



# TF2 Series

## Mid Size Snap-acting Switches



### Agency Approvals

Agency	Agency File Number
	E42363
	ENEC-03347

### Specifications

<b>Contact Rating</b>	From low level <sup>1</sup> to 10 amps @125/250 V AC.
<b>Electrical Life</b>	10,000 cycles
<b>Mechanical Life</b>	1,000,000 cycles at 0.1A and 6A 400,000 cycles at 10A
<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 125°C (-40°C to 85°C)
<b>Operating Force</b>	From 18 to 330 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

Designers of motor controls, thermostatics and portable tools turn to the TF2 series because of its reputation for long-lasting performance. The TF2 series is a mid size snap-acting switch that features a broad range of operating forces, a wide variety of actuator styles and ratings of up to 10A.

### Features & Benefits

- Broad range of operating forces
- Ratings up to 10 AMPS
- Wide variety of actuator styles
- Quick connect terminations

### Applications

- Motor controls
- Thermostatics
- Portable tools

### Materials

<b>Switch Housing/ Actuator Button</b>	Nylon 6/6
<b>Spring</b>	Stainless Steel
<b>Pivot</b>	Brass Alloy
<b>Movable Contacts</b>	See electric rating page 3
<b>Movable Blade</b>	BeCu
<b>Stationary Contacts</b>	See electric rating page 3
<b>Terminals</b>	Brass Alloy

#### Notes:

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

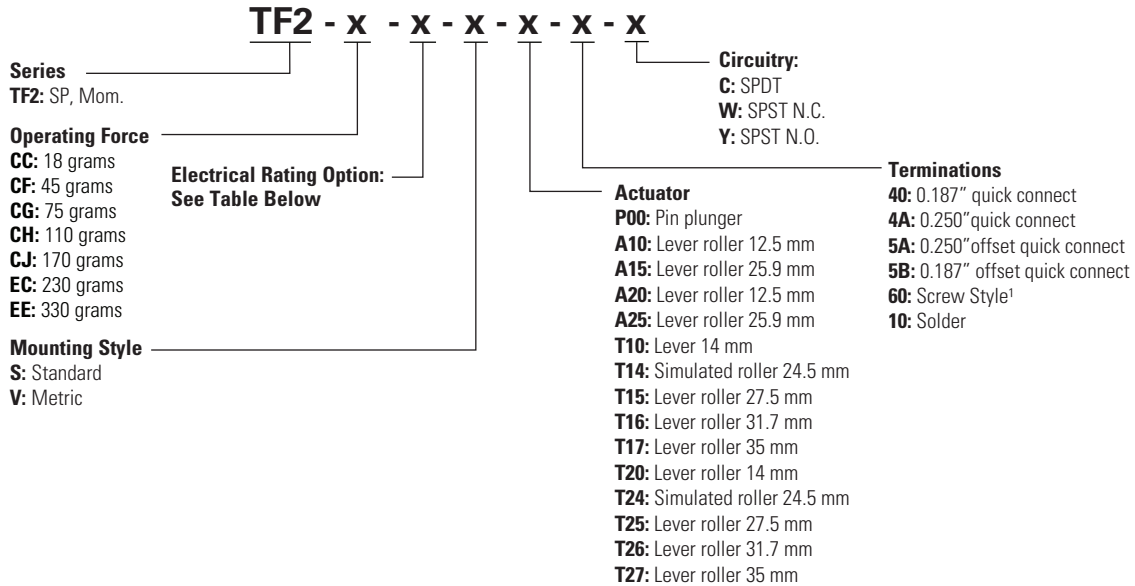
# TF2 Series

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### Ordering Number

To order, simply select desired option from each category and place in the appropriate box. For additional options not shown in catalog, consult Customer Service Center.



Option Code	US 61058-1	
F5	0.1A 125/250 V AC (T85) Min. 10,000 operations	0.1A 125/250 VAC μT125, 1E4
H8	6A 125/250 V AC (T85) Min. 10,000 operations	6A 125/250 VAC μT125, 1E4
K6	10A 125/250 V AC (T85) Min. 10,000 operations	10(4)A 125/250 VAC μT125, 1E4

**Notes:**  
See chart on following pages of compatible electrical ratings and operating force options. No. UL & ENEC 15 safety. For Termination option "60"

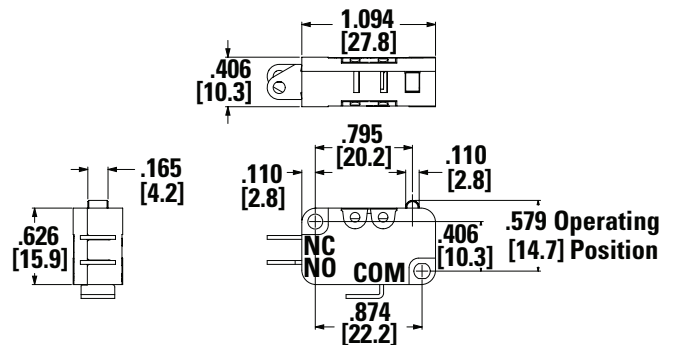
### Operating Force

Option Code	Basic Switch Operating Force (grams)
CC	18
CD	45
CF	75
CG	110
CJ	170
EC	230
EE <sup>1</sup>	330

**Notes:**  
1. Minimums may apply, consult Customer Service Center.

### TF2 Series inches (mm)

#### Mid Size Snap-Acting Switches - SP Momentary



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### Electrical Rating

Option Code	Contact Material		Movable Contact	Stationary Contact
	RoHS Compliant <sup>1</sup>	RoHS Compatible <sup>1</sup>		
F5	Yes		Silver Alloy	
H8				
K6				

**Notes:** See Technical Data section of this catalog for RoHS compliant and compatible definition and specifications. All models us

### International Rating Symbols

$\mu$	Microgap construction (less than 3 mm).
~	AC
T_ _	Max. Rating 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.

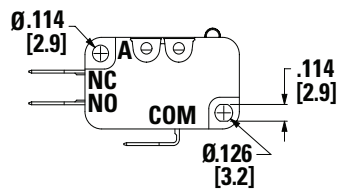
**Notes:** See Technical Data section of this catalog for RoHS compliant and compatible definition and specifications. All models us Consult Customer Service center for availability and delivery of non-standard ratings. Low Level=conditions where no arcing occurs during switching, i.e., 0.4 VA max. @ 20 V AC or DC max.

Electrical Rating	Amps (REF.)	Operating Force						
		CC (18)	CF (45)	CG (75)	CH (110)	CJ (170)	EC (230)	EE (330)
F5	0.1	•	•	•	•	•	•	X
H8	6	X	•	•	•	•	•	•
K6	10	X	X	X	•	•	•	•

**Notes:**  
 • Available  
 X: Not Available

### Mounting Style inches (mm)

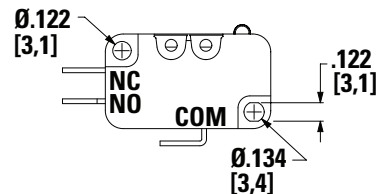
#### S Standard for 4-40 Screw Size



**TF2 Switch with Type 40 (0.187 QC) Terminals and P00 Actuator Shown**

**Note:** Torque Mounting Screws 2-5 in/lbs.

#### V Metric for 3 mm Screw Size



**TF2 Switch with Type 10 (Solder) Terminals and P00 Actuator Shown**

**Note:** Torque Mounting Screws 2-5 in/lbs.

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### Actuator

Option Code	Fig.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E
P00	2	0.795 (20.2)	-	0.578 ± 0.019 (14.70 ± 0.05)	0.068 (1.72)	-
A10	1	0.822 (20.9)	0.33 (8.4)	0.816 ± 0.050 (20.73 ± 1.27)	0.106 (2.70)	0.19 (4.8)
A15		1.35 (34.3)				
A20		1.05 (26.8)	0.56 (14.3)	0.816 ± 0.050 (20.73 ± 1.27)	0.183 (4.65)	
A25		1.58 (40.2)				
T10	3	0.882 (22.39)	0.33 (8.4)	0.602 ± 0.020 (15.3 ± 0.50)	0.110 (2.80)	-
T14	4	1.295 (32.9)	0.33 (8.4)	0.737 ± 0.059 (18.72 ± 1.5)	0.216 (5.50)	Ø0.275 (Ø7.0)
T15	3	1.405 (35.69)	0.33 (8.4)	0.600 ± 0.059 (15.24 ± 1.5)	0.232 (5.90)	-
T16		1.58 (40.01)				
T17		1.708 (43.39)	0.56 (14.3)	0.603 ± 0.062 (15.33 ± 1.57)	0.216 (5.50)	
T20		1.11 (28.3)				
T24	4	1.527 (38.8)	0.56 (14.3)	0.742 ± 0.090 (18.84 ± 2.29)	0.342 (8.70)	Ø0.275 (Ø7.0)
T25	3	1.631 (41.43)	0.56 (14.3)	0.609 ± 0.090 (15.47 ± 2.3)	0.381 (9.70)	-
T26		1.811 (46.00)				
T27		1.94 (49.3)	0.598 ± 0.150 (15.2 ± 3.8)	0.433 (11.0)		

Note: Switch characteristics chart on following page.

### Lever Roller

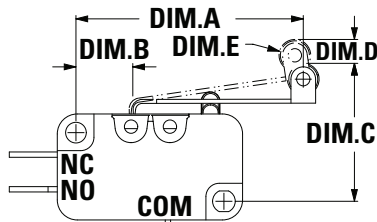


Figure 1 Lever Roller  
TF2XXXMA1510C

### Pin Roller

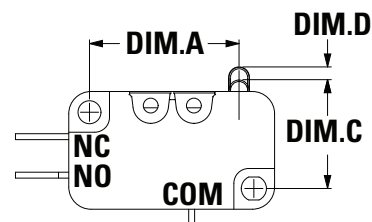


Figure 2 Pin Roller  
TF2XXXMP0010C

### Lever

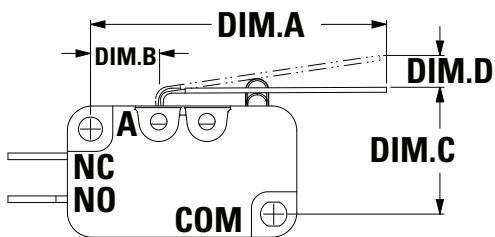


Figure 3 Lever  
TF2XXXST1510C Shown

### Simulated Roller

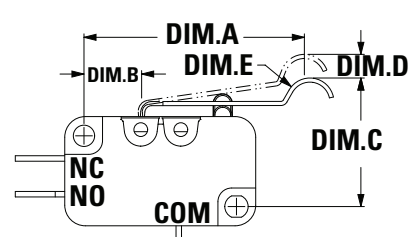


Figure 4 Simulated Roller  
TF2XXXST1410C

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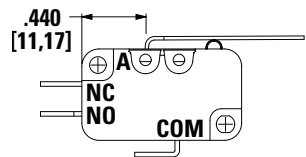
## Mid Size Snap-acting Switches



### Actuator

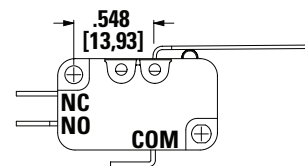
Lever Type		CC	CF	CG	CH Grams	CJ	EC	EE	Max. Differential Travel	Max. Pre-Travel	Min. Over Travel mm
									All Forces		
P00	OF	18	45	75	110	170	230	330	1.72	0.4	0.8
	RF	3	7	14	20	34	42	60			
T10	OF	18	45	75	110	170	230	330	2.8	0.5	0.6
	RF	-	6	11	17	25	35	50			
T20	OF	8	27	43	50	85	120	175	5.2	0.9	1.55
	RF	-	3	5	7	13	17	25			
T14	OF	10	28	43	65	110	140	205	5.5	1.1	1.4
	RF	-	3	5	8	14	17	31			
T24	OF	7	16	24	35	56	70	100	8.7	1.7	3.2
	RF	-	-	-	4	5	9	12			
A10	OF	20	55	80	110	170	230	330	2.7	0.45	0.6
	RF	-	5	11	16	28	31	45			
A20	OF	8	35	55	70	100	120	175	4.65	0.8	1.4
	RF	-	3	5	7	14	18	28			
A15	OF	8	30	45	65	100	125	180	4.2	1.25	1.6
	RF	-	-	5	7	12	16	25			
A25	OF	7	20	30	40	51	65	90	9.3	1.8	2.8
	RF	-	-	-	-	6	8	9			
T17	OF	16	25	35	50	80	100	140	5.5	1.2	0.55
	RF	-	2	4	6	11	14	20			
T27	OF	13	18	24	32	45	55	90	11	2.3	3.6
	RF	-	-	2	3	5	7	10			
T16	OF	15	17	32	55	85	110	150	5	1.05	1.8
	RF	-	-	4	6	12	15	22			
T26	OF	10	12	18	35	45	65	90	9.9	2.05	3.6
	RF	-	-	2	4	6	8	11			
T15	OF	18	22	37	50	86	125	180	5.9	1	1.6
	RF	-	3	5	9	14	17	24			
T25	OF	5	16	25	30	51	65	90	9.7	2.2	3.1
	RF	-	-	3	4	6	8	11			

#### 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.

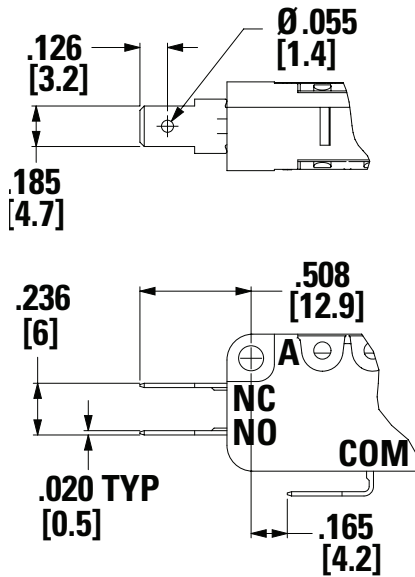
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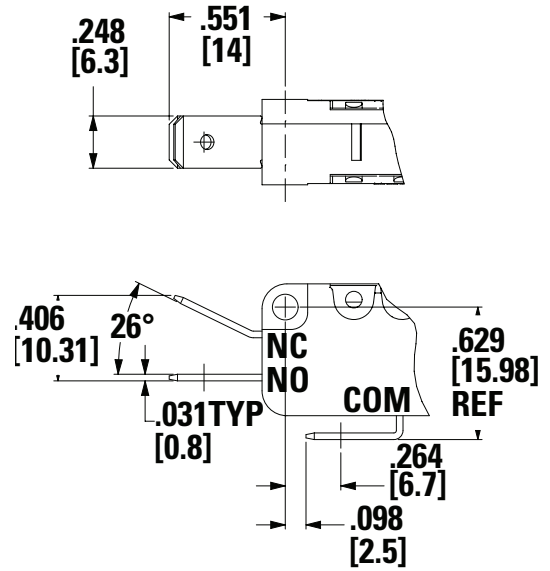


Terminations inches [mm]

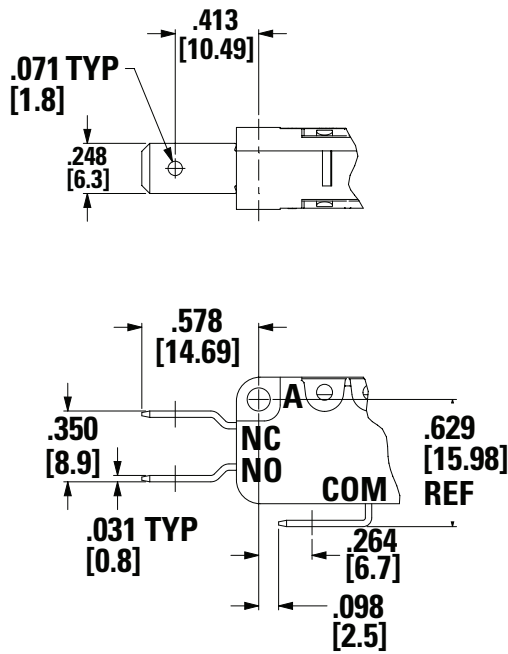
40 0.187" Quick Connect



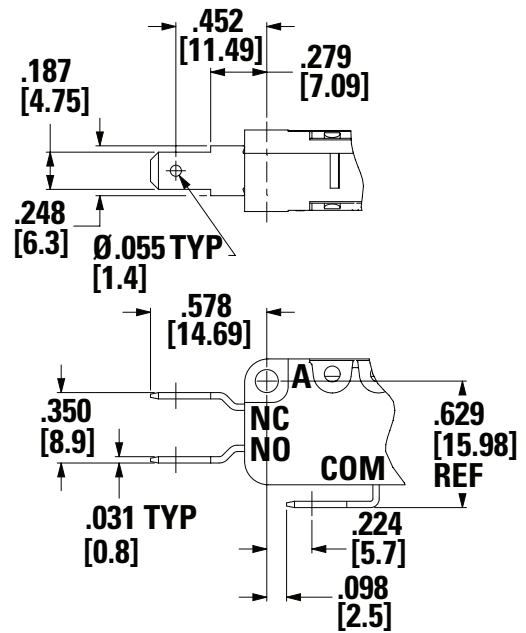
4A 0.250" Quick Connect



5A Offset 0.250" Quick Connect



5B Offset 0.187" Quick Connect



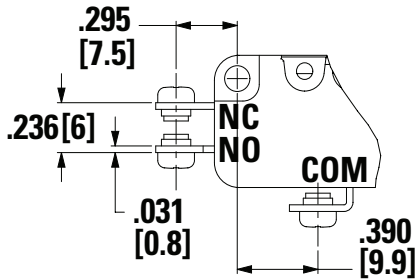
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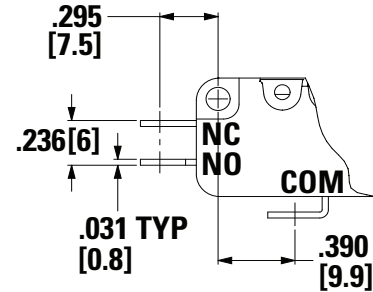
### 60 Screw Style

4-40 X .125  
(3.18)TYP.  
Screws &  
Lockwashers



### 10 Solder

Ø.098  
[2.5]  
TYP



### 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)

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