

Tactile Switches, .138 [3.5] x .236 [6], Through Hole

MATERIAL SPECIFICATIONS:

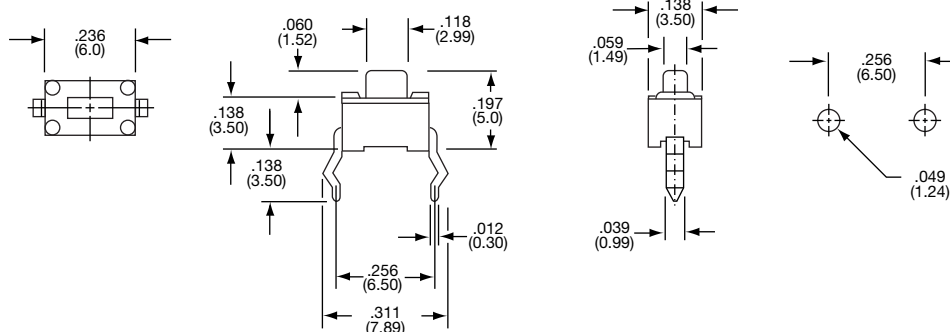
ContactsStainless/Silver clad plate
Case MaterialNylon
Actuator MaterialPBT
Terminals/Fixed Contacts.....Copper alloy, Silver/Nickel

ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature.....-40°F to +185°F (-40°C to + 85°C)
Storage Temperature.....-40°F to +185°F (-40°C to + 85°C)
Solder Heat ResistanceSee Page M3-4

TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating50 mA @ 12 VDC
Initial Contact Resistance100 Milliohms max.
Insulation Resistance100 Megohms min. @ 500 VDC
Dielectric Strength500 VAC for 1 minute
Actuation Force130±50 Grams
Actuator Travel......010"(.254)
Life ExpectancyUp to 20,000 Cycles



3.5 x 6mm

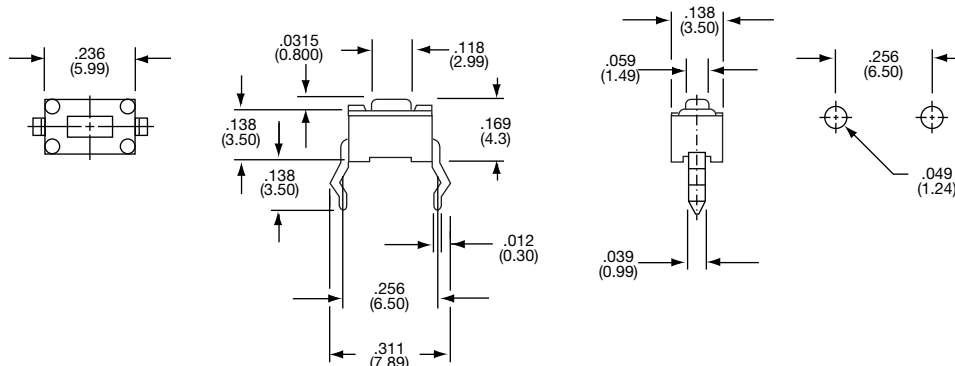


FSM

E

FSM Series

Tyco Electronics	Alcoswitch	Type		
1437565-1	FSM	SPST	Off	(On)
(On) indicates momentary position.				



3.5 x 6mm



FSMC

Tyco Electronics	Alcoswitch	Type		
7-1437565-6	FSMC	SPST	Off	(On)
(On) indicates momentary position.				

Tactile Switches, .236 [6] x .236 [6], Through Hole

MATERIAL SPECIFICATIONS:

ContactsCopper alloy, silver plate
Case.....Polyamide
Actuator ButtonPolyacetal Resin
FrameSteel, tin plate
TerminalsCopper alloy, silver plate

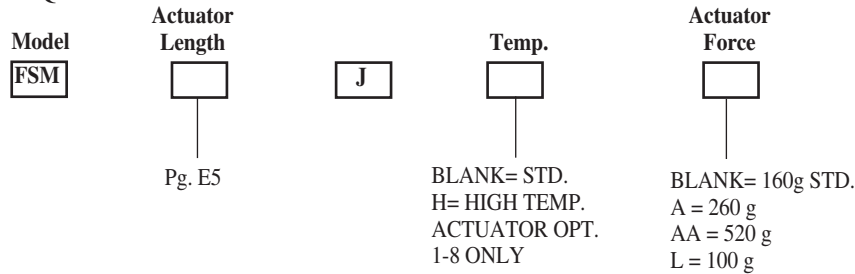
ENVIRONMENTAL SPECIFICATIONS

Operating Temperature.....-40°F to +221°F (-40°C to +105°C)
Storage Temperature.....-40°F to +221°F (-40°C to +105°C)
Solder Heat ResistanceSee Page M3-4

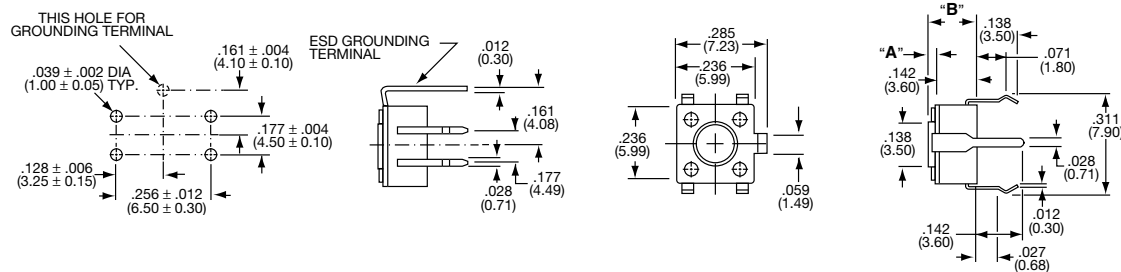
TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating50 mA @ 12 VDC
Initial Contact Resistance100 Milliohms max.
Insulation Resistance100 Megohms min. @ 100 VDC
Dielectric Strength500 VAC
Actuation ForceSee page E5
Actuator Travel......012" (0,3)
Electrostatic Discharge
w/ESD Ground Terminal5Kv w/no discharge
Life ExpectancyUp to 100,000 Cycles

PART NUMBERING SEQUENCE

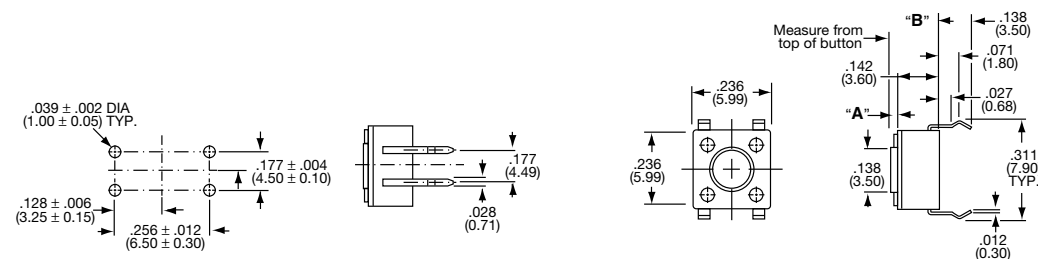


6 x 6 mm



FSM1J
WITH
ESD
TERMINAL

6 x 6 mm



FSM2J
WITHOUT
ESD
TERMINAL

Tactile Switches, .236 [6] x .236 [6], Through Hole (Continued)

TYCO Electronics Part Number	ALCO Part Number	DIMENSIONS		Actuation Force	Actuator Material	Life Cycles
		A	B			
With Ground Terminal						
1-1437565-5	FSM1J	0.028 (0.70)	0.169 (4.30)	160±50gf	PBT	100,000
—	FSM1JA	0.028 (0.70)	0.169 (4.30)	260±50gf	PBT	100,000
—	FSM1JAA	0.028 (0.70)	0.169 (4.30)	520±100gf	PBT	100,000
—	FSM1JL	0.028 (0.70)	0.169 (4.30)	100±50gf	PBT	100,000
3-1437565-3	FSM3J	0.055 (1.40)	0.196 (5.00)	160±50gf	PBT	100,000
—	FSM3JA	0.055 (1.40)	0.196 (5.00)	260±50gf	PBT	100,000
—	FSM3JAA	0.055 (1.40)	0.196 (5.00)	520±100gf	PBT	100,000
—	FSM3JL	0.055 (1.40)	0.196 (5.00)	100±50gf	PBT	100,000
4-1437565-4	FSM5J	0.134 (3.40)	0.276 (7.00)	160±50gf	ACETAL	100,000
—	FSM5JA	0.134 (3.40)	0.276 (7.00)	260±50gf	ACETAL	100,000
—	FSM5JAA	0.134 (3.40)	0.276 (7.00)	520±100gf	ACETAL	100,000
—	FSM5JL	0.134 (3.40)	0.276 (7.00)	100±50gf	ACETAL	100,000
5-1437565-1	FSM7J	0.232 (5.90)	0.374 (9.50)	160±50gf	PBT	100,000
—	FSM7JA	0.232 (5.90)	0.374 (9.50)	260±50gf	PBT	100,000
—	FSM7JAA	0.232 (5.90)	0.374 (9.50)	520±100gf	PBT	100,000
—	FSM7JL	0.232 (5.90)	0.374 (9.50)	100±50gf	PBT	100,000
7-1437565-5	FSM9J	0.146 (3.70)	0.287 (7.30)	160±50gf	ACETAL	100,000
—	FSM9JA	0.146 (3.70)	0.287 (7.30)	260±50gf	ACETAL	100,000
—	FSM9JAA	0.146 (3.70)	0.287 (7.30)	520±100gf	ACETAL	100,000
—	FSM9JL	0.146 (3.70)	0.287 (7.30)	100±50gf	ACETAL	100,000
1437565-8	FSM11J	0.173 (4.40)	0.315 (8.00)	160±50gf	ACETAL	100,000
—	FSM11JA	0.173 (4.40)	0.315 (8.00)	260±50gf	ACETAL	100,000
—	FSM11JAA	0.173 (4.40)	0.315 (8.00)	520±100gf	ACETAL	100,000
—	FSM11JL	0.173 (4.40)	0.315 (8.00)	100±50gf	ACETAL	100,000
1-1437565-0	FSM13J	0.370 (9.40)	0.512 (13.00)	160±50gf	ACETAL	100,000
1-1437565-1	FSM13JA	0.370 (9.40)	0.512 (13.00)	260±50gf	ACETAL	100,000
—	FSM13JAA	0.370 (9.40)	0.512 (13.00)	520±100gf	ACETAL	100,000
—	FSM13JL	0.370 (9.40)	0.512 (13.00)	100±50gf	ACETAL	100,000
—	FSM15J	0.527 (13.40)	0.669 (17.00)	160±50gf	ACETAL	100,000
147916-1	FSM15JA	0.527 (13.40)	0.669 (17.00)	260±50gf	ACETAL	100,000
—	FSM15JAA	0.527 (13.40)	0.669 (17.00)	520±100gf	ACETAL	100,000
—	FSM15JL	0.527 (13.40)	0.669 (17.00)	100±50gf	ACETAL	100,000
—	FSM17J	0.193 (4.90)	0.335 (8.51)	160±50gf	ACETAL	100,000
—	FSM17JA	0.193 (4.90)	0.335 (8.51)	260±50gf	ACETAL	100,000
—	FSM17JAA	0.193 (4.90)	0.335 (8.51)	520±100gf	ACETAL	100,000
—	FSM17JL	0.193 (4.90)	0.335 (8.51)	100±50gf	ACETAL	100,000
Without Ground Terminal						
2-1437565-0	FSM2J	0.028 (0.70)	0.169 (4.30)	160±50gf	PBT	100,000
2-1437565-1	FSM2JA	0.028 (0.70)	0.169 (4.30)	260±50gf	PBT	100,000
—	FSM2JAA	0.028 (0.70)	0.169 (4.30)	520±100gf	PBT	100,000
2-1437565-4	FSM2JL	0.028 (0.70)	0.169 (4.30)	100±50gf	PBT	100,000
3-1437565-6	FSM4J	0.055 (1.40)	0.196 (5.00)	160±50gf	PBT	100,000
3-1437565-7	FSM4JA	0.055 (1.40)	0.196 (5.00)	260±50gf	PBT	100,000
3-1437565-8	FSM4JAA	0.055 (1.40)	0.196 (5.00)	520±100gf	PBT	100,000
—	FSM4JL	0.055 (1.40)	0.196 (5.00)	100±50gf	PBT	100,000
4-1437565-5	FSM6J	0.134 (3.40)	0.276 (7.00)	160±50gf	ACETAL	100,000
4-1437565-6	FSM6JA	0.134 (3.40)	0.276 (7.00)	260±50gf	ACETAL	100,000
—	FSM6JAA	0.134 (3.40)	0.276 (7.00)	520±100gf	ACETAL	100,000
—	FSM6JL	0.134 (3.40)	0.276 (7.00)	100±50gf	ACETAL	100,000
5-1437565-2	FSM8J	0.232 (5.90)	0.374 (9.50)	160±50gf	PBT	100,000
5-1437565-3	FSM8JA	0.232 (5.90)	0.374 (9.50)	260±50gf	PBT	100,000
5-1437565-4	FSM8JAA	0.232 (5.90)	0.374 (9.50)	520±100gf	PBT	100,000
1571376-1	FSM8JL	0.232 (5.90)	0.374 (9.50)	100±50gf	PBT	100,000
1437565-7	FSM10J	0.146 (3.70)	0.287 (7.30)	160±50gf	ACETAL	100,000
—	FSM10JA	0.146 (3.70)	0.287 (7.30)	260±50gf	ACETAL	100,000
—	FSM10JAA	0.146 (3.70)	0.287 (7.30)	520±100gf	ACETAL	100,000
—	FSM10JL	0.146 (3.70)	0.287 (7.30)	100±50gf	ACETAL	100,000
1437565-9	FSM12J	0.173 (4.40)	0.315 (8.00)	160±50gf	ACETAL	100,000
—	FSM12JA	0.173 (4.40)	0.315 (8.00)	260±50gf	ACETAL	100,000
—	FSM12JAA	0.173 (4.40)	0.315 (8.00)	520±100gf	ACETAL	100,000
—	FSM12JL	0.173 (4.40)	0.315 (8.00)	100±50gf	ACETAL	100,000
1-1437565-2	FSM14J	0.370 (9.40)	0.512 (13.00)	160±50gf	ACETAL	100,000
—	FSM14JA	0.370 (9.40)	0.512 (13.00)	260±50gf	ACETAL	100,000
—	FSM14JAA	0.370 (9.40)	0.512 (13.00)	520±100gf	ACETAL	100,000
—	FSM14JL	0.370 (9.40)	0.512 (13.00)	100±50gf	ACETAL	100,000
1-1437565-3	FSM16J	0.527 (13.40)	0.669 (17.00)	160±50gf	ACETAL	100,000
—	FSM16JA	0.527 (13.40)	0.669 (17.00)	260±50gf	ACETAL	100,000
—	FSM16JAA	0.527 (13.40)	0.669 (17.00)	520±100gf	ACETAL	100,000
—	FSM16JL	0.527 (13.40)	0.669 (17.00)	100±50gf	ACETAL	100,000
1-1437565-4	FSM18J	0.193 (4.90)	0.335 (8.51)	160±50gf	ACETAL	100,000
—	FSM18JA	0.193 (4.90)	0.335 (8.51)	260±50gf	ACETAL	100,000
—	FSM18JAA	0.193 (4.90)	0.335 (8.51)	520±100gf	ACETAL	100,000
—	FSM18JL	0.193 (4.90)	0.335 (8.51)	100±50gf	ACETAL	100,000

Tactile Switches, .236 [6] x .236 [6], Radial Tape

MATERIAL SPECIFICATIONS:

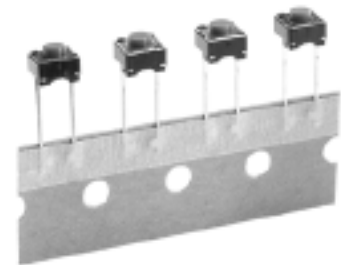
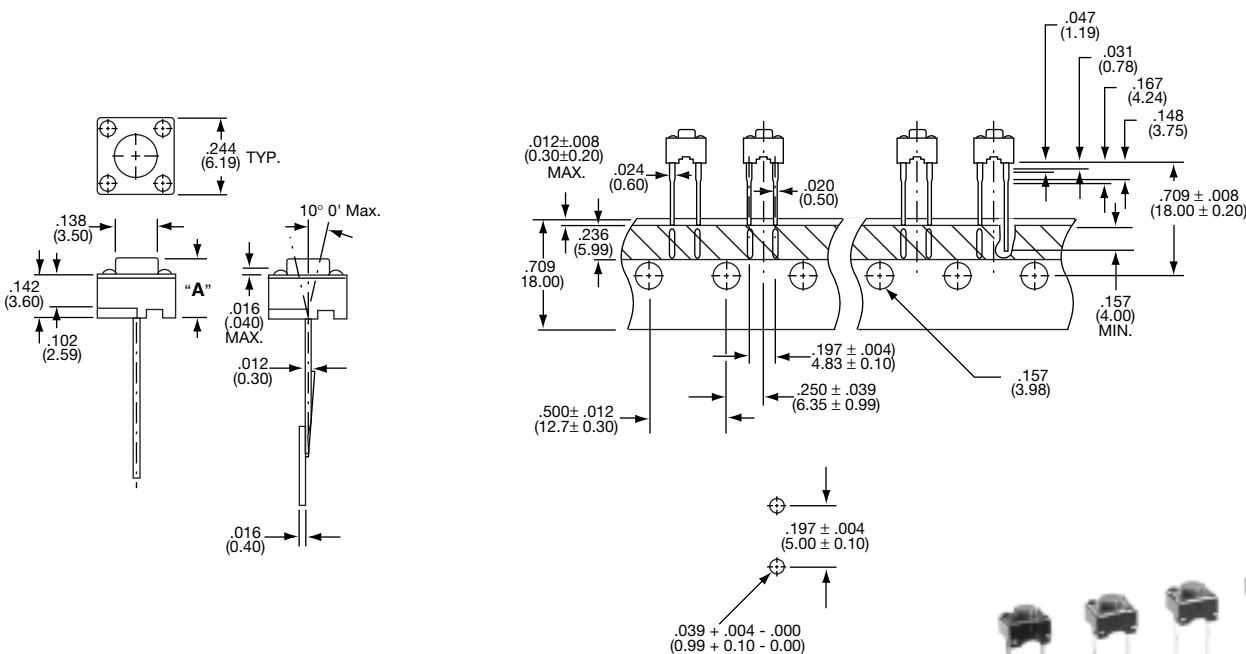
ContactsCopper alloy, silver clad plate
Case.....Nylon
Actuator ButtonPBT
Cover.....Steel, tin plate
TerminalsCopper alloy, silver clad plate

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature..... -40°F to +221°F (-40°C to +105°C)
Storage Temperature.....-40°F to +221°F (-40°C to +105°C)
Solder Heat ResistanceSee Page M3-4

TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating50 mA @ 12 VDC
Initial Contact Resistance100 Milliohms max.
Insulation Resistance100 Megohms min. @ 100 VDC
Dielectric Strength500 VAC for 1 minute
Actuation ForceSee Below
Actuator Travel......010" (.254)
Life ExpectancyUp to 100,000 Cycles



FSM4JRT

Tyco Electronics	Alcoswitch	Dimension A	Actuation Force
2-1437565-6	FSM2JRT	4.3 (.169)	160 +/-50 gm
2-1437565-2	FSM2JART	4.3 (.169)	260 +/-75 gm
4-1437565-0	FSM4JRT	5.0 (.197)	160 +/-50 gm
147997-1	FSM4JART	5.0 (.197)	260 +/-75 gm
4-1437565-8	FSM6JRT	7.0 (.276)	160 +/-50 gm
1571402-1	FSM6JART	7.0 (.276)	260 +/-75 gm
147694-1	FSM8JRT	9.5 (.374)	160 +/-50 gm
147871-1	FSM8JART	9.5 (.374)	260 +/-75 gm
1571010-1	FSM14JRT	13.0 (.512)	160 +/-50 gm

Tactile Switches, .236 [6] x .236 [6], Right Angle

MATERIAL SPECIFICATIONS:

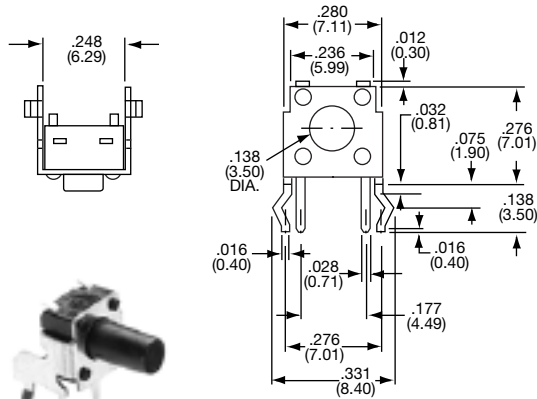
ContactsCopper alloy, silver clad plate
Case.....PBT
Actuator ButtonNylon/acetel
FrameSteel, tin plate
TerminalsCopper alloy, silver plate

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature.....-4°F to +185°F (-20°C to +85°C)
Storage Temperature.....-22°F to +185°F (-30°C to +85°C)
Solder Heat ResistanceSee Page M3-4

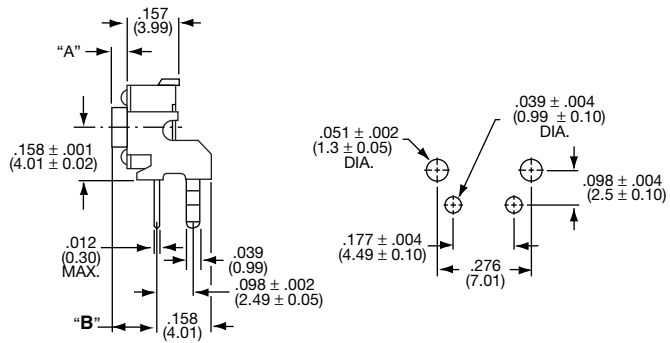
TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating50 mA @ 12 VDC
Initial Contact Resistance100 Milliohms max.
Insulation Resistance100 Megohms min. @ 100 VDC
Dielectric Strength500 VAC for 1 minute
Actuation ForceSee Below
Actuator Travel......012" (0,3)
Life ExpectancyUp to 100,000 Cycles
Up to 50,000 Cycles 520 GF (AA option)



FSMRA7J

Type	Off	On
SPST	Off	On
	(On) indicates momentary position.	



Tyco Electronics	Alcoswitch	Dim. A	Dim B
8-1437565-4	FSMRA 1J	.022" (0,55)	.124" (3,15)
1571386-2	FSMRA 1JL	.022" (0,55)	.124" (3,15)
8-1437565-5	FSMRA 2J	.049" (1,25)	.152" (3,86)
1571386-1	FSMRA 2JL	.049" (1,25)	.152" (3,86)
8-1437565-8	FSMRA 2JA	.049" (1,25)	.152" (3,86)
8-1437565-9	FSMRA 2JH	.049" (1,25)	.152" (3,86)
9-1437565-0	FSMRA 3J	.128" (3,25)	.230" (5,84)
1571386-3	FSMRA 3JL	.128" (3,25)	.230" (5,84)
9-1437565-1	FSMRA 4J	.226" (5,74)	.329" (8,36)
1571819-1	FSMRA 4JA	.226" (5,74)	.329" (8,36)
1571386-4	FSMRA 4JL	.226" (5,74)	.329" (8,36)
9-1437565-2	FSMRA 5J	.140" (3,55)	.242" (6,15)
1571386-5	FSMRA 5JL	.140" (3,55)	.242" (6,15)
9-1437565-3	FSMRA 6J	.167" (4,25)	.269" (6,85)
1571386-6	FSMRA 6JL	.167" (4,25)	.269" (6,85)
9-1437565-5	FSMRA 7J	.364" (9,25)	.467" (11,86)
1571386-7	FSMRA 7JL	.364" (9,25)	.467" (11,86)
1571419-1	FSMRA 8J	.522" (13,26)	.624" (15,85)
1571386-8	FSMRA 8JL	.522" (13,26)	.624" (15,85)

PART NUMBERING SEQUENCE

Model	Actuator Length	Temperature	Actuation Force
FSMRA	J		
ACTUATOR LENGTH DIM "A"	SWITCH HEIGHT DIM "B"	BLANK = STD. TEMP. H = HIGH TEMP.	BLANK = 160 g (STD.) A = 260 g (OPT.) AA = 520 g (OPT.) L = 100 g (OPT.)
.022" (0,56)	.124" (3,15)		
.049" (1,24)	.152" (3,86)		
.128" (3,25)	.230" (5,84)		
.226" (5,74)	.329" (8,36)		
.140" (3,55)	.242" (6,15)		
.167" (4,24)	.269" (6,85)		
.364" (9,24)	.467" (11,86)		
.522" (13,26)	.624" (15,85)		

CONSULT FACTORY
FOR OTHER OPTIONS

Tactile Switches, .236 [6] x .236 [6], Square Button, Straight or Right Angle

MATERIAL SPECIFICATIONS:

ContactsCopper alloy, silver clad plate
Case.....Nylon
Actuator ButtonPolyacetal Resin
Cover.....Pet film
TerminalsCopper alloy, silver plate
Frame (R/A)Steel, tin plate

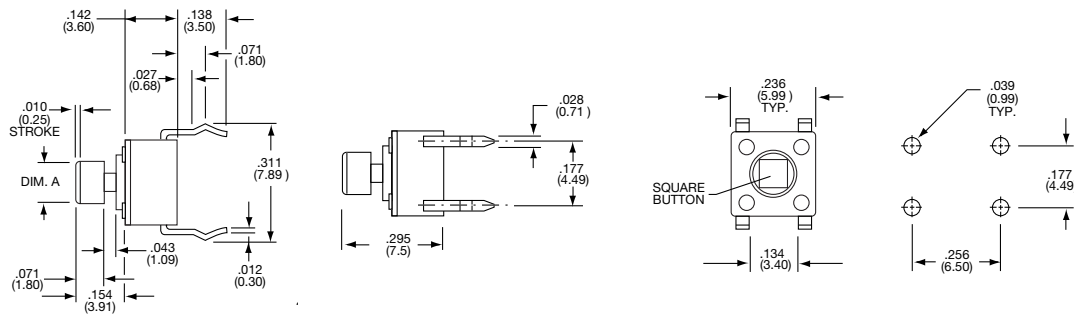
TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating50 mA @ 12 VDC
Initial Contact Resistance100 Milliohms Max.
Insulation Resistance100 Megohms min. @ 100 VDC
Dielectric Strength500 VAC for 1 minute
Actuation Force100 and 160 ±50 Grams
Actuator Travel......010"(.254)
Life ExpectancyUp to 100,000 Cycles

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature..... -4°F to +185°F (-20°C to +85°C)
Storage Temperature.....-22°F to +185°F (-30°C to +85°C)
Solder Heat ResistanceSee Page M3-4

6 x 6 mm

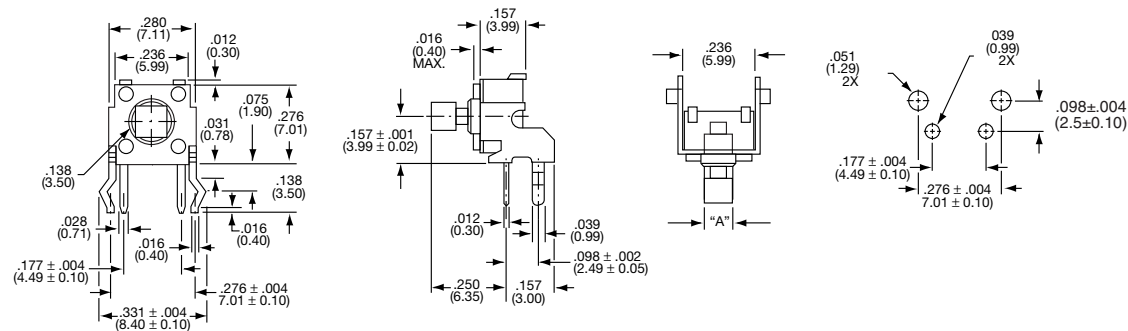


FSMCD

Tyco Electronics	Alcoswitch	Dim. A	Type	Off	On	Force
7-1437565-8	FSMCD	.095 (2,42)	SPST	Off	(On)	100±50g
7-1437565-9	FSMCD	.110 (2,80)	SPST	Off	(On)	160±50g

(On) indicates momentary position.

6 x 6 mm



FSMRACD

Tyco Electronics	Alcoswitch	Dim. A	Force
9-1437565-9	FSMRACD	.095 (2,42)	100±50g
1437566-1	FSMRACD	.110 (2,80)	160±50g

E8

Catalog 1308390
Issued 9-04

www.tycoelectronics.com

Dimensions are in inches and millimeters unless otherwise specified. Values in parentheses or brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-5-729-0425

South America: 55-11-3611-1514
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967

Tactile Switches, .138 [3.5] x .236 [6], Surface Mount

MATERIAL SPECIFICATIONS:

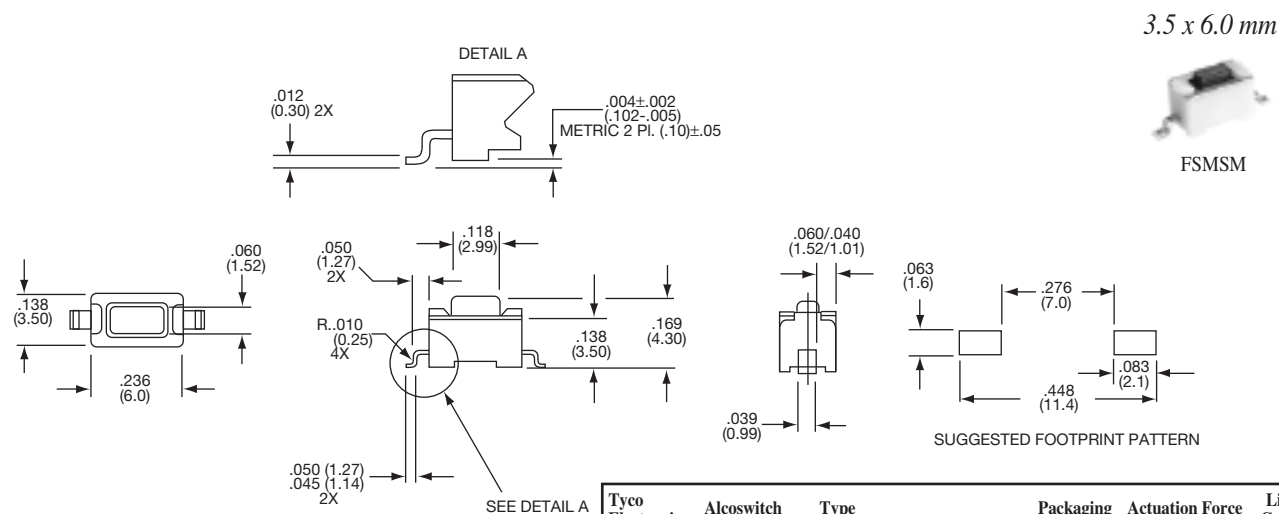
ContactsStainless steel, silver clad plate
Case MaterialFSMSM: PPS
Actuator MaterialFSMSM: Nylon
FSMJM: PPS
TerminalsCopper alloy, silver plate or tin plate
Cover.....Stainless steel

TYPICAL PERFORMANCE CHARACTERISTICS:

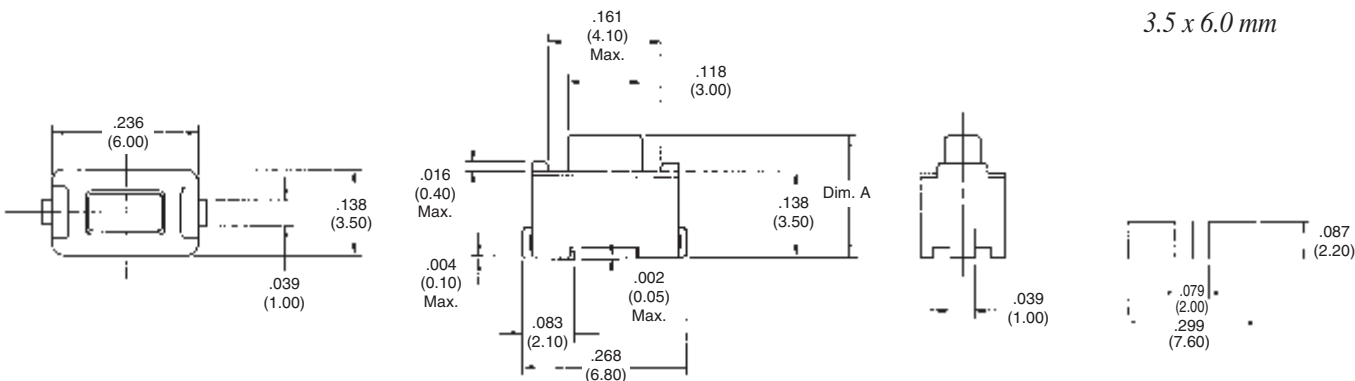
Contact Rating50 mA @ 12 VDC
Initial Contact Resistance100 Milliohms max.
Insulation Resistance100 Megohms min. @ 500 VDC
Dielectric Strength500 VAC for 1 minute
Actuator Travel......010"(.254)
Life Expectancy20,000-40,000 Cycles

ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature.....-40°F to +185°F (-40°C to +85°C)
Storage Temperature.....-40°F to +185°F (-40°C to +85°C)
Solder Heat ResistanceFSMSM IR Soldering EIA-364-56,
Procedure 5 Level 1, 215° C
FSMJM IR Soldering per EIA 364-56
Procedure 5, level 2, 464°F (240°C)



(On) indicates momentary position.



Tyco Electronics	Alcoswitch	Type	Dim. A	Actuation Force	Packaging	Life Cycle
147873-1	FSMJM5.0ATR	SPST	.197 (5.00)	180±50	Reel	40,000
147873-2	FSMJM4.3ATR	SPST	.169 (4.30)	180±50	Reel	40,000
147873-3	FSMJM3.5ATR	SPST	.138 (3.50)	180±50	Reel	40,000
147942-1	FSMJM4.3	SPST	.169 (4.30)	130±50	Bulk	40,000
147942-2	FSMJM4.3TR	SPST	.169 (4.30)	130±50	Reel	40,000

Tactile Switches, .236 [6] x .236 [6], Surface Mount

MATERIAL SPECIFICATIONS:

ContactsCopper alloy, silver plate
Case.....PPS
Actuator ButtonPPS
Cover.....Steel, tin plate
TerminalsCopper alloy, silver plate

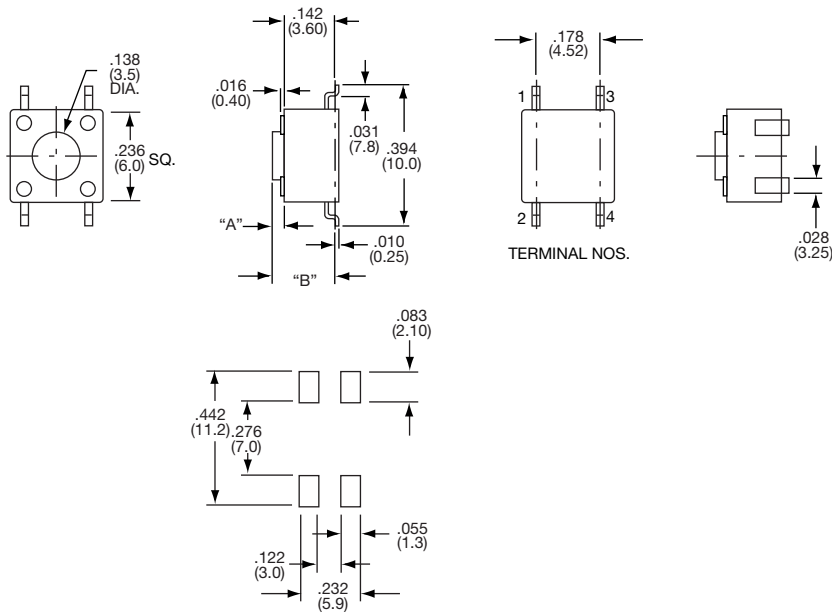
ENVIRONMENTAL SPECIFICATIONS

Operating Temperature.....-4°F to +185°F (-20°C to +85°C)
Storage Temperature.....-22°F to +185°F (-30°C to +85°C)
Solder Heat ResistanceIR Soldering EIA-364-56
Procedure 5 Level 3, 500°F (260°C)

TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating50 mA @ 12 VDC
Initial Contact Resistance100 Milliohms max.
Insulation Resistance100 Megohms min. @ 100 VDC
Dielectric Strength500 VAC for 1 minute
Actuation ForceSee Below
Actuator Travel......010"(.254)
Life ExpectancyUp to 100,000 Cycles

6 x 6 mm



FSMJ SMA

Bulk Pack Part Number		Tape & Reel Part Number		Actuator Length	Switch Height	Actuation Force
Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Dimension A	Dimension B	
2-1437565-7	FSM2JSMA	3-1437565-0	FSM2JSMATR	.028 (0.70)	.169 (4.30)	160 ± 50 grams
4-1437565-1	FSM4JSMA	4-1437565-2	FSM4JSMATR	.055 (1.40)	.196 (5.00)	160 ± 50 grams
4-1437565-9	FSM6JSMA	5-1437565-0	FSM6JSMATR	.134 (3.40)	.276 (7.00)	160 ± 50 grams
2-1437565-8	FSM2JSMAA	2-1437565-9	FSM2JSMAATR	.028 (0.70)	.169 (4.30)	260 ± 50 grams
1571563-1	FSM4JSML	1571563-2	FSM4JSMLTR	.055 (1.40)	.196 (5.00)	100 ± 50 grams
1571563-3	FSM4JSMAA	1571563-4	FSM4JSMAATR	.055 (1.40)	.196 (5.00)	260 ± 50 grams
—	FSM6JSMAA	—	FSM6JSMAATR	.134 (3.40)	.276 (7.00)	260 ± 50 grams
3-1437566-8	FSM8JSMA	—	FSM8JSMATR	.232 (5.90)	.374 (9.50)	260 ± 50 grams
1571527-1	FSM2JSML	1571527-2	FSM2JSMLTR	.028 (0.70)	.169 (4.30)	100 ± 50 grams