

**TS30-P****Micro-miniature Pushbutton Switches****SPECIFICATIONS**

CONTACT RATING: Q: 500mA @120 VAC or 28 VDC
 ELECTRICAL LIFE: 6,000 make-and-break cycles at full load
 CONTACT RESISTANCE: 20 mΩ max. initial @2-4 VDC, 100 mA
 INSULATION RESISTANCE: 1,000 MΩ min.
 DIELECTRIC STRENGTH: 500 V RMS @ sea level.
 OPERATING TEMPERATURE: -30°C to 85°C

MATERIALS

Base - diallyl phthalate (DAP) (UL94V-0)
 Plunger -Glass filled Nylon(UL94V-0)
 Bushing -Copper alloy , nickel plated
 CONTACT AND TERMINAL - Copper alloy , silver plated

How do you build the switches you need!!

T S - 3 1 - Z R - E - 2 -

Switch Type	
TS-31	SPST short
TS-32	SPST long
TS-33	SPST click
TS-33A	SPST click

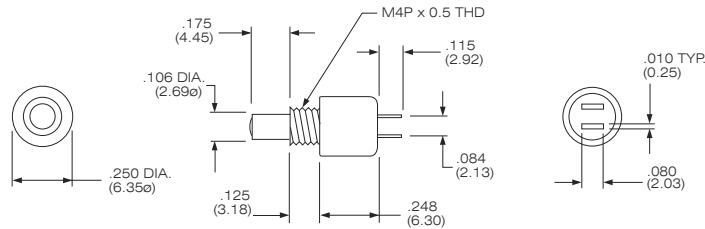
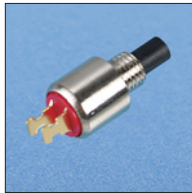
Terminal
Z
C

Contact material
Q silver plated
R gold plated
G Gold over silver

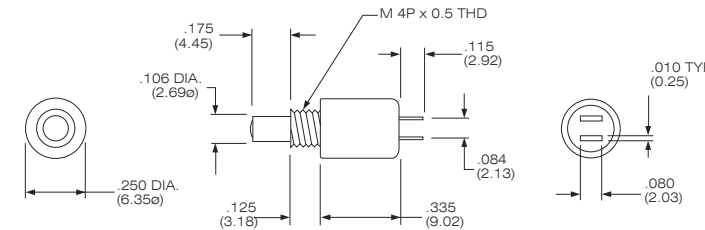
Epoxy seal
(none) none seal
E terminal seal

Plunger color
1 White
2 Black

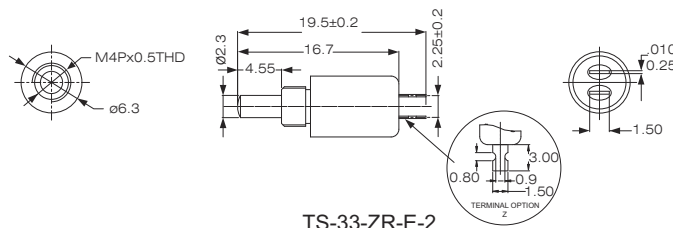
RoHS code
H = RoHS Compliant

**TS-31-ZR-E-2**

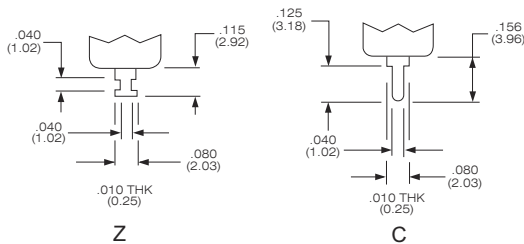
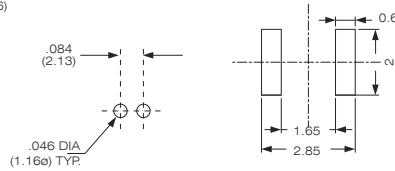
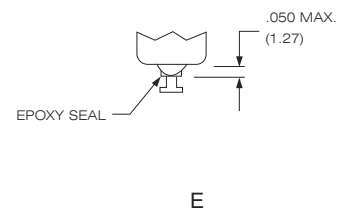
MODEL NO.	SWITCH FUNCTION	
	POS. 1	POS. 2
TS-31	OFF	MOM.
Schematic:		
N.O.		
Total Travel: .040 (1.02) typ.		
Actuation Force: 5 OZ. (140g) typ.		
MOM = Momentary		

**TS-32-ZR-E-2**

MODEL NO.	SWITCH FUNCTION	
	POS. 1	POS. 2
TS-32	OFF	MOM.
Schematic:		
N.O. w/Overtravel		
Total Travel: .059 (1.50)		
Overtravel: .024 (0.61) typ.		
Actuation Force: 6.25 OZ. (177g) typ.		
MOM = Momentary		

**TS-33-ZR-E-2**

MODEL NO.	SWITCH FUNCTION	
	POS. 1	POS. 2
TS-33	OFF	MOM.
TS-33A	ON	MOM.
Schematic:		
N.O.		
Total Travel: .071 (1.80) typ.		

TERMINAL OPTION**Z****C****PCB LAYOUT****TS-31 / TS-32****TS-33****TERMINAL SEAL OPTION****E****CONTACT MATERIAL OPTIONS**

CODE	CONTACT MATERIAL	TERMINAL MATERIAL	RATING
Q	Silver plated	Silver plated	500mA @ 120 V AC or 28 V DC
R	Gold plated over nickel plated	Gold plated over nickel plated	0.4VA MAX @ 20V AC or DC MAX
G	Gold plated over silver plated	Gold plated over silver plated	0.4 VA MAX @ 20 V AC or DC MAX or 500mA @ 120 V AC or 28 V DC