

DS-DP-DA series

DIP switches

Distinctive features and specifications

- Standard, piano and right angle models
- 2 to 12 positions
- Top tape sealing option

ELECTRICAL SPECIFICATIONS

- Current/voltage rating :
 - non-switching : 100mA 50VDC
 - switching : 50mA 24VDC
- Contact resistance (at 100mA) :
 - 50mΩ max. at initial
 - 100mΩ after life test
- Insulation resistance (at 100VDC +/-15V) :
 - 100 MΩ min. between adjacent terminals
- Dielectric strength : 500VDC for one minute
- Capacitance : 5 pF between adjacent terminals
- Circuit : single pole, single throw
- Electrical life : 2.000 cycles min. per switch

MATERIALS

- Case, UL94-V0, glass fiber filled PBT, black
- Cover : UL94-V0, glass fiber filled PBT, red
- Actuator : UL94-V0, glass fiber filled PBT, white
- Terminals/contacts : gold over nickel plated phosphor bronze
- Terminal seal : epoxy
- Tape seal : polyester film

GENERAL SPECIFICATIONS

- Operating force :
 - DP models : 4N
 - DS/DA models : 8N
- Travel : 2 mm (.078)
- Mechanical life : 5.000 cycles min. per switch
- Vibration test : MIL-STD-202F method 201A
- Shock test : MIL-STD-202F method 213B, condition A
- Operating temperature : -20°C to +70°C

RECOMMENDED SOLDERING AND CLEANING PROCESSES

- Hand soldering : 320°C max. for 2 seconds max. (30 watt iron max.)
- Wave soldering : 260°C max. for 5 seconds max.
- Force rinse, high agitation or triple bath cleaning method (**with tape seal, option T**) : freon TF or TE. When vapor methods are used, do not subject switch to solvents above 51°C.

Note : keep switches in "OFF" position during soldering and cleaning for best results.

Dimensions : first dimensions are in mm while inches are shown as bracketted numbers.

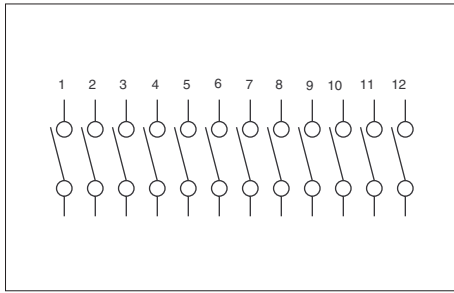


Packaging unit : standard IC tubes - Quantities depending on model. See table below.

| DS/DSR | Quantity | DS-T/DSR-T | Quantity | DA | Quantity | DA-T | Quantity | DP/DPL | Quantity | DP-T/DPL-T | Quantity |
|----------|----------|------------|----------|-------|----------|--------|----------|----------|----------|------------|----------|
| DS(R)-02 | 72 | DS(R)-02T | 70 | DA-02 | 73 | DA-02T | 70 | DP(L)-02 | 70 | DP(L)-02T | 65 |
| DS(R)-03 | 51 | DS(R)-03T | 50 | DA-03 | 52 | DA-03T | 50 | DP(L)-03 | 50 | DP(L)-03T | 48 |
| DS(R)-04 | 40 | DS(R)-04T | 39 | DA-04 | 40 | DA-04T | 39 | DP(L)-04 | 39 | DP(L)-04T | 39 |
| DS(R)-05 | 32 | DS(R)-05T | 32 | DA-05 | 33 | DA-05T | 32 | DP(L)-05 | 32 | DP(L)-05T | 32 |
| DS(R)-06 | 27 | DS(R)-06T | 28 | DA-06 | 28 | DA-06T | 28 | DP(L)-06 | 27 | DP(L)-06T | 25 |
| DS(R)-07 | 24 | DS(R)-07T | 24 | DA-07 | 24 | DA-07T | 24 | DP(L)-08 | 21 | DP(L)-08T | 21 |
| DS(R)-08 | 21 | DS(R)-08T | 21 | DA-08 | 21 | DA-08T | 21 | DP(L)-10 | 17 | DP(L)-10T | 17 |
| DS(R)-09 | 19 | DS(R)-09T | 19 | DA-09 | 19 | DA-09T | 19 | DP(L)-12 | 14 | DP(L)-12T | 14 |
| DS(R)-10 | 17 | DS(R)-10T | 17 | DA-10 | 17 | DA-10T | 17 | | | | |
| DS(R)-12 | 14 | DS(R)-12T | 14 | DA-12 | 14 | DA-12T | 14 | | | | |

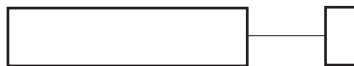
DS/DSR series

Standard DIP switches



- Raised or recessed actuator
- 2 to 12 positions

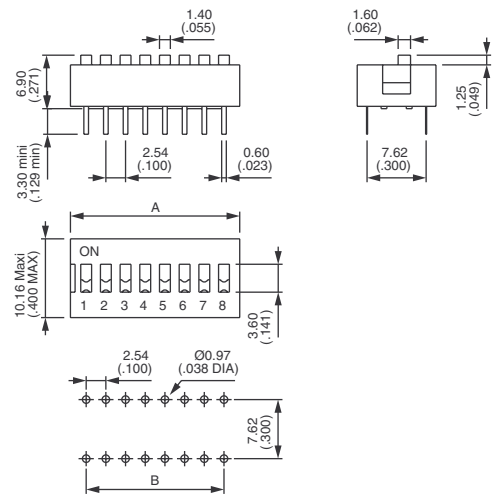
MODEL
STRUCTURE



Raised actuator : DS



| Model No | No. pos. | Dim "A" | Dim. "B" |
|----------|----------|---------------|---------------|
| DS-02 | 2 | 6,60 (.259) | 2,54 (.100) |
| DS-03 | 3 | 9,14 (.359) | 5,08 (.200) |
| DS-04 | 4 | 11,68 (.459) | 7,62 (.300) |
| DS-05 | 5 | 14,22 (.559) | 10,16 (.400) |
| DS-06 | 6 | 16,76 (.659) | 12,70 (.500) |
| DS-07 | 7 | 19,30 (.759) | 15,24 (.600) |
| DS-08 | 8 | 21,84 (.859) | 17,78 (.700) |
| DS-09 | 9 | 24,38 (.959) | 20,32 (.800) |
| DS-10 | 10 | 26,92 (1.059) | 22,86 (.900) |
| DS-12 | 12 | 32,00 (1.259) | 27,94 (1.100) |

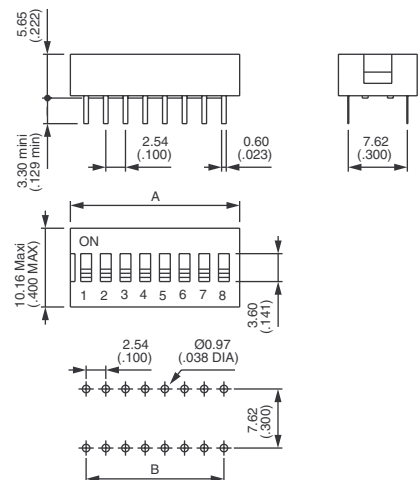


Top tape sealed : add "T" after model number.

Recessed actuator : DSR



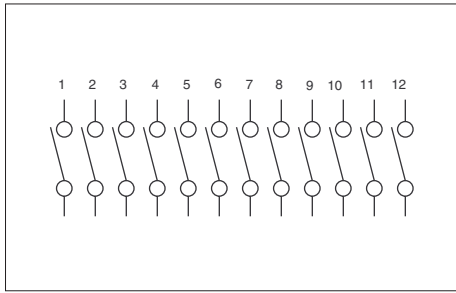
| Model No | No. pos. | Dim "A" | Dim. "B" |
|----------|----------|---------------|---------------|
| DSR-02 | 2 | 6,60 (.259) | 2,54 (.100) |
| DSR-03 | 3 | 9,14 (.359) | 5,08 (.200) |
| DSR-04 | 4 | 11,68 (.459) | 7,62 (.300) |
| DSR-05 | 5 | 14,22 (.559) | 10,16 (.400) |
| DSR-06 | 6 | 16,76 (.659) | 12,70 (.500) |
| DSR-07 | 7 | 19,30 (.759) | 15,24 (.600) |
| DSR-08 | 8 | 21,84 (.859) | 17,78 (.700) |
| DSR-09 | 9 | 24,38 (.959) | 20,32 (.800) |
| DSR-10 | 10 | 26,92 (1.059) | 22,86 (.900) |
| DSR-12 | 12 | 32,00 (1.259) | 27,94 (1.100) |



Top tape sealed : add "T" after model number.

DP/DPL series

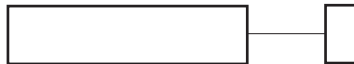
Piano DIP switches



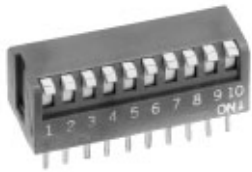
- Short or long actuator
- 2 to 12 positions

Note : Push down for "ON" is our standard type.
Push down for "OFF" is also available on special order, consult factory.

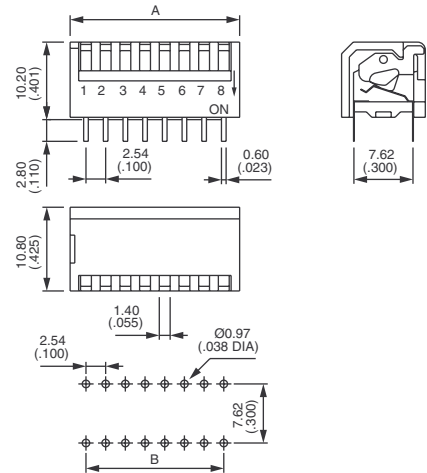
MODEL
STRUCTURE



Short actuator : DP



| Model No | No. pos. | Dim "A" | Dim. "B" |
|----------|----------|---------------|---------------|
| DP-02 | 2 | 6,63 (.261) | 2,54 (.100) |
| DP-03 | 3 | 9,17 (.361) | 5,08 (.200) |
| DP-04 | 4 | 11,71 (.461) | 7,62 (.300) |
| DP-05 | 5 | 14,25 (.561) | 10,16 (.400) |
| DP-06 | 6 | 16,8 (.661) | 12,70 (.500) |
| DP-08 | 8 | 21,87 (.861) | 17,78 (.700) |
| DP-10 | 10 | 26,95 (1.061) | 22,86 (.900) |
| DP-12 | 12 | 32,03 (1.261) | 27,94 (1.100) |

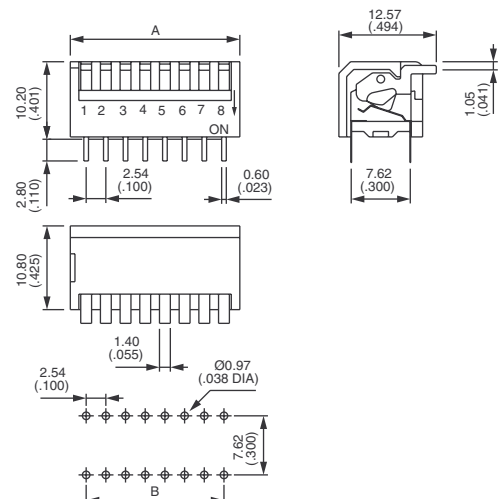


Top tape sealed : add "T" after model number.

Long actuator : DPL



| Model No | No. pos. | Dim "A" | Dim. "B" |
|----------|----------|---------------|---------------|
| DPL-02 | 2 | 6,63 (.261) | 2,54 (.100) |
| DPL-03 | 3 | 9,17 (.361) | 5,08 (.200) |
| DPL-04 | 4 | 11,71 (.461) | 7,62 (.300) |
| DPL-05 | 5 | 14,25 (.561) | 10,16 (.400) |
| DPL-06 | 6 | 16,8 (.661) | 12,70 (.500) |
| DPL-08 | 8 | 21,87 (.861) | 17,78 (.700) |
| DPL-10 | 10 | 26,95 (1.061) | 22,86 (.900) |
| DPL-12 | 12 | 32,03 (1.261) | 27,94 (1.100) |

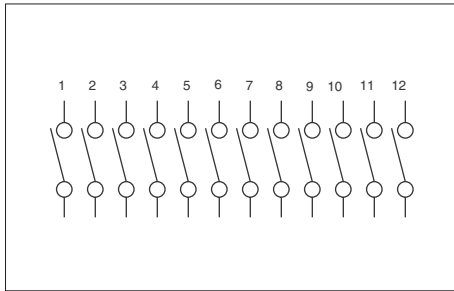


Top tape sealed : add "T" after model number.

F

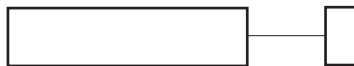
DA series

Right angle DIP switches



• 2 to 12 positions

MODEL
STRUCTURE



Raised actuator : DA



| Model No | No. pos. | Dim "A" | Dim. "B" |
|----------|----------|---------------|---------------|
| DA-02 | 2 | 6,60 (.259) | 2,54 (.100) |
| DA-03 | 3 | 9,14 (.359) | 5,08 (.200) |
| DA-04 | 4 | 11,68 (.459) | 7,62 (.300) |
| DA-05 | 5 | 14,22 (.559) | 10,16 (.400) |
| DA-06 | 6 | 16,76 (.659) | 12,70 (.500) |
| DA-07 | 7 | 19,30 (.759) | 15,24 (.600) |
| DA-08 | 8 | 21,84 (.859) | 17,78 (.700) |
| DA-09 | 9 | 24,38 (.959) | 20,32 (.800) |
| DA-10 | 10 | 26,92 (1.059) | 22,86 (.900) |
| DA-12 | 12 | 32,00 (1.259) | 27,94 (1.100) |

Top tape sealed : add "T" after model number.

