

TM Series Miniature Snap-acting Switches



Features/Benefits

- Broad range of operating forces available
- Wide variety of actuator and terminal styles
- Cost-effective solution

Typical Applications

- Pumps and motors
- White goods
- Consumer appliances



Specifications

CONTACT RATING: From low level* to 15 AMPS @ 250 V AC.
 ELECTRICAL LIFE: 150,000 cycles at 15 AMPS @ 250 V AC, models with 150 grams operating force. 350,000 cycles at 10 AMPS @ 250 V AC, models with 75 grams operating force.
 INSULATION RESISTANCE: 1,000 M ohms min.
 DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level.
 OPERATING TEMPERATURE: -67°F to 302°F (-55°C to 150°C).
 OPERATING FORCE: 50, 75 and 150 grams at actuator available; refer to chart for lever style forces.
 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.

Materials

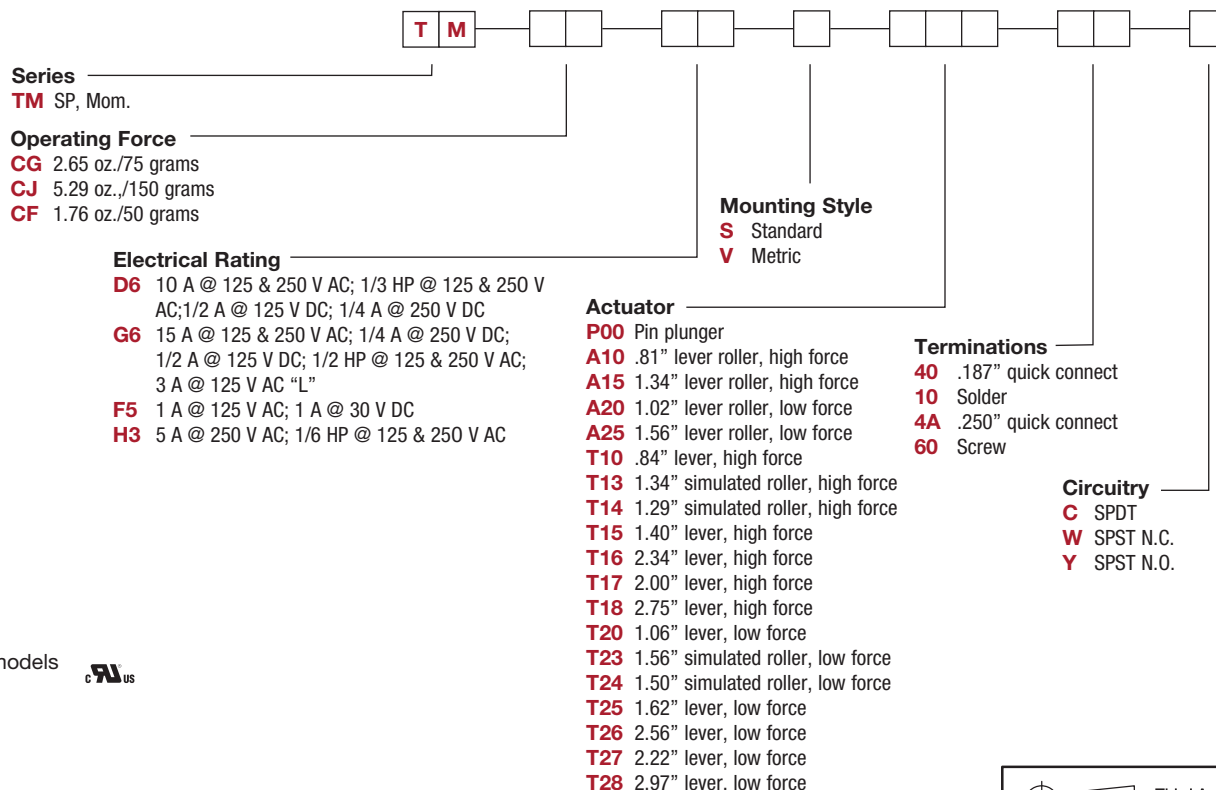
SWITCH HOUSING: Thermoplastic or general purpose phenolic (UL 94V-0).
 ACTUATOR BUTTON: Thermoplastic (UL 94V-0).
 SPRING: Copper alloy.
 PIVOT: Brass alloy.
 MOVABLE CONTACTS: Gold alloy for ratings 1 AMP @ 125 V AC or less. Fine silver for ratings greater than 1 AMP @ 125 V AC.
 STATIONARY CONTACTS: 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 @ 250 V AC. Copper alloy for 15 AMPS @ 250 V AC ratings.

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

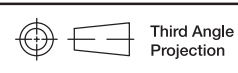
Snap-acting

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-26 through J-31. For additional options not shown in catalog, consult Customer Service Center. Available extended electrical life per UL 1054, rated for 100,000 operations, consult factory.



* All models



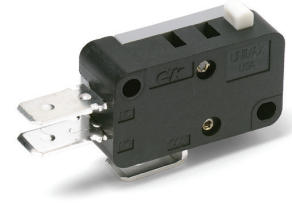
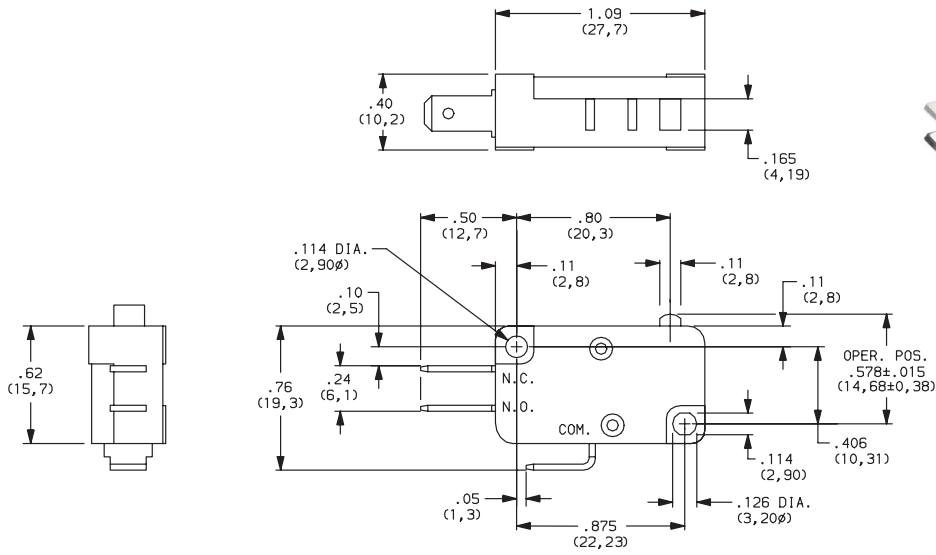
Dimensions are shown: Inch (mm)
 Specifications and dimensions subject to change



TM Series Miniature Snap-acting Switches

SERIES

TM MINIATURE SNAP-ACTING SWITCHES – SP MOMENTARY



OPERATING FORCE

OPTION CODE	BASIC SWITCH OPERATING FORCE (OZ./GRAMS)
CG	2.65 75
CJ	5.29 150
CF	1.76 50

Operating Force option 'CF' not available with 'T18, T27 and T28' actuator options. Operating force varies with actuator option, see ACTUATOR option section.

ELECTRICAL RATING

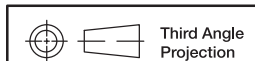
OPTION CODE	RoHS COMPLIANT*	RoHS COMPATIBLE*	CONTACT MATERIAL		ELECTRICAL RATING
			MOVABLE CONTACT	STATIONARY CONTACT	
D6	Yes	Yes	Fine Silver	Fine Silver	10 AMPS @ 125 & 250 V AC; 1/3 HP @ 125 & 250 V AC; 1/2 AMP @ 125 V DC; 1/4 AMP @ 250 V DC.
F5	Yes	Yes	Gold alloy	Gold alloy	From low level* to 1 AMP @ 125 V AC, 1 AMP @ 30 V DC.
G6	Yes	Yes	Fine Silver	Fine Silver	15 AMPS @ 125 & 250 V AC; 0.25 AMP @ 250 V DC; 0.5 AMP @ 125 V DC; 1/2 HP @ 125 & 250 V AC; 3 AMPS @ 125 V AC "L".
H3	Yes	Yes			5 AMPS @ 250 V AC; 1/6 HP @ 125 & 250 V AC.

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

* All models US

Contact 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: Inches (mm)
Specifications and dimensions subject to change



TM Series Miniature Snap-acting Switches

ELECTRICAL RATING

AVAILABLE COMBINATIONS

ELECTRICAL RATING	MAXIMUM OPERATING FORCE (OZ./GRAMS)		
	1.76/50 CF	2.65/75 CG	5.29/150 CJ
D6	•	•	•
F5	•	•	•
G6	X	X	•
H3	•	•	•

• AVAILABLE
X NOT AVAILABLE



* All models 

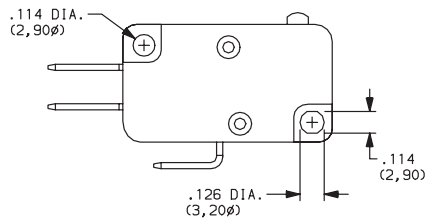
Contact Customer Service Center for availability and delivery of nonstandard ratings.

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

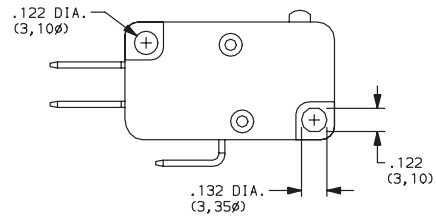
MOUNTING STYLE

S Standard

V Metric



Recommended maximum screw size: 4-40.



Recommended maximum screw size: 3 mm.

NOTE: Torque mounting screws 2-5 in/lbs.

Snap-acting



Third Angle Projection

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

TM Series Miniature Snap-acting Switches

ACTUATOR

OPTION CODE	FIG.	DIM. A	DIM. B	DIM. C	DIM. D
P00	2	.80 (20,3)	—	.578 ± .015 (14,68 ± 0,38)	—
A10	1	.81 (20,6)	.36 (9,1)	.810 ± .020 (20,57 ± 0,51)	.19 dia. (4,80)
A15	1	1.34 (34,0)	.36 (9,1)	.810 ± .040 (20,57 ± 1,02)	.19 dia. (4,80)
A20	1	1.03 (26,2)	.58 (14,7)	.810 ± .050 (20,57 ± 1,27)	.19 dia. (4,80)
A25	1	1.56 (39,6)	.58 (14,7)	.810 ± .080 (20,57 ± 2,03)	.19 dia. (4,80)
T10	3	.84 (21,3)	.36 (9,1)	.600 ± .020 (15,24 ± 0,51)	—
T13	4	1.34 (34,0)	.36 (9,1)	.810 ± .040 (20,57 ± 1,02)	.19 dia. (4,80)
T14	4	1.28 (32,5)	.36 (9,1)	.743 ± .050 (18,9 ± 1,3)	.236 dia. (6,00)
T15	3	1.40 (35,6)	.36 (9,1)	.600 ± .040 (15,24 ± 1,02)	—
T16	3	2.34 (59,4)	.36 (9,1)	.600 ± .062 (15,24 ± 1,57)	—
T17	3	2.00 (50,8)	.36 (9,1)	.600 ± .052 (15,24 ± 1,57)	—
T18	3	2.75 (69,9)	.36 (9,1)	.600 ± .093 (15,24 ± 2,36)	—
T20	3	1.06 (26,9)	.58 (14,7)	.600 ± .045 (15,24 ± 1,14)	—
T23	4	1.56 (39,6)	.58 (14,7)	.810 ± .065 (20,57 ± 1,65)	.19 dia. (4,80)
T24	4	1.50 (38,1)	.58 (14,7)	.743 ± .090 (18,80 ± 2,29)	.236 dia. (6,00)
T25	3	1.62 (41,1)	.58 (14,7)	.600 ± .080 (15,24 ± 2,03)	—
T26	3	2.56 (65,0)	.56 (14,7)	.600 ± .125 (15,24 ± 3,18)	—
T27	3	2.22 (56,4)	.58 (14,7)	.600 ± .125 (15,24 ± 3,18)	—
T28	3	2.97 (75,4)	.58 (14,7)	.600 ± .187 (15,24 ± 4,75)	—

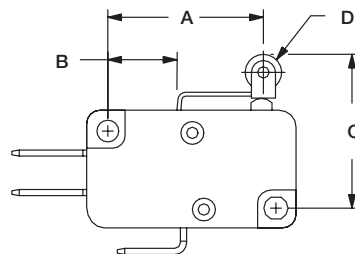


FIG. 1
Lever Roller

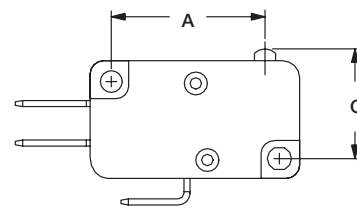


FIG. 2
Pin Roller

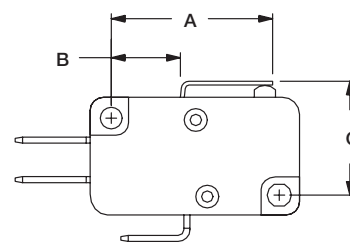


FIG. 3
Lever

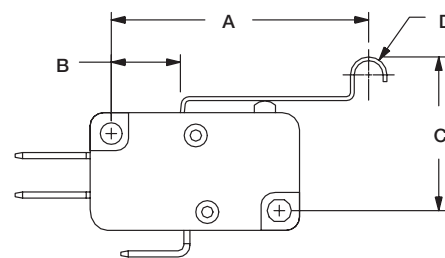
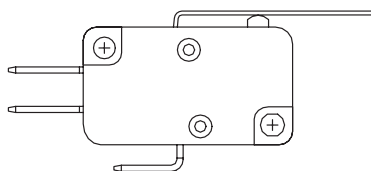


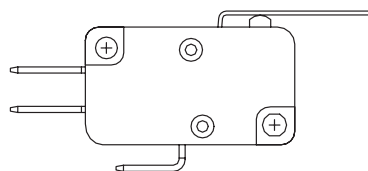
FIG. 4
Simulated Roller

HIGH FORCE, LOW MOTION PIVOT POSITION



Available with actuators A10, A15, T10, T13, T14, T15, T16, T17 and T18.

LOW FORCE, HIGH MOTION PIVOT POSITION



Available with actuators A20, A25, T20, T23, T24, T25, T26, T27 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.

TM Series Miniature Snap-acting Switches

ACTUATOR 

SWITCH CHARACTERISTICS

OPTION CODE	MAXIMUM OPERATING FORCE (OZ./GRAMS)			MINIMUM RELEASE FORCE (OZ./GRAMS)			MINIMUM RETURN FORCE (OZ./GRAMS)			MAXIMUM DIFFERENTIAL TRAVEL	MAXIMUM PRETRAVEL	MINIMUM OVERTRAVEL
	CF (50)	CG (75)	CJ (150)	CF (50)	CG (75)	CJ (150)	CF (50)	CG (75)	CJ (150)	ALL FORCES	ALL FORCES	ALL FORCES
T10	2.12 60	3.17 90	6.35 180	.49 14	.99 28	1.69 48	.25 7	.53 15	1.06 30	.013 (0,33)	.080 (2,03)	.035 (0,89)
T13	1.06 30	1.59 45	2.82 80	.21 6	.35 10	.71 20	.11 3	.14 4	.35 10	.030 (0,76)	.160 (4,06)	.065 (1,65)
T13	1.06 30	1.76 50	3.17 90	.25 7	.35 10	.71 20	.11 3	.14 4	.35 10	.050 (1,27)	.140 (3,56)	.062 (1,57)
T15	1.06 30	1.59 45	2.28 80	.21 6	.32 9	.71 20	.11 3	.14 4	.35 10	.032 (0,81)	.160 (4,06)	.075 (1,90)
T16	.53 15	.71 20	1.41 40	.11 3	.18 5	.35 10	.05 1.5	.07 2	.18 5	.090 (2,29)	.312 (7,92)	.140 (3,56)
T17	.71 20	.88 25	1.76 50	.14 4	.21 6	.42 12	.07 2	.07 2	.21 6	.062 (1,57)	.220 (5,59)	.110 (2,79)
T18	N/A	.71 20	1.23 35	N/A	.14 4	.28 8	N/A	.04 1	.14 4	.078 (1,98)	.375 (9,52)	.160 (4,06)
T20	1.06 30	1.59 45	3.17 90	.21 6	.32 9	.71 20	.11 3	.18 5	.35 10	.030 (0,76)	.160 (4,06)	.065 (1,65)
T23	.53 15	1.06 30	1.59 45	.11 3	.18 5	.35 10	.04 1	.07 2	.18 5	.070 (1,78)	.312 (7,92)	.125 (3,18)
T24	.53 15	1.23 35	1.76 50	.11 3	.18 5	.35 10	.05 1.5	.07 2	.18 5	.080 (2,03)	.312 (7,92)	.110 (2,79)
T25	.71 20	1.06 30	1.41 40	.07 2	.14 4	.32 9	.04 1	.07 2	.16 4.5	.070 (1,78)	.330 (8,38)	.100 (2,54)
T26	N/A	.35 10	.71 20	N/A	.07 2	.18 5	N/A	.04 1	.07 2	.110 (2,79)	.500 (12,7)	.250 (6,35)
T27	N/A	.60 17	.88 25	N/A	.11 3	.21 6	N/A	.04 1	.11 3	.125 (3,18)	.500 (12,70)	.200 (5,08)
T28	N/A	.42 12	.63 18	N/A	.07 2	.14 4	N/A	.04 1	.07 2	.187 (4,75)	.750 (19,05)	.280 (7,11)
A10	2.12 60	3.17 90	6.35 180	.49 14	.99 28	1.69 48	.25 7	.53 15	1.06 30	.013 (0,33)	.070 (1,78)	.035 (0,89)
A15	1.06 30	1.59 45	2.82 80	.21 6	.35 10	.71 20	.11 3	.14 4	.35 10	.030 (0,76)	.160 (4,06)	.065 (1,65)
A20	1.06 30	1.76 50	3.17 90	.25 7	.35 10	.71 20	.11 3	.18 5	.35 10	.025 (0,64)	.140 (3,56)	.060 (1,52)
A25	.53 15	1.06 30	1.59 45	.11 3	.18 5	.35 10	.04 1	.07 2	.18 5	.070 (1,78)	.312 (7,92)	.125 (3,18)
P00	1.76 50	2.65 75	5.29 150	.71 20	.99 28	2.12 60	.35 10	.53 15	1.06 30	.013 (0,33)	.056 (1,42)	.035 (0,89)

NOTE: For basic switch operating forces, see page J-26.

Snap-acting

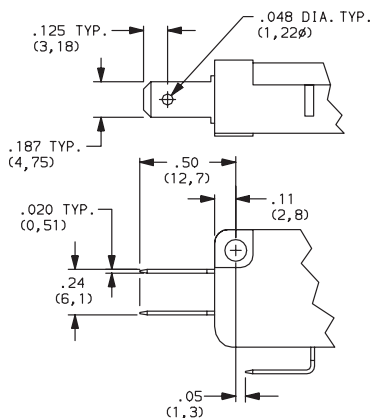


Third Angle Projection

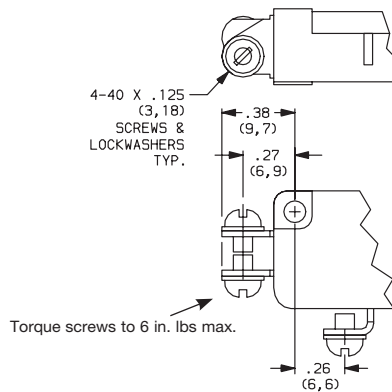
Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change

TERMINATIONS

40 .187" QUICK CONNECT

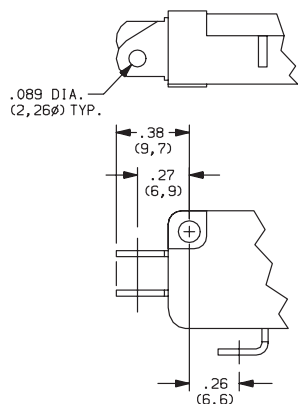


60 SCREW TERMINALS



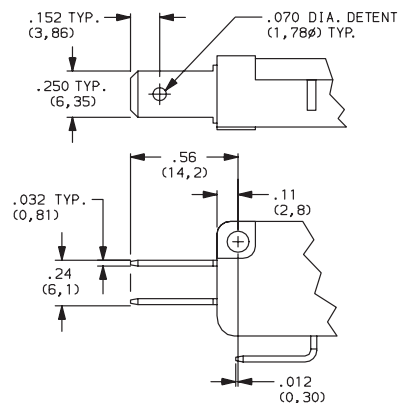
Not available with 'F5' rating option.

10 SOLDER



Not available with 'F5' rating option.

4A .250" QUICK CONNECT



Not available with 'F5' rating option.



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)



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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

C&K Switches:

[TMC GD6ST1840C](#) [TMC GD6ST2740C](#) [TMC GD6SA1540C](#) [TMC GD6ST1440C](#) [TMC GD6SA1040C](#)
[TMC GD6SP004AC](#) [TMC GD6ST1540C](#) [TMC GD6SP0040W](#) [TMC GD6SP0040Y](#) [TMC GF5VP0040C](#)
[TMC GD6SP0040C](#) [TMC JG6SP0040C](#) [TMC GD6SA1010C](#) [TMC GD6SA154AC](#) [TMC GD6ST174AC](#)
[TMC GF5SP0040C](#) [TMC JD6ST1410Y](#) [TMC JG6SA2540C](#) [TMC JG6ST1040C](#) [TMC JG6ST1540C](#) [TMC JG6VT1640Y](#)
[TMC JG6VT2810C](#) [TMC FD6SP0040W](#) [TMC GF5ST1040C](#) [TMC GD6ST2040C](#) [TMC GD6ST1040C](#) [TMC GD6SA2040C](#)
[TMC JF5SP0040W](#) [TMC GF5SA1040C](#) [TMC FD6ST2510C](#) [TMC GF5SA2540C](#) [TMC GD6ST1540Y](#)
[TMC JG6ST1440C](#) [TMC JG6SA1040C](#) [TMC JG6ST1540Y](#) [TMC GF5ST1540Y](#) [TMC JG6SA1010C](#) [TMC FF5ST1440C](#)
[TMC FD6SA1040C](#) [TMC JG6SP004AC](#) [TMC GF5ST1440C](#) [TMC JG6SA1040W](#) [TMC JD6SA1540C](#) [TMC JG6ST2440W](#)
[TMC JF5ST1540C](#) [TMC GD6VP004AC](#) [TMC JD6ST1640Y](#) [TMC FD6SA2040C](#) [TMC JD6ST1540C](#) [TMC JG6ST1840Y](#)
[TMC JD6SP0040C](#) [TMC FD6ST1040C](#) [TMC FD6SP0040Y](#) [TMC JG6VP0040Y](#) [TMC GD6SP004AY](#) [TMC JG6ST1560C](#)
[TMC JD6VP0040C](#) [TMC FH3ST204AC](#) [TMC JH3SP0040W](#) [TMC GD6VT1410C](#) [TMC JG6ST1340C](#)
[TMC GF5VT2440C](#) [TMC JD6VP0010C](#) [TMC GD6ST1640C](#) [TMC GH3ST1640C](#) [TMC JF5SP0040C](#) [TMC JG6ST1010C](#)
[TMC GD6VA1040Y](#) [TMC JG6SA1540W](#) [TMC GF5SA1540C](#) [TMC GD6ST2440C](#) [TMC FF5SP0040Y](#) [TMC JH3SP0040Y](#)
[TMC GD6VT2040Y](#) [TMC GD6VT1040Y](#) [TMC GD6SA104AC](#) [TMC JG6ST1510C](#) [TMC GF5ST1740Y](#)
[TMC GD6SA2510Y](#) [TMC FD6ST1540C](#) [TMC GD6ST154AC](#) [TMC JG6ST2540Y](#) [TMC JG6VA1540C](#) [TMC GD6ST2540C](#)
[TMC JG6SP0040W](#) [TMC FF5ST1540C](#) [TMC JG6SA1540C](#) [TMC JF5ST1440C](#) [TMC JD6ST2840C](#) [TMC GD6ST254AC](#)
[TMC JG6ST1040W](#) [TMC FD6SP0040C](#) [TMC JG6SA1040Y](#) [TMC GD6ST1340C](#) [TMC GF5SP0040Y](#)
[TMC GD6SA2540C](#) [TMC GD6ST2340C](#) [TMC FF5SA2040Y](#) [TMC JD6ST1440C](#) [TMC JG6VT2010C](#)