

**General Information** The MSD is essentially a Heavy Duty rotary switch which is rated at 6amps. at 250Vac. Designed to handle higher currents than is possible with normal types of leaf clip wafer switches. It is eminently suitable for use in a wide variety of electrical equipment.  
Developed by NSF technical service to incorporate modern materials and techniques which give the switch a greatly extended life at it's full current rating.

**Electrical**

**Characteristics.** Maximum working voltage 250Vac.  
Contact rating. with resistive/non-inductive load  
6 amps at 250Vac. (rms)  
10 amps at 30 Vdc.  
Proof Voltage 2000 Vdc for 1 minute.  
Insulation resistance greater than 10<sup>5</sup> megohms.  
between adjacent contact or contact and frame)  
Contact resistance (initial) less than 5

milliohms at 2.5 Vdc

No. of Poles.	
1 Pole.	2 to 12 ways
2 Pole.	2 to 6 ways
3 Pole.	2 to 4 ways
4 Pole.	2 or 3 ways

1 amp.

**Contacts.** Contacts are copper, silver plated.

**Rotor Contacts.** Break-before-make only.

**Index Mechanism.** The 'U' type mechanism is used where one or two wafers are required, the type HD for switches with two or three. For more than three wafers please refer to our technical service.  
The low friction moulded cam and followers in the 'U' type assembly ensure a smooth and positive indexing action. Balanced pressure springs provide consistent and readily reproducible torque values which can be approximated as...

- Light - Not greater than 0.18Nm.
- Medium - Greater than 0.14Nm. but less than 0.32Nm.
- Heavy - Greater than 0.28Nm.

**Terminals.** Solder Lug.

**Insulation.** Stator - Glass fibre loaded diallylphthalate.  
Rotor - Glass filled nylon.

**Finish.** Standard Ferrous parts zinc plated, non-ferrous parts clean.

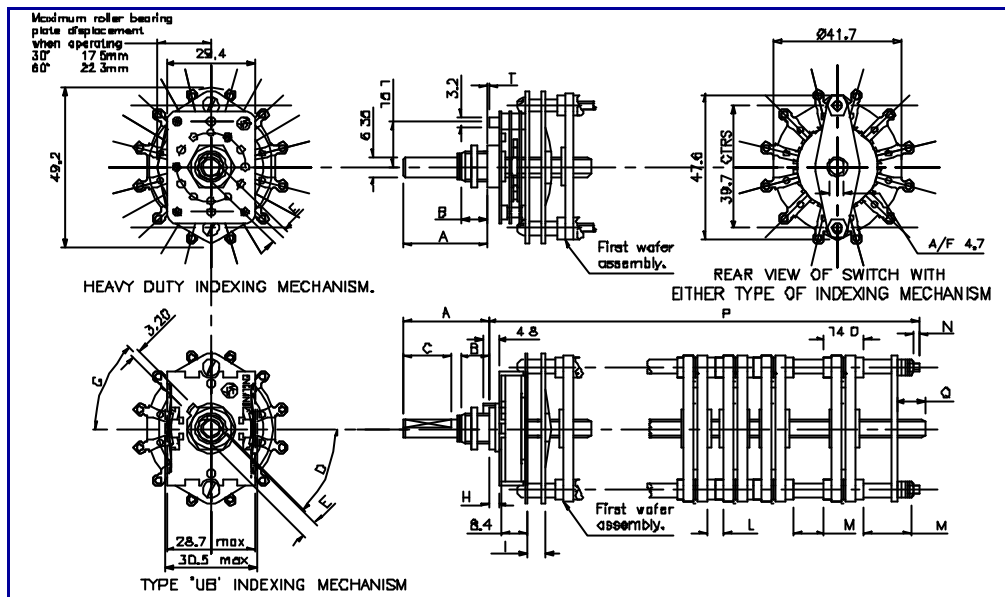
**Mounting Details.** Imperial (standard). Metric (alternative)  
Bush 3/8" x 32TPI (Whit.) M10 x 0.75.  
Shaft 0.25" dia. 6mm, dia.  
Nut 0.525" A/F. 14mm A/F.

The alternative is optional in each case.

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

Panel and spindle seals can be fitted allowing sealing to 1cm<sup>3</sup>/hr.

**Standard contacts.** Each wafer comprises two stators interconnected by a rotor. One to six multiple position contacts are fitted to one stator whilst the other has up to 12 individual contacts. The rotor is fitted with up to 4 contacts to give the number of poles and ways required.



### Dimensions Are In Millimetres

#### Key To Details

- |    |   |    |   |
|----|---|----|---|
| A. | Shaft length: optional $\pm 0.40$   | H. | Bushing shoulder; standard 3,2  |
| B. | Bushing thread length: preferred standard 9.5; 6.35 (0.250") available as an alternative.<br>Special lengths if necessary   | I. | Combined bearing strap and spacer, minimum 5,55   |
| C. | Flat length: length to specification. Tolerance $\pm 0.40$ .<br>Special shaft terminations may be provided to special requirements.                                     | L. | Spacing. 5,0 minimum spacing between contacts.  |
| D. | Angle of flat: to specification $\pm 2^\circ$ ; specify position of flat, with switch shaft in <b>fully anti-clockwise</b> position when viewed from front or knob end. | M. | Any length spacer desired may be inserted at this point. Last spacer dimension will include 5.55 for the combined bearing strap and spacer. |
| E. | Flat thickness: standard $5.55 \pm 0.15$ for grub screws; $4.95 \pm 0.05$ for push-on knobs.  | N. | Thread extension: 3,0mm min x 1/8" whit. any length desired.  |
| F. | Distance of locating lug from shaft, centre line to centre line.<br>Type 'U' 9.5<br>Type 'HD' 15.1  | P. | Specify maximum overall length if important.  |
| G. | Angle of locating lug:<br>Type 'U' $45^\circ$ , $135^\circ$ , $225^\circ$ or $315^\circ$ .<br>Type 'HD' $90^\circ$ or $270^\circ$ .                                     | Q. | Shaft extension at rear: nominal 3 to 6 mm. any length required may be specified.   |
|    |   | T. | Length of locating pin 0.05 to 0.30 below mounting face of bush (Sealed type).<br>unsealed type 4.8.  |