

UB-MM Rotary Wafer Switch



General Specifications:

With moulded stators and 24 switching positions per section, this switch is particularly suitable for applications where space is at a premium. The 'U' balanced pressure indexing mechanism with its low friction moulded cam and plunger provides a smooth positive action with consistent and reproducible torque. 15° indexing is standard. Optional features include insulated or concentric shafts, panel and spindle seals and rigid tags for printed circuit connections.

- **Maximum Working Voltage:** 300 Vac / dc
- **Contact Rating - Current Carrying:** 2 amp continuous
- **Contact Rating - Current Breaking with a Resistive / Non-reactive load:** 50mA at 300 Vdc/ac (rms) 500mA at 30 Vdc/ac (rms)
- **Proof Voltage:** 1000 Vrms at sea level for 1 min
- **Insulation Resistance:** 5000 megohms min (live terminals to frame or between circuits)
- **Contact Resistance:** 80 milliohms maximum
- **Standard Contact Arrangements:** Please refer to our standard contact arrangements and use these whenever possible
- **Mechanical and Electrical Endurance:** 10,000 cycles

| Maximum Switching Per Section | |
|-------------------------------|---------------------------|
| 1 Pole | 24 positions |
| 1 Pole | 2 to 23 positions and off |
| 2 Pole | 2 to 11 positions and off |
| 3 Pole | 2 to 7 positions and off |
| 4 Pole | 2 to 5 positions and off |
| 6 Pole | 2 to 3 positions and off |
| 8 Pole | 2 positions and off |

Index Mechanism:

The 'U' mechanism with low friction cam followers and plungers is standard with 15° indexing. Cams for 30°, 45° or 60° indexing are also available. A satisfactory operating life in excess of 50,000 complete cycles is obtained with torque values from 13 to 70 oz Ins. The 'UB' mechanism incorporates a back plate fitted to the 'U' type mechanism.

Contacts & Terminations:

Clips - Silver plated spring brass
Rotor Blades - Hard brass silver plated
- Spring silver alloy clips and blades, also other special finishes available to order

Insulation:

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

Finish:

Index springs stainless steel, other metal parts passivated zinc plated. Other finishes to order.

Mounting Details:

| <u>Imperial (standard)</u> | <u>Metric (alternative)</u> |
|----------------------------|-----------------------------|
| 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.

Panel and spindle seals can be fitted allowing sealing to 1cm³/hr

Optional Features:

Switches can be supplied, to specification, with dual concentric or insulated shafts, shields, adjustable and/or fixed stops and rigid tags for printed circuit connections.

Rotor Blades Note:

Standard switches are make-before-break type in which connection is maintained with one contact until after the next contact is made.

Break-before-make switches, which break connection with one contact before the next contact is made, are available to order.

"Front" is when the switch is viewed from the knob end.

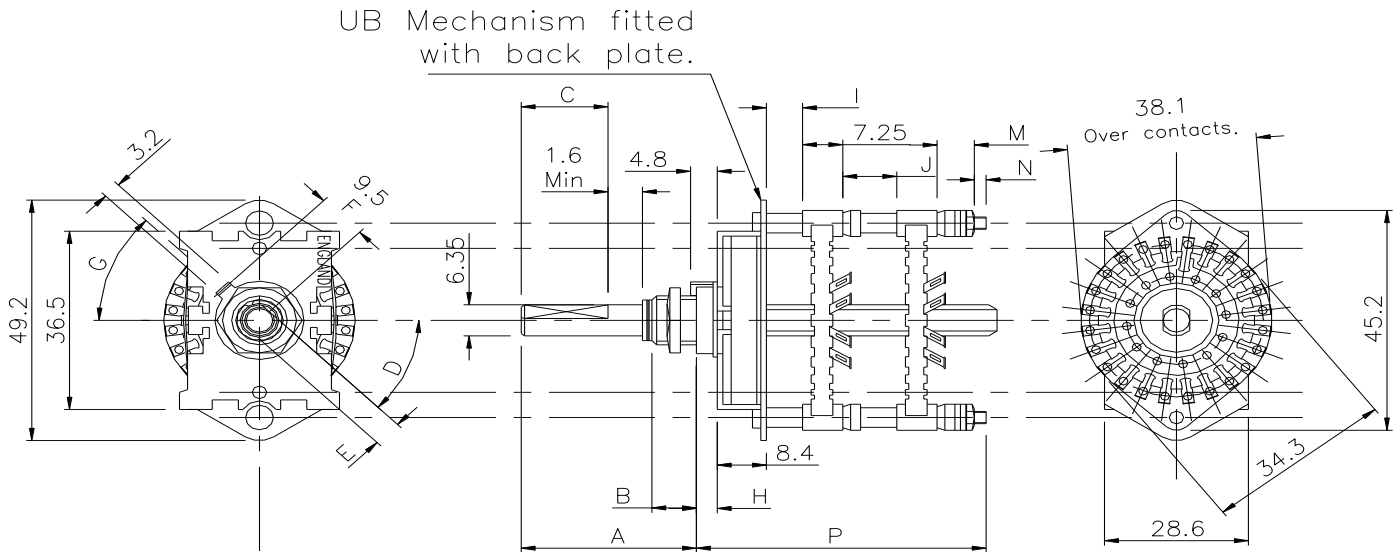
Caution: Our range of rotary wafer switches use polycarbonate rotors, the rotor blade/moving contact is secured to the rotor using a staking process to deform moulded locating pips. Please be aware that the use of some solvents and excessive heat as may be present from a heat gun could cause the following 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 >140°C 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 (Rev 01/12)

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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 $\pm 2^\circ$; 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" \pm 0.005") for grub screws 4.95 ± 0.05 (0.195" \pm 0.002") for push-on knobs |
| F Distance of Locating Lug From Centre of Shaft: | Measured centre line to centre line; 9.5mm (0.375") |
| G Angle of Locating Lug: | Available angles 45° or 135° |
| H Bushing Shoulder: | Standard 3.2mm (0.125") |
| I Front Spacer: | If not clips on front side of first section; 1.6mm (0.062") min If clips on front side of first section; 4.8mm (0.187") min Otherwise may be any length within switch specifications |
| J Spacers: | Minimum dimensions; With clips facing away, or flat clips NIL With clips facing same direction 2.40 (0.093") With clips facing each other 6.35 (0.250") |
| M Spacer Length: | If no spacer 3.97mm (0.156"). Any length spacer may be inserted at this point. |
| N Thread Extension: | 3mm x M2.5 any length required |
| P Overall Length: | Specify maximum overall length if important |

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