



2000 SERIES

THUMBWHEEL SWITCHES

EECO's 2000 Series is ideal for demanding industrial control applications. The large size of the switch makes it easy to operate, even if the operator is wearing gloves.

The *2000 Series* is available with an optional internal O-ring seal for use in harsh environments. The *2000 Series* switch is 500" wide and features PCB termination designed to accept a variety of edge connectors, and also allows direct wiring. Other options such as lighted indicators, custom legends, stops and diode provisions make the *2000 Series* an excellent choice for heavy-duty industrial control applications demanding high reliability. The *2000 Series* is covered by EECO's one-year warranty.



SPECIFICATIONS

MECHANICAL

No. of Switching Positions	8, 10, 12, 16
Life	Minimum 1,000,000 Detents
Tangential Operating Force	6-18 Oz
Weight	0.8 Oz.

ELECTRICAL

Maximum Electrical Current, Non-Switching	3A Per Common Terminal
Maximum Rated Load, Switching	125 mA at 28 VDC or 115 VAC
Minimum Switching Load	0.01 mA at 0.02 VDC
Contact Resistance (Initial)	100 mΩ Maximum
(After Life)	200 mΩ Maximum
Insulation Resistance	1,000 MΩ Minimum
Dielectric Withstanding Voltage	1000 VAC (RMS) Single Pole Models 500 VAC (RMS) Double Pole Models

ENVIRONMENTAL

Operating Temperature	-40°C To +75°C
Storage Temperature	-65°C To +100°C
Seal	Optional O-Ring

MATERIALS

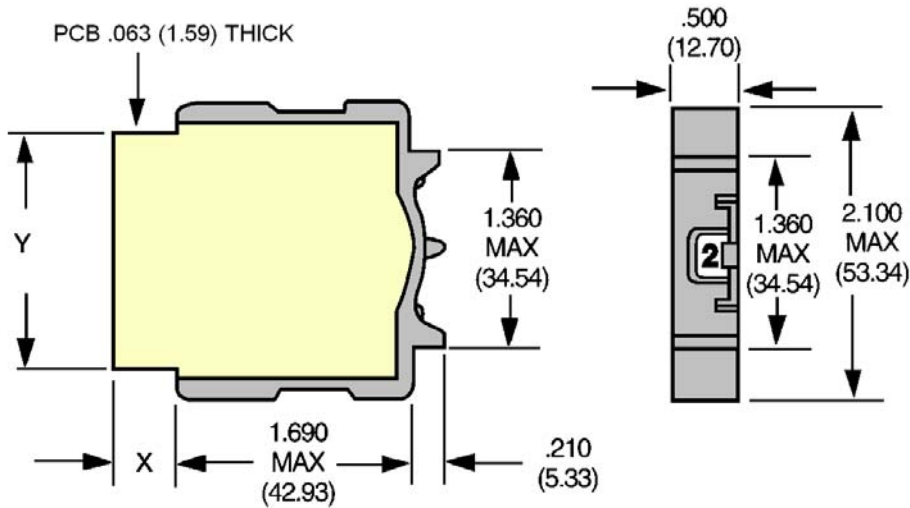
Plastic	Polycarbonate per Federal Spec LP-393A
Metals	Corrosion Resistant
Circuit Board - Material	0.063" Glass Epoxy
Plating	Gold Over Nickel Plating
Terminals	Copper Alloy, Plated for Soldering
Contacts	Bifurcated Copper Alloy, Gold Over Nickel Plating
O-Ring	Buna-N

RoHS COMPLIANCE

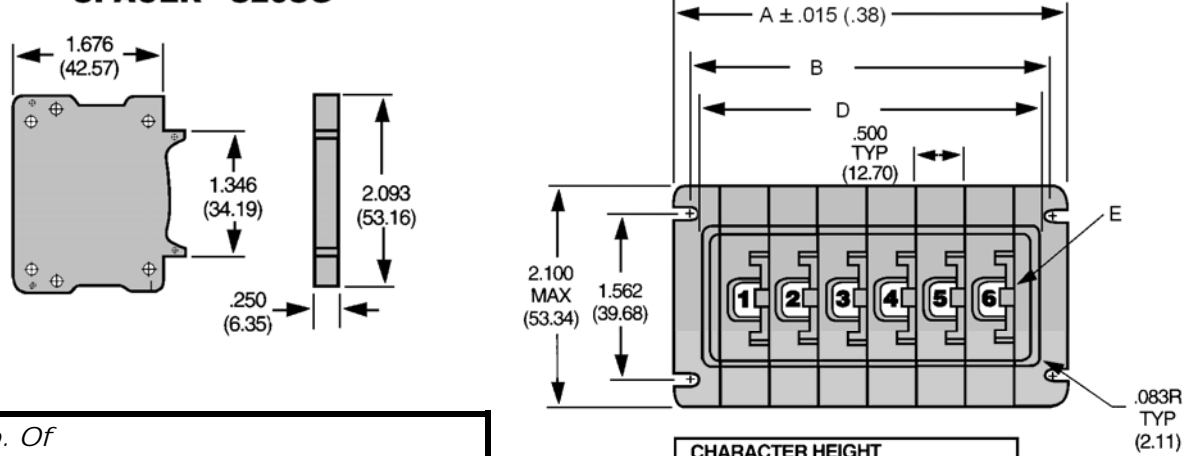
EECO Switch is fully committed to complying with the European Lead-Free and RoHS directives. The 2000 series is lead free and RoHS compliant.

2000 Series

OUTLINE DIMENSIONS

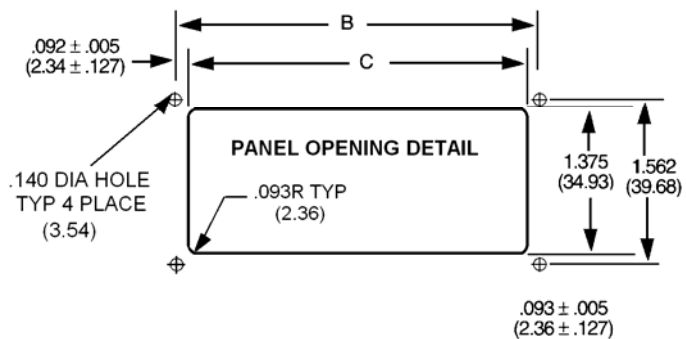


SPACER - S20SG



CHARACTER HEIGHT Dimension E	
.250 (6.35)	8, 10 & 12 Position
.170 (4.32)	16 Position

No. Of Stations	A	B	C	D
1	1.38 (34.9)	1.08 (27.4)	0.89 (22.6)	0.88 (22.4)
2	1.88 (47.6)	1.58 (40.1)	1.39 (35.3)	1.38 (35.1)
3	2.38 (60.3)	2.08 (52.8)	1.89 (48.0)	1.88 (47.8)
4	2.88 (73.0)	2.58 (65.5)	2.39 (60.7)	2.38 (60.5)
5	3.38 (85.7)	3.08 (78.2)	2.89 (73.4)	2.88 (73.2)
6	3.88 (98.4)	3.58 (90.9)	3.39 (86.1)	3.38 (85.9)
7	4.38 (111.1)	4.08 (103.6)	3.89 (98.8)	3.88 (98.6)
8	4.88 (123.8)	4.58 (116.3)	4.39 (111.5)	4.38 (111.3)
9	5.38 (136.5)	5.08 (129.0)	4.89 (124.2)	4.88 (124.0)
10	5.88 (149.2)	5.58 (141.7)	5.39 (136.9)	5.38 (136.7)



All dimensions in inches.
Tolerances .XXX ± .010, .XX ± .03 unless noted.
() Metric equivalents in mm.

Assembly may exhibit an expansion of .003" per station before installation but will adjust to recommended panel cutout when installed.
Spacers count as stations. Subtract .250" from each dimension A through D when spacers are used.
Add .500" to dimensions A through D for each additional station over 10.

2000 Series

TRUTH TABLE	PART NUMBER	PART DESCRIPTION	NUMBER OF POSITIONS	PCB TAIL DIMENSIONS		TERMINATION	
				X	Y	† TYPE	CONNECTOR CODE*
A01	2284G	1 Pole 8 Pos. Decimal	8	0.34	1.71	E	C
A02	2229G	1 Pole Decimal	10	0.34	2.02	E	E
A03	2281G	1 Pole 12 Pos. Decimal	12	0.45	2.33	E
A04	2283G	1 Pole 16 Pos. Decimal	16	0.34	1.71	E	D
A05	2217G	2 Pole Decimal	10	1.40	2.02	E	N/A
B02	2214G	1 Pole BCD w/Diode Prov.	10	0.98	1.08	E	C
B02	2228G	1 Pole BCD	10	0.34	1.08	E	A
B03	2262G	1 Pole BCD (1-10 Marking)	10	0.34	1.08	E	A
B04	2245G	1 Pole 12 Pos. Binary w/Diode Prov.	12	0.98	1.08	W
B05	2249G	1 Pole BCD Odd Bit Parity Diode Prov.	10	0.98	1.08	E	A
B06	2227G	1 Pole BCD w/Even Bit Parity	10	0.34	1.08	E	A
C02	2205G	1 Pole BCD w/Compl Diode Prov.	10	0.98	1.71	E	C
C02	2206G	1 Pole BCD w/Complement	10	0.98	1.71	E	C
C03	2263G	1 Pole BCD w/Compl. Diode Prov. (1-10 Marking)	10	0.98	1.71	E	C
C06	2280G	1 Pole BCH w/Compl. Mkd 0-15	16	0.34	1.71	E	C
C06	2285G	1 Pole BCH w/Compl. Mkd 0-9-A-F	16	0.34	1.71	E	C
C06	2286G	1 Pole BCH w/Diode Prov. Mkd 0-15	16	0.98	1.71	E	C
C06	2296G	1 Pole BCH w/Diode Prov.	16	0.98	1.71	E	C
C07	2274G	1 Pole Excess 3 w/Complement	10	0.34	1.71	E	C
C08	2210G	1 Pole 9's Complement w/Complement	10	0.34	1.71	E	C
C08	2250G	1 Pole 9's Compl. w/Compl Diode Prov.	10	0.98	1.71	E	C
C09	2220G	1 Pole 10's Complement w/Compl.	10	0.34	1.71	E	C
D02	2258G	2 Pole BCD w/Separate Common to Not True Bits	10	0.34	1.71	E	C
D03	2276G	2 Pole BCD Diode Prov.	10	0.98	1.71	E	C
D04	2289G	2 Pole BCH w/Compl. Mkd 0-15	16	0.34	1.71	E	C
D04	2299G	2 Pole BCH w/Compl. Mkd 0-9-A-F	16	0.34	1.71	E	C
D06	2287G	2 Pole BCH w/Separate Common To Not True Bits Mkd 0-9-A-F	16	0.34	1.71	E	C
D06	2288G	2 Pole BCH w/Separate Common To Not True Bits Mkd 0-15	16	0.34	1.71	E	C
E01	2235G	2 Pole BCO w/Complement	8	0.34	1.71	E	C
E02	2257G	2 Pole BCD w/Complement	10	0.34	1.71	E	C
F01	2233G	2 Pole BCD and Decimal	10	0.34	1.71	C	D
S01	2264G	2 Pole 2 Position Marked +/-	2	0.34	1.08	E	A
S01	2266G	2 Pole 2 Position Marked 0-1	2	0.34	1.08	E	A
S05	2208G	Biquinary	10	0.34	1.08	W
S06	2253G	NOT/NOR (All Shorted But One) Decimal	12	0.34	2.33	E
S07	2234G	Incremental Voltage Divider	10	1.79	1.08	E	A
S08	2216G	Wolff-Poggendorf Voltage Divider	10	1.79	1.08	E	A
S09	2272G	1-2-3-4 Capacitor Decade	10	1.88	1.08	E	A
S10	2268G	1-2-3-6 Resistor Decade	10	2.08	1.08	E	A
S11	2223G	7 Bar Indicator	10	0.34	1.71	C	C
S12	2278G	Kelvin-Varley Voltage Divider Make Before Break	10	1.41	2.02	W	

† **Type Codes:** **C**-Connector Only **E**-Either Connector Or Direct Wire **W**-Direct Wire Only

Replace "G" with "M" in part number for spray matte finish.

2000 Series

AVAILABLE OPTIONS

<i>A</i>	Diodes Installed Anode To Common
<i>C</i>	Diodes Installed Cathode To Common
<i>D</i>	Decimal Point
<i>K</i>	Lighted Decimal Point
<i>L</i>	Lighted Switch Legend. Black hot-stamped character on white translucent background. 5 Volt lamp standard, consult factory for other voltages
<i>M</i>	Spray Matte Finish
<i>P</i>	+/- Rotor Marking
<i>R</i>	Reverse Lighting. Illuminated white character on black background
<i>S</i>	Sealed Switch
<i>T</i>	Alphabet Marking
<i>U</i>	EMI/RFI Shielding
	Stop Pins
	Consult Factory for Custom Rotor Marking, Custom Output Codes and Other Special Requests

2000 HARDWARE AND ACCESSORIES

19SG-X Standard Hardware Kit: Endpieces, Threaded Rods, Screws, Nuts and Washers

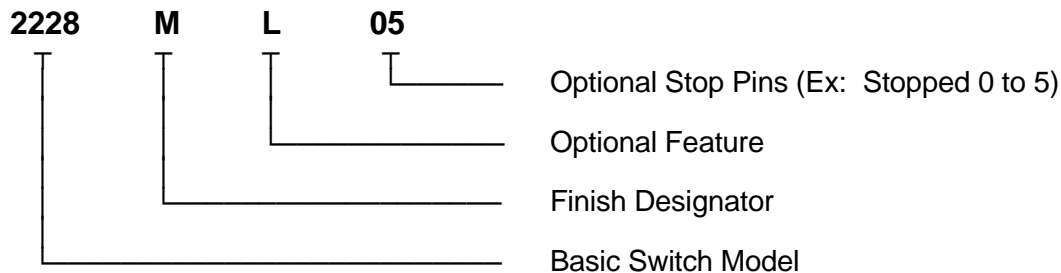
NOTE: REPLACE "G" WITH "M" TO ORDER SPRAY MATTE HARDWARE
REPLACE "X" WITH THE APPROPRIATE NUMBER OF SWITCHES IN ASSEMBLY

CATALOG NUMBER	DESCRIPTION	PART NUMBER
E20SG	Endpiece Gloss	197788-01
E20SM	Endpiece Matte	197788-02
S20SG	.250" Spacer Gloss	197787-01
S20SM	.250" Spacer Matte	197787-02

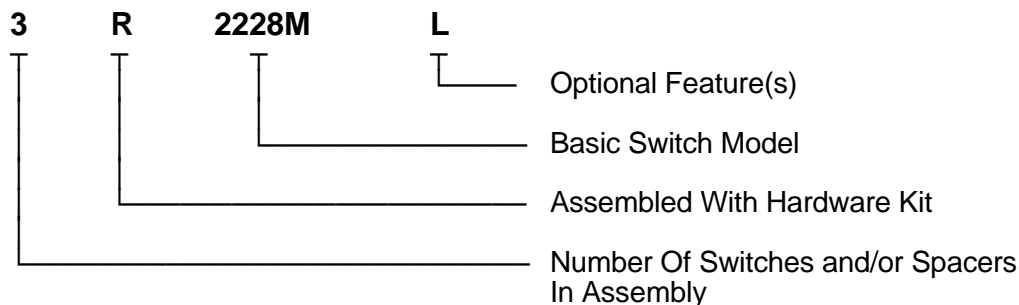
* CONNECTOR CODE	
LETTER	CINCH PART NUMBER
A	50-6A-20
B	50-12A-30
C	50-10A-20
D	50-20A-30
E	50-12A-20

NOTE: Cinch connector information is supplied for reference only. Information shown is deemed accurate but not guaranteed. EECO does not supply Cinch or other connectors for this product. Consult an appropriate connector supplier for additional information.

ORDERING EXAMPLE - SWITCH



ORDERING EXAMPLE



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

EECO SWITCH STANDARD TRUTH TABLES

EECO Switch offers over 60 binary, decimal, and special purpose electrical output codes. The code designations (e.g. B02) are common to all EECO Switch products. Not all codes are offered in every switch series.

Using the truth tables on the following pages, select the electrical code that suits your circuit. Then select the corresponding 2000 Series part number from the table on page 4. The most common output codes are highlighted in *red*

Contact the factory for additional information and availability of other codes and options.

SINGLE POLE DECIMAL CODES

A01

OCTAL 1 Pole 8 Position	
D I A	Common (C) connected to terminals indicated
L	0 1 2 3 4 5 6 7
0	●
1	●
2	●
3	●
4	●
5	●
6	●
7	●

A02

DECIMAL 1 Pole 10 Position	
D I A	Common (C) connected to terminals indicated
L	0 1 2 3 4 5 6 7 8 9
0	●
1	●
2	●
3	●
4	●
5	●
6	●
7	●
8	●
9	●

A03

1 Pole 12 Position	
D I A	Common (C) connected to terminals indicated
L	0 1 2 3 4 5 6 7 8 9 10 11
0	●
1	●
2	●
3	●
4	●
5	●
6	●
7	●
8	●
9	●
10	●
11	●

A04

1 Pole 16 Position	
D I A	Common (C) connected to terminals indicated
L	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
0	●
1	●
2	●
3	●
4	●
5	●
6	●
7	●
8	●
9	●
10	●
11	●
12	●
13	●
14	●
15	●

DOUBLE POLE DECIMAL CODES

A05

DECIMAL 2 Pole 10 Position	
D I A	Common (C) connected to terminals indicated
L	0 1 2 3 4 5 6 7 8 9
0	●
1	●
2	●
3	●
4	●
5	●
6	●
7	●
8	●
9	●

A06

DECIMAL 2 Pole 10 Position One Pole Shorting One Pole Non-Shorting	
D I A	Common (C) connected to terminals indicated
L	0 1 2 3 4 5 6 7 8 9
0	●
1	●
2	●
3	●
4	●
5	●
6	●
7	●
8	●
9	●

A07

DECIMAL 1 Pole 12 Position	
D I A	Common (C) connected to terminals indicated
L	0 1 2 3 4 5 6 7 8 9 10 11
0	●
1	●
2	●
3	●
4	●
5	●
6	●
7	●
8	●
9	●
10	●
11	●

A08

2 Pole 5 Position	
D I A	Common (C) and (C') connected to terminals indicated
L	0 1 2 3 4
0	●
1	●
2	●
3	●
4	●

B01

BCD 1 Pole 8 Position							
D	Common (C) connected to terminals indicated						
I							
A							
L	1	2	4				
0							
1	●						
2		●					
3	●	●					
4			●				
5				●			
6	●	●					
7	●	●	●				

B02

BCD 1 Pole 10 Position									
D	Common (C) connected to terminals indicated								
I									
A									
L	1	2	4	8					
0									
1	●								
2		●							
3	●	●							
4			●						
5	●			●					
6	●	●							
7	●	●	●						
8				●					
9	●				●				

B03

BCD, binary 10 at 0 1 Pole 10 Position									
D	Common (C) connected to terminals indicated								
I									
A									
L	1	2	4	8					
0	●								
1		●							
2	●	●							
3			●						
4	●			●					
5	●	●							
6	●	●	●						
7	●	●	●	●					
8				●					
9	●				●				
0	●					●			

B04

BINARY CODE 1 Pole 12 Position											
D	Common (C) connected to terminals indicated										
I											
A											
L	1	2	4	8							
0											
1	●										
2	●	●									
3	●	●	●								
4				●							
5	●				●						
6	●	●									
7	●	●	●								
8				●							
9	●				●						
10	●					●					
11	●	●					●				

B05

BCD, with Odd Bit Parity 1 Pole 10 Position									
D	Common (C) connected to terminals indicated								
I									
A									
L	1	2	4	8	P				
0					●				
1	●								
2		●							
3	●	●				●			
4			●						
5	●			●					
6	●	●				●			
7	●	●	●						
8				●					
9	●				●				

B06

BCD, with Even Bit Parity 1 Pole 10 Position									
D	Common (C) connected to terminals indicated								
I									
A									
L	1	2	4	8	P				
0									
1	●							●	
2		●							
3	●	●							
4			●					●	
5	●			●					
6	●	●							
7	●	●	●						
8				●					
9	●				●				

B07

Binary Code 1-Pole 16-Position															
D	Common C connected to terminals indicated														
I															
A															
L	1	2	4	8											
0	0														
1	1	●													
2	2		●												
3	3	●	●												
4	4			●											
5	5	●			●										
6	6		●			●									
7	7	●	●												
8	8														
9	9	●													
A	10		●												
B	11	●													
C	12			●											
D	13				●										
E	14		●												
F	15	●	●												

C02

BCD w/Complement 1 Pole 10 Position															
D	Common (C) connected to terminals indicated														
I															
A															
L	1	2	4	8	1	2	4	8							
0								●	●	●	●				
1	1							●	●	●	●				
2		●						●	●	●	●				
3	●		●					●	●	●	●				
4				●				●	●	●	●				
5	●				●			●	●	●	●				
6	●	●				●		●	●	●	●				
7	●	●	●					●	●	●	●				
8								●	●	●	●				
9								●	●	●	●				

C03

BCD w/Complement Binary 10 at 0 1 Pole 10 Position															
D	Common (C) connected to terminals indicated														
I															
A															
L	1	2	4	8	1	2	4	8							
0	1														
1		●													
2	2		●												
3	3	●		●											
4	4				●										
5	5	●				●									
6	6		●				●								
7	7	●	●					●							
8	8								●						
9	9	●								●					
0	0										●				

C04

Binary Code w/Complement 1 Pole 12 Position															
D	Common (C) connected to terminals indicated														
I															
A															
L	1	2	4	8	1	2	4	8							
0															
1	1														
2		●													
3	3	●	●												
4				●											
5	5	●			●										
6	6		●			●									
7	7	●	●												
8	8														
9	9	●													
A	10		●												
B	11	●													
C	12			●											
D	13				●										
E	14		●												
F	15	●	●												

C06

Binary Code w/Complement 1-Pole, 16-Position															
D	Common (C) connected to terminals indicated														
I															
A															
L	1	2	4	8	1	2	4	8							
0	0							●	●	●	●				
1	1							●	●	●	●				
2	2		●					●	●	●	●				
3	3	●		●				●	●	●	●				
4	4				●			●	●	●	●				
5	5	●				●		●	●	●	●				
6	6		●				●	●	●	●	●				
7	7	●	●					●	●	●	●				
8	8							●	●	●	●				
9	9	●						●	●	●	●				
A	10		●					●	●	●	●				
B	11			●				●	●	●	●				
C	12				●			●	●	●	●				
D	13					●		●	●	●	●				
E	14		●					●	●	●	●				
F	15	●	●					●	●	●	●				

C07

BCD Excess 3, w/Complement 1 Pole 10 Position															
D	Common (C) connected to terminals indicated														
I															
A															
L	1	2	4	8	1	2	4	8							
0	●	●													
1		●													
2	●		●												
3	●			●											
4	●				●										
5	●					●									
6	●	●					●								
7	●	●	●					●							
8	●	●							●						
9										●					

C08

9's Complement BCD, w/Complement 1 Pole 10 Position															
D	Common (C) connected to terminals indicated														
I															
A															
L	1	2	4	8	1	2	4	8							
0								●	●	●	●				
1								●	●	●	●				

D01

BCD 2 Pole 8 Position w/Sep Com to NT Bits	
D I A L	Common C (●) and C (★) connected to terminals indicated
	1 2 4
0	★ ★ ★
1	● ★ ★
2	★ ● ★
3	● ● ★
4	★ ★ ●
5	● ★ ●
6	★ ● ●
7	● ● ●

D02

BCD 2 Pole 10 Position Sep Com to NT Bits	
D I A L	Common C (●) and C (★) connected to terminals indicated
	1 2 4 8
0	★ ★ ★ ★
1	● ★ ★ ★
2	★ ● ★ ★
3	● ● ★ ★
4	★ ★ ● ★
5	● ★ ● ★
6	★ ● ● ★
7	● ● ● ★
8	★ ★ ★ ●
9	● ★ ★ ●

D03

BCD Dual, 2 Pole 10 Position		
D I A L	Common (C1) and (C2) connected to terminals indicated	
	C1 C2	
	1 2 4 8	1 2 4 8
0		
1	●	
2	●	●
3		●
4		●
5	●	●
6	●	●
7	●	●
8		●
9	●	●

D04

Binary Code w/Complement 2 Pole 16 Position	
D I A L	Common (C) and (\bar{C}) connected to terminals indicated
	1 2 4 8 $\bar{1}$ $\bar{2}$ $\bar{4}$ $\bar{8}$
0	0 ● ● ● ● ● ● ● ●
1	1 ● ● ● ● ● ● ● ●
2	2 ● ● ● ● ● ● ● ●
3	3 ● ● ● ● ● ● ● ●
4	4 ● ● ● ● ● ● ● ●
5	5 ● ● ● ● ● ● ● ●
6	6 ● ● ● ● ● ● ● ●
7	7 ● ● ● ● ● ● ● ●
8	8 ● ● ● ● ● ● ● ●
9	9 ● ● ● ● ● ● ● ●
A	10 ● ● ● ● ● ● ● ●
B	11 ● ● ● ● ● ● ● ●
C	12 ● ● ● ● ● ● ● ●
D	13 ● ● ● ● ● ● ● ●
E	14 ● ● ● ● ● ● ● ●
F	15 ● ● ● ● ● ● ● ●

D06

2 Pole Binary with Sep Com to NT Bits	
D I A L	Common C (●) and C (★) connected to terminals indicated
	1 2 4 8
0	0 ● ● ● ●
1	1 ● ● ● ●
2	2 ● ● ● ●
3	3 ● ● ● ●
4	4 ● ● ● ●
5	5 ● ● ● ●
6	6 ● ● ● ●
7	7 ● ● ● ●
8	8 ● ● ● ●
9	9 ● ● ● ●
A	10 ● ● ● ●
B	11 ● ● ● ●
C	12 ● ● ● ●
D	13 ● ● ● ●
E	14 ● ● ● ●
F	15 ● ● ● ●

E01

BCD w/Complement 2 Pole 8 Position	
D I A L	Common (C) and (\bar{C}) connected to terminals indicated
	C \bar{C}
	1 2 4 $\bar{1}$ $\bar{2}$ $\bar{4}$
0	● ● ● ●
1	● ● ● ●
2	● ● ● ●
3	● ● ● ●
4	● ● ● ●
5	● ● ● ●
6	● ● ● ●
7	● ● ● ●

E02

BCD w/Complement 2 Pole 10 Position	
D I A L	Common (C) and (\bar{C}) connected to terminals indicated
	C \bar{C}
	1 2 4 8 $\bar{1}$ $\bar{2}$ $\bar{4}$ $\bar{8}$
0	● ● ● ● ● ● ● ●
1	● ● ● ● ● ● ● ●
2	● ● ● ● ● ● ● ●
3	● ● ● ● ● ● ● ●
4	● ● ● ● ● ● ● ●
5	● ● ● ● ● ● ● ●
6	● ● ● ● ● ● ● ●
7	● ● ● ● ● ● ● ●
8	● ● ● ● ● ● ● ●
9	● ● ● ● ● ● ● ●

E04

9's Complement BCD, w/Complement 2 Pole 10 Position	
D I A L	Common (C) and (\bar{C}) connected to terminals indicated
	C \bar{C}
	1 2 4 8 $\bar{1}$ $\bar{2}$ $\bar{4}$ $\bar{8}$
0	● ● ● ● ● ● ● ●
1	● ● ● ● ● ● ● ●
2	● ● ● ● ● ● ● ●
3	● ● ● ● ● ● ● ●
4	● ● ● ● ● ● ● ●
5	● ● ● ● ● ● ● ●
6	● ● ● ● ● ● ● ●
7	● ● ● ● ● ● ● ●
8	● ● ● ● ● ● ● ●
9	● ● ● ● ● ● ● ●

E05

10's Complement BCD, w/Complement 2 Pole 10 Position	
D I A L	Common (C) and (\bar{C}) connected to terminals indicated
	C \bar{C}
	1 2 4 8 $\bar{1}$ $\bar{2}$ $\bar{4}$ $\bar{8}$
1	● ● ● ● ● ● ● ●
2	● ● ● ● ● ● ● ●
3	● ● ● ● ● ● ● ●
4	● ● ● ● ● ● ● ●
5	● ● ● ● ● ● ● ●
6	● ● ● ● ● ● ● ●
7	● ● ● ● ● ● ● ●
8	● ● ● ● ● ● ● ●
9	● ● ● ● ● ● ● ●
0	● ● ● ● ● ● ● ●

E06

Binary Code w/Complement 2 Pole 12 Position	
D I A L	Common (C) and (\bar{C}) connected to terminals indicated
	C \bar{C}
	1 2 4 8 $\bar{1}$ $\bar{2}$ $\bar{4}$ $\bar{8}$
0	● ● ● ● ● ● ● ●
1	● ● ● ● ● ● ● ●
2	● ● ● ● ● ● ● ●
3	● ● ● ● ● ● ● ●
4	● ● ● ● ● ● ● ●
5	● ● ● ● ● ● ● ●
6	● ● ● ● ● ● ● ●
7	● ● ● ● ● ● ● ●
8	● ● ● ● ● ● ● ●
9	● ● ● ● ● ● ● ●
10	● ● ● ● ● ● ● ●
11	● ● ● ● ● ● ● ●

E07

BCD Excess 3, w/Complement 2 Pole 10 Position	
D I A L	Common (C) and (\bar{C}) connected to terminals indicated
	C \bar{C}
	1 2 4 8 $\bar{1}$ $\bar{2}$ $\bar{4}$ $\bar{8}$
0	● ● ● ● ● ● ● ●
1	● ● ● ● ● ● ● ●
2	● ● ● ● ● ● ● ●
3	● ● ● ● ● ● ● ●
4	● ● ● ● ● ● ● ●
5	● ● ● ● ● ● ● ●
6	● ● ● ● ● ● ● ●
7	● ● ● ● ● ● ● ●
8	● ● ● ● ● ● ● ●
9	● ● ● ● ● ● ● ●

E08

Special 4 Pole, BCD w/Complement	
D I A L	Common (C1), (C2), (C3) and (C4) connected to terminals indicated
	C1 C2 C3 C4
	1 $\bar{1}$ 2 $\bar{2}$ 4 $\bar{4}$ 8 $\bar{8}$
0	● ● ● ● ● ● ● ●
1	● ● ● ● ● ● ● ●
2	● ● ● ● ● ● ● ●
3	● ● ● ● ● ● ● ●
4	● ● ● ● ● ● ● ●
5	● ● ● ● ● ● ● ●
6	● ● ● ● ● ● ● ●
7	● ● ● ● ● ● ● ●
8	● ● ● ● ● ● ● ●
9	● ● ● ● ● ● ● ●

F01

BCD and Non-Shorting DECIMAL
2 Pole 10 Position

D I A L Common (C1) and (C2) connected to terminals indicated

	C1				C2									
L	1	2	4	8	0	1	2	3	4	5	6	7	8	9
0					●									
1	●					●								
2		●					●							
3	●	●						●						
4			●						●					
5	●	●								●				
6		●	●								●			
7	●	●	●									●		
8				●									●	
9	●			●										●

G01

1-2-2'-4 Berkeley Code
1 Pole 10 Position

D I A L Common (C) connected to terminals indicated

L	1	2	2'	4
0				
1	●			
2		●		
3	●	●		
4			●	●
5	●	●	●	
6		●	●	●
7	●	●	●	
8		●	●	●
9	●	●	●	●

G02

1-2-4-2' Berkeley Code
1 Pole 10 Position

D I A L Common (C) connected to terminals indicated

L	1	2	4	2'
0				
1	●			
2		●		
3	●	●		
4			●	
5	●	●	●	
6		●	●	●
7	●	●	●	
8		●	●	●
9	●	●	●	●

H01

1-2-4-2' Berkeley Code w/Complement
1 Pole 10 Position

D I A L Common (C) connected to terminals indicated

L	1	2	4	2'	1	2	4	2'
0					●	●	●	●
1	●					●	●	●
2		●					●	●
3	●	●						●
4			●				●	●
5	●	●	●			●	●	●
6		●	●	●				●
7	●	●	●					●
8		●	●	●				●
9	●	●	●	●		●	●	●

S01

1 or 2 Pole 2 Throw
Common (C1) and (C2) connected to terminals indicated

	C1		C2	
DIAL	A1	B1	A2	B2
0	0	+	●	●
1	5	-	●	●
2	0	+	●	●
3	5	-	●	●
4	0	+	●	●
5	5	-	●	●
6	0	+	●	●
7	5	-	●	●
8	0	+	●	●
9	5	-	●	●

S03

5-Line TELETYPE
1 Pole 10 Position

D I A L Common (C) connected to terminals indicated

L	1	2	3	4	5
0	●	●	●	●	●
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●
6	●	●	●	●	●
7	●	●	●	●	●
8	●	●	●	●	●
9	●	●	●	●	●

S04

5-Line TELETYPE w/even bit parity
1 Pole 10 Position

D I A L Common (C) connected to terminals indicated

L	1	2	3	4	5	P
0	●	●	●	●	●	●
1	●	●	●	●	●	●
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●
6	●	●	●	●	●	●
7	●	●	●	●	●	●
8	●	●	●	●	●	●
9	●	●	●	●	●	●

S05

BIQUINARY
1 Pole 10 Position

D I A L Common (C) connected to terminals indicated

L	ODD	EVEN	0	1	2	3	4	5	6	7	8	9
0		●	●									
1	●		●									
2		●		●								
3	●		●									
4		●		●								
5	●		●									
6		●		●								
7	●		●									
8		●		●								
9	●		●									

S06

NOT/NOR SWITCH 1 Pole 12 Position
(All Positions Shorted except Position indicated on Dial)

D I A L Common (C) connected to terminals indicated

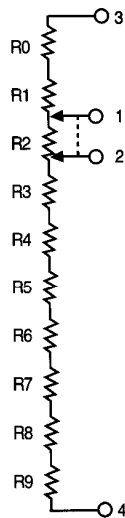
L	0	1	2	3	4	5	6	7	8	9	10	11
0	●	●	●	●	●	●	●	●	●	●	●	●
1	●	●	●	●	●	●	●	●	●	●	●	●
2	●	●	●	●	●	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●	●	●	●	●	●
7	●	●	●	●	●	●	●	●	●	●	●	●
8	●	●	●	●	●	●	●	●	●	●	●	●
9	●	●	●	●	●	●	●	●	●	●	●	●
10	●	●	●	●	●	●	●	●	●	●	●	●
11	●	●	●	●	●	●	●	●	●	●	●	●

S07

INCREMENTAL Voltage Divider
2 Pole 10 Position

D I A L Pins 1 and 2 connected across resistor indicated

L	R0	R1	R2	R3	R4	R5	R6	R7	R8	R9
0	●									
1		●								
2			●							
3				●						
4					●					
5						●				
6							●			
7								●		
8									●	
9										●



SCHEMATIC
Dial set at
Position no. 2

S08

WOLFF POGGENDORF Voltage Divider
10 Position

D I A L Resistors in circuit

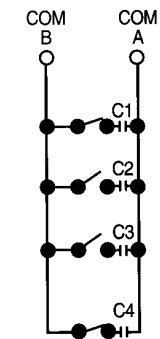
L	1	2	4	2'	1	2	4	2'
0	●	●	●					●
1		●	●	●				●
2	●		●	●	●			●
3		●	●	●	●	●		●
4	●	●	●	●	●	●		●
5		●	●	●	●	●	●	●
6	●		●	●	●	●	●	●
7		●	●	●	●	●	●	●
8	●	●	●	●	●	●	●	●
9								●

S09

CAPACITOR DECADE
1-2-3-4 Code 10 Position

D I A L Capacitors in Circuit

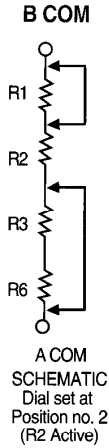
L	C1	C2	C3	C4
0				
1	●			
2		●		
3			●	
4				●
5	●	●	●	●
6	●	●	●	●
7	●	●	●	●
8	●	●	●	●
9	●	●	●	●



SCHEMATIC
Dial set at Position no. 5
(C1 and C4 Active)

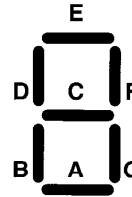
S10
RESISTOR DECADE
1-2-3-6 Code 10 Position

DIAL		Resistors in circuit			
L	R1	R2	R3	R6	
0	●				
1		●			
2			●		
3				●	
4	●				
5		●			
6			●		
7	●				
8			●		
9				●	



S11
7 BAR INDICATOR
1 Pole 10 Position

DIAL		Common connected to terminals indicated						
L	A	B	C	D	E	F	G	
0	●			●	●	●	●	
1		●						
2			●					
3				●				
4					●			
5						●		
6							●	
7								
8								
9								



S12
KELVIN VARLEY: Voltage Divider
10 Position

DIAL		Pins 1 and 2 connected across resistors indicated									
L	R0	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
0	●										
1		●									
2			●								
3				●							
4					●						
5						●					
6							●				
7								●			
8									●		
9										●	

S15
Modified 5 Bit TELETYPE
1-2-4-2' Code 10 Position

DIAL		Common (C) connected to terminals indicated				
L	1	2	3	4	5	
0		●	●	●	●	
1		●		●		
2		●			●	
3	●					
4	●	●		●		
5	●				●	
6	●		●			
7	●	●				
8	●					
9			●	●		

S17
Resistor DECADE
1-2-4-2' Code 10 Position

DIAL		Resistors in circuit				
L	R1	R2	R4	R2'		
0						
1	●					
2	●					
3	●					
4			●			
5	●		●			
6	●					
7	●	●				
8	●	●				
9	●	●				

S18
Resistor DECADE
1-2-2-2-2 Code 10 Position

DIAL		Resistors in circuit				
L	R1	R2	R3	R4	R5	
0						
1	●					
2					●	
3	●					
4				●		
5	●			●		
6			●	●		
7	●		●	●		
8		●	●	●		
9	●	●	●	●		

S19
2 Pole 2 Throw

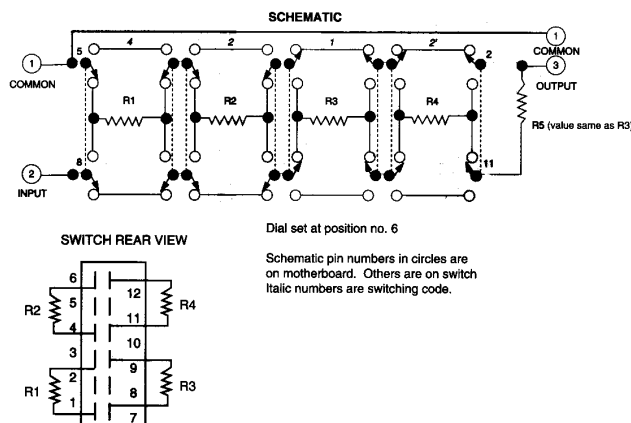
DIAL		Commons C (●) and C (*) connected to terminals indicated	
L	A	B	
0	0	+ ● *	
1	5	- * ●	
2	0	+ ● *	
3	5	- * ●	
4	0	+ ● *	
5	5	- * ●	
6	0	+ ● *	
7	5	- * ●	
8	0	+ ● *	
9	5	- * ●	

S20
2 Pole 1-1'-2-5 with Complement

DIAL		Commons (C) and (C') connected to terminals indicated							
L	5	2	1'	1	5	2	1'	1	
0				●	●	●	●	●	
1			●						
2	●			●					
3		●			●				
4	●		●			●			
5					●		●	●	
6	●			●				●	
7		●			●				
8	●		●			●			
9							●	●	

S21
ECCO Voltage Divider (THUMB POT)
10 Position

DIAL		Resistors in circuit between term 2 & 5				Resistors in circuit between term 8 & 11			
L	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	●	●							



S22
1-2-4-5 Code

DIAL		Common (C) connected to terminals indicated				
L	1	2	4	5		
0						
1	●					
2		●				
3			●			
4				●		
5						
6	●					
7			●			
8	●					
9				●		

S23
JOHNSON CODE

DIAL		Common (C) connected to terminals indicated				
L	A	B	C	D	E	
0	●	●	●	●	●	
1	●					
2	●					
3	●					
4						
5					●	
6						
7			●	●	●	
8	●					
9	●	●	●	●	●	

Consult factory for additional information.



*DIGITAL SWITCHES
MEMBRANE KEYPADS
ELASTOMER KEYPADS*

“The Leader In Electromechanical Switch Technology”

EECO SWITCH

880 Columbia St.
Brea, CA 92821-2916
Tel: (714) 835-6000
Fax: (714) 482-9429
E-Mail: sales@ecoswitch.com



9/12/12

EECO EUROPE

Unit 1, New Close Farm Business Park
Bar Road, Lolworth
Cambridgeshire, CB23 8DS England
TEL: +44 (0) 1954-781818
FAX: +44 (0) 1954-789305
E-mail: sales@ecoswitch.co.uk