

TF Series Miniature Snap-acting Switches

Features/Benefits

- Broad range of operating forces
- Ratings up to 21 AMPS
- Wide variety of actuator styles
- Quick connect terminations

Typical Applications

- Motor controls
- Thermostatics
- Portable tools



Specifications

CONTACT RATING: From low level* to 21 AMPS @ 277 V AC.
 ELECTRICAL LIFE: 300,000 cycles at 10 AMPS @ 250 V AC, consult Customer Service Center for typical life of higher rated switches.
 INSULATION RESISTANCE: 1,000 M ohm min.
 DIELECTRIC STRENGTH: 1,500 Vrms min. @ sea level.
 OPERATING TEMPERATURE: -40°F to 185°F (-40°C to 85°C).
 OPERATING FORCE: From 15 to 400 grams at actuator button available.
 MOUNTING: Torque screws 2-5 in/lbs.

* Low Level=conditions where no arcing occurs during switching, i.e., 0.4 VA max. @ 20 V AC or DC max. Standard electrical life per UL 1054, rated for 6,000 operations.

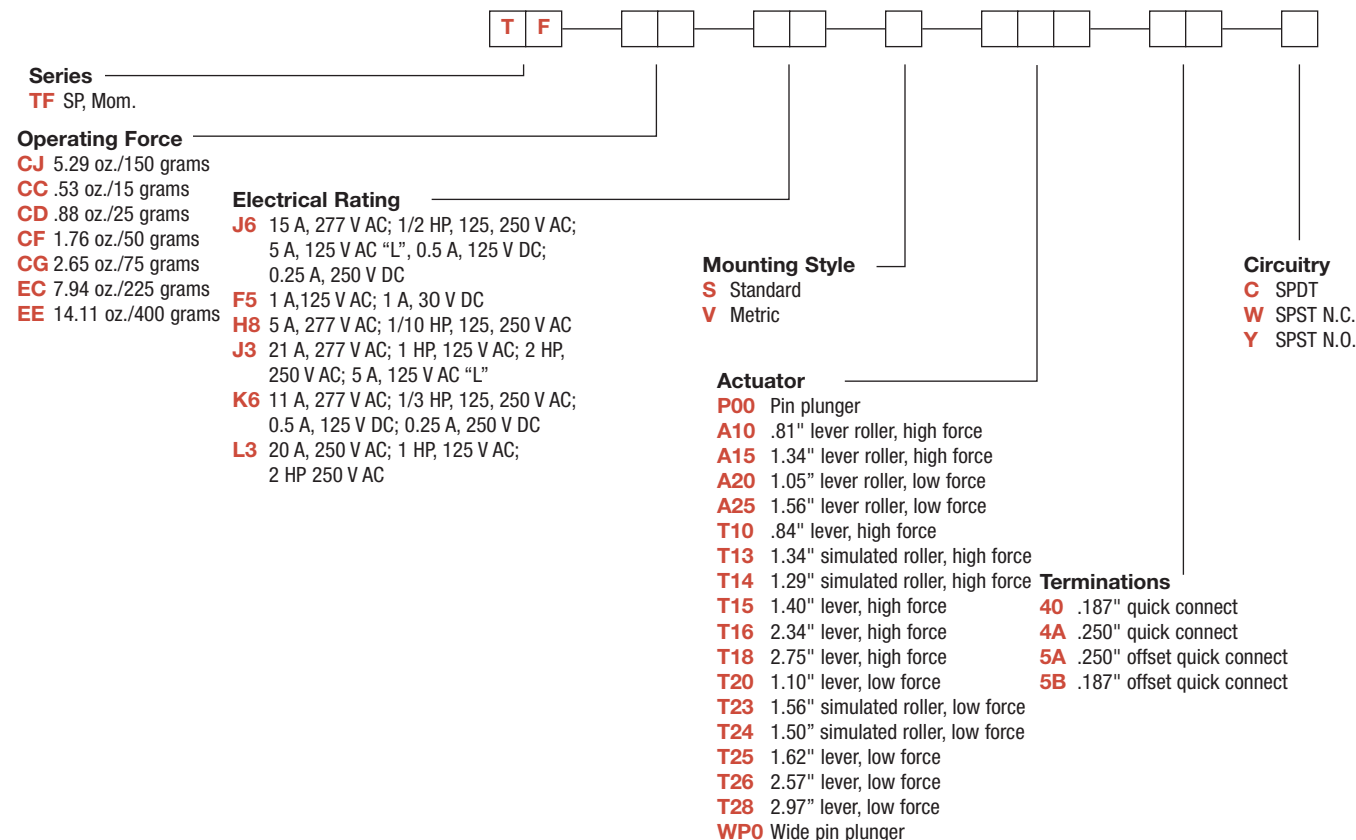
Materials

SWITCH HOUSING: Thermoplastic (UL 94V-0).
 ACTUATOR BUTTON: Thermoplastic (UL 94V-0).
 SPRING: Copper alloy.
 PIVOT: Brass alloy.
 MOVABLE CONTACTS: Gold alloy for ratings 1 AMP or less.
 Fine silver for ratings greater than 1 AMP up to 15 AMPS.
 Precious metal alloy for ratings greater than 15 AMPS.
 STATIONARY CONTACTS: Gold alloy for ratings 1 AMP or less.
 Fine silver for ratings greater than 1 AMP.
 TERMINALS: Brass alloy for ratings up to 10 AMPS.
 Copper alloy for ratings greater than 10 AMPS.

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

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages J-6 through J-10. For additional options not shown in catalog, consult Customer Service Center.



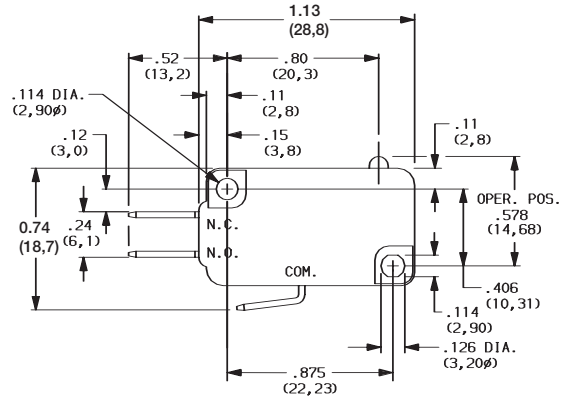
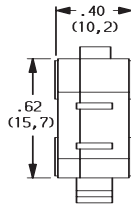
Dimensions are shown: Inches (mm)
 Specifications and dimensions subject to change

Snap-acting

TF Series Miniature Snap-acting Switches

SERIES

TF MINIATURE SNAP-ACTING SWITCHES – SP MOMENTARY



OPERATING FORCE



Snap-acting

OPTION CODE	BASIC SWITCH OPERATING FORCE (OZ./GRAMS)
CC	.53 15
CD	.88 25
CF	1.76 50
CG	2.65 75
CJ	5.29 150
EC	7.94 225
EE*	14.11 400

*Minimums may apply, consult Customer Service Center.

Operating Force option 'CC' not available with 'T18 & T26' Actuator options.
Operating force varies with actuator option, see ACTUATOR option section.

ELECTRICAL RATING

OPTION CODE	RoHS COMPLIANT *	RoHS COMPATIBLE *	CONTACT MATERIAL		ELECTRICAL RATING
			MOVABLE CONTACT	STATIONARY CONTACT	
F5	Yes	Yes	Gold alloy	Gold alloy	From low level* to 1 AMP @ 125 V AC, 1 AMP @ 30 V DC.
H8	Yes	Yes	Fine Silver	Fine Silver	5 AMPS @ 277 V AC; 1/10 HP @ 125 & 250 V AC.
J3	Yes	Yes			21 AMPS @ 277 V AC; 1 HP @ 125 V AC; 2 HP @ 250 V AC; 5 AMPS @ 125 V AC "L".
J6	Yes	Yes			15 AMPS @ 277 V AC; 1/2 HP @ 125 & 250 V AC; 5 AMPS @ 125 V AC "L". 0.5 AMP @ 125 V DC; 0.25 AMP @ 250 V DC.
K6	Yes	Yes			11 AMPS @ 277 V AC; 1/3 HP @ 125 & 250 V AC; 0.5 AMP @ 125 V DC; 0.25 AMP @ 250 V DC.
L3	Yes	Yes	Silver alloy		20 AMPS @ 250 V AC; 1 HP @ 125 V AC; 2 HP @ 250 V AC

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

All models

Consult Customer Service center for availability and delivery of nonstandard ratings.

* Low Level=conditions where no arcing occurs during switching, i.e., 0.4 VA max. @ 20 V AC or DC max.



Third Angle Projection

Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change



TF Series Miniature Snap-acting Switches

ELECTRICAL RATING

INTERNATIONAL RATING SYMBOLS	
μ	Microgap construction (less than 3 mm).
~	Alternating current.
T__	Maximum rated use temperature.
50E3	Cycles over 50,000 at rated current.
10E3	Cycles over 10,000 at rated current.
10(3)	Current Rating: First number represents resistive rating; second number represents inductive (motor) rating.

ELECTRICAL RATING	AMPS (REF.)	OPERATING FORCE						
		CC (15)	CD (25)	CF (50)	CG (75)	CJ (150)	EC (225)	EE (400)
F5	1	•	•	•	•	•	•	
H8	5	•	•	•	•	•	•	•
J3	21	X	X	X	X	•	•	•
J6	15	X	X	X	X	•	•	•
K6	11	X	•	•	•	•	•	•
L3	20	X	X	X	X	•	•	•

All models 

Consult Customer Service center for availability and delivery of nonstandard ratings.

* Low Level=conditions where no arcing occurs during switching, i.e., 0.4 VA max. @ 20 V AC or DC max.

• AVAILABLE

X NOT AVAILABLE

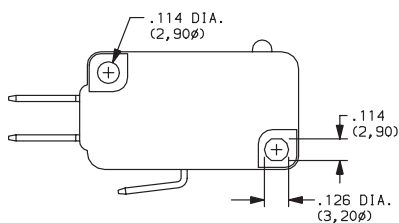
** Available with 4A & 5A terminations only, see page J-10.



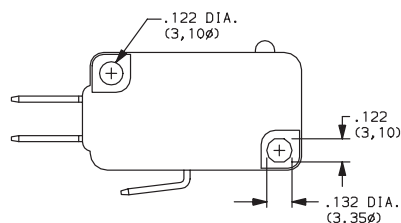
Snap-acting

MOUNTING STYLE

S STANDARD
For 4-40 screw size



V Metric
For 3 mm screw size



Third Angle
Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



TF Series Miniature Snap-acting Switches

ACTUATOR

OPTION CODE	FIG.	DIM. A	DIM. B	DIM. C	DIM. D
P00	1	.80 (20,3)	—	.578 ± .015 (14,68 ± 0,38)	—
A10	2	.81 (20,6)	.32 (8,1)	.810 ± .020 (20,57 ± 0,51)	.19 dia. (4,80)
A15	2	1.34 (34,0)	.32 (8,1)	.810 ± .030 (20,57 ± 0,76)	.19 dia. (4,80)
A20	2	1.05 (26,7)	.54 (13,7)	.810 ± .050 (20,57 ± 1,27)	.19 dia. (4,80)
A25	2	1.56 (39,6)	.54 (13,7)	.810 ± .075 (20,57 ± 1,91)	.19 dia. (4,80)
T10	3	.84 (21,3)	.32 (8,1)	.600 ± .020 (15,24 ± 0,51)	—
T15	3	1.40 (35,6)	.32 (8,1)	.600 ± .040 (15,24 ± 1,02)	—
T16	3	2.34 (59,4)	.32 (8,1)	.600 ± .065 (15,24 ± 1,65)	—
T18	3	2.75 (69,9)	.32 (8,1)	.600 ± .080 (15,24 ± 2,03)	—
T20	3	1.10 (27,9)	.54 (13,7)	.600 ± .050 (15,24 ± 1,27)	—
T25	3	1.62 (41,1)	.54 (13,7)	.600 ± .070 (15,24 ± 1,78)	—
T26	3	2.57 (65,3)	.54 (13,7)	.600 ± .150 (15,24 ± 3,81)	—
T28	3	2.97 (75,4)	.54 (13,7)	.600 ± .187 (15,24 ± 4,75)	—
T13	4	1.34 (34,0)	.32 (8,1)	.810 ± .030 (20,57 ± 0,76)	.19 dia. (4,80)
T14	4	1.29 (32,8)	.32 (8,1)	.730 ± .030 (18,54 ± 0,76)	.19 dia. (6,40)
T23	4	1.56 (39,6)	.54 (13,7)	.810 ± .065 (20,57 ± 1,65)	.19 dia. (4,80)
T24	4	1.50 (38,1)	.54 (13,7)	.730 ± .060 (18,54 ± 1,52)	.25 dia. (6,40)
WP0	5	.80 (20,3)	—	.635 ± .015 (16,13 ± 0,38)	—

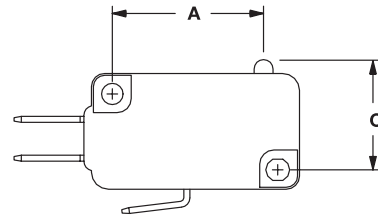


FIG. 1
Pin Plunger

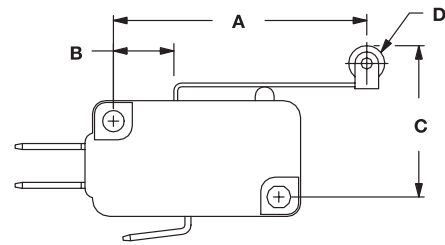


FIG. 2
Lever Roller

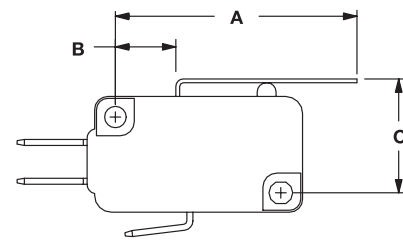


FIG. 3
Lever

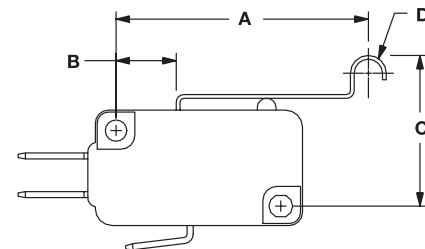


FIG. 4
Simulated Roller

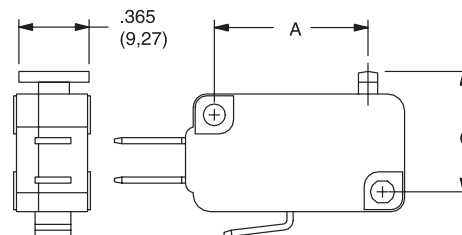


FIG. 5
Wide Pin



Third Angle
Projection

Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change



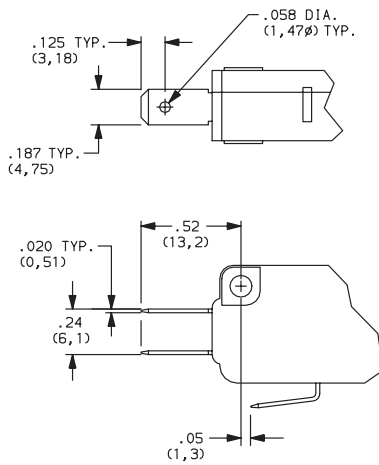
Snap-acting



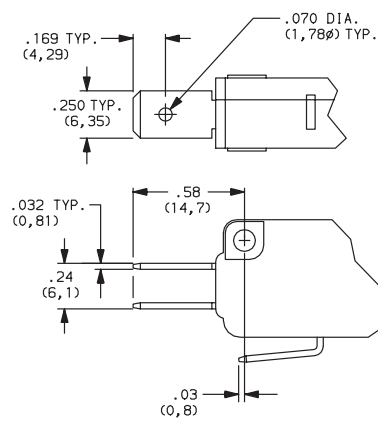
TF Series Miniature Snap-acting Switches

TERMINATIONS

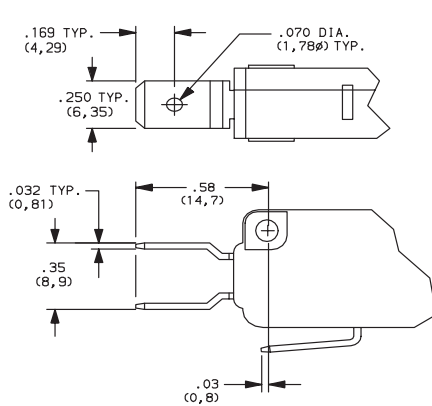
40 .187" QUICK CONNECT



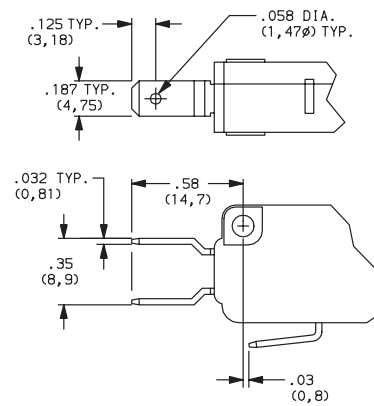
4A .250" QUICK CONNECT



5A OFFSET .250" QUICK CONNECT



5B OFFSET .187" QUICK CONNECT



CIRCUITRY

- C** SPDT (Single Pole, Double Throw)
- W** SPST N.C. (Single Pole, Single Throw, Normally Closed)
- Y** SPST N.O. (Single Pole, Single Throw, Normally Open)



Third Angle
Projection

Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change