

ROTARY SWITCHES

TYPE DA

10 or 12 position rotary wafer switches with 'in line' terminations

FEATURES

- Gold contacts for electrical stability
- Long operational life
- Balanced positive indexing
- 100% electrically tested
- Stainless steel spindles
- Wide operating temperature
- In-line terminals for PC mounting
- Various wafer styles
- Binary and decimal combinations available
- Eliminates wiring faults
- Base or panel mounting
- Dual concentric assemblies



TECHNICAL SPECIFICATION

Electrical Specifications

Contact Rating:- Switching 5VA dc. 10VA ac. (1A max) resistive

Continuous 2A

Proof Voltage (for 1 min.) 1000 volts peak, adjacent terminals
2000 volts peak all terminals to frame

Insulation Resistance 500M Ω minimum at 500 volts dc.

Contact resistance 50m Ω maximum initial at the terminations measured at 100mV, 100mA.
20m Ω maximum increase after 20,000 cycles of operation at 70°

Capacitance 3pf adjacent terminals

Switching per Wafer 1,2,3 or 4 poles (1 or 2 poles on 10 position) with shorting (make before break) or non-shorting (break before make) switching.
Coded output modules (10 or 12 position) see type DAC, may be mixed with wafers in the same assembly.

Mechanical Specifications

Endurance (Electrical) 20,000 cycles (1 cycle is full rotation in both directions) minimum, at upper temperature category and electrical load.

Endurance (Mechanical) 50,000 cycles

No. of Positions (With or Without End Stops). 12 maximum (style 075-13 075-14, or 100) at 30° steps.
10 maximum (style 110) at 36° steps

Operating Torque Light - .028/.112Nm
Medium - .084/.168Nm
Heavy - .14/.336Nm

End Stop Strength 1.13Nm

Temperature Range -40°C/+70°C

Terminations Pins for P.C. mounting or wire wrap or holes in boards for direct solder.

Terminal Strength Tensile test load 10N

Sealing Spindle & panel seal option max. leakage 1ml/hour.

Switch Mounting Panel mounting via M7 or M10 threaded bush, base mounting via "twist tabs" on front & rear plates to P.C. board.

Number of Wafers 20 maximum

Operating Spindle 4.0DIA or 6.0DIA. Style 'A' or 'D' with flat. Style 'B' with slot. Style 'C', 'E' or 'F' plain.

Dual Concentric Operation Consult WASP for available options.

Inverted Wafers Individual wafers may be inverted to allow "sandwich" assemblies i.e. P.C.B. at top & bottom of switch.

Materials and Finishes

Switch Wafer Copper clad epoxy glass laminate etched & finish electroplated nickel 5 μ m & hard (150 VPN) gold 2.5 μ m min in contact area remainder in gold flash.

Terminal Pins Hard brass nickel & tin-lead plated for subsequent solderability.

Wiping Contact Brass electroplated nickel 5 μ m & finished in hard gold 2.5 μ m
Stainless steel coil spring.

Contact Pressure Spring

Contact Rotor Moulding Glass filled nylon 66

Wafer Housing Glass filled polyester

Front & Rear Plates Aluminium alloy - 'Alocrom' finish

Rear Shaft Aluminium alloy

Mechanism Mouldings Glass filled nylon 66

Mechanism Rollers } Stainless steel

Mechanism Thrust Plates }

Mechanism Springs }

Front Spindle Stainless steel 18/8

Sealing Rings Panel seal in nitrile spindle seals (2) in silicone

Mounting Bush Brass electroplated

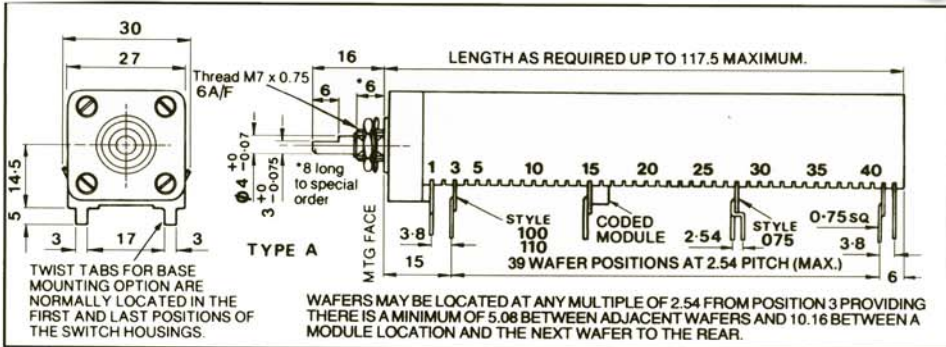
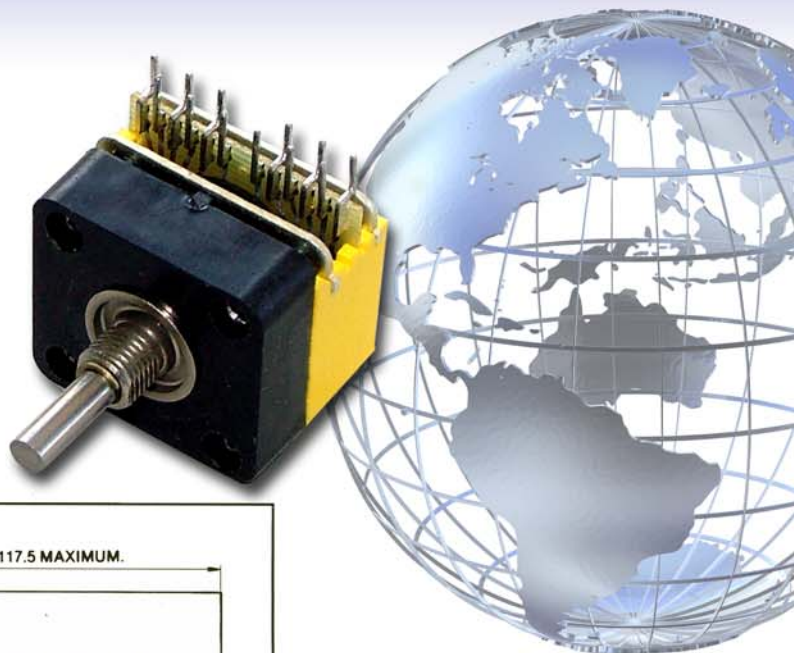
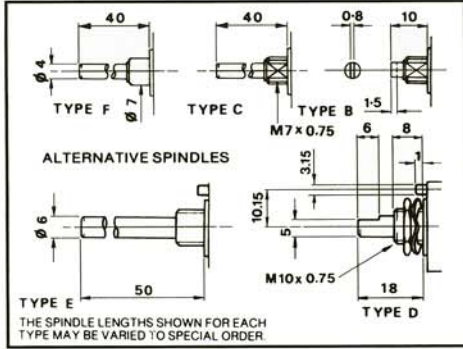
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Dimensions in mm



Standard Wafers

Shorting (S) or Non-Shorting (N) - 30° index

- 1 Pole,
 - 12 Active Positions Code S112 or N112 All styles
 - 2 Pole,
 - 5 Active Positions* Code S205 or N205 Style 075-13
 - 2 Pole,
 - 6 Active Positions Code S206 or N206 Style 100 & 075-14
 - 3 Pole,
 - 3 Active Positions* Code S303 or N303 All styles
 - 4 Pole,
 - 2 Active Positions* Code S402 or N402 All styles
- *An OFF position available in addition as position 1

Standard Wafers

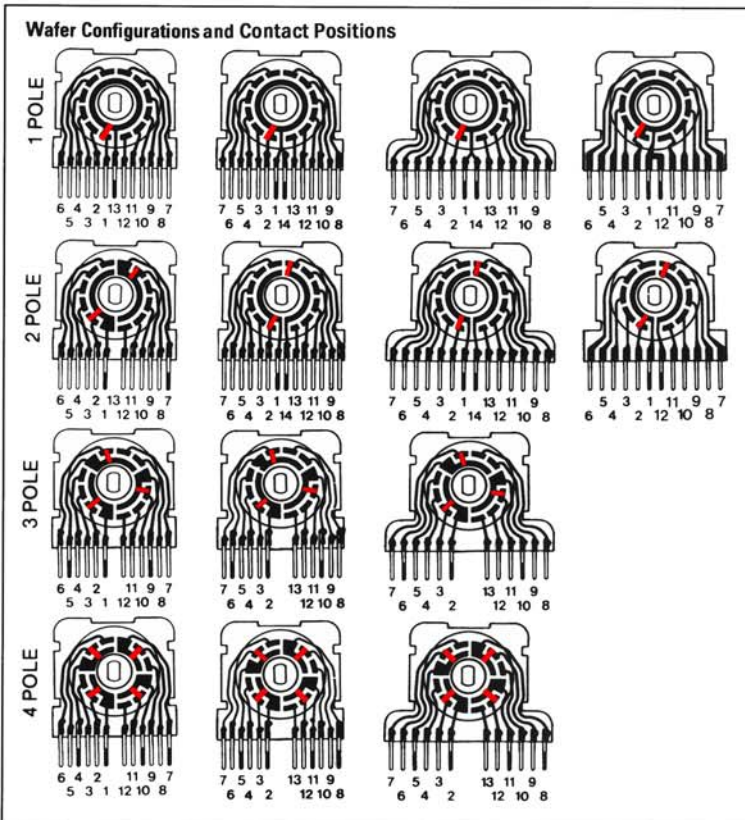
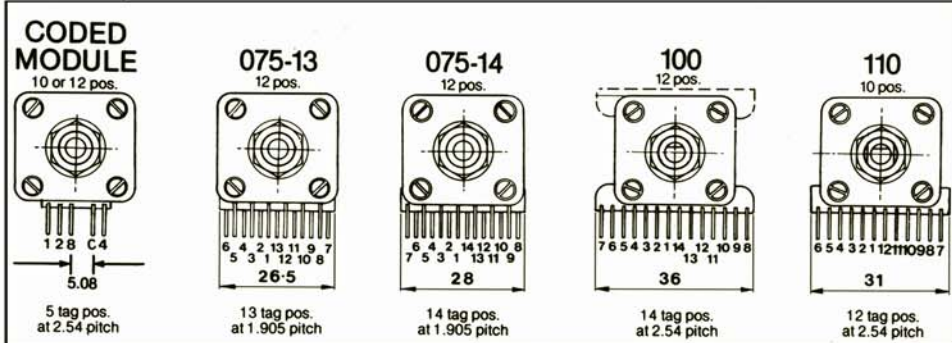
Shorting (S) or Non-Shorting (N) - 36° index

- 1 Pole,
- 10 Active Positions Code S110 or N110 Style 110
- 2 Pole,
- 5 Active Positions* Code S205 or N205 Style 110

Standard Coded Modules

BCD, or BCD complement in 10 or 12 positions.

Switch style Identifications



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