

# NDI & DM 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.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

## 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 milliohms max. initial - 100 milliohms max. after life test |
| Insulation resistance at 100 VDC     | 100 milliohms minimum  |
| Dielectric strength                  | 500 VAC for 1 minute   |
| Capacitance                          | 5 pf. max. between adjacent terminals                          |

### MECHANICALS, THERMALS

|                             |  |
|-----------------------------|--|
| Mechanical life             | 2000 cycles min. per switch                                  |
| Operating force             | 1000 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 | -20°C to 85°C  |

### SOLDERING & CLEANING RECOMMENDATIONS\*

|                           |   |
|---------------------------|---|
| Hand soldering            | 350°C max. for 2 seconds max. (30 watt iron max.) |
| Wave soldering            | 260°C max. for 5 seconds max.                     |
| Cleaning (with tape seal) | Spray wash from top side only.                    |

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

## MATERIALS

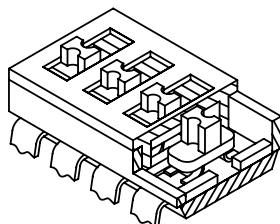
|               |   |
|---------------|---|
| Base & Cover  | NDI: UL94V-O, glass fiber filled PBT, black<br>DM: UL94V-O, glass fiber filled PPS, black |
| Actuators     | UL94V-O, Nylon, white   |
| Contacts      | Gold over nickel plated copper alloy  |
| Terminals     | Gold plated brass.  |
| Term. Sealing | Molded-in   |
| Tape seal     | Kapton  |

## PACKAGING

DIP switches are shipped in standard IC tubes with all actuators in the "OFF" position.  
Tape & reel packaging per EIA available for DMR models (see next page).

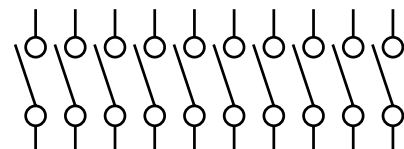
## SWITCH CROSS SECTIONS

Double  
contact system



DI & DM

## SCHEMATIC (TYPICAL)



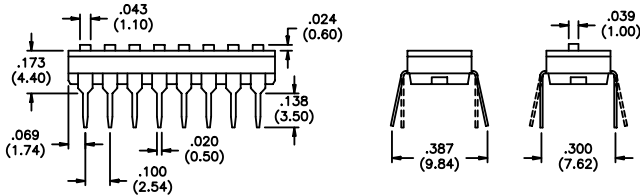
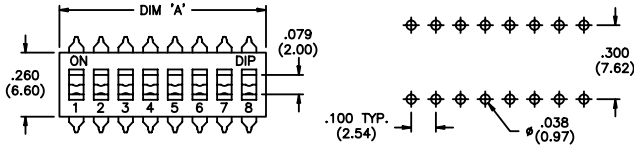
See tabulations on following pages for  
number of positions available (10 shown)

**NDI Series  
Machine  
Insertable P**



Tin/lead plated brass terminals  
Gold plated terminals available on request

| Actuator | Squared terminals           |                          | Spread terminals            |                          | No. of Pos. | 'A' Dim. +.008/-0.000" (+0.2/-0.0mm) |
|----------|-----------------------------|--------------------------|-----------------------------|--------------------------|-------------|--------------------------------------|
|          | MODEL NO. with no tape seal | MODEL NO. with tape seal | MODEL NO. with no tape seal | MODEL NO. with tape seal |             |                                      |
| Raised   | NDI01H                      | n/a                      | NDI01S                      | n/a                      | 1           | .137 (3,48)                          |
|          | NDI02H                      | n/a                      | NDI02S                      | n/a                      | 2           | .237 (6,02)                          |
|          | NDI04H                      | n/a                      | NDI04S                      | n/a                      | 4           | .437 (11,10)                         |
|          | NDI06H                      | n/a                      | NDI06S                      | n/a                      | 6           | .637 (16,18)                         |
|          | NDI08H                      | n/a                      | NDI08S                      | n/a                      | 8           | .837 (21,26)                         |
| Recessed | NDI10H                      | n/a                      | NDI10S                      | n/a                      | 10          | 1.037 (26,34)                        |
|          | NDIR01H                     | n/a                      | NDIR01S                     | n/a                      | 1           | .137 (3,48)                          |
|          | NDIR02H                     | NDIR02HT                 | NDIR02S                     | NDIR02ST                 | 2           | .237 (6,02)                          |
|          | NDIR04H                     | NDIR04HT                 | NDIR04S                     | NDIR04ST                 | 4           | .437 (11,10)                         |
|          | NDIR06H                     | NDIR06HT                 | NDIR06S                     | NDIR06ST                 | 6           | .637 (16,18)                         |
|          | NDIR08H                     | NDIR08HT                 | NDIR08S                     | NDIR08ST                 | 8           | .837 (21,26)                         |
|          | NDIR10H                     | NDIR10HT                 | NDIR10S                     | NDIR10ST                 | 10          | 1.037 (26,34)                        |



P Auto-insertable using equipment from Amistar, Dynapert, Panasert, Northeastern Tool, Universal and others.

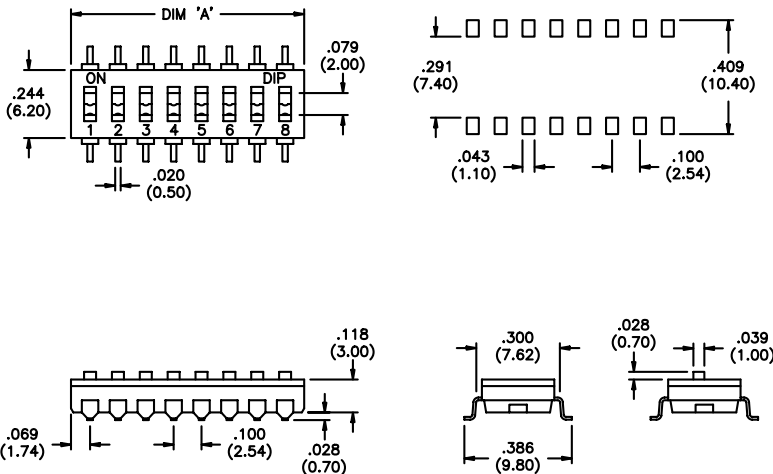
n/a = not available.

**P**

**DM Series  
Surface  
Mount P**



| 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 | DM01                        | n/a                      | 1           | .137 (3,48)                               |
|                 | DM02                        | n/a                      | 2           | .237 (6,02)                               |
|                 | DM03                        | n/a                      | 3           | .337 (8,56)                               |
|                 | DM04                        | n/a                      | 4           | .437 (11,10)                              |
|                 | DM05                        | n/a                      | 5           | .537 (13,64)                              |
|                 | DM06                        | n/a                      | 6           | .637 (16,18)                              |
|                 | DM07                        | n/a                      | 7           | .737 (18,72)                              |
|                 | DM08                        | n/a                      | 8           | .837 (21,26)                              |
|                 | DM09                        | n/a                      | 9           | .937 (23,80)                              |
|                 | DM10                        | n/a                      | 10          | 1.037 (26,34)                             |
|                 | DM12                        | n/a                      | 12          | 1.237 (31,42)                             |
|                 | Recessed Actuator           | DMR01                    | n/a         | 1   |
| DMR02           |                             | DMR02T                   | 2           | .237 (6,02)                               |
| DMR03           |                             | DMR03T                   | 3           | .337 (8,56)                               |
| DMR04           |                             | DMR04T                   | 4           | .437 (11,10)                              |
| DMR05           |                             | DMR05T                   | 5           | .537 (13,64)                              |
| DMR06           |                             | DMR06T                   | 6           | .637 (16,18)                              |
| DMR07           |                             | DMR07T                   | 7           | .737 (18,72)                              |
| DMR08           |                             | DMR08T                   | 8           | .837 (21,26)                              |
| DMR09           |                             | DMR09T                   | 9           | .937 (23,80)                              |
| DMR10           |                             | DMR10T                   | 10          | 1.037 (26,34)                             |
| DMR12           |                             | DMR12T                   | 12          | 1.237 (31,42)                             |



For tape & reel packaging on DMR models only, add 'TR' to model number - example: DMR08TTR. Note- tape & reel packaging is available only with tape seal models. 900 switches per reel.