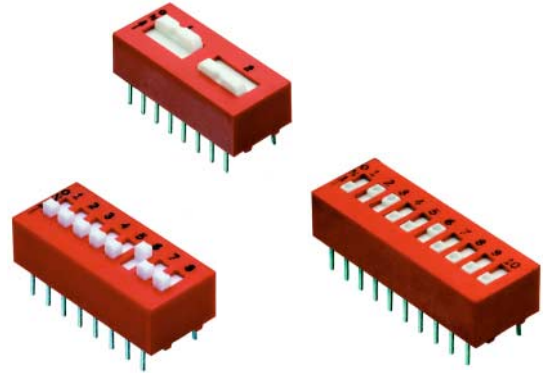
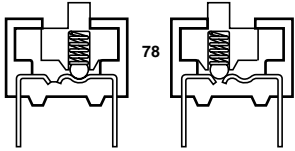


SERIES 78 SPST To 4PST Slide

FEATURES

- Raised and Recessed Slides
- SPST, 2PST, 3PST, 4PST
- Sealed Base Standard
- Spring and Ball Contact
- Top Tape Seal Option



DIP Switches

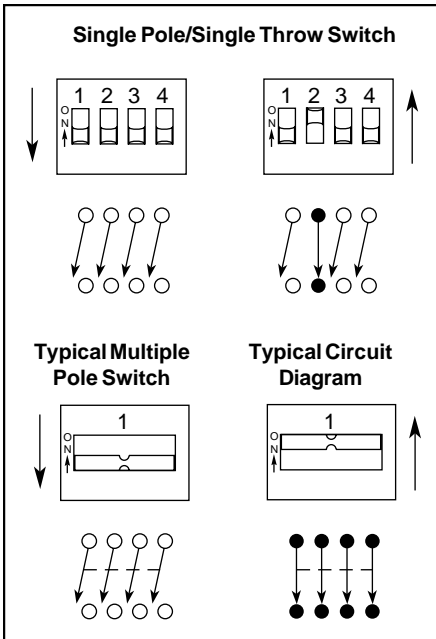
DIMENSIONS In inches (and millimeters)

Single Pole/Single Throw Switch in Raised and Recessed Slides

Note: Recessed slides have a dimple for tool actuation. For recessed slides, the .295 dimension does not apply.

Typical Multiple Pole Switch with Raised Slides (Switch shown here is 78H02, 4PST)

CIRCUITRY



ORDERING INFORMATION

Circuitry	No. of Positions	Length Inches	Length Metric	No./Tube	Raised Slides*	Recessed Slides*	
SPST	2	0.280"	7,1mm	35	78B02	78RB02	
	3	0.380"	9,7mm	27	78B03	78RB03	
	4	0.480"	12,2mm	21	78B04	78RB04	
	5	0.580"	14,7mm	18	78B05	78RB05	
	6	0.680"	17,3mm	15	78B06	78RB06	
	7	0.780"	19,8mm	13	78B07	78RB07	
	8	0.880"	22,4mm	12	78B08	78RB08	
	9	0.980"	24,9mm	10	78B09	78RB09	
	10	1.080"	27,4mm	9	78B10	78RB10	
	12	1.280"	32,5mm	8	78B12	78RB12	
	2PST	1	0.280"	7,1mm	35	78F01	Recessed Slides Not Available
		2	0.480"	12,2mm	21	78F02	
3		0.680"	17,3mm	15	78F03		
4		0.880"	22,4mm	12	78F04		
5		1.080"	27,4mm	9	78F05		
6		1.280"	32,5mm	8	78F06		
3PST	1	0.380"	9,7mm	27	78G01	Recessed Slides Not Available	
	2	0.680"	17,3mm	15	78G02		
	3	0.980"	24,9mm	10	78G03		
4PST	1	0.480"	12,2mm	21	78H01	Recessed Slides Not Available	
	2	0.880"	22,4mm	12	78H02		

For switches with 5, 6, 7, 8, or 10PST circuitry, contact Grayhill.

*A top tape seal is required for switches that are machine soldered or heavily cleaned after hand soldering. To order top seal versions, add "S" to the Grayhill part number.

ADDITIONAL INFORMATION

For Specifications see page B-16.
For other Options and Accessories, see pages B-20 and B-21.

Available from your local Grayhill Distributor.
For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.

SPECIFICATIONS: Standard and Military Qualified Styles

Ratings	76	78	90B
Mechanical Life: Operations per switch position	20,000	20,000	5,000
Make-and-break Current Rating: Operations per switch position at these resistive loads			
1 mA, 5 Vdc; 50 mA, 30 Vdc; or 150 mA, 30 Vdc:	10,000	10,000	—
10 mA, 30 Vdc; or 10 mA, 50 mVdc:	—	—	2,000
10 mA, 50 mVdc; or 25 mA, 24 Vdc; or 100 mA, 6 Vdc:	—	—	2,000
Contact Resistance: Initially:	≤ 30 mΩ	≤ 30 mΩ	≤ 20 mΩ
After life, at 10 mA, 50 mVdc, open circuit:	≤ 100 mΩ	≤ 100 mΩ	≤ 100 mΩ
Insulation Resistance:			
Minimum, at 100 Vdc between adjacent closed contacts and also across open switch contacts			
Initially (Mohms):	5,000	5,000	5,000
After life (Mohms):	1,000	1,000	1,000
Dielectric Strength: Minimum voltage (AC, RMS) measured between adjacent closed contacts and also across open switch contacts.			
Initially:	750 V	750 V	500 V
After life:	500 V	500 V	500 V
Current Carry Rating: Maximum rise of 20°C	5 A	4 A	3 A
Switch Capacitance: At 1 megahertz	2 pF	2 pF	2 pF
Operating Temperature Range:	-40°C to + 85°C	-40°C to + 85°C	-40°C to + 85°C
Storage Temperature Range:	-55°C to + 85°C	-55°C to + 85°C	-55°C to + 85°C

DIP Switches

Mechanical Ratings

Vibration Resistance: Per Method 204, Test Condition B, 1 mS opening (10 mS allowed)
Mechanical Shock: Per Method 213, Test Condition A. 1 mS opening (10 mS allowed)
Thermal Shock Resistance: Per specification; no failures; passes contact resistance.
Terminal Strength: Per specification
Thermal Aging: 1,000 hours at 85°C; no failures.

Environmental Ratings

Meets all requirements of MIL- S-83504. Where Grayhill performance is superior, the MIL spec is listed in parentheses.
Moisture Resistance: Per specification, Method 106.

Soldering Information

Series 90 MIDIP® and Series 76 recessed rocker (76RSB style) sealed switches have been tested to EIA Standard RS-448-2. Similar performance can be expected from other sealed Series 76 and 78 DIP switches.
Solderability: Per MIL-STD-202, Method 208
Resistance to Soldering Heat: 76RSB: Passes EIA Standard using two, four, and six second soldering time. 90: Per MIL-S-83504, six second test.
Fluxing: Per EIA RS-448-2 with flux touching switch body.
Cleaning: 76RSB, 90: Passes immersion test using water/detergent. Acceptable solutions include 1-1-1 trichlorethane, freon, (TF, TE, or TMS), isopropyl alcohol, detergent (140°F maximum). Terpene acceptable for Series 90 only. Solutions which are not recommended include acetone, methylene chloride, freon TMC.

Materials and Finishes

Shorting Member (Ball): Brass, gold-plated 10 microinches minimum over nickel barrier.
Base Contacts: Copper alloy, gold-plated 10 microinches minimum over nickel barrier.
Terminals: Copper alloy, solder-plated over nickel barrier.
Non-Conductive Parts: Thermoplastic (UL94V-O)
Potting Material: Epoxy, 76,78 only.
Protective Cover: 76,78, only-Polycarbonate.

Tape and Reel Packaging

Tape Seal:
 76, 78: Polyester film
 90: Polyimide film or foil
Tape Seal Integrity: Passes gross leak test using 125°C flourinert for 20 seconds minimum. Reference MIL-STD-202, Method 112.