

# ROTARY SWITCHES

## TYPE DB

### Coded Output Switch

4, 6, 8 10, 12 or 16 positions

### FEATURES

- Compact 25mm sq. panel area
- Balanced positive indexing
- Spindle and panel sealing option
- Alternative bush and spindle sizes
- Stainless steel spindles
- Gold contacts for low level switching
- Biased at either both or end positions
- End stop to limit rotation
- Banking of sections
- 100% electrically tested
- Wide operating temperature range



### TECHNICAL SPECIFICATION

#### Electrical Specifications

<b>Contact Rating:- Switching</b>	5VA dc. 10VA ac. (1A max) resistive
<b>Continuous</b>	2A
<b>Proof Voltage (for 1 min.)</b>	500 d.c. volts peak, adjacent terminals 1000 volts peak all terminals to frame
<b>Insulation Resistance</b>	1000M $\Omega$ minimum at 100 volts dc.
<b>Contact resistance</b>	60m $\Omega$ maximum initial at the terminations measured at 100mV, 100mA. 20m $\Omega$ maximum increase after 20,000 cycles of operation at 85°
<b>Capacitance</b>	3pf adjacent terminals
<b>Switching per Wafer</b>	Any 5 bit code from 1 input see standard codes available in tables

#### Mechanical Specifications

<b>Endurance (Electrical)</b>	20,000 cycles (1 cycle is full rotation in both directions) minimum, at upper temperature category and electrical load.
<b>Endurance (Mechanical)</b>	50,000 cycles
<b>No. of Positions (With or Without End Stops).</b>	4 maximum at 90° 6 maximum at 60° 8 maximum at 45° 16 maximum at 22½° 12 maximum at 30° 10 maximum at 36°
<b>Operating Torque</b>	Light - .028/.112Nm Medium - .084/.168Nm Heavy - .14/.336Nm
<b>End Stop Strength</b>	1.13Nm
<b>Temperature Range</b>	-40°C/+85°C pillar terminals
<b>Terminal Strength</b>	Tensile test load 10N
<b>Sealing</b>	Spindle & panel seal option max. leakage 1ml/hour.
<b>Switch Mounting</b>	Panel mounting via M7 or M10 threaded bush.
<b>Operating Spindle</b>	4.0DIA or 6.0DIA.
<b>Dual Concentric Operation</b>	Consult WASP for available options.

#### Materials and Finishes

<b>Switch Wafer</b>	Copper clad epoxy glass laminate etched & finish electroplated nickel 5 $\mu$ m & hard (150 VPN) gold 2.5 $\mu$ m min
<b>Terminals</b>	Hard brass nickel & tin-lead plated for subsequent solderability.
<b>Wiping Contact</b>	Be/Cu electroplated nickel 5 $\mu$ m & finished in hard gold 2.5 $\mu$ m
<b>Mouldings</b>	Glass filled nylon 66
<b>Mechanism Rollers</b>	Stainless steel
<b>Mechanism Thrust Plates</b>	
<b>Mechanism Springs</b>	
<b>Front Spindle</b>	Stainless steel 18/8
<b>Sealing Rings</b>	Panel seal in nitrile spindle seals (2) in silicone
<b>Mounting Bush</b>	Brass electroplated

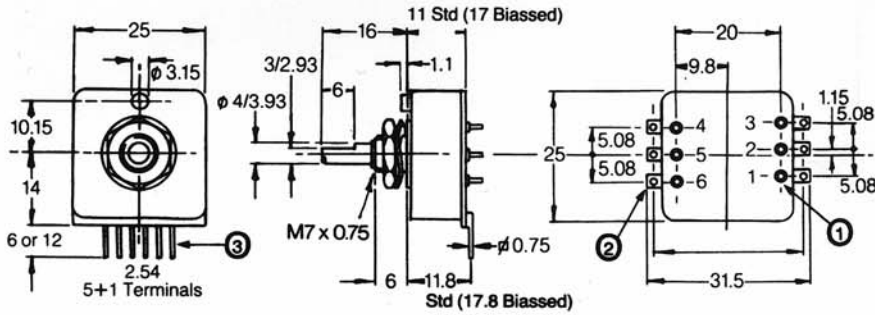
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### Dimensions in mm

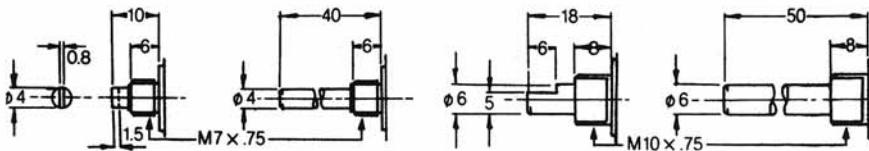


① PILLAR TERMINALS

② SOLDER LUGS

③ PC TERMINALS

### Alternative Spindles



22° INDEX  
GRAY

POS	3	2	5	1	4	6
0						
1	●					
2	●	●				
3	●	●	●			
4	●	●	●	●		
5	●	●	●	●	●	
6	●	●	●	●	●	●
7						
8						
9	●					
10	●	●				
11	●	●	●			
12	●	●	●	●		
13	●	●	●	●	●	
14	●	●	●	●	●	●
15						

22° INDEX  
0-15

POS	3	2	5	1	4	6
0						
1	●					
2	●	●				
3	●	●	●			
4	●	●	●	●		
5	●	●	●	●	●	
6	●	●	●	●	●	●
7						
8						
9	●					
10	●	●				
11	●	●	●			
12	●	●	●	●		
13	●	●	●	●	●	
14	●	●	●	●	●	●
15						

22° INDEX  
0-15  
COMPLIMENT

POS	3	2	5	1	4	6
0						
1	●	●	●	●		
2	●	●	●	●	●	
3	●	●	●	●	●	●
4	●	●	●	●	●	●
5	●	●	●	●	●	●
6	●	●	●	●	●	●
7						
8	●	●	●	●		
9	●	●	●	●	●	
10	●	●	●	●	●	
11	●	●	●	●	●	
12	●	●	●	●	●	
13	●	●	●	●	●	
14	●	●	●	●	●	
15						

30° INDEX  
0-11  
COMPLIMENT

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

36° INDEX  
BCD  
COMPLIMENT

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

36° INDEX  
BCD

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

30° INDEX  
GRAY

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

30° INDEX  
0-11

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



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