

## DIP Switches, Extended Actuator, Auto Insertable, Through Hole and Surface Mount

### FEATURES:

- Available in PC or surface mount termination.
- High pressure wiping contact allows aqueous or solvent cleaning without tape seal.
- Auto-insertable
- Tape Seal version available for vacuum pick-n-place
- Unique design can withstand vapor phase reflow or wave soldering conditions.
- Gas tight contacts
- Shipped in the off position

### ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature .....-30°C to + 85°C  
 Storage Temperature .....-45°C to + 100°C  
 Solder Heat Resistance.....245°C ± 5°C with switch in "off" position 30 seconds when mounted on a .060" thick PCB per MIL-STD202, Method 210  
 Cleaning.....Aqueous solution or solvent

### MATERIAL SPECIFICATIONS:

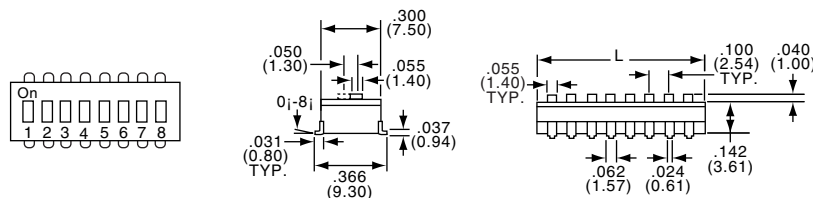
Base and Cover .....PPS-UL94V-0, (Black)  
 Actuator.....PA6T-UL94V-0, (White)  
 Fixed Contact/Terminal .....Copper alloy plate-solder/copper  
 Moving Contact .....Copper alloy plate-gold/nickel

### TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating .....0.4 VA @ 20 VDC max.  
 Max Rating Switching-100 Milliamp @ 24VDC  
 Min Rating Switching-1 Microamp @ 1 Millivolt  
 Max Rating Non Switching-1 Amp @ 5VDC  
 Initial Contact Resistance .....50 Milliohms max.  
 Insulation Resistance .....1,000 Megohms min. @ 100 VDC  
 Dielectric Strength .....500 VAC  
 Operating Force .....Less than 800 grams  
 Actuator Travel .....AD/R Series 1.30mm/.050" piano style 25°  
 Life Expectancy .....1,000 Cycles



ADE

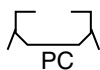


S Termination Shown

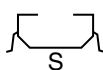


ADE08

Extended Actuator



PC



S



SA

| PC Term.         |            | "S" Term.        |            | "SA" Term.       |            | No. of Positions | Actuator Style | Dim. L       |
|------------------|------------|------------------|------------|------------------|------------|------------------|----------------|--------------|
| Tyco Electronics | Alcoswitch | Tyco Electronics | Alcoswitch | Tyco Electronics | Alcoswitch |                  |                |              |
| 1437586-2        | ADE02      | 1437586-4        | ADE02S     | 1437586-5        | ADE02SA    | 2                | Slide          | .278(7.06)   |
| 1437586-7        | ADE03      | 1437586-8        | ADE03S     | —                | ADE03SA    | 3                | Slide          | .378(9.60)   |
| 1-1437586-0      | ADE04      | 1-1437586-2      | ADE04S     | 1-1437586-3      | ADE04SA    | 4                | Slide          | .478(12.14)  |
| 1-1437586-5      | ADE05      | 1-1437586-7      | ADE05S     | —                | ADE05SA    | 5                | Slide          | .578(14.68)  |
| 1-1437586-8      | ADE06      | 2-1437586-0      | ADE06S     | 2-1437586-1      | ADE06SA    | 6                | Slide          | .678(17.22)  |
| 2-1437586-3      | ADE07      | 2-1437586-5      | ADE07S     | —                | ADE07SA    | 7                | Slide          | .778(19.76)  |
| 2-1437586-6      | ADE08      | 2-1437586-8      | ADE08S     | 2-1437586-9      | ADE08SA    | 8                | Slide          | .878(22.30)  |
| 3-1437586-0      | ADE09      | —                | ADE09S     | —                | ADE09SA    | 9                | Slide          | .978(24.84)  |
| 3-1437586-2      | ADE10      | 3-1437586-7      | ADE10S     | —                | ADE10SA    | 10               | Slide          | 1.078(27.38) |
| 3-1437586-8      | ADE12      | 1571337-1        | ADE12S     | —                | ADE12SA    | 12               | Slide          | 1.278(32.51) |

See Page A9 for PC Pad Layout.

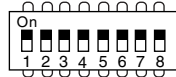
## DIP Switches, Flush Acuator, Auto Insertable, Through Hole, and Surface Mount

SEE PAGE A7 FOR PRODUCT SPECIFICATIONS

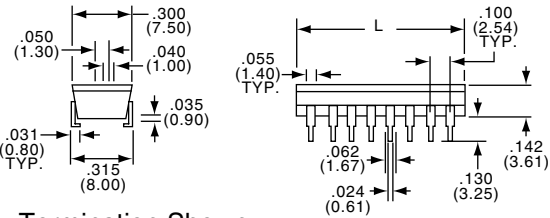
ADF



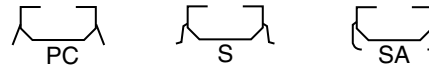
ADF08S  
Flush Actuator



See Page A9 for PC Pad Layout.



SA Termination Shown



| PC Term.         |            | PC Term. w/Tape  |            | No. of Positions | Actuator Style | Dim. L       |
|------------------|------------|------------------|------------|------------------|----------------|--------------|
| Tyco Electronics | Alcoswitch | Tyco Electronics | Alcoswitch |                  |                |              |
| 4-1437586-2      | ADF02      | 5-1437586-0      | ADF02T     | 2                | Slide          | .278(7.06)   |
| 5-1437586-1      | ADF03      | 5-1437586-6      | ADF03T     | 3                | Slide          | .378(9.60)   |
| 5-1437586-7      | ADF04      | 6-1437586-4      | ADF04T     | 4                | Slide          | .478(12.14)  |
| 6-1437586-5      | ADF05      | 7-1437586-0      | ADF05T     | 5                | Slide          | .578(14.68)  |
| 7-1437586-1      | ADF06      | 8-1437586-0      | ADF06T     | 6                | Slide          | .678(17.22)  |
| 8-1437586-1      | ADF07      | 8-1437586-5      | ADF07T     | 7                | Slide          | .778(19.76)  |
| 8-1437586-6      | ADF08      | 9-1437586-5      | ADF08T     | 8                | Slide          | .878(22.30)  |
| 9-1437586-6      | ADF09      | —                | ADF09T     | 9                | Slide          | .978(24.84)  |
| 1437587-1        | ADF10      | 1437587-7        | ADF10T     | 10               | Slide          | 1.078(27.38) |
| —                | ADF12      | 1571336-1        | ADF12T     | 12               | Slide          | 1.278(32.51) |

| "S" Term.        |            | "S" Term. w/Tape Seal |            | Tape & Reel      |            | No. of Positions | Actuator Style | Dim. L       |
|------------------|------------|-----------------------|------------|------------------|------------|------------------|----------------|--------------|
| Tyco Electronics | Alcoswitch | Tyco Electronics      | Alcoswitch | Tyco Electronics | Alcoswitch |                  |                |              |
| 4-1437586-4      | ADF02S     | 4-1437586-8           | ADF02ST    | 4-1437586-9      | ADF02STTR  | 2                | Slide          | .278(7.06)   |
| 5-1437586-2      | ADF03S     | 5-1437586-4           | ADF03ST    | 5-1437586-5      | ADF03STTR  | 3                | Slide          | .378(9.60)   |
| 5-1437586-9      | ADF04S     | 6-1437586-3           | ADF04ST    | 1437583-6        | ADF04STTR  | 4                | Slide          | .478(12.14)  |
| 6-1437586-6      | ADF05S     | 6-1437586-8           | ADF05ST    | 6-1437586-9      | ADF05STTR  | 5                | Slide          | .578(14.68)  |
| 7-1437586-5      | ADF06S     | 7-1437586-8           | ADF06ST    | 7-1437586-9      | ADF06STTR  | 6                | Slide          | .678(17.22)  |
| 8-1437586-2      | ADF07S     | 8-1437586-3           | ADF07ST    | 8-1437586-4      | ADF07STTR  | 7                | Slide          | .778(19.76)  |
| 8-1437586-8      | ADF08S     | 9-1437586-1           | ADF08ST    | 9-1437586-2      | ADF08STTR  | 8                | Slide          | .878(22.30)  |
| 9-1437586-7      | ADF09S     | 9-1437586-8           | ADF09ST    | 9-1437586-9      | ADF09STTR  | 9                | Slide          | .978(24.84)  |
| 1437587-3        | ADF10S     | 1437587-5             | ADF10ST    | 1437587-6        | ADF10STTR  | 10               | Slide          | 1.078(27.38) |
| 1437587-8        | ADF12S     | —                     | ADF12ST    | 1437587-9        | ADF12STTR  | 12               | Slide          | 1.278(32.51) |

| "SA" Term.       |            | "SA" Term. w/Tape Seal |            | No. of Positions | Actuator Style | Dim. L       |
|------------------|------------|------------------------|------------|------------------|----------------|--------------|
| Tyco Electronics | Alcoswitch | Tyco Electronics       | Alcoswitch |                  |                |              |
| 4-1437586-5      | ADF02SA    | 4-1437586-6            | ADF02SAT   | 2                | Slide          | .278(7.06)   |
| 5-1437586-3      | ADF03SA    | —                      | ADF03SAT   | 3                | Slide          | .378(9.60)   |
| 6-1437586-0      | ADF04SA    | 6-1437586-1            | ADF04SAT   | 4                | Slide          | .478(12.14)  |
| —                | ADF05SA    | —                      | ADF05SAT   | 5                | Slide          | .578(14.68)  |
| 7-1437586-6      | ADF06SA    | 7-1437586-7            | ADF06SAT   | 6                | Slide          | .678(17.22)  |
| —                | ADF07SA    | —                      | ADF07SAT   | 7                | Slide          | .778(19.76)  |
| 8-1437586-9      | ADF08SA    | 9-1437586-0            | ADF08SAT   | 8                | Slide          | .878(22.30)  |
| —                | ADF09SA    | —                      | ADF09SAT   | 9                | Slide          | .978(24.84)  |
| —                | ADF10SA    | 1437587-4              | ADF10SAT   | 10               | Slide          | 1.078(27.38) |
| —                | ADF12SA    | —                      | ADF12SAT   | 12               | Slide          | 1.278(32.51) |

# DIP Switches, Piano Acuator, Auto Insertable, Through Hole, and Surface Mount

ADP

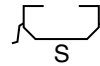
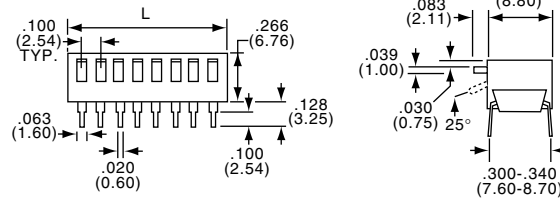


ADP04S

Piano Actuator

"PC" Termination Shown

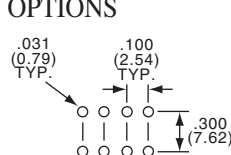
SEE PAGE A7 FOR PRODUCT SPECIFICATIONS



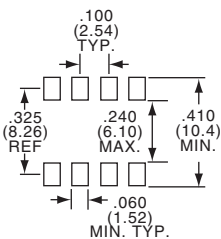
| Lever Down "On" |       | "S" Term         |            | "SA" Term.       |            | No. of Positions | Actuator Style | Dim. L       |
|-----------------|-------|------------------|------------|------------------|------------|------------------|----------------|--------------|
|                 |       | Tyco Electronics | Alcoswitch | Tyco Electronics | Alcoswitch |                  |                |              |
| 1-1437587-1     | ADP02 | 1-1437587-2      | ADP02S     | 1-1437587-3      | ADP02SA    | 2                | Piano          | .278(7.06)   |
| 1-1437587-5     | ADP04 | 1-1437587-7      | ADP04S     | 1-1437587-8      | ADP04SA    | 4                | Piano          | .478(12.14)  |
| 2-1437587-0     | ADP05 | 2-1437587-1      | ADP05S     | —                | ADP05SA    | 5                | Piano          | .578(14.68)  |
| 2-1437587-2     | ADP06 | 2-1437587-3      | ADP06S     | 2-1437587-4      | ADP06SA    | 6                | Piano          | .678(17.22)  |
| 2-1437587-5     | ADP07 | —                | ADP07S     | —                | ADP07SA    | 7                | Piano          | .778(19.76)  |
| 2-1437587-6     | ADP08 | 2-1437587-8      | ADP08S     | 2-1437587-9      | ADP08SA    | 8                | Piano          | .878(22.30)  |
| 3-1437587-0     | ADP09 | —                | ADP09S     | 3-1437587-1      | ADP09SA    | 9                | Piano          | .978(24.84)  |
| 3-1437587-3     | ADP10 | 3-1437587-6      | ADP10S     | —                | ADP10SA    | 10               | Piano          | 1.078(27.38) |

| Lever Up "On" |        | "S" Term         |            | "SA" Term.       |            | No. of Positions | Actuator Style | Dim. L       |
|---------------|--------|------------------|------------|------------------|------------|------------------|----------------|--------------|
|               |        | Tyco Electronics | Alcoswitch | Tyco Electronics | Alcoswitch |                  |                |              |
| 4-1437587-7   | ADPA02 | —                | ADPA02S    | —                | ADPA02SA   | 2                | Piano          | .278(7.06)   |
| 4-1437587-8   | ADPA04 | 5-1437587-0      | ADPA04S    | 5-1437587-1      | ADPA04SA   | 4                | Piano          | .478(12.14)  |
| 5-1437587-2   | ADPA05 | 5-1437587-3      | ADPA05S    | —                | ADPA05SA   | 5                | Piano          | .578(14.68)  |
| 5-1437587-4   | ADPA06 | 5-1437587-5      | ADPA06S    | 5-1437587-6      | ADPA06SA   | 6                | Piano          | .678(17.22)  |
| 5-1437587-7   | ADPA07 | —                | ADPA07S    | —                | ADPA07SA   | 7                | Piano          | .778(19.76)  |
| 5-1437587-8   | ADPA08 | 6-1437587-0      | ADPA08S    | —                | ADPA08SA   | 8                | Piano          | .878(22.30)  |
| —             | ADPA09 | —                | ADPA09S    | —                | ADPA09SA   | 9                | Piano          | .978(24.84)  |
| 6-1437587-1   | ADPA10 | —                | ADPA10S    | —                | ADPA10SA   | 10               | Piano          | 1.078(27.38) |

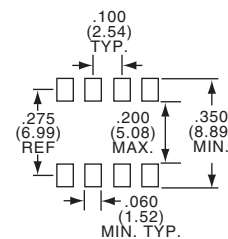
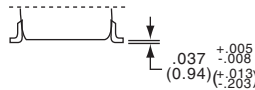
## TERMINATION OPTIONS



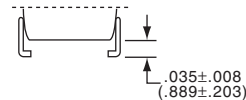
PC Termination



S Termination



SA Termination



## Hybrid DIP Switches, Through Hole and Surface Mount

### AUTO-INSERTABLE\* DIP SWITCH WITH INTEGRAL RESISTORS

\* Flush actuator versions are auto-insertable

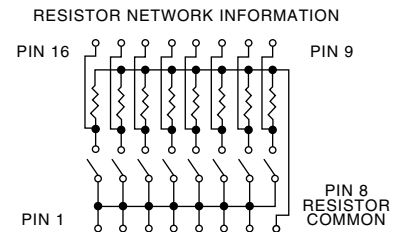
SEE PAGE A7 FOR PRODUCT SPECIFICATIONS

#### FEATURES:

All the features of the AD SERIES - PLUS

- Thick film pull-up resistors molded into the base of the switch.
- Replaces discrete resistor network plus DIP Switch with one component.
- Available with 3.3K ohms or 10K ohms resistors.
- Ceramic substrate allows wave soldering temperatures of 245°C for up to 30 seconds per MIL-STD 202, Method 210.
- Custom resistor values available.
- Shipped in off position.

| Rated Pwr. | Resistance       | Tolerance   | Max. Voltage |
|------------|------------------|-------------|--------------|
| 125 mW     | 3.3K Ohms (red)  | ±5% at 85°C | 24V          |
| 125 mW     | 10K Ohms (green) | ±5% at 85°C | 24V          |



| A                                                                                      |  | R                                                                                             |  |                               |  |  |  |                                                              |  |  |  | HOW TO ORDER |
|----------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------|--|-------------------------------|--|--|--|--------------------------------------------------------------|--|--|--|--------------|
| Series                                                                                 |  | Auto-Dip with Resistors                                                                       |  | No. of Positions              |  |  |  | Terminations                                                 |  |  |  |              |
| E = Extended<br>F = Flush Auto-Insertable<br>P = Piano (On Down)<br>PA = Piano (On Up) |  | See Pages A7-A9 for dimensional info.                                                         |  | 02, 04, 06, 08, 10            |  |  |  | Blank = PC<br>S = Outside "L" (SMT)<br>SA - Inside "L" (SMT) |  |  |  |              |
| Resistor Value                                                                         |  | 3.3K Ohms (Red case)<br>10K Ohms (Green case)<br>Custom values are available on special order |  | See Page A9 for board layout. |  |  |  |                                                              |  |  |  |              |

#### Example: ARF 06 10KST = Auto-Dip

Flush actuator  
06 positions  
10K ohms resistors  
Outside "L" terminations & tape seal