

DS, NDS, DA & DP SERIES SPST STANDARD DIP SWITCHES

FEATURES
 High reliability.
 Self-cleaning contacts.
 Multi- positions.
 Process compatible with tape seal.
 Dual in-line .100" x .300" term. spacing.

GENERAL SPECIFICATIONS

ELECTRICALS

Electrical life	2000 cycles min. per switch @ 24 VDC, 25 mA
Contact rating, non-switching	100 mA at 50 VDC
Contact rating, switching	25 mA at 24 VDC
Contact resistance at current 100 mA	50 mΩ max. initial - 100 mΩ max. after life test
Insulation resistance at 100 VDC	100 MΩ minimum
Dielectric strength	500 VDC for 1 minute
Capacitance	5 pf. max. between adjacent terminals

MECHANICALS, THERMALS

Mechanical life	2000 cycles min. per switch
Operating force	800 grams max. (DP Series only - 400 grams max.)
Vibration	10-55 Hz. per MIL-STD-202F METHOD 201A
Shock	50 g (peak value) for 11 msec. per MIL-STD-202F, METHOD 213B
Operating temperature range	-40°C to 85°C

SOLDERING & CLEANING RECOMMENDATIONS*

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	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

MATERIALS

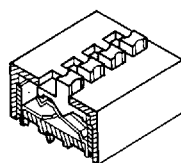
Base	UL94V-O, glass fiber filled PBT, black
Cover	UL94V-O, glass fiber filled PBT, red
Actuators	UL94V-O, glass fiber filled PBT, white
Contacts & Terms.	Gold over nickel plated phosphor bronze
Terms.- (NDS only)	Tin plated phosphor bronze
Sealing	Epoxy
Tape seal	Polyester film

PACKAGING

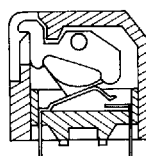
DIP switches are shipped in standard IC tubes with all actuators in the "OFF" position.

SWITCH CROSS SECTIONS

Normally open
contact system

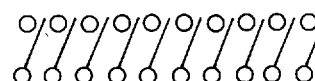


DS, NDS & DA



DP

SCHEMATIC (TYPICAL)

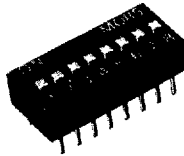


See tabulations on following pages for
number of positions available (10 shown)

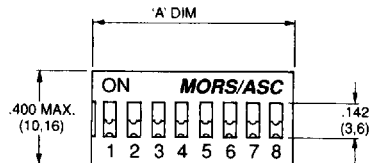
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A

DS & NDS Series Slides

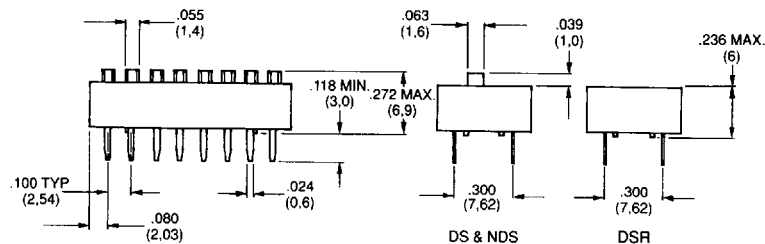
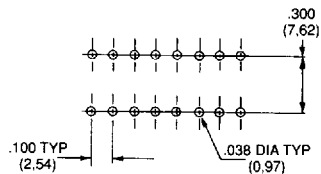


Mechanical outline



Printed circuit board layout

tolerance $\pm .003$ (0.08), non-cumulative



General unit tolerances $\pm .008$ (0.2)

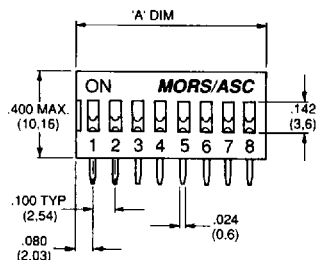
Actuator Style & Terminal Mat'l.	MODEL NO. with no tape seal	MODEL NO. with tape seal	No. of Pos.	'A' Dimension $+.008/-0.000$ " (+0.2/-0.0mm)
Raised Actuator	DS-02	DS-02T	2	.254 (6,45)
	DS-03	DS-03T	3	.354 (8,98)
	DS-04	DS-04T	4	.454 (11,52)
	DS-05	DS-05T	5	.554 (14,08)
	DS-06	DS-06T	6	.654 (16,60)
	DS-07	DS-07T	7	.754 (19,14)
Gold Terms.	DS-08	DS-08T	8	.854 (21,68)
	DS-09	DS-09T	9	.954 (24,22)
	DS-10	DS-10T	10	1.054 (26,77)
	DS-12	DS-12T	12	1.254 (31,85)
Recessed Actuator	DSR-02	DSR-02T	2	.254 (6,45)
	DSR-03	DSR-03T	3	.354 (8,98)
	DSR-04	DSR-04T	4	.454 (11,52)
	DSR-05	DSR-05T	5	.554 (14,08)
	DSR-06	DSR-06T	6	.654 (16,60)
	DSR-07	DSR-07T	7	.754 (19,14)
Gold Terms.	DSR-08	DSR-08T	8	.854 (21,68)
	DSR-09	DSR-09T	9	.954 (24,22)
	DSR-10	DSR-10T	10	1.054 (26,77)
	DSR-12	DSR-12T	12	1.254 (31,85)
Raised Actuator	NDS-04	NDS-04T	4	.466 (11,84)
	NDS-06	NDS-06T	6	.666 (16,92)
	NDS-08	NDS-08T	8	.866 (22,00)
Tin Terms.	NDS-10	NDS-10T	10	1.066 (27,08)
	NDS-12	NDS-12T	12	1.266 (32,16)

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

DA Series Right angle

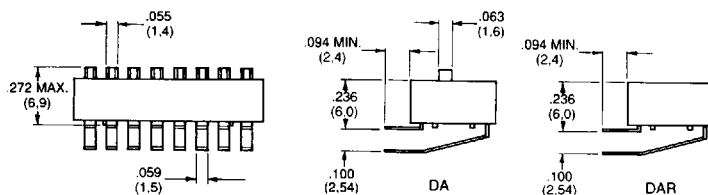
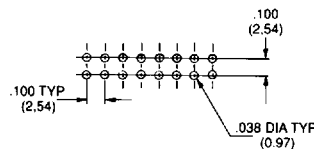


Mechanical outline



Printed circuit board layout

tolerance $\pm .003$ (0.08), non-cumulative



General unit tolerances $\pm .008$ (0.2)

Actuator Style	MODEL NO. with no tape seal	MODEL NO. with tape seal	No. of Pos.	'A' Dimension $+.008/-0.000$ " (+0.2/-0.0mm)
Raised Actuator	DA-04	DA-04T	4	.454 (11,52)
	DA-05	DA-05T	5	.554 (14,08)
	DA-06	DA-06T	6	.654 (16,60)
	DA-07	DA-07T	7	.754 (19,14)
	DA-08	DA-08T	8	.854 (21,68)
	DA-09	DA-09T	9	.954 (24,22)
	DA-10	DA-10T	10	1.054 (26,77)
	DA-12	DA-12T	12	1.254 (31,85)

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