### **DIP Switch** Right Angle Type





### **Application**

- Industrial Control
- Computer and Peripherals
- Variety of Function Controls

### RoHS **Compliant**

### **Specifications**

**Contact Rating** 

Terminal : Brass, Gold Plated

Cover : High Temperature PBT 15% - Red Stem : High Temperature PBT 15% - White

Contact : C7035 TM06, Gold Plated

Base : High Temperature PA66 + 20% GF - Molded Black

: Non-Switching: 100mA, 50V DC

Switching: 25mA, 24V DC

Contact Resistance : 50mΩ max.

:  $100M\Omega$  min. 500V DC Insulation Resistance Dielectric Strength : 500V AC/1 minute **Operating Force** : 1000gf max. (9.8N max.)

Travel : 2mm Operating Life : 2000 cycles **Operating Temperature** : -40°C to +85°C Storage Temperature : -40°C to +85°C Shelf Life : 6 Months

### **Test Sequence**

Properties	Item	Description	Test Conditions	Requirements
	1	Visual Examination	By visual examination check without any out pressure & testing.	There shall be no defects that affect the serviceability of the product.
Electric Performance	2	Contact Resistance	<ol> <li>To be measured between the two terminals associated with each switch pole.</li> <li>Measurements shall be made with a 1kHz shall current contact resistance meter.</li> </ol>	50mΩ Max.(initial)
	3	Insulation Resistance	500V DC, 1 minute ± 5 sec.	100MΩ Min.
	4	Dielectric withstanding Voltage	500V AC(50Hz or 60Hz) shall be applied between all the adjacent terminals and between the terminal and the frame for 1 minute.	There shall be no breakdown or flashover
Mechanical Performance	5	Operation Force	Applied in the direction of operation.  ON→OFF  OFF→ON	1000gf Max (9.8N Max)

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Properties	Item	Description	Test Conditions	Requirements	
	6	Stop Strength	A static load of 1 kgf(9.8N) is applied in th direction and pulling direction operated for of 15 seconds.		There shall be no sign of damage mechanically
			A static load of 5 kgf (49N) to apply on stem top position for a period of 15 seconds.		There shall be no sign of electrical function out of order or damage.
	7	Soldering Heat Resistance	Soldering Temperature :		
			TEMP	TIME	As shown in item 2~6
			260°C ±5°C	5 ±1 sec.	
Mechanical Performance	8	Vibration	Shall be vibrated in accordance with Methof MIL-STD-202F  1. Frequency: 10-55-10 Hz 1 min/cycle. 2. Direction: 3 vertical directions includir direction of operation. 3. Test Time: 2 hours each direction.	As shown in item 2~6	
	9	Shock	Shall be shocked in accordance with Meth condition A of MIL-STD-202F 1. Acceleration: 50G. 2. Action Time: 11 ± 1 m sec. (Testing E sides.) (Test cycle: 3 times in each di	As shown in item 2~6	
	10	Solderability	<ol> <li>NDP(L)-VSoldering Temperature:245 ±3°C Lead-Free solder: M705E JIS Z 3282 Class A (Tin 96.5%, Silver 3%, Copper 0.5%)</li> <li>Flux: 5-10 seconds.</li> <li>Duration of solder Immersion: 5 ±1 sec.</li> </ol>		No anti-soldering and the coverage of dipping into solder must more than 75% was requested.
Durability	11	Operation Life	Measurements shall be made following the test set forth below:  1. 25mA, 24V DC resistive load  2. Rate of Operation: 15~20 cycles/ minute  3. Cycle of Operation: 2000 cycles.		As shown in item 3,4     Contact Resistance:     100mΩ Max.     (Final-after test)
Weather Proof	12	Resistance Low Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made:  1. Temperature: -40°C ±3°C. 2. Time: 96 hours		As shown in item 2~6
	13	Resistance High Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made :  1. Temperature: 85°C ±2°C. 2. Time: 96 hours		1.As shown in item 3~6 2.Contact Resistance: 100mΩ Max.
	14	Humidity Resistance	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made:  1. Temperature: 40°C ±2°C  2. Relative Humidity:90~95%  3. Time: 96 hours		As shown in item 4,6     Contact Resistance:     100mΩ Max.     Insulation Resistance:     10MΩ Min.

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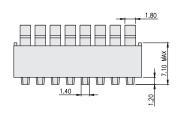
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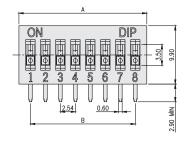


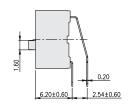
### **Soldering Conditions**

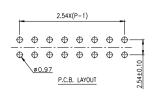
Manual Soldering				
Soldering Temperature	Max.350°C			
Continuous Soldering Time	Max. 5 seconds			

#### Diagram



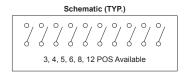






Dimensions : Millimetres

Part Number	No. of Pos.	"A" mm (Inches)	"B" mm (Inches)
MCNDA-03V	3	8.98 (0.354)	5.08 (0.2)
MCNDA-04V	4	11.52 (0.454)	7.62 (0.3)
MCNDA-05V	5	14.06 (0.554)	10.16 (0.4)
MCNDA-06V	6	16.6 (0.654)	12.7 (0.5)
MCNDA-08V	8	21.68 (0.854)	17.78 (0.7)
MCNDA-12V	12	31.84 (1.254)	27.94 (1.1)



Tolerances: 10mm Over ±0.2mm 10mm Below ±0.1mm

#### **Part Number Table**

Description	Part Number
DIP Switch, R/A, 3Pos, SPST-NO, Slide Actuation, Red, TH	MCNDA-03V
DIP Switch, R/A, 4Pos, SPST-NO, Slide Actuation, Red, TH	MCNDA-04V
DIP Switch, R/A, 5Pos, SPST-NO, Slide Actuation, Red, TH	MCNDA-05V
DIP Switch, R/A, 6Pos, SPST-NO, Slide Actuation, Red, TH	MCNDA-06V
DIP Switch, R/A, 8Pos, SPST-NO, Slide Actuation, Red, TH	MCNDA-08V
DIP Switch, R/A, 12Pos, SPST-NO, Slide Actuation, Red, TH	MCNDA-12V

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