

TF2 Series Miniature Snap-acting Switches



Features/Benefits

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

Typical Applications

- Motor controls
- Thermostatics
- Portable tools
- Air Conditioner

Specifications

CONTACT RATING: From low level* to 10 AMPS @125/250 V AC.

ELECTRICAL LIFE: 10,000 cycles

MECHANICAL LIFE: 1,000,000 cycles at 0.1A and 6A

400,000 cycles at 10A

INSULATION RESISTANCE: 1,000 M ohm min.

DIELECTRIC STRENGTH: 1,500 Vrms min. @ sea level.

OPERATING TEMPERATURE: -40°C to 125°C (-40°C to 85°C).

OPERATING FORCE: From 18 to 330 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: Nylon 6/6

ACTUATOR BUTTON: Nylon 6/6

SPRING: Stainless Steel

PIVOT: Brass Alloy

MOVABLE CONTACTS: See electric rating page J-21

MOVABLE BLADE: BeCu

STATIONARY CONTACTS: See electric rating page J-21

TERMINALS: Brass Alloy

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-21 through J-25. For additional options not shown in catalog, consult Customer Service Center.

Series

TF2 SP, Mom.

Operating Force

CC 18 grams
CF 45 grams
CG 75 grams
CH 110 grams
CJ 170 grams
EC 230 grams
EE 330 grams

Electrical Rating Chart

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

Mounting Style

S Standard
V Metric

Actuator

P00 Pin plunger
A10 Lever roller 12.5 mm
A15 Lever roller 25.9 mm
A20 Lever roller 12.5 mm
A25 Lever roller 25.9 mm
T10 Lever 14 mm
T14 Simulated roller 24.5 mm
T15 Lever 27.5 mm
T16 Lever 31.7 mm
T17 Lever 35 mm
T20 Lever 14 mm
T24 Simulated lever 24.5 mm
T25 Lever 27.5 mm
T26 Lever 31.7 mm
T27 Lever 35 mm

Circuitry

C SPDT
W SPST N.C.
Y SPST N.O.

Terminations

40 .187" quick connect
4A .250" quick connect
5A .250" off set quick connect
5B .187" off set quick connect
60 Screw style *
10 Solder

see chart on following pages for detailed information

* Note: No UL & ENEC 15 safety for Termination option "60"



Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com

SERIES

[illegible]

OPERATING FORCE

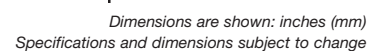
OPTION CODE	BASIC SWITCH OPERATING FORCE (grams)
CC	18
CF	45
CG	75
CH	110
CJ	170
EC	230
EE*	330

Snap-acting

ELECTRICAL RATING

	CONTACT MATERIAL			
OPTION CODE	RoHS COMPLIANT *	RoHS COMPATIBLE *	MOVABLE CONTACT	STATIONARY CONTACT
F5	Yes	Yes	Silver alloy	Silver alloy
H8	Yes	Yes		
K6	Yes	Yes		

All models  



TF2 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 (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	•	•	•	•

• AVAILABLE
 X NOT AVAILABLE

All models    15

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

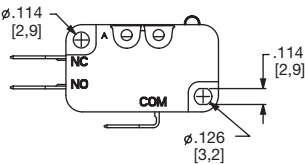
* Low Level=conditions where no arcing occurs during switching, i.e., 0.4 VA max. @ 20 V AC or DC max.

Snap-acting




MOUNTING STYLE

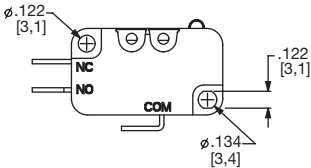
S STANDARD
 For 4-40 screw size



TF2 SWITCH WITH TYPE 40 (.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.

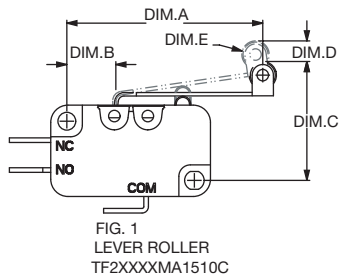
TF2 Series Miniature Snap-acting Switches

ACTUATOR

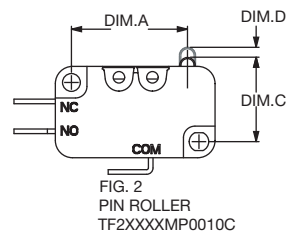
OPTION CODE	FIG	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E
P00	2	.795 (20,2)	-	.578 ± .019 (14,70 ± 0,05)	0.068 (1,72)	-
A10	1	.822 (20,9)	.33 (8,4)	.816 ± .050 (20,73 ± 1,27)	.106 (2,70)	∅ .19 (∅ 4,8)
A15	1	1.35 (34,3)	.33 (8,4)	.816 ± .059 (20,73 ± 1,5)	.165 (4,20)	∅ .19 (∅ 4,8)
A20	1	1.05 (26,8)	.56 (14,3)	.816 ± .050 (20,73 ± 1,27)	.183 (4,65)	∅ .19 (∅ 4,8)
A25	1	1.58 (40,2)	.56 (14,3)	.816 ± .086 (20,73 ± 2,2)	.366 (9,30)	∅ .19 (∅ 4,8)
T10	3	.882 (22,39)	.33 (8,4)	.602 ± .020 (15,3 ± 0,50)	.110 (2,80)	-
T14	4	1.295 (32,9)	.33 (8,4)	.737 ± .059 (18,72 ± 1,5)	.216 (5,50)	∅ .275 (∅ 7,0)
T15	3	1.405 (35,69)	.33 (8,4)	.600 ± .059 (15,24 ± 1,5)	.232 (5,90)	-
T16	3	1.58 (40,01)	.33 (8,4)	.604 ± .068 (15,35 ± 1,75)	.196 (5,0)	-
T17	3	1.708 (43,39)	.33 (8,4)	.603 ± .062 (15,33 ± 1,57)	.216 (5,50)	-
T20	3	1.11 (28,3)	.56 (14,3)	.604 ± .045 (15,34 ± 1,14)	.204 (5,20)	-
T24	4	1.527 (38,8)	.56 (14,3)	.742 ± .090 (18,84 ± 2,29)	.342 (8,70)	∅ .275 (∅ 7,0)
T25	3	1.631 (41,43)	.56 (14,3)	.609 ± .090 (15,47 ± 2,3)	.381 (9,70)	-
T26	3	1.811 (46,00)	.56 (14,3)	.616 ± .125 (15,65 ± 3,18)	.389 (9,90)	-
T27	3	1.94 (49,3)	.56 (14,3)	.598 ± .150 (15,2 ± 3,8)	.433 (11,0)	-

NOTE: Switch characteristics chart on following page.

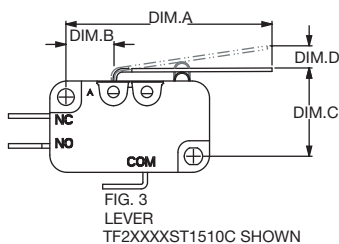
Lever Roller



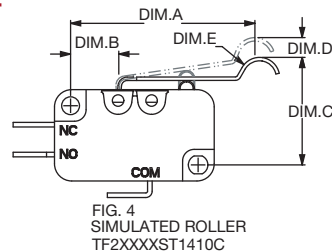
Pin Roller



Lever



Simulated Roller



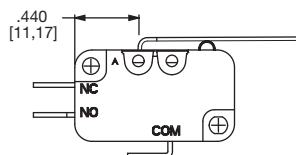
Dimensions are shown: inches (mm)
Specifications and dimensions subject to change

TF2 Series Miniature Snap-acting Switches

ACTUATOR 

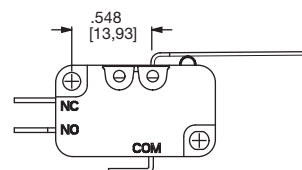
Lever Type		CC	CF	CG	CH Grams	CJ	EC	EE	Pre-Travel max. mm	Max Differential max. mm	Over Travel Min. mm
P00	OF	18	45	75	110	170	230	330	1.72	0.4	0.8
	RF	3	7	14	20	34	42	60			
T10	OF	18	45	75	110	170	230	330	2.8	0.5	0.6
	RF	-	6	11	17	25	35	50			
T20	OF	8	27	43	50	85	120	175	5.2	0.9	1.55
	RF	-	3	5	7	13	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



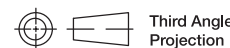
Available with actuators A10, A15, T10, T13, T14, T15, T16 and T18.

LOW FORCE, HIGH MOTION PIVOT POSITION



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

NOTE: 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.



Third Angle
Projection

Dimensions are shown: mm

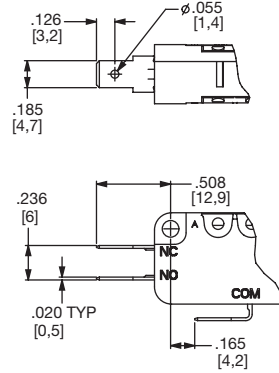
Specifications and dimensions subject to change



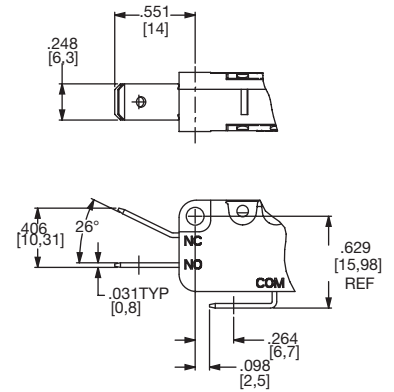
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TERMINATIONS

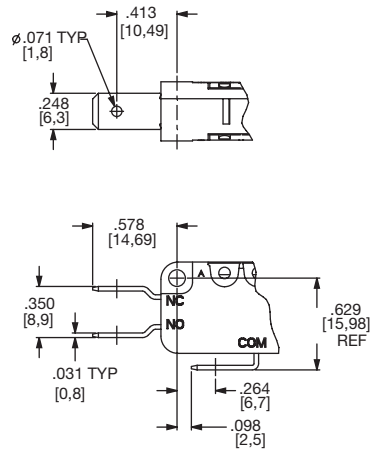
40 .187" QUICK CONNECT



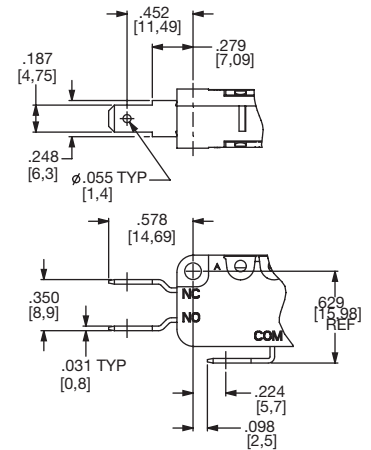
4A .250" QUICK CONNECT



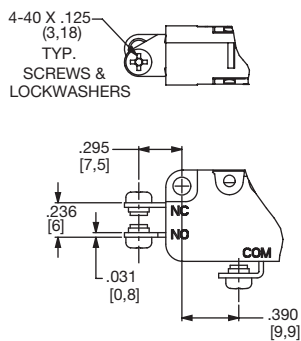
5A .250" OFF SET QUICK CONNECT



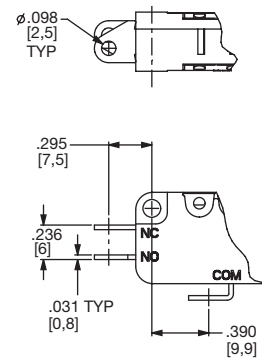
5B .187" OFF SET QUICK CONNECT



60 SCREW STYLE



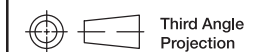
10 SOLDER



Snap-acting

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)



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

C&K