

## SERIES 79A

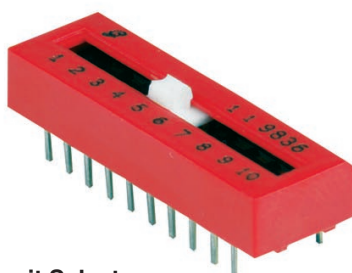
### Linear Action Circuit Selector

## SERIES 79C

### Linear Action Tap

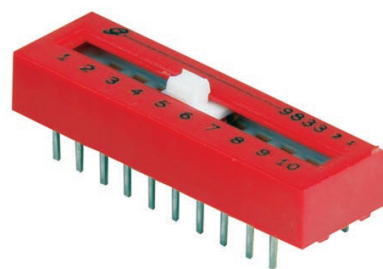
## FEATURES

- Single-Setting Programming
- Isolated or Bussed Circuits
- 10 Positions
- 125 mA, 6 Vdc, 2000 Cycles
- RoHS Compliant



### Circuit Selector

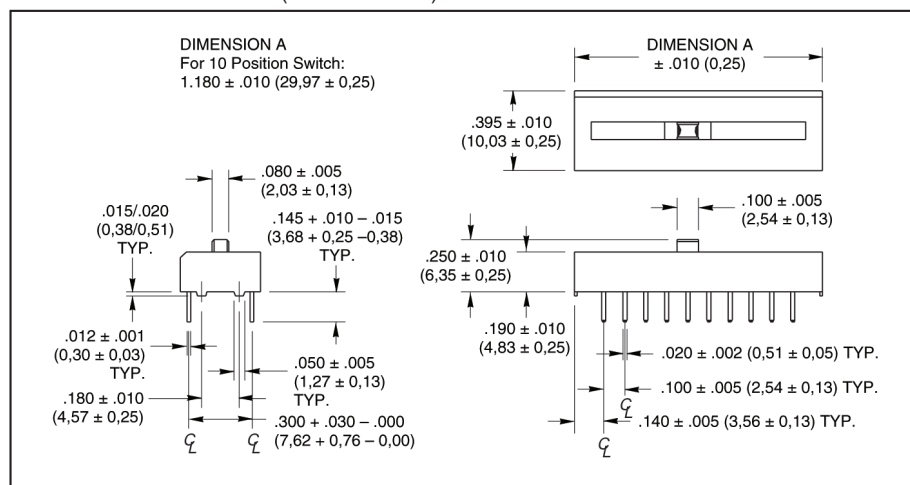
Each position is a single isolated circuit, which connects the two terminals across the switch package. The movable contact is non-shorting.



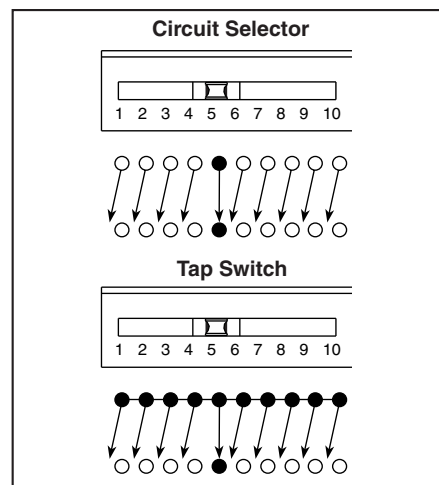
### Tap Switch

All contacts on one side of the switch are internally bussed for a common pole. Any terminal on that side may be used as a common, the others may be clipped. The movable contact is non-shorting.

## DIMENSIONS in inches (and millimeters)



## CIRCUITRY



## SPECIFICATIONS

### Electrical Ratings

**Make-and-break Current Rating:** 2,000 cycles at 10 mA, 50 mVdc; 2,000 cycles at 125 mA, 6 Vdc; 2,000 cycles at 50 mA, 30 Vdc.

**Contact Resistance:** (measured at 10 mA, 50 mVdc) Coded Switches: 60 mohms maximum initially. Other Switches: 50 mohms maximum initially. After Life: 100 mohms maximum

### Insulation Resistance (at 100 Vdc):

Between adjacent isolated contacts: Initial: 5,000 Mohms; 1,000 Mohms minimum after life. Across open contacts: Initial: 5,000 Mohms; 1,000 Mohms minimum after life.

**Dielectric Strength:** Between adjacent isolated contacts and also across open contacts. Initially: 750 Vac; 500 Vac after life

**Contact Carry Rating:** 2 Amps with a maximum contact temperature rise of 20°C

### Mechanical Ratings

**Mechanical Life:** 4,000 cycles maximum. Note: a cycle is one complete operation, back and forth through all switch positions.

**Vibration Resistance:** 10 to 2,000 Hz at 15G or 0.060" double amplitude, per MIL-STD-202F per MIL-5-83504; Method 213, Condition A. No damage and no contact openings exceeding 10 mS (Method 204, Test Condition B).

**Shock Resistance:** 509, 11 mS, half sine; no damage and no openings exceeding 10 mS (Method 213, Test Condition A).

### Environmental Rating

**Operating Temperature:** -40°C to +85°C

**Storage Temperature:** -55°C to +85°C

**Moisture Resistance:** 240 hours with temperature cycling and polarization, per MIL-STD-202F, Method 305

### Materials and Finishes

**Nonconductive Parts:** Plastic UL94V-O

**Shorting Arm:** Phosphor bronze, gold plate over nickel plate

**Base Contacts:** Copper alloy, gold plate over nickel plate

**Terminals:** Copper alloy, matte tin plated over nickel barrier.

**Potting Material:** Epoxy

### Tape and Seal Packaging

**Seal Strength:** Per MIL-STD-202, Method 112. 30 seconds at 125° hot Fluorocarbon

**Solderability:** Per MIL-STD-202, Method 208.

**Tape Seal:** Polyester film

**Available from your local Grayhill Distributor.**

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

## ORDERING INFORMATION

Number of Positions	Type of Circuit Code	Number per Tube	Part Number*
10	Circuit Selector	9	79A10T
10	Single Pole	9	79C10T

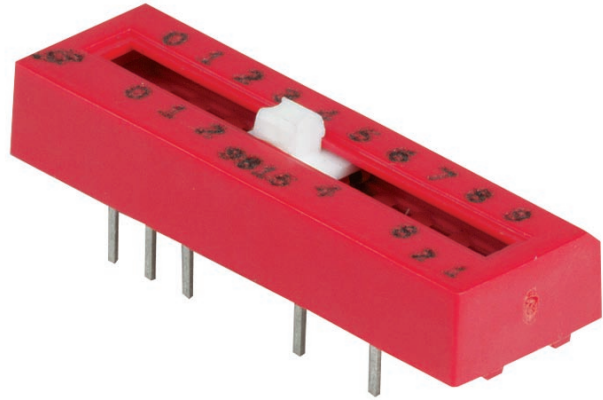
\*A top tape seal is required for switches that are machine soldered or heavily cleaned after hand soldering. To order top seal versions, add "S" before the "T" in the Grayhill part number.

## SERIES 79B

### Linear Action, Coded Output

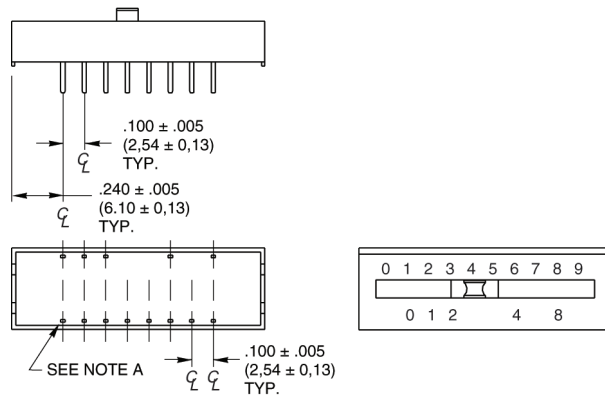
#### FEATURES

- Reliable Switching, Positive Detent
- Codes in BCD and Hexadecimal
- True Zero Output
- 10 Positions
- 2000 Cycle Life
- Up to 60,000 Detent Operations
- RoHS Compliant



#### DIMENSIONS In inches (and millimeters)

All dimensions not shown here are the same as those on the facing page.



NOTE A: All terminals on this side of the switch are bussed internally. Any one of them may be used as the common terminal.

#### CIRCUITRY

BINARY CODES									
SWITCH POSITIONS	0	1	2	3	4	5	6	7	8
	0	1	2	3	4	5	6	7	8
	0	1	2	3	4	5	6	7	8
	0	1	2	3	4	5	6	7	8
	0	1	2	3	4	5	6	7	8
	0	1	2	3	4	5	6	7	8
	0	1	2	3	4	5	6	7	8
	0	1	2	3	4	5	6	7	8
	0	1	2	3	4	5	6	7	8
	0	1	2	3	4	5	6	7	8
TERMINAL									

Dot indicates contact made between contact and output terminal.

## SPECIFICATIONS

### Electrical Ratings

**Make-and-break Current Rating:** 2,000 cycles at 10 mA, 50 mVdc; 2,000 cycles at 125 mA, 6 Vdc; 2,000 cycles at 50 mA, 30 Vdc.

**Contact Resistance:** 100 mohms maximum after life, measured at 10 mA dc and 50 mV (open circuit). Initial values are 60 mohms maximum for coded switches.

#### Insulation Resistance (at 100 Vdc):

Between adjacent isolated contacts: Initial: 5,000 Mohms minimum; After Life: 1,000 Mohms minimum

Across open contacts: Initial: 5,000 Mohms minimum; After Life: 1,000 Mohms minimum

**Dielectric Strength:** Between adjacent isolated contacts and across open contacts. Initial: 750 Vac; After Life: 500 Vac

**Contact Carry Rating:** 2 amps with a maximum contact temperature rise of 20°C.

### Mechanical Ratings

**Mechanical Life:** 4,000 cycles maximum. Note: a cycle is one complete operation, back and forth through all switch positions.

**Vibration Resistance:** 10 to 2,000 Hz at 15G or 0.060" double amplitude; no damage and no contact openings exceeding 10 mS (Method 204, Test Condition B).

**Shock Resistance:** 509, 11 mS, half sine; no damage and no openings exceeding 10 microseconds (Method 213, Test Condition A).

### Environmental Ratings

Refer to MIL-STD-202F per MIL-S-83504

**Operating Temperature:** -40°C to +85°C

**Storage Temperature:** -55°C to +85°C

**Moisture Resistance:** 240 hours with temperature cycling and polarization, per MIL-STD-202F, Method 305

### Materials and Finishes

**Nonconductive Parts:** Plastic UL94V-O

**Shorting Arm:** Phosphor bronze, gold plate over nickel plate

**Base Contacts:** Copper alloy, gold plate over nickel plate

**Terminals:** Copper alloy, matte tin plated over nickel barrier

**Potting Material:** Epoxy

### Tape Seal and Packaging

**Tape Seal:** Polyester film

## ORDERING INFORMATION

Number of Positions	Type of Circuit Code	Number per Tube	Part Number*
10	Binary Code Decimal	9	79B10T

\*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" before the "T" in the Grayhill part number.

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