



**THE DATASHEET OF  
TFCDH8ST1340C**



# TF Series

## Mid Size Snap-acting Switches



### Agency Approvals

Agency	Agency File Number
UL US	E42363

### Specifications

<b>Contact Rating</b>	From low level <sup>1</sup> to 21 AMPS @ 277 V AC.
<b>Electrical Life</b>	300,000 cycles at 10 AMPS @ 250 V AC, consult Customer Service Center for typical life of higher rated switches.
<b>Insulation Resistance</b>	1,000 M ohm min.
<b>Dielectric Strength</b>	1,500 Vrms min. @ sea level
<b>Operating Temperature</b>	-40°C to 85°C
<b>Operating Force</b>	From 15 to 400 grams at actuator button available
<b>Mounting</b>	Torque screws 2-5 in/lbs

#### Notes:

1. 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.

### Description

The TF series mid size snap-acting switch from C&K features a broad range of operating forces, ratings up to 21A and a wide variety of actuator styles to fit the specific needs of any design. Often used in motor controls, thermostatics and portable tools, designers across the globe turn to the TF series for its performance and resilience.

### Features & Benefits

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

### Applications

- Motor controls
- Thermostatics
- Portable tools

### Materials

<b>Switch Housing</b>	Thermoplastic (UL 94V-0)
<b>Actuator Button</b>	Thermoplastic (UL 94V-0)
<b>Spring</b>	Copper alloy.
<b>Pivot</b>	Brass Alloy
<b>Movable Contacts</b>	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.
<b>Stationary Contacts</b>	Gold alloy for ratings 1 amp or less. Fine silver for ratings greater than 1 amp.
<b>Terminals</b>	Brass alloy for ratings up to 10 amps. Copper alloy for ratings greater than 10 amps.

#### Notes:

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



# TF Series

## Mid Size Snap-acting Switches



### Operating Force

Option Code	Basic Switch Operating Force (oz./grams)
CC	0.53, 15
CD	0.88, 25
CF	1.76, 50
CG	2.65, 75
CJ	5.29, 150
EC	7.94, 225
EE	14.11, 400

#### Notes:

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 <sup>1</sup>	RoHS Compatible <sup>1</sup>	Contact Material		Electrical Rating  us
			Movable Contact	Stationary Contact	
F5	Yes		Gold Alloy		From low level <sup>1</sup> to 1 amp @ 125 V AC, 1 amp @ 30 V DC.
H8			Fine Silver	Fine Silver	5 amps @ 277 V AC; 1/10 HP @ 125 & 250 V AC.
J3					21 amps @ 277 V AC; 1 HP @ 125 V AC; 2 HP @ 250 V AC; 5 amps @ 125 V AC "L".
J6	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					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		Silver Alloy	Fine Silver	20 amps @ 250 V AC; 1 HP @ 125 V AC; 2 HP @ 250 V AC
M8	Yes		Fine Silver	Silver Alloy	0.1AMPS @ 125VAC, 0.1AMPS @ 30V DC.

**Notes:** See Technical Data section of this catalog for RoHS compliant and compatible definition and specifications. All models us Consult Customer Service center for availability and delivery of nonstandard ratings.

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

### Operating Force

Electrical Rating	Amps (REF.)	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	•	•	•

#### Notes:

• Available  
X Not available.

**1.** Available with 4A & 5A terminations only, see page 5. All models us Consult Customer Service center for availability and delivery of nonstandard ratings.

**2.** Operating forces correlated with M8 Electrical Rating:

Please consult factory.

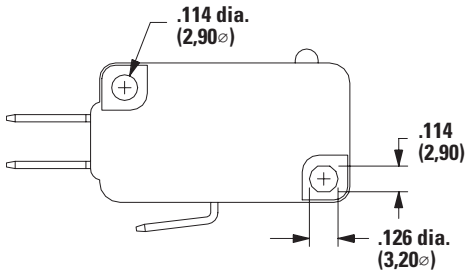
# TF Series

## Mid Size Snap-acting Switches

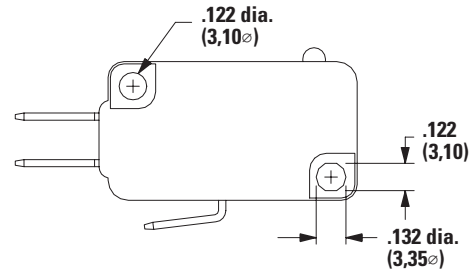


### Mounting Style

**S Standard for 4-40 Screw Size**



**V Metric for 3 mm Screw Size**



### Actuator

Option Code	Fig.	Dim. A	Dim. B	Dim. C	Dim. D
P00	1	0.80 (20.3)	-	0.578 ± 0.015 (14.68 ± 0.38)	-
A10	2	0.81 (20.6)	0.32 (8.1)	0.810 ± 0.020 (20.57 ± 0.51)	0.19 dia. (4.8Ø)
A15		1.34 (34.0)		0.810 ± 0.030 (20.57 ± 0.76)	
A20		1.05 (26.7)	0.54 (13.7)	0.810 ± 0.050 (20.57) ± 1.27	
A25		1.56 (39.6)		0.810 ± 0.075 (20.57 ± 1.91)	
T10	3	0.84 (21.3)	0.32 (8.1)	0.600 ± 0.020 (15.24 ± 0.51)	-
T15		1.40 (35.6)		0.600 ± 0.040 (15.24 ± 1.02)	
T16		2.34 (59.4)		0.600 ± 0.065 (15.24 ± 1.65)	
T18		2.75 (69.9)	0.54 (13.7)	0.600 ± 0.080 (15.24 ± 2.03)	
T20		1.10 (27.9)		0.600 ± 0.080 (15.24 ± 1.27)	
T25		1.62 (41.1)		0.600 ± 0.070 (15.24 ± 1.78)	
T26		2.57 (65.3)		0.600 ± 0.150 (15.24 ± 3.81)	
T28		2.97 (75.4)		0.600 ± 0.187 (15.24) ± 4.75	
T13		1.34 (34.0)		0.32 (8.1)	
T14	1.29 (32.8)	0.730 ± 0.030 (18.54 ± 0.76)			
T23	1.56 (39.6)	0.54 (13.7)	0.810 ± 0.065 (20.57 ± 1.65)		
T24	1.50 (38.1)		0.730 ± 0.060 (18.54) ± 1.52	0.25 dia. (6.4Ø)	
WP0	5	0.80 (20.3)	-	0.635 ± 0.015 (16.13 ± .038)	-

# TF Series

## Mid Size Snap-acting Switches



Figure 1 - Pin Plunger

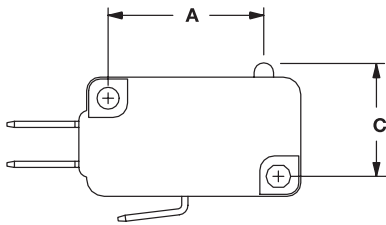


Figure 2 - Lever Roller

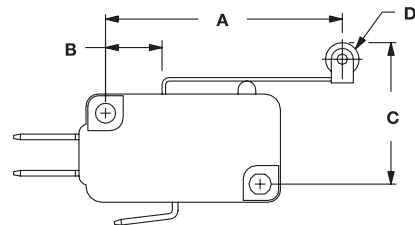


Figure 3 - Lever

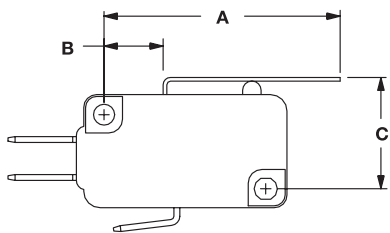


Figure 4 - Simulated Roller

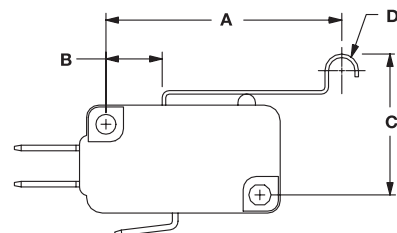
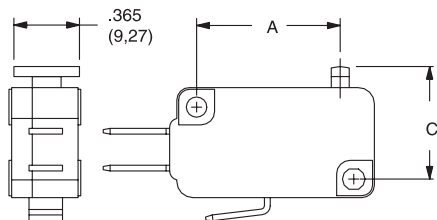


Figure 5 - Wide Pin



Note: Switch characteristics chart on following page.

# TF Series

## Mid Size Snap-acting Switches

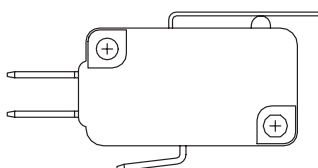


### Switch Characteristics

Option Code	Max. Operating Force (oz./grams)							Min. Release Force (oz./grams)							Max. Differential Travel	Max. Pre-Travel	Min. Over Travel
	CC (15)	CD (25)	CF (50)	CG (75)	CJ (150)	EC (225)	EE (400)	CC (15)	CD (25)	CF (50)	CG (75)	CJ (150)	EC (225)	EE (400)			
A10	0.63 18	1.06 30	2.29 65	3.17 90	6.35 180	7.94 225	14.11 400	0.21 6	0.35 10	0.35 10	0.53 15	0.71 20	1.98 56	3.88 110	0.015 (0.38)	0.060 (1.52)	0.030 (0.76)
A15	0.28 8	0.42 12	1.06 30	1.59 45	3 85	4.59 130	7.94 225	0.07 2	0.14 4	0.14 4	0.18 5	0.35 10	0.71 20	2.82 80	0.030 (0.76)	0.100 (2.54)	0.065 (1.65)
A20	0.53 15	0.71 20	1.41 40	2.12 60	4.23 120	6 170	9.7 275	0.07 2	0.11 3	0.11 3	0.18 5	0.42 12	0.71 20	1.41 40	0.025 (0.64)	0.12 (3.05)	0.055 (1.40)
A25	0.18 5	0.28 8	0.56 16	0.85 24	1.69 48	2.65 75	4.41 125	0.04 1	0.07 2	0.07 2	0.07 2	0.21 6	0.35 10	0.71 20	0.050 (1.27)	0.250 (6.35)	0.120 (3.05)
P00	0.53 15	0.88 25	1.76 50	2.65 75	5.29 150	7.94 225	14.11 400	0.21 6	0.35 10	0.35 10	0.53 15	1.23 35	1.98 56	3.88 110	0.010 (0.25)	0.047 (1.19)	0.050 (1.27)
T10	0.63 18	1.06 30	2.29 65	3.17 90	6.35 180	7.94 225	14.11 400	0.21 6	0.35 10	0.35 10	0.53 15	0.71 20	1.98 56	3.88 110	0.015 (0.38)	0.060 (1.52)	0.030 (0.76)
T13	0.28 8	0.42 12	1.06 30	1.59 45	3 85	4.59 130	7.94 225	0.07 2	0.14 4	0.14 4	0.18 5	0.35 10	0.71 20	2.82 80	0.030 (0.76)	0.100 (2.54)	0.065 (1.65)
T14	0.28 8	0.42 12	1.23 35	1.76 50	3.17 90	4.76 135	7.94 225	0.07 2	0.14 4	0.14 4	0.18 5	0.35 10	0.71 20	2.82 80	0.030 (0.76)	0.100 (2.54)	0.060 (1.52)
T15	0.25 7	0.42 12	1.06 30	1.41 40	2.82 80	4.41 125	7.94 225	0.07 2	0.14 4	0.14 4	0.18 5	0.28 8	0.63 18	2.82 80	0.030 (0.76)	0.110 (2.79)	0.065 (1.65)
T16	0.18 5	0.28 8	0.53 15	0.78 22	1.59 45	2.47 70	4.23 120	0.04 1	0.07 2	0.07 2	0.07 2	0.28 8	0.35 10	0.71 20	0.045 (1.14)	0.250 (6.35)	0.125 (3.18)
T18	N/A	0.21 6	0.42 12	0.71 20	1.41 40	2.12 60	3.53 100	N/A	0.04 1	0.04 1	0.07 2	0.18 5	0.28 8	0.56 16	0.062 (1.57)	0.300 (7.62)	0.155 (3.94)
T20	0.53 15	0.71 20	1.41 40	2.12 60	4.23 120	6 170	9.7 275	0.21 6	0.35 10	0.35 10	0.53 15	0.71 20	1.98 56	3.88 110	0.030 (0.76)	0.140 (3.56)	0.060 (1.52)
T23	0.18 5	0.28 8	0.56 16	0.85 24	1.69 48	2.65 75	4.41 125	0.04 1	0.07 2	0.07 2	0.07 2	0.21 6	0.35 10	0.71 20	0.050 (1.27)	0.250 (6.35)	0.120 (3.05)
T24	0.18 5	0.28 8	0.56 16	0.88 25	1.76 50	2.65 75	4.76 135	0.04 1	0.07 2	0.07 2	0.11 3	0.21 6	0.35 10	0.71 20	0.005 (1.27)	0.23 (5.84)	0.11 (2.79)
T25	0.18 5	0.28 8	0.53 15	0.88 25	1.59 45	2.47 70	4.23 120	0.04 1	0.07 2	0.07 2	0.07 2	0.21 6	0.35 10	0.99 28	0.055 (1.40)	0.250 (6.35)	0.125 (3.18)
T26	N/A	0.14 4	0.28 8	0.42 12	0.85 24	1.27 36	2.26 64	N/A	0.04 1	0.04 1	0.05 1.5	0.12 3.5	0.21 6	0.39 11	0.100 (2.54)	0.500 (12.70)	0.235 (5.97)
T28	N/A	N/A	N/A	0.42 12	0.71 20	1.06 30	1.94 55	N/A	N/A	N/A	0.04 1	0.11 3	0.18 5	0.32 9	0.12 (3.05)	0.560 (14.22)	0.285 (7.24)
WP0	0.53 15	0.88 25	1.76 50	2.65 75	5.29 150	7.94 225	14.11 400	0.21 6	0.35 10	0.35 10	0.53 15	1.23 35	1.97 56	3.88 110	0.010 (0.25)	0.047 (1.19)	0.030 (0.51)

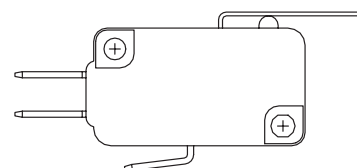
Note: For basic switch operating forces, see page 3.

#### High Force, Low Motion Pivot Position



Available with actuators A10, A15, T10, T13, T14, T15, T16 and T18.

#### Low Force, High Motion Pivot Position



Available with actuators A20, A25, T20, T23, T24, T25, T26, and T28.

Notes: Lever actuator options are available in either of two pivot positions. Levers located in the forward pivot position have lower forces and higher motions. Levers located in the rear pivot position have higher forces and lower motions.

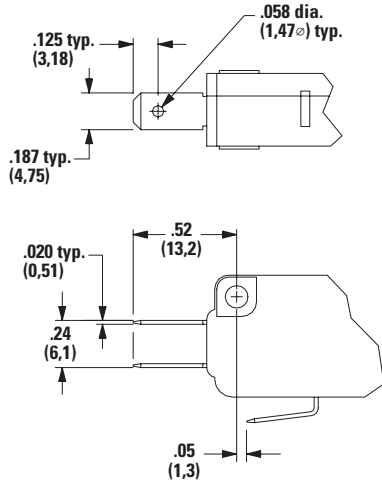
# TF Series

## Mid Size Snap-acting Switches

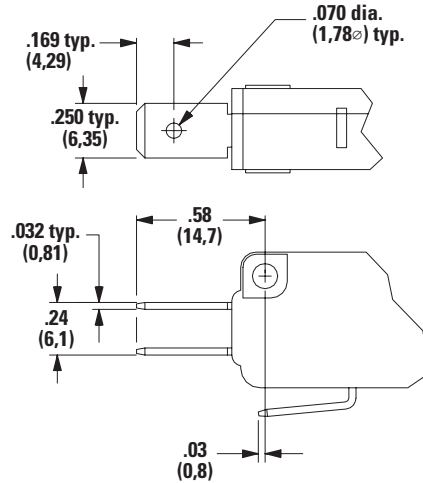


### Terminations

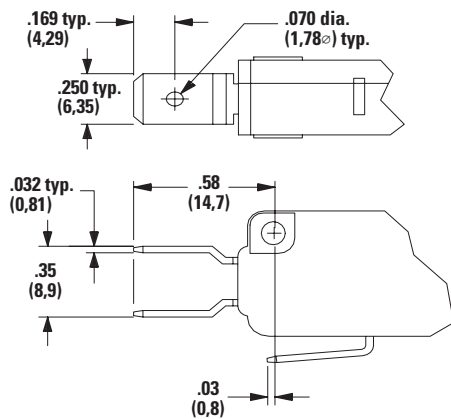
40 0.187" Quick Connect



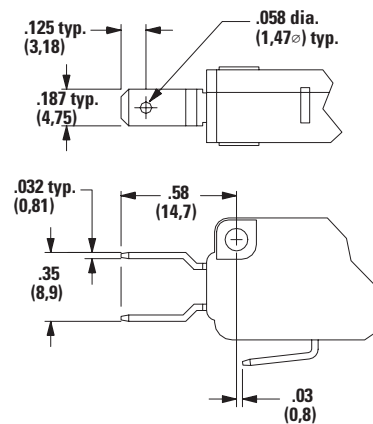
4A 0.250" Quick Connect



5A Offset 0.250" Quick Connect



5B Offset 0.187" 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)

**Disclaimer Notice** - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at <http://www.littelfuse.com/disclaimer-electronics>.

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View TFCDH8ST1340C on WIN SOURCE](#)
-  [C&K Components Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management