MU-MK Rotary Wafer Switch

General Specifications:

These switches have 32mm (1.26") diameter moulded wafers with 22 contact positions providing up to 12 switching positions. The stators are moulded from glass fibre loaded Diallyl Phthalate. Optional features include concentric shafts, panel and spindle seals and rigid terminations for printed circuit connections.

- **Maximum Working Voltage:** 300 Vac / dc
- **Contact Rating - Current Carrying:** 5 amp continuous
- **Contact Rating - Current Breaking with a Resistive / Non-reactive load:** 60mA at 250 Vdc
  150mA at 250 Vac (rms)
  500mA at 30 Vac / dc (rms)
- **Proof Voltage:** 1000 Vrms at sea level
- **Insulation Resistance:** Not less than 2 Gohms (between any 2 parts requiring electrical insulation)
- **Contact Resistance (initial):** 10 milliohms maximum 100mA max

Maximum Switching Per Wafer (30° Indexing)	
1 Pole	2 to 12 ways
2 Pole	2 to 9 ways
3 Pole	2 to 5 ways
4 Pole	2 to 4 ways
5 Pole	2 to 3 ways
6 & 7 Pole	2 ways

Index Mechanism: The preferred mechanism used with the MK wafers is the type 'MU', providing indexing angles of 30°, 45° and 60°. Torque ranges available are:

Light	7 to 14 x 10^{-2} Nm (10 to 20 oz Ins)
Medium	14 to 28 x 10^{-2} Nm (20 to 40 oz Ins)
High	8 to 35 x 10^{-2} Nm (40 to 50 oz Ins)

Other mechanisms which may be used as alternatives are:
Heavy Duty when torque in excess of 0.35 Nm up to 0.63 Nm (90 oz Ins) is required or where locating pins are preferred to lugs, on 15.1mm (0.6") radius.
Type 'UB' when torque values up to 0.49 Nm (70 oz Ins) are required.
Type 'J' where additional locating lug angles of 0° or 180° are specified, also where radius of 13.5mm (0.53") is required.

Contacts:

Standard	- Silver plated brass
Alternatives	- Hard gold plated or silver alloy contacts are available at extra cost as are contacts with gold flash

Terminations: Forward, standard: Straight, alternative

Rotor Blades:

Standard	- Shorting (make before break MBB)
Alternative	- Non-shorting (break before make BBM)

Insulation:

Stator	- Moulded glass fibre loaded Diallyl Phthalate (DAP)
Rotor	- Polycarbonate

Finish: Index springs stainless steel, other metal parts passivated zinc plated. Finishes to order.

Mounting Details:

Imperial (standard)	Metric (alternative)
Bush 3/8" x 32 TPI (Whit)	M10 x 0.75
Shaft 0.25" dia	6 mm dia
Nut 0.525" A/F	14 mm A/F

The alternative is optional in each case.
Unless otherwise specified, each switch is supplied with a wavey lock washer.

Construction: The switch wafers are spaced by tubular metal spacers and held in place, with a positive relationship to the index mechanism, by side strut screws.

Alternative Shafts: Concentric shafts - dual concentric shafts and mechanisms for dual switching applications, also with hollow independent drive of other devices by 1/8" concentric shaft.

Caution: Our range of rotary wafer switches use polycarbonate rotors, the rotor blade/moving contact is secured to the rotor using a staking process to deform moulded locating pips. Please be aware that the use of some solvents and excessive heat as may be present from a heat gun could cause the following issues and should be avoided. In the case of solvent abuse the retaining pips may become brittle and break off resulting in the blades becoming detached and similarly the application of heat >140ºC can cause the deformed moulding to reassert itself again causing failure of the blade retention.

Please Note: In line with continued development we reserve the right to amend specification without prior notice (Rev1 08/14)

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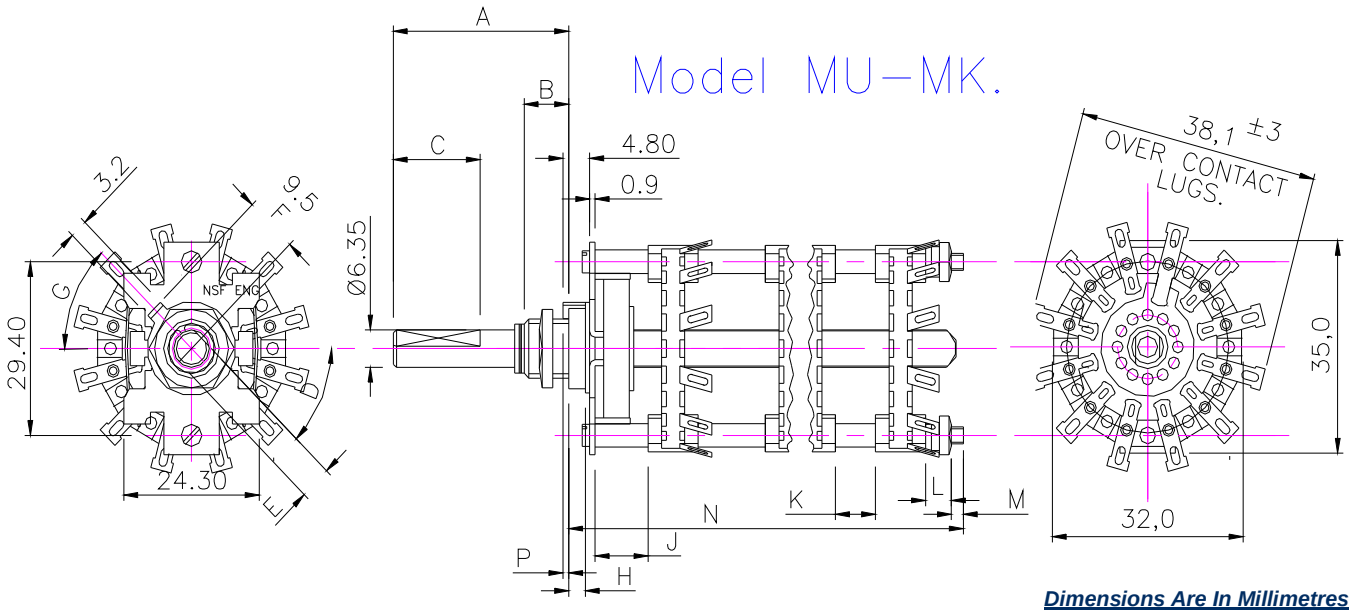
MU-MK Rotary Wafer Switch



Dimensions Are In Millimetres

Key To Details

A Shaft Length: Optional ± 0.40 (0.016”) / (25mm if not specified)

B Bushing Thread Length: Preferred standard 9.5 (0.375”), 6.35 (0.250”) available as an alternative
Special lengths if necessary

C Flat Length: Length to specification; tolerance ± 0.40 (0.016”)
Special shaft terminations may be provided to special requirements

D Angle of Flat: To specification ± 2° ; specify position of flat, with switch shaft in **fully anti-clockwise** position when viewed from front or knob end

E Flat Thickness: Standard 5.55 ± 0.15 (0.218” ± 0.005”) for grub screws
4.95 ± 0.05 (0.195” ± 0.002”) for push-on knobs

F Distance of Locating Lug From Shaft: Measured centre line to centre line; standard 9.5mm

G Angle of Locating Lug: Type ‘MU’ mechanism; 45°, 135°, 225° and 315° from horizontal centre line
Type ‘A’ mechanism also includes 0° and 180° as viewed

H Bushing Shoulder: Standard 3.2 (0.125”)

J Front Spacer: Minimum dimension; MU-MA 9.5 (0.375”), A-MA 4.8 (0.187”)

K Other Spacers: Minimum dimensions;

With clips facing same direction	NIL
With clips facing away or flat clips	NIL
With clips facing each other	3.2 (0.125”)

L Spacer Length: If no spacer 2.4 (0.093”). Any length spacer required may be inserted at this point.

M Thread Extension: 1/8” (min) x M2 x 0.4, any length required

P Standard Locating Lug Lengths: MU-MA unsealed, projects 1.6 (0.062”) beyond mounting face; sealed 0.05/0.15 (0.002”/0.006”) below mounting face.
A-MA projects 4.8 (0.187”) beyond mounting face.

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