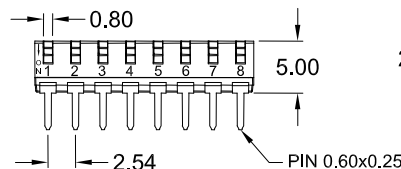
LA = Low Profile Actuator
EA = Extended Actuator
LAT = Low Profile Actuator & Tape sealed

the DPH Series is basically "Top Side OFF"



Extended Actuator

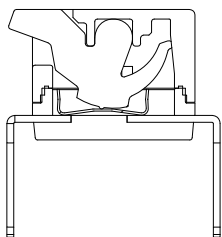
Low Profile Actuator



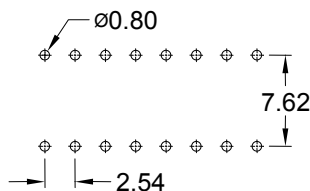
Position	2	4	6	8	10
Dim. "A"	4.98	10.06	15.15	20.22	25.30

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

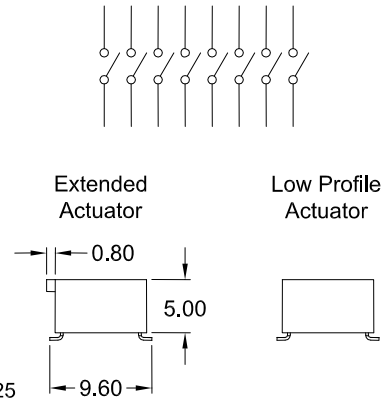
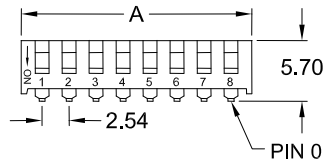
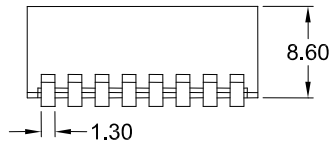
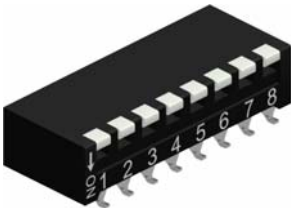
Example:
2 Position = **02**
4 Position = **04**
etc.

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



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	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	1000 operations
Vibration	10 Hz – 50 Hz – 10 Hz for 6 hours

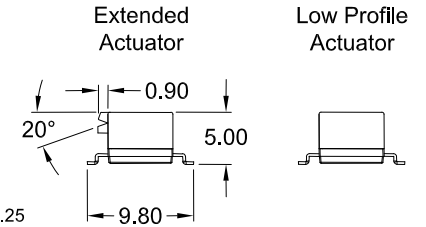
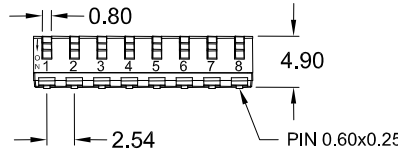
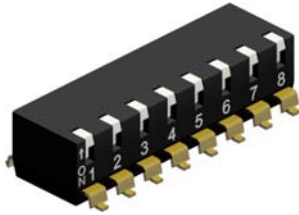
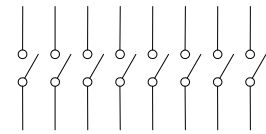
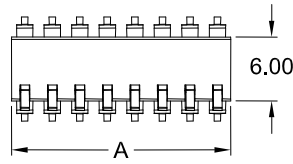
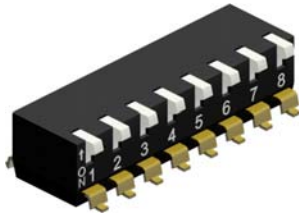
FEATURES

- 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

DPA – 1 xx – XX Xx Z

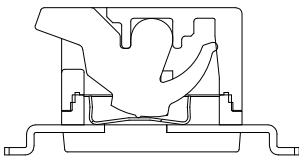
Nbr of positions	Actuator and "ON/OFF" Position	Packing and Sealing
<p>see under position/dimension box above</p> <p>Example: 2 Position = 02 4 Position = 04 etc.</p>	<p>EA = Extended Actuator; Top side OFF</p> <p>LA = Low Profile Actuator; Top side OFF</p>	<p>00 = Tube packing 10 = Reel packing</p>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



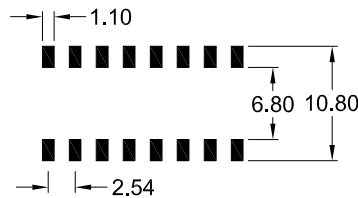
Position	2	4	6	8	10
Dim. "A"	4.98	10.06	15.15	20.22	25.30

Unit: mm

Construction



PCB SMT Layout



Precautions in Handling

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
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
- 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

DPM – 1 xx – XX 1 xx Z

Nbr of positions

see under position/dimension box above

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

Actuator and "ON/OFF" Position

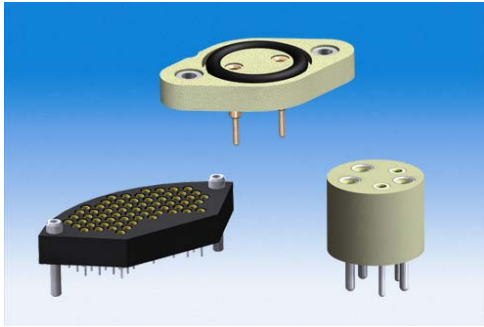
EA	= Extended Actuator; Top side OFF
EB	= Extended Actuator; Top side ON
LA	= Low profile Actuator; Top side OFF
LB	= Low profile Actuator; Top side ON

Packing

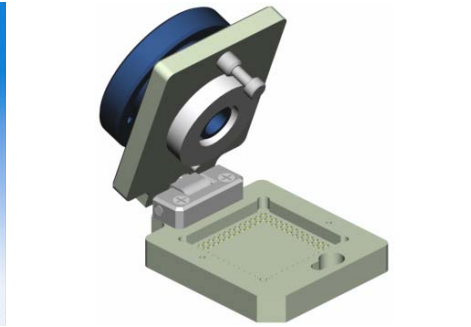
10	= Tube packing
11	= Reel packing
10	= Tube packing
11	= Reel packing
T0	= Tube packing & Tape sealed
T1	= Reel packing & Tape sealed

Other products from E-tec

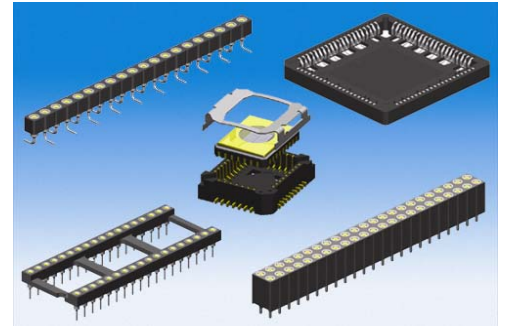
Please contact your closest sales office for further information.



Customized Products



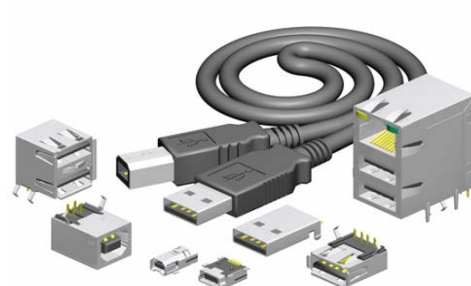
Test Sockets & Adapters



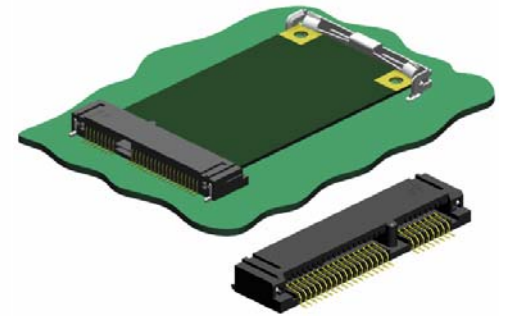
IC - Sockets



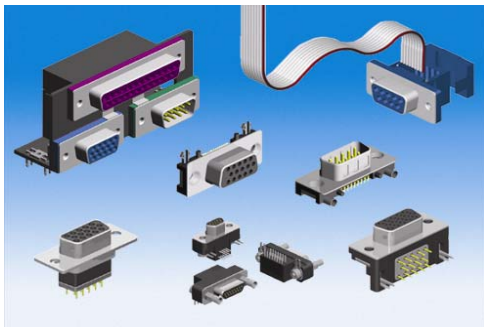
Compact Flash Connectors



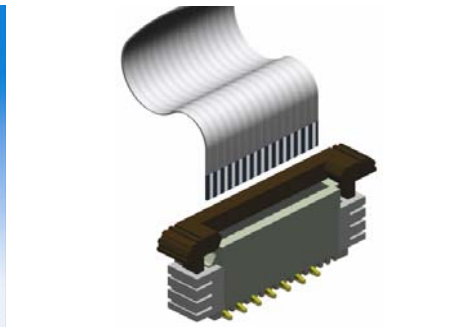
USB & IEEE 1394 Connectors



Mini PCI Express Connectors



D-Sub Connectors



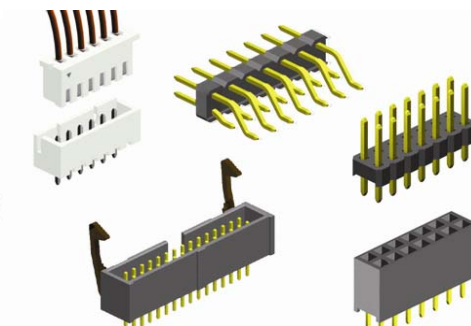
Flex Cable Connectors



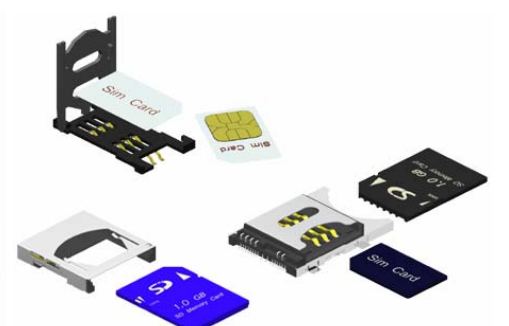
HDMI Connectors



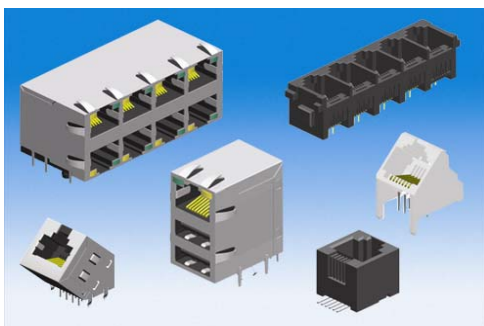
Probe Pin & Probe Pin Connectors



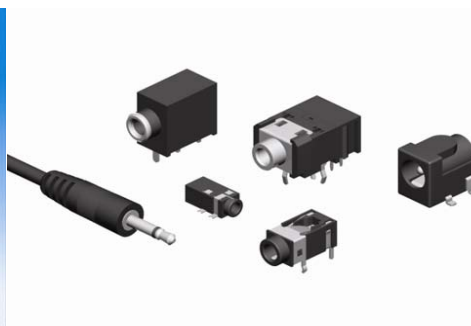
PCB Connectors



Multi Media Card Connectors



Modular Plugs & Jacks



Phono - & DC - Power Connectors



RF - Connectors



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