

# ROTARY SWITCHES

## TYPE DC

10, 12 or 16 positions

### FEATURES

Gold contacts for electrical stability  
Long operational life  
Balanced positive indexing  
100% electrically tested  
Stainless steel spindles  
Wide operating temperature range  
Multi wafer



### 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>	1000 d.c. volts peak, adjacent terminals 2000 volts peak all terminals to frame
<b>Insulation Resistance</b>	500M $\Omega$ minimum at 500 volts dc.
<b>Contact resistance</b>	50m $\Omega$ 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 (see tables of standard wafers)</b>	1, 2, 4 or 6 poles (1 or 2 poles on 10 position) with shorting (make before break) or non-shorting (break before make) switching

#### 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>	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>Number of Wafers</b>	5 maximum
<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 in contact area remainder in gold flash
<b>Terminals</b>	Hard brass nickel & tin-lead plated for subsequent solderability.
<b>Wiping Contact</b>	Brass electroplated nickel 5 $\mu$ m & finished in hard gold 1.5 $\mu$ m. (36° version contact is fine silver)
<b>Contact Pressure Spring</b>	Stainless steel coil spring (36° version Be Cu flat spring)
<b>Contact Rotor Moulding</b>	Glass filled nylon 66
<b>Mechanism Mouldings</b>	Glass filled nylon 66
<b>Mechanism Rollers</b>	Stainless steel
<b>Mechanism Thrust Plates</b>	
<b>Mechanism Springs</b>	
<b>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

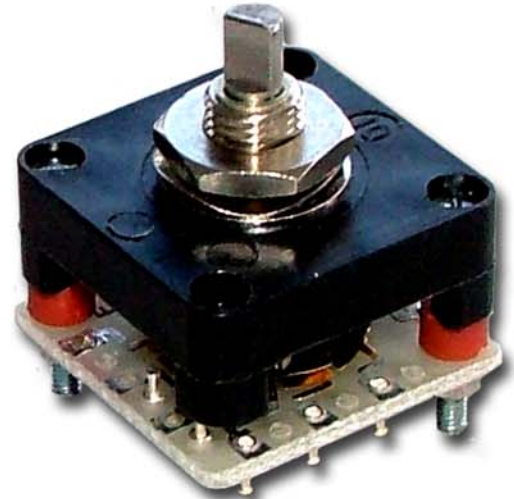
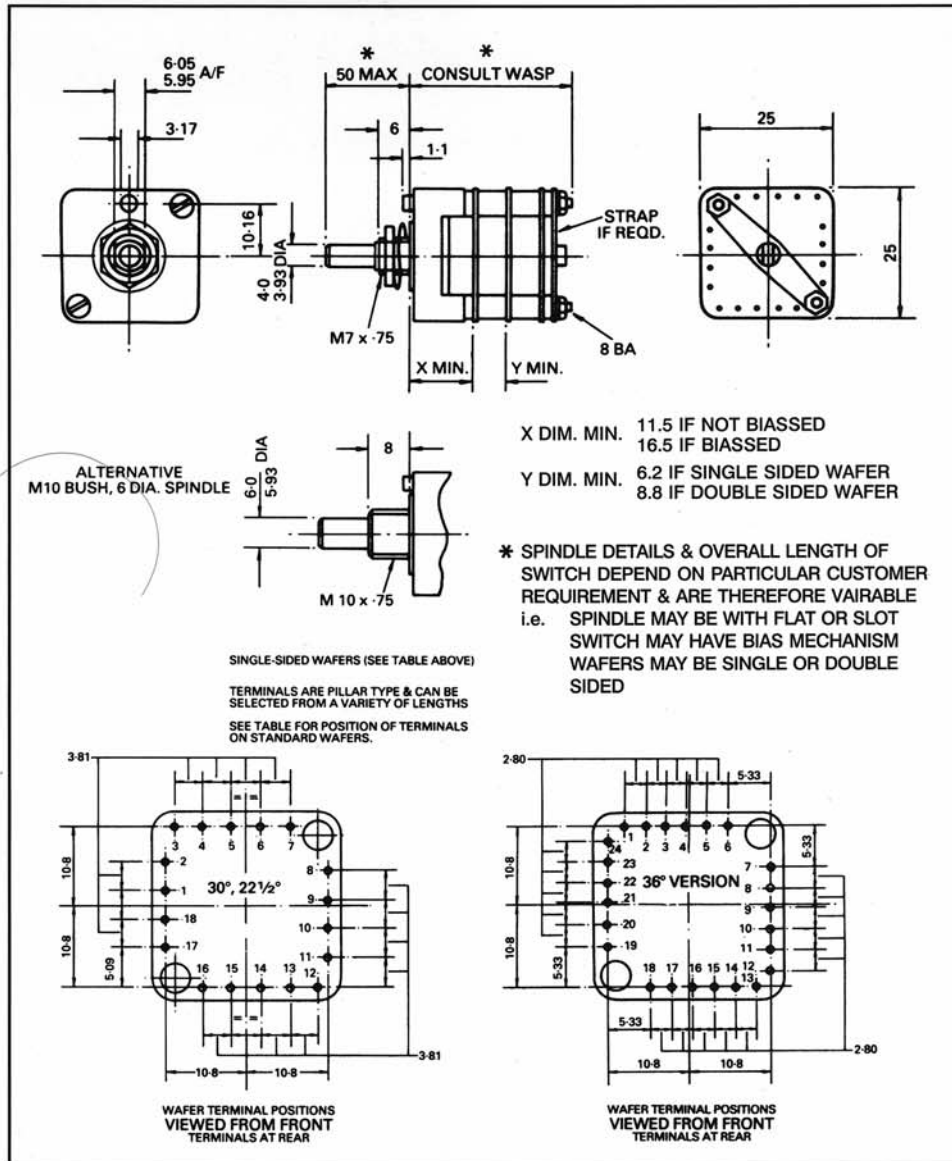
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### Dimensions in mm



#### TERMINAL IDENTIFICATION FOR STANDARD WAFERS

SWITCH INDEX ANGLE	WAFER TYPE	POLE TERMINALS	OUTPUT TERMINALS
30°	1 pole SH. or NS.	18	1,2,4,5,9,11,12,13,14,15,16
	2 pole SH. or NS.	5,14	6,7,8,9,10,13 - 15,16,17,18,2,4
	4 pole SH. only	5,9,14,18	6,7,8 - 10,11,13 - 15,16,17 - 1,2,4
	6 pole NS. only	1,4,7,10,13,16	18,2 - 3,5 - 6,8 - 9,11 - 12,14 - 15,17
22½°	1 pole NS. only	14	15,16,17,18,1,2,4,5,6,7,8,9,10,11,12,13

#### TERMINAL IDENTIFICATION FOR STANDARD WAFERS

36° INDEXING	WAFER TYPE	POLE TERMINALS		OUTPUT TERMINALS	
	1 POLE	FRONT	REAR	FRONT	REAR
		24			
2 POLE	24	23		2, 4, 6, 8, 10, 14, 16, 18, 20, 22	1, 3, 5, 7, 9, 13, 15, 17, 19, 21
	4 POLE	24, 12	23, 11		



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