## Sealed Rotary DIP Switch A6C/A6CV

## Highly Reliable Subminiature DIP Switch

- A precise rotary cam and contact driving mechanism achieve compactness for high-precision mounting.
- Top-actuated and side-actuated models included in series.
- Insert-molded terminals and an O-ring sealed rotor combine to form a sealed construction equivalent to IP64 (IEC 60529) that prevents flux penetration and provides high contact reliability even in dusty locations and locations where water is used.
- Offset between terminal pins and side of case allows simple circuit inspection
- RoHS Compliant



## Ordering Information

| Output code | No. of positions | Part numbers |  |
| :---: | :---: | :---: | :---: |
|  |  | Top actuated | Side actuated |
|  |  |  |  |
| BCD 1-2-4-8 | 10 | A6C-10R(N) | A6CV-10R |
| BCD Hexadecimal 1-2-4-8 | 16 | A6C-16R(N) | A6CV-16R |

Important Note: Switches cannot be water-washed.

## Specifications

## Characteristics

| Switching capacity |  | 100 mA at 30 VDC |
| :---: | :---: | :---: |
| Minimum Permissible load |  | $10 \mu \mathrm{~A}$ at 3.5 VDC min. |
| Contact resistance |  | $200 \mathrm{M} \Omega$ max. |
| Insulation resistance |  | $100 \mathrm{M} \Omega$ min. (at 250 VDC) |
| Dielectric strength |  | 250 VAC for 1 minute between terminals |
| Operating torque |  | $100 \mathrm{~g}-\mathrm{cm}\left(0.98 \times 10^{-2} \mathrm{~N} . \mathrm{m}\right)$ max. |
| Vibration resistance | Malfunction durability | 10 to $55 \mathrm{~Hz}, 1.5 \mathrm{~mm}$ double amplitude |
| Shock resistance | Malfunction durability | $300 \mathrm{~m} / \mathrm{s}^{2}(30 \mathrm{G}) \mathrm{min}$. |
| Ambient operating temperature |  | $-20^{\circ}$ to $70^{\circ} \mathrm{C}$ at $60 \%$ RH max. (with no icing or condensation) |
| Ambient operating humidity |  | $35 \%$ to $95 \%$ RH (at 5 to $35^{\circ} \mathrm{C}$ ) |
| Service life | Mechanical | 10,000 detent operations min. |
|  | Electrical | 2,000 detent operations min. |
| Weight |  | Top-actuated: Approx. 0.4 g Side-actuated: Approx. 0.8 g |

Note: Data shown are of initial value.

## - Construction

The movable contactor is moved as the rotor rotates. The terminals are insert molded into the base. The rotor is secured by an O-ring and the case and the cover are made of plastic resin. Therefore, the internal mechanism is effectively sealed.


## Dimensions

Note: 1. All units are in millimeters unless otherwise indicated.
2. Unless otherwise specified, a tolerance of $\pm 0.4 \mathrm{~mm}$ applies to all dimensions.

## Top Actuated, 10 Positions



Side Actuated, 10 Positions

## A6CV-10R



Side Actuated, 16 Positions A6CV-16R


## Terminal arrangement (bottom view)



- Top Actuated, 16 Positions

A6C-16R (N)


Note: " $\bullet$ " indicates that the internal switch is ON.

10-position Models

| $\begin{array}{r}\text { Type } \\ \text { Terminal No. } \\ \text { Position }\end{array}$ | $\begin{array}{c}\text { BCD } \\ \text { 1-2-4-8 }\end{array}$ |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 4 | 8 |  |
|  |  |  |  |  |  |
| 2 | $\bullet$ |  |  |  |  |
| 3 |  | $\bullet$ |  |  |  |
| 4 | $\bullet$ | $\bullet$ |  |  |  |
| 5 |  |  | $\bullet$ |  |  |
| 6 | $\bullet$ |  | $\bullet$ |  |  |
| 7 |  | $\bullet$ | $\bullet$ |  |  |
| 8 | $\bullet$ | $\bullet$ | $\bullet$ |  |  |
| 9 |  |  |  | $\bullet$ |  |

16-position Models

$\qquad$
$\qquad$

$\qquad$






$\vdash---1-++-1-\vdash+---1-++-1-\vdash+--1-++-1-\vdash+--1-++-1-\vdash-1$















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## ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937 . To convert grams into ounces, multiply by 0.03527 .

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