Engineering Bulletin No RW29
Rotary Wafer Switches - Model MU-MK

General Information

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

Characteristics.

Electrical, Maximum working voltage	300Vac/dc.
Contact rating:	
Current carrying	5amp continuous.
Current breaking with a resistive/non-reactive load.	
	60mA at 250Vdc.
	150mA at 250Vac (rms).
	500mA at 30Vac/dc (rms).
Proof Voltage.	1000Vrms 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.

No. of Poles.	30° MU-MK		
1 Pole.	2 to 12 ways	5 Pole.	2 to 3 ways
2 Pole.	2 to 9 ways	6 Pole.	2 ways
3 Pole.	2 to 5 ways	7 Pole.	2 ways
4 Pole.	2 to 4 ways		

Index Mechanism.

The preferred mechanism used with the MK wafers is the Type MU providing indexing angles of 30°, 45° and 60°, (see Bulletin RW36 for full technical details). 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	28 to 35 x 10^{-2} Nm	(40 to 50 oz, ins,)

Alternative Mechanisms Available

Contacts & Termination's.

Standard.	- Silver plated brass.
Alternatives.	- Hard gold plated or silver alloy contacts are available at extra cost as are contacts with gold flash.
Termination's.	- 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 diallylphthalate (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 32TPI (Whit.)	M10 x 0.75.
Shaft 0.25" dia.	6mm, dia.
Nut 0.525" A/F.	14mm A/F.

The alternative is optional in each case.

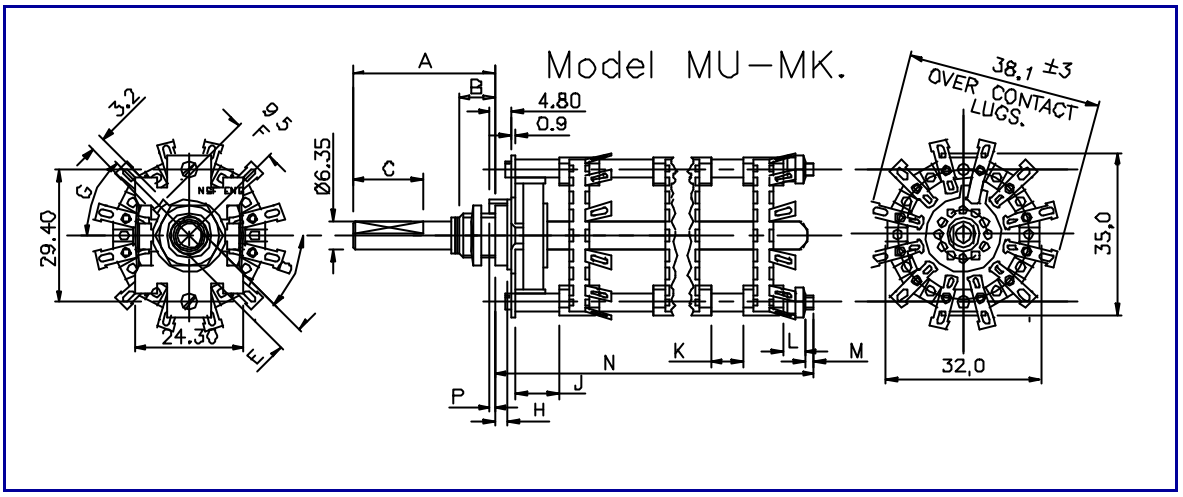
Unless otherwise specified, each switch is supplied with an internal tooth steel lock washer.

Alternative Shafts.

Concentric shafts - dual concentric shafts and mechanisms for dual switching applications, also

NSF Controls Limited Keighley West Yorkshire BD21 5EF ☎+44(0) 1535 661144 Fax: +44(0) 1535 661474 Email: mail@nsfcontrols.co.uk

RW29 MU-MK



Dimensions Are In Millimetres

Key To Details

A. Shaft length: optional ± 0.40

B. Bushing thread length: preferred standard 9.5; 6.35 available as an alternative. Special lengths if necessary

C. Flat length: length to specification. Tolerance ± 0.40 (0.016”). Special shaft termination’s 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 for grub screws; 4.95 ± 0.05 for push-on knobs.

F. Distance of locating lug from shaft, centre line to centre line.

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

J. Front spacer, minimum dimension:
MU-MA 9,5
A-MA 5.0.

K. Other spacers: minimum dimensions.

Clips facing same direction	NIL.
Clips facing away or flat clips	NIL.
Clips facing each other	3.0

L. If no spacer 2,5. Any length spacer desired may be inserted at this point.

M. Thread extension: 3.0 (min) x M2 x 0,4 any length desired.

P. Standard locating lug lengths:
MU-MA, unsealed, projects 1.6 beyond mounting face sealed, 0,05/0,15 below mounting face;
A-MA, projects 4,8 (0.187” beyond mounting face.

NSF Controls Limited Keighley West Yorkshire BD21 5EF ☎+44(0) 1535 661144 Fax: +44(0) 1535 661474 Email: mail@nsfcontrols.co.uk