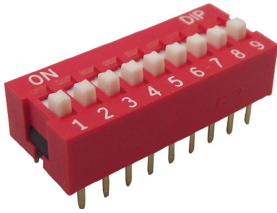


DIP Switch Slide Type



RoHS
Compliant



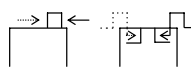
Application:

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

Specifications:

- Actuator : Thermoplastic PBT UL 94V-0 – White
- Cover : Thermoplastic PBT UL 94V-0 – Red
- Contact : Copper Alloy, Gold Plated
- Terminal : Brass, Gold Plated
- Base : Thermoplastic PA66 UL 94V-0 - Black
- Current Rating : Non-Switching: 100mA, 50V DC
Switching: 25mA, 24V DC
- Contact Resistance : 50mΩ max.
- Insulation Resistance : 100MΩ min. 500V DC
- 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
Electric Performance	1	Visual Examination	By visual examination check without any out pressure & testing.	There shall be no defects that affect the serviceability of the product.
	2	Contact Resistance	1. To be measured between the two terminals associated with each switch pole. 2. Measurements shall be made with a 1kHz shall current contact resistance meter.	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
	5	Capacitance	1 MHz ±10kHz	5pF Max.
Mechanical Performance	6	Operation Force	Applied in the direction of operation. ON→OFF OFF→ON 	1000gf Max (9.8N Max)

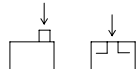
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DIP Switch

Slide Type



Properties	Item	Description	Test Conditions	Requirements	
Mechanical Performance	7	Stop Strength	<p>A static load of 1 kgf(9.8N) is applied in the operating direction and pulling direction operated for a period of 15 seconds.</p> <p>A static load of 5 kgf (49N) to apply on stem top position for a period of 15 seconds.</p> 	<p>There shall be no sign of damage mechanically</p> <p>There shall be no sign of electrical function out of order or damage</p>	
	8	Soldering Heat Resistance	Soldering Temperature:	As shown in item 2~6	
			TEMP		TIME
			260°C ±5°C		5 ±1 sec.
	(PCB is 1.6mm in thickness.)				
	9	Vibration	<p>Shall be vibrated in accordance with Method 201A of MIL-STD-202F</p> <ol style="list-style-type: none"> Frequency: 10-55-10 Hz 1 min/cycle. Direction: 3 vertical directions including the direction of operation. Test Time: 2 hours each direction. 	As shown in item 2~6	
10	Shock	<p>Shall be shocked in accordance with Method 213B condition A of MIL-STD-202F</p> <ol style="list-style-type: none"> Acceleration: 50G. Action Time : 11 ± 1 m sec. Testing Direction: 6 sides. Test cycle : 3 times in each direction) 	As shown in item 2~6		
11	Solderability	<ol style="list-style-type: none"> NDS(R)-V Soldering Temperature:245 ±3°C Lead-Free solder : M705E JIS Z 3282 Class A (Tin 96.5%, Silver 3%, Copper 0.5%) Flux: 5-10 seconds. Duration of solder Immersion: 5 ±1 sec. 	No anti-soldering and the coverage of dipping into solder must more than 75% was requested.		
Durability	12	Operation Life	<p>Measurements shall be made following the test set forth below:</p> <ol style="list-style-type: none"> 25mA, 24V DC resistive load Rate of Operation: 15~20 cycles/ minute Cycle of Operation: 2000 cycles. 	<ol style="list-style-type: none"> As shown in item 3,4 Contact Resistance: 100mΩ Max. (Final-after test) 	
Weather Proof	13	Resistance Low Temperature	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made:</p> <ol style="list-style-type: none"> Temperature : -40°C ±3°C. 2. Time: 96 hours 	As shown in item 2~6	
	14	Resistance High Temperature	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made :</p> <ol style="list-style-type: none"> Temperature : 85°C ±2°C. 2. Time: 96 hours 	<ol style="list-style-type: none"> As shown in item 3~6 Contact Resistance: 100mΩ Max. 	
	15	Humidity Resistance	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made :</p> <ol style="list-style-type: none"> Temperature : 40°C ±2°C Relative Humidity :90~95% Time: 96 hours 	<ol style="list-style-type: none"> As shown in item 4,6 Contact Resistance: 100mΩ Max. Insulation Resistance: 10MΩ Min. 	



DIP Switch Slide Type

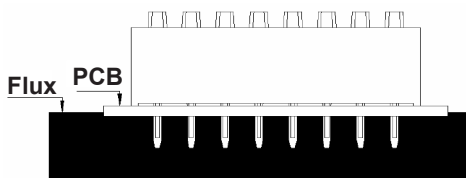


Soldering Conditions

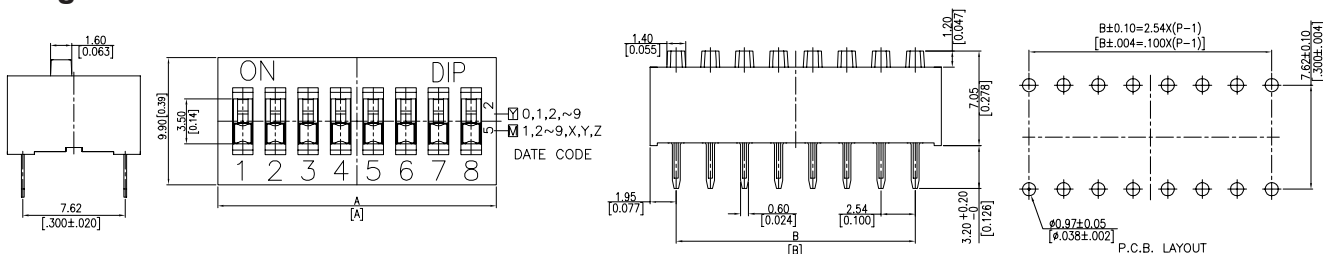
Manual Soldering	
Soldering Temperature	Max.350°C
Continuous Soldering Time	Max. 5 seconds

Precautions in Handling

- Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch.
- Don't clean the switch body except with top tape sealed type, which can only spray of cleaning method from top of s/w.
- There should be no flux rose over the surface of the PCB

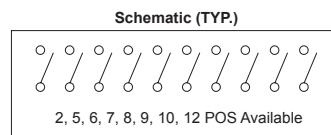


Diagram



Dimensions : Millimetres (Inches)

Part Number	No. of Pos.	"A" mm (Inches)	"B" mm (Inches)
MCNDS-02V	2	6.44 (0.254)	2.54 (0.1)
MCNDS-03V	3	8.98 (0.354)	5.08 (0.2)
MCNDS-04V	4	11.52 (0.454)	7.62 (0.3)
MCNDS-05V	5	14.06 (0.554)	10.16 (0.4)
MCNDS-06V	6	16.6 (0.654)	12.7 (0.5)
MCNDS-07V	7	19.14 (0.754)	15.24 (0.6)
MCNDS-08V	8	21.68 (0.854)	17.78 (0.7)
MCNDS-09V	9	24.22 (0.954)	20.32 (0.8)
MCNDS-10V	10	26.76 (1.054)	22.86 (0.9)
MCNDS-12V	12	31.84 (1.254)	27.94 (1.1)



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

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DIP Switch

Slide Type



Part Number Table

Description	Part Number
DIP Switch, Slide Type, 2Pos, SPST-NO, Raised Actuator, Red, TH	MCNDS-02V
DIP Switch, Slide Type, 3Pos, SPST-NO, Raised Actuator, Red, TH	MCNDS-03V
DIP Switch, Slide Type, 4Pos, SPST-NO, Raised Actuator, Red, TH	MCNDS-04V
DIP Switch, Slide Type, 5Pos, SPST-NO, Raised Actuator, Red, TH	MCNDS-05V
DIP Switch, Slide Type, 6Pos, SPST-NO, Raised Actuator, Red, TH	MCNDS-06V
DIP Switch, Slide Type, 7Pos, SPST-NO, Raised Actuator, Red, TH	MCNDS-07V
DIP Switch, Slide Type, 8Pos, SPST-NO, Raised Actuator, Red, TH	MCNDS-08V
DIP Switch, Slide Type, 9Pos, SPST-NO, Raised Actuator, Red, TH	MCNDS-09V
DIP Switch, Slide Type, 10Pos, SPST-NO, Raised Actuator, Red, TH	MCNDS-10V
DIP Switch, Slide Type, 12Pos, SPST-NO, Raised Actuator, Red, TH	MCNDS-12V

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