



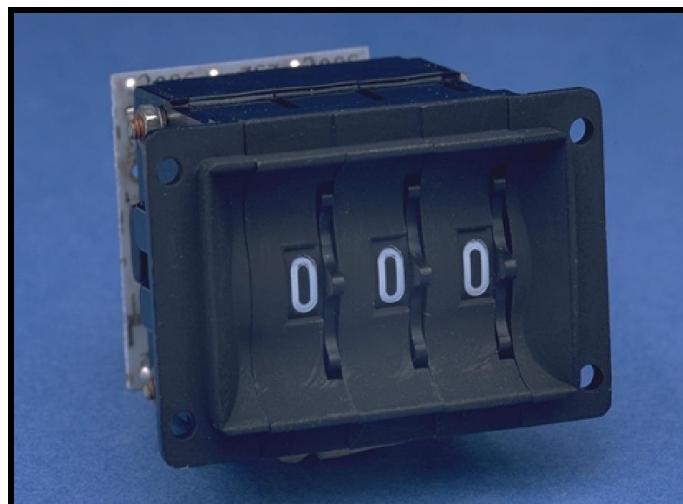
THUMB POT™ SERIES

THUMB POT VOLTAGE DIVIDERS

EECO's THUMB POT™ is a digital voltage divider which allows the user to set varying voltages while maintaining a constant resistance within the circuit.

Sharing many of the features and options of our 1776 and 1976 Series switches, the **THUMB POT** is available in 2, 3, or 4 decade models, with resistance values from 1,000 to 100,000 ohms. The **THUMB POT** is based on a proprietary circuit developed by EECO, using matched resistor pairs. Unlike rotary or dial potentiometers, the **THUMB POT** offers exact setting repeatability, with setting accuracy as precise as $\pm 0.05\%$ of full scale voltage.

The **THUMB POT** is covered by EECO's one-year warranty.



SPECIFICATIONS

MECHANICAL

No. of Switching Positions	10
Life	Minimum 1,000,000 Detents @ 10 mA, 5VDC, +25°C
Tangential Operating Force	5-18 Oz.
Weight	(Approx.) 0.4 Oz Per Decade

ELECTRICAL

Standard Resistance Range	1,000 to 100,000Ω
Standard Resistance Tolerance	$\pm 1\%$
Setting Accuracy	To 0.05% of Full Scale Voltage
Standard Input Voltages (Function Of Input Impedance)	
1,000 To 5,000 Ω Input Impedance	16 Volts @ 25°C
10,000 To 50,000 Ω Input Impedance	50 Volts @ 25°C
100,000 Ω Input Impedance	150 Volts @ 25°C
Insulation Resistance	1,000M Ω Minimum
Dielectric Withstanding Voltage	500 VAC (RMS)

ENVIRONMENTAL

Operating Temperature	-20°C To +75°C
Seal	Dust Resistant

MATERIALS

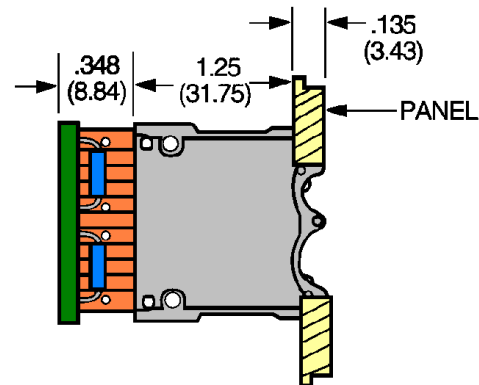
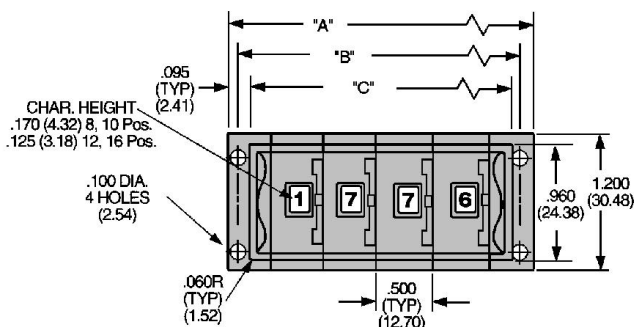
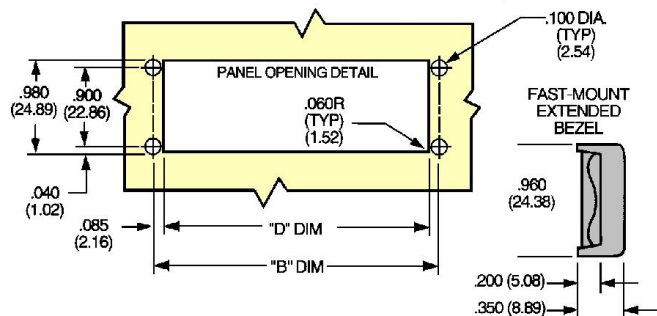
Plastic	Polycarbonate per Federal Spec LP-393A
Metals	Corrosion Resistant
Circuit Disc - Material	Glass Epoxy
Plating	Gold Over Nickel Plating
Terminals	Copper Alloy, Plated for Soldering
Contacts	Copper Alloy, Gold Over Nickel Plating

RoHS COMPLIANCE

EECO Switch is fully committed to complying with the European Lead-Free and RoHS directives. Consult the factory for the RoHS status of this product.

OUTLINE DIMENSIONS AND PANEL MOUNTING INFORMATION

1776 MODEL

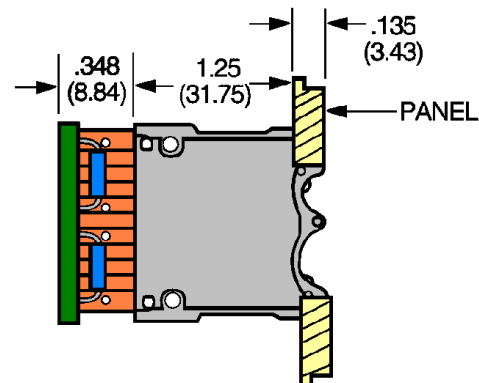
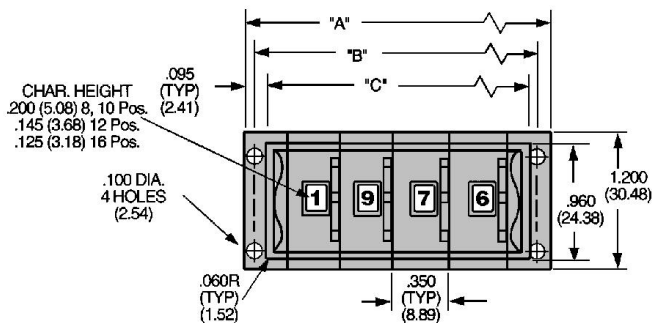
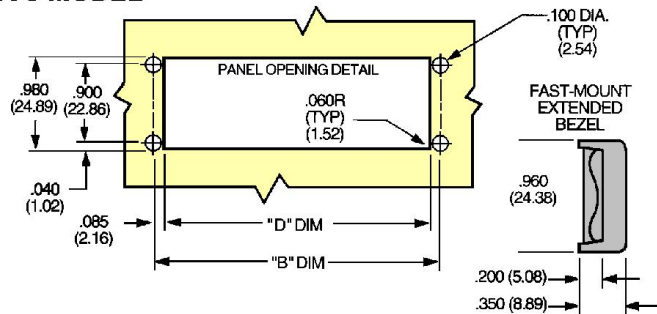


MOUNTING DIMENSIONS 76 SERIES

NO. OF DECADES	A	B	C	D
2	1.76 (44.7)	1.59 (40.4)	1.40 (35.6)	1.42 (36.1)
3	2.26 (57.4)	2.09 (53.1)	1.90 (48.3)	1.92 (48.8)
4	2.76 (70.1)	2.59 (65.8)	2.40 (61.0)	2.42 (61.5)

Assembly dimensions may exhibit expansion of 0.003" per station before installation, but will adjust to recommended panel dimensions shown once installed.
Tolerances .XXX ± 0.010", .XX ± 0.030.
() Metric equivalents in mm.

1976 MODEL

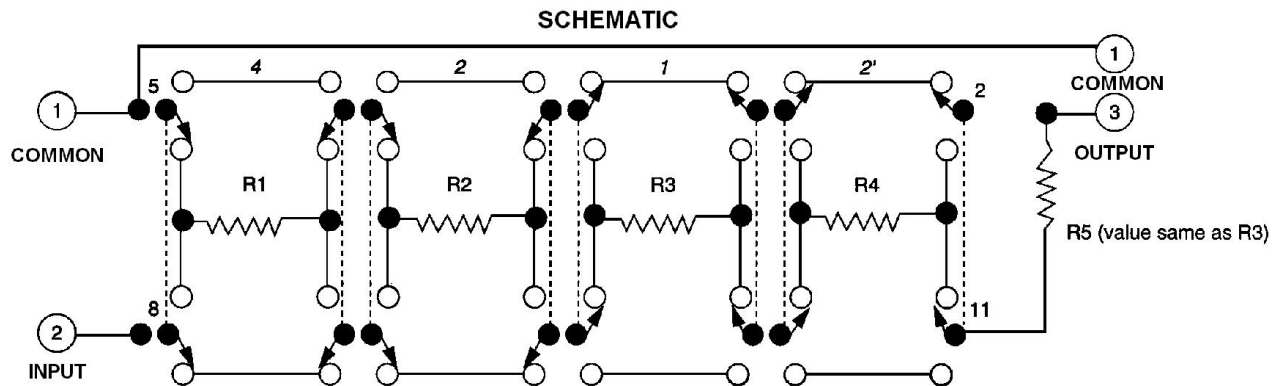


MOUNTING DIMENSIONS 96 SERIES

NO. OF DECADES	A	B	C	D
2	1.46 (37.1)	1.29 (32.8)	1.10 (27.9)	1.12 (28.4)
3	1.81 (46.0)	1.64 (41.7)	1.45 (36.8)	1.47 (37.3)
4	2.16 (54.9)	1.99 (50.5)	1.80 (45.7)	1.82 (46.2)

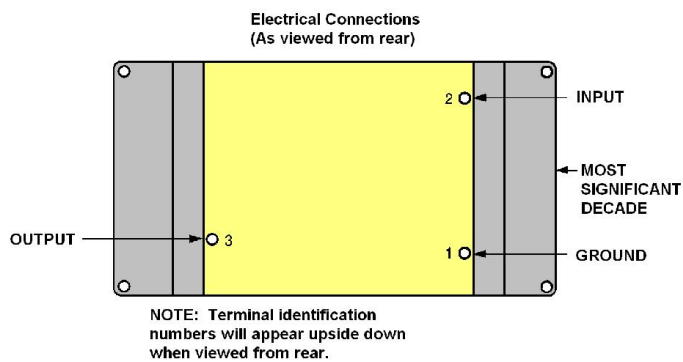
Assembly dimensions may exhibit expansion of 0.003" per station before installation, but will adjust to recommended panel dimensions shown once installed.
Tolerances .XXX ± 0.010", .XX ± 0.030.
() Metric equivalents in mm.

SCHEMATIC AND TERMINAL INFORMATION



Dial set at position 6

Schematic pin numbers in circles are located on motherboard. Other numbers refer to switch terminals. Italic numbers refer to resistor values.



S21

EECO Thumbpot Voltage Divider 10 Position								
D I A L	Resistors in circuit between terminals 2 and 5				Resistors in circuit between terminals 8 and 11			
	4	2	1	2'	4	2	1	2''
	R1	R2	R3	R4	R1	R2	R3	R4
0					●	●	●	●
1			●		●	●		●
2		●			●		●	●
3			●	●	●	●		
4	●					●	●	●
5	●		●			●		●
6	●	●					●	●
7	●	●	●					●
8	●	●		●			●	
9	●	●	●	●				

OPTIONS AND ORDERING INFORMATION

AVAILABLE OPTIONS

D	Decimal Point
G	Gloss Finish (Standard)
M	Spray Matte Finish
P	+/- Rotor Marking
T	Alphabet Marking
U	EMI/RFI Shielding
Y	Fast Mount Hardware (applies to assembly part number)
	Stop Pins
	Consult Factory for Custom Rotor Marking or Other Special Requests

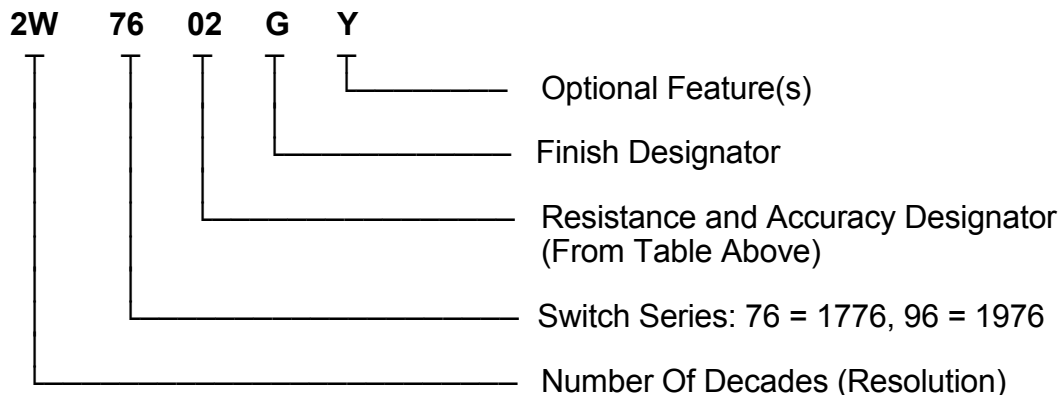
INPUT RESISTANCE	RESISTANCE AND ACCURACY DESIGNATORS				
	SETTING ACCURACY (AS % OF FULL SCALE INPUT VOLTAGE)				
	1%	.5%	.25%†	.10%†	.05%†
100,000 $\Omega \pm 1\%$	01	05	09	13	17
50,000 $\Omega \pm 1\%$	29	32	35	38	41
10,000 $\Omega \pm 1\%$	02	06	10	14	18
5,000 $\Omega \pm 1\%$	30	33	36	39	42
1,000 $\Omega \pm 1\%$	03 ¹	07 ¹	11 ¹	15 ¹	19 ¹

DEVICE RESOLUTION	PART NO. PREFIX
1.0 (2 Decades)	2W76 or 2W96
0.1 (3 Decades)	3W76 or 3W96
0.01 (4 Decades)	4W76 or 4W96

THUMBPOW ORDERING NOTES

- ¹ Not available on 4 decade models.
- † Models are limited availability. Consult factory for additional information.
- Values shown above are for linearity as defined by VRCL-P-100A. "Terminal-based", "Zero-based" and "Independent" linearity specifications are available. Consult factory for additional information.

ORDERING EXAMPLE – THUMBPOW ASSEMBLY



Certain combinations of options may require a special part number. Consult factory for additional information.

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