

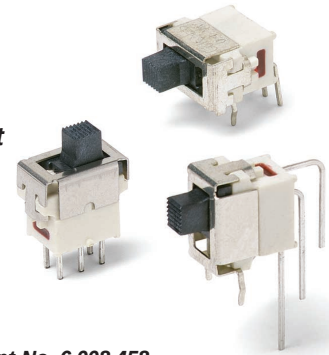
C&K ES Series Sealed Tiny Slide Switches

Features/Benefits

- **Process compatible**—internal o-ring and epoxy base seal
- **Thru-hole & surface mount models**
- **Reliable contact design ensures long electrical life**
- **Robust actuator for easy actuation**

Typical Applications

- **Computer peripherals & network products**
- **Test & measurement equipment**
- **Telephone & cable modems**



Patent No. 6,008,458

Specifications

CONTACT RATING: 0.4 VA max. @ 20 V AC or DC max.

MECHANICAL & ELECTRICAL LIFE: 40,000 make-and-break cycles at full load.

CONTACT RESISTANCE: 50 m Ω max. initial @ 2-4 V DC, 100 mA.

INSULATION RESISTANCE: $10^9 \Omega$ min.

DIELECTRIC STRENGTH: 500 Vrms min.

OPERATING TEMPERATURE: -30°C to 85°C.

SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9.

DEGREE OF PROTECTION: IP57; Protection against harmful dust deposit, full-scale voltage protection, temporary immersion.

ESD ENDURANCE: 8kv min. (EIA 545).

PACKAGING: Thru-hole switches supplied in anti-static trays.

Surface mount switches available in tape and reel packaging.

Materials

HOUSING & BASE: Nylon (UL 94V-0).

ACTUATOR: LCP (UL 94V-0) black, standard.

SURFACE PLATE: Stainless steel with tin plate.

MOVABLE CONTACT: Bronze with gold plate over nickel plate.

STATIONARY CONTACTS: Copper alloy, with gold plate over nickel plate.

TERMINALS: Copper alloy, with tin-lead alloy over nickel plate. All terminals insert molded.

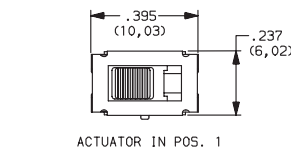
BASE & TERMINAL SEAL: Epoxy.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

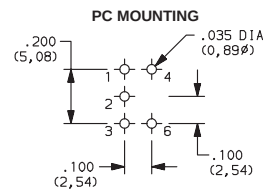
How To Order

Complete part numbers for ES Series Sealed Tiny Slide Switches are shown on pages I-3 thru I-6. These unique tiny slide switches are process compatible. An internal o-ring and epoxy base seal protects the switch from wave and reflow soldering, as well as cleaning processes.

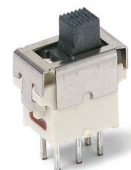
PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
ES01MCKE	ON	NONE	ON
ES03MCKE	ON	OFF	ON
CONN. TERMINALS	2-3	OPEN	2-1
SCHEMATIC			
SPDT			
ES02MCKE	OFF	NONE	ON
CONN. TERMINALS	OPEN	N/A	3-1
SCHEMATIC			
SPST			



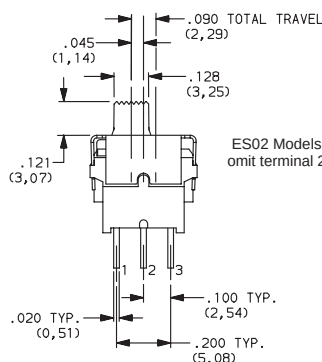
ACTUATOR IN POS. 1



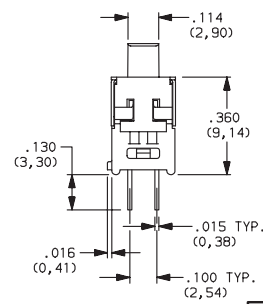
ES02 Models:
omit hole 2.



ES01MCKE
SPDT



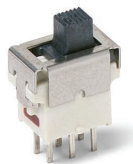
ES02 Models:
omit terminal 2.



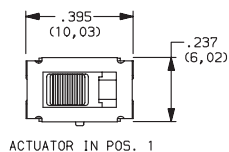
Third Angle
Projection

Dimensions are shown: IN (mm)
Dimensions subject to change

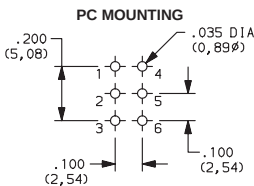
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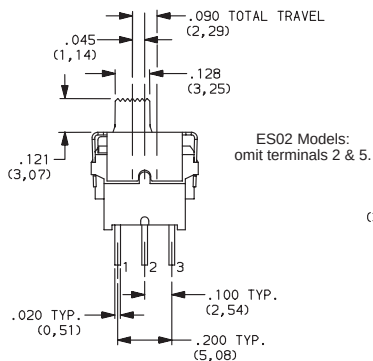
ES21MCKE
DPDT



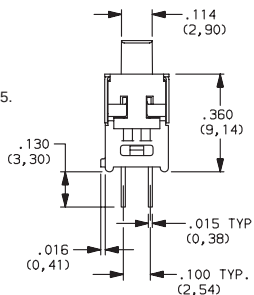
ACTUATOR IN POS. 1



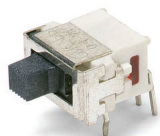
ES02 Models:
omit holes 2 & 5.



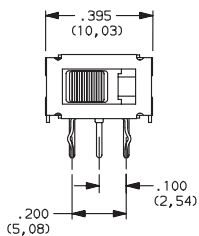
ES02 Models:
omit terminals 2 & 5.



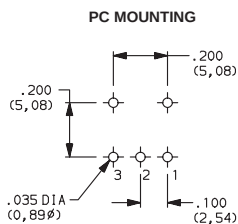
PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
ES21MCKE	ON	NONE	ON
ES23MCKE	ON	OFF	ON
CONN. TERMINALS	2-3, 5-6	OPEN	2-1, 5-4
SCHEMATIC			
DPDT			
ES22MCKE	OFF	NONE	ON
CONN. TERMINALS	OPEN	N/A	3-1, 6-4
SCHEMATIC			
DPST			



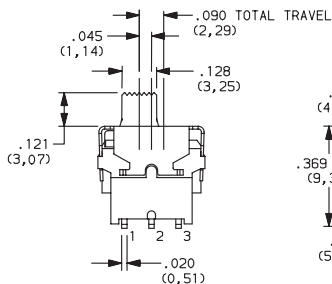
ES01MAKE
SPDT



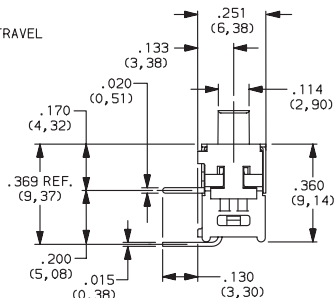
ACTUATOR IN POS. 1



ES02 Models:
omit hole 2.



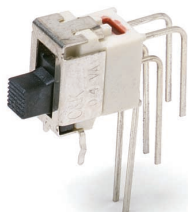
ES02 Models:
omit terminal 2.



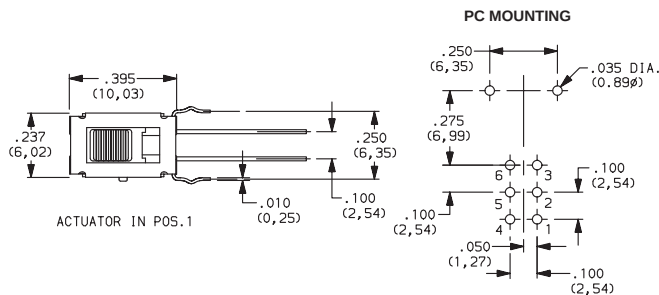
PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
ES01MAKE	ON	NONE	ON
ES03MAKE	ON	OFF	ON
CONN. TERMINALS	2-3	OPEN	2-1
SCHEMATIC			
SPDT			
ES02MAKE	OFF	NONE	ON
CONN. TERMINALS	OPEN	N/A	3-1
SCHEMATIC			
SPST			

Slide

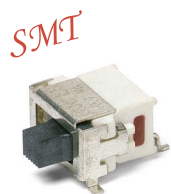
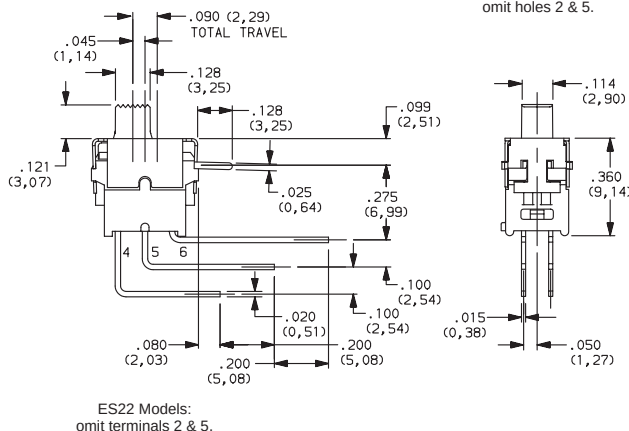
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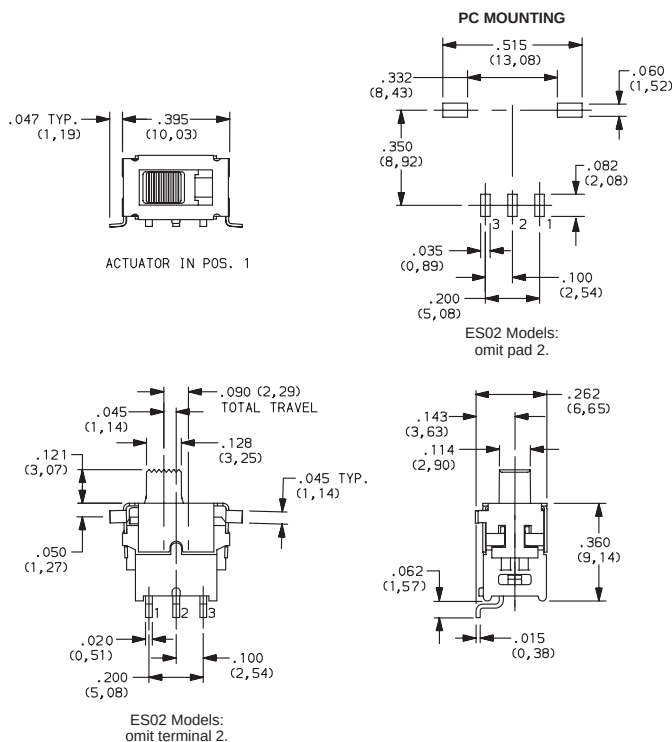
ES21MAVKE
DPDT



PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
ES21MAVKE	ON	NONE	ON
ES23MAVKE	ON	OFF	ON
CONN. TERMINALS	2-3,5-6	OPEN	2-1,5-4
SCHEMATIC			
DPDT			
ES22MAVKE	OFF	NONE	ON
CONN. TERMINALS	OPEN	N/A	3-1,6-4
SCHEMATIC			
DPST			



ES01MSAKE
Horizontal Actuation
SPDT



PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
ES01MSAKE	ON	NONE	ON
ES03MSAKE	ON	OFF	ON
CONN. TERMINALS	2-3	OPEN	2-1
SCHEMATIC			
SPDT			
ES02MSAKE	OFF	NONE	ON
CONN. TERMINALS	OPEN	N/A	3-1
SCHEMATIC			
SPST			

C&K ES Series Sealed Tiny Slide Switches

TAPE & REEL

For part numbers ESXXMSAKE

