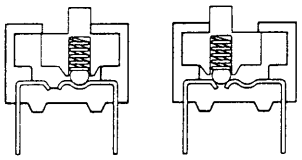
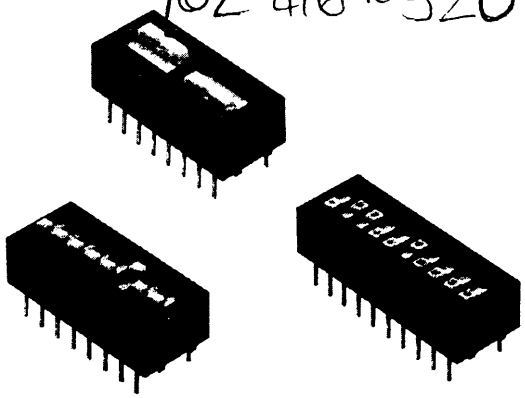
SERIES 78

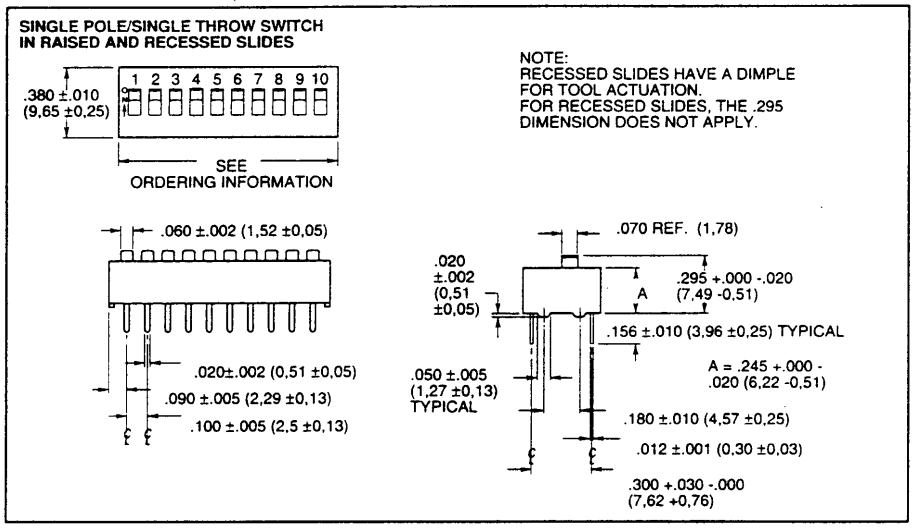


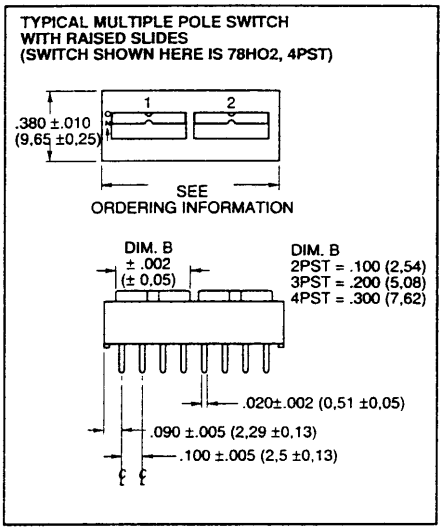
FEATURES

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

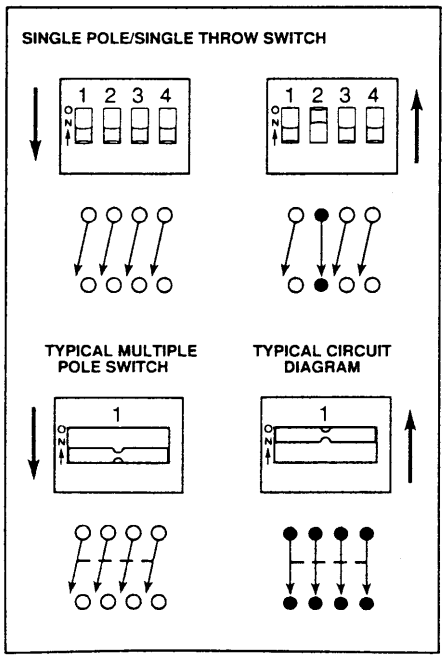


DIMENSIONS In inches (and millimeters)





CIRCUITRY



ORDERING INFORMATION*

Circuitry	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	
	2	0.480"	12,2mm	21	78F02	
	3	0.680"	17,3mm	15	78F03	
	4	0.880"	22,4mm	12	78F04	Recessed
	5	1.080"	27,4mm	9	78F05	Slides
3PST	1	0.380"	9,7mm	27	78G01	Not
	2	0.680"	17,3mm	15	78G02	Available
	3	0.980"	24,9mm	10	78G03	
4PST	1	0.480"	12,2mm	21	78H01	
	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.

SPECIFICATIONS

See page 16.

Available From A Local Grayhill Distributor
Priced competitively. For prices and discounts, contact a local Sales Office, an authorized local Distributor, or Grayhill. *See inside front cover.*

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	—	—	—
Contact Resistance: Initially	≤ 30 mΩ	≤ 30 mΩ	≤ 20 mΩ
After life, at 10 mA, 50 Vdc, 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 (megohms)	5,000	5,000	1,000
After life (megohms)	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:	-40°C to + 85°C	-40°C to + 85°C	-40°C to + 85°C
Storage Temperature:	-55°C to + 85°C	-55°C to + 85°C	-40°C to + 85°C
Processing Position: Switch is to be processed with all actuators in the closed (on) position as shipped.			

Environmental

Meets or surpasses all requirements of MIL- S-83504.

Vibration: Per method 204, Test Condition B 1 microsecond opening

Mechanical Shock: Per Method 213, Test Condition A. 1 microsecond opening

Moisture Resistance: Per specification, Method 106.

Thermal Shock: Per specification; no failures; passes contact resistance.

Terminal Strength: Per specification.

Thermal Aging: 1,000 hours at 85°C; no failures.

Machine Soldering

Series 90 and Series 76 recessed rocker 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.

Fluxing: Per EIA RS-448-2 with flux touching switch body.

Resistance to Soldering Heat: 76RSB—Passes EIA Standard using two, four, and six second soldering time. 90—Per MIL-S-83504, six second test.

Cleaning: 76RSB, 90—Passes immersion test using freon (TF or TE), and water/detergent.

Cleaning Solutions: 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.

Tape Seal Integrity: Passes gross leak test using 125°C flourinert for 20 seconds minimum. Reference MIL-STD-202, Method 112.

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 (90/10) plated 100 microinches minimum over nickel barrier. Gold plate is also available.

Non-Conductive Parts: Thermoplastic, UL94V–O rating.

Potting Material: 76,78 only—Epoxy.

Tape Seal: Series 76 and 78 polyester film, Series 90 polymide film