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 $+185^{\circ}$ F (-40° C to $+85^{\circ}$ C)

Solder Heat ResistanceSee Page M3-4

TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating50 mA @ 12 VDC

Initial Contact Resistance 100 Milliohms max.

Dielectric Strength500 VAC for 1 minute

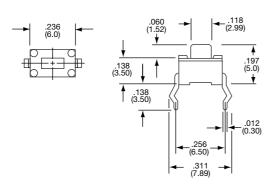
Actuation Force130±50 Grams

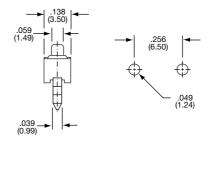
Actuator Travel......010"(.254)

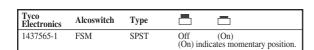
Life ExpectancyUp to 20,000 Cycles

3.5 x 6mm



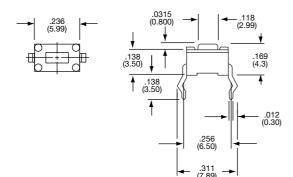






3.5 x 6mm





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

www.tycoelectronics.com



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.

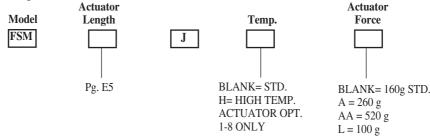
Insulation Resistance100 Megohms min. @ 100 VDC

Electrostatic Discharge

w/ESD Ground Terminal5Kv w/no discharge

Life ExpectancyUp to 100,000 Cycles

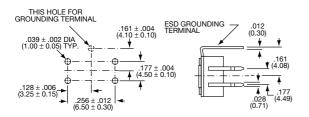
PART NUMBERING SEQUENCE

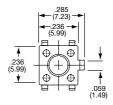


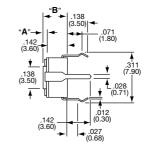
6 x 6 mm

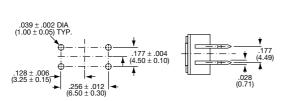


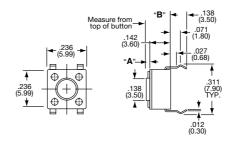
FSM1J WITH ESD TERMINAL















FSM2J WITHOUT ESD TERMINAL

Alcoswitch

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

Part Number With Ground Terminal 1-1437565-5	Part Number	A	В	Force	Material	Cycles
	POLIT					
1-1437565-5	TIGN CLY					
ı —	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 FSM1JL	0.028 (0.70) 0.028 (0.70)	0.169 (4.30) 0.169 (4.30)	520±100gf 100±50gf	PBT PBT	100,000 100,000
3-1437565-3	FSM3J	0.055 (1.40)	0.109 (4.30)	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 FSM5JA	0.134 (3.40) 0.134 (3.40)	0.276 (7.00) 0.276 (7.00)	160±50gf 260±50gf	ACETAL ACETAL	100,000 100,000
_	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 FSM7JL	0.232 (5.90) 0.232 (5.90)	0.374 (9.50)	520±100gf 100±50gf	PBT PBT	100,000 100,000
7-1437565-5	FSM9J	0.232 (3.90)	0.374 (9.50) 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 FSM11JAA	0.173 (4.40) 0.173 (4.40)	0.315 (8.00) 0.315 (8.00)	260±50gf 520±100gf	ACETAL ACETAL	100,000 100,000
	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 FSM15J	0.370 (9.40) 0.527 (13.40)	0.512 (13.00) 0.669 (17.00)	100±50gf 160±50gf	ACETAL ACETAL	100,000 100.000
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 FSM17JAA	0.193 (4.90) 0.193 (4.90)	0.335 (8.51) 0.335 (8.51)	260±50gf 520±100gf	ACETAL ACETAL	100,000 100,000
_	FSM17JAA FSM17JL	0.193 (4.90)	0.335 (8.51)	100±50gf	ACETAL	100,000
Without Ground Terminal	101111112	0.175 (1.70)	0.000 (0.01)	100=0061	.1021112	100,000
	ECMOL	0.020 (0.70)	0.1(0.(4.20)	1(0,50-6	DDT	100,000
2-1437565-0 2-1437565-1	FSM2J FSM2JA	0.028 (0.70) 0.028 (0.70)	0.169 (4.30) 0.169 (4.30)	160±50gf 260±50gf	PBT PBT	100,000 100,000
——————————————————————————————————————	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 FSM4JL	0.055 (1.40) 0.055 (1.40)	0.196 (5.00) 0.196 (5.00)	520±100gf 100±50gf	PBT PBT	100,000 100,000
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
5 1/27565 2	FSM6JL ECM9J	0.134 (3.40)	0.276 (7.00)	100±50gf	ACETAL	100,000
5-1437565-2 5-1437565-3	FSM8J FSM8JA	0.232 (5.90) 0.232 (5.90)	0.374 (9.50) 0.374 (9.50)	160±50gf 260±50gf	PBT PBT	100,000 100,000
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 FSM10JL	0.146 (3.70) 0.146 (3.70)	0.287 (7.30) 0.287 (7.30)	520±100gf 100±50gf	ACETAL ACETAL	100,000 100,000
1437565-9	FSM10JL FSM12J	0.146 (3.70)	0.287 (7.30) 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) 0.512 (13.00)	160±50gf 260±50gf	ACETAL ACETAL	100,000 100,000
_	FSM14JA FSM14JAA	0.370 (9.40) 0.370 (9.40)	0.512 (13.00)	200±30gf 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
i .	FSM16JAA	0.527 (13.40)	0.669 (17.00) 0.669 (17.00)	520±100gf 100±50gf	ACETAL	100,000
_			U DD9 (1 / UU)	TOD+200T	ACETAL	100,000
	FSM16JL FSM18I	0.527 (13.40)				
1-1437565-4 —	FSM18J	0.193 (4.90)	0.335 (8.51)	160±50gf	ACETAL	100,000
1-1437565-4 ————————————————————————————————————						

www.tycoelectronics.com



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

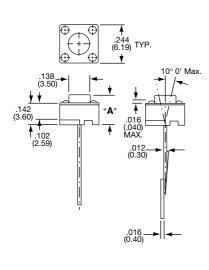
TYPICAL PERFORMANCE CHARACTERISTICS:

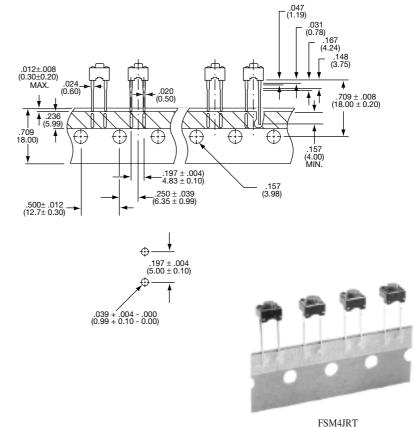
Contact Rating50 mA @ 12 VDC Initial Contact Resistance100 Milliohms max.

Dielectric Strength500 VAC for 1 minute

Actuation ForceSee Below Actuator Travel010" (,254)

Life ExpectancyUp to 100,000 Cycles





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

E6

.012 (0.30)

.138 (3.50)

Electronics

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

MATERIAL SPECIFICATIONS:

ContactsCopper alloy, silver clad plate

Case.....PBT

Actuator ButtonNvlon/acetal

FrameSteel, tin plate

TerminalsCopper alloy, silver plate

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature......- $4^{\circ}F$ to $+185^{\circ}F$ ($-20^{\circ}C$ to $+85^{\circ}C$) 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.

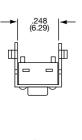
Insulation Resistance100 Megohms min. @ 100 VDC

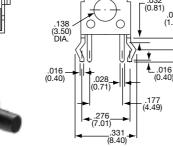
Dielectric Strength500 VAC for 1 minute

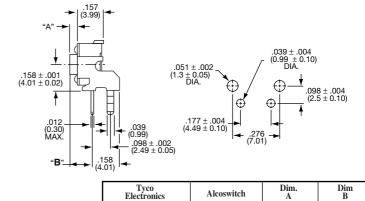
Actuation ForceSee Below

Life ExpectancyUp to 100,000 Cycles

Up to 50,000 Cycles 520 GF (AA option)







8-1437565-4

FSMRA7J

	,,10,
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" (3,36)
1571819-1 FSMRA 4JA .226" (5,74) .329" (3,36)
1571386-4 FSMRA 4JL .226" (5,74) .329" (3,36)
9-1437565-2 FSMRA 5J .140" (3,55) .242" (5,15)
1571386-5 FSMRA 5JL .140" (3,55) .242" (5,15)
9-1437565-3 FSMRA 6J .167" (4,25) .269" (5,85)
1571386-6 FSMRA 6JL .167" (4,25) .269" (5,85)
9-1437565-5 FSMRA 7J .364" (9,25) .467" (1	1,86)
1571386-7 FSMRA 7JL .364" (9,25) .467" (1	1,86)
	5 05)
1571419-1 FSMRA 8J .522" (13,26) .624" (1	3,03)

Alcoswitch

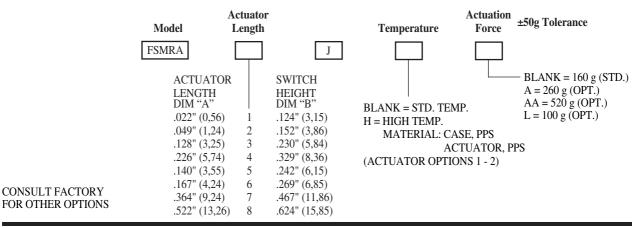
FSMRA 1J

.022" (0,55)

.124" (3,15)

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

PART NUMBERING SEQUENCE



Catalog 1308390 Issued 9-04

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

FSMRAJ Series



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

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature......- $4^{\circ}F$ to $+185^{\circ}F$ ($-20^{\circ}C$ to $+85^{\circ}C$) Storage Temperature.....- $-22^{\circ}F$ to $+185^{\circ}F$ ($-30^{\circ}C$ to $+85^{\circ}C$)

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

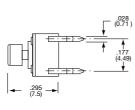
Life ExpectancyUp to 100,000 Cycles

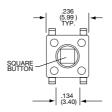
6 x 6 mm

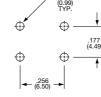


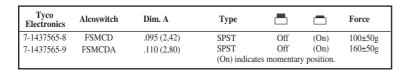
FSMCDA

.142 (3.60)	.138 (3.50)	
010 (0.25) STROKE DIM. A 071 (1.80)	0.68) (1.80) (2.	









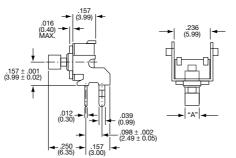
6 x 6 mm



⊕ .098±.004 ⊕ ⊕ (2.5±0.10) ← FSMRACDA

,	(7.11) .012 (0.30) .031 (0.30) .276 (0.70) .276 (0.70) .775 (0.70) .276 (0.70) .776 (0.70) .776
.138	138
(3.50)	(3.50)
.028	016
(0.71)	(0.40)
.177 ± .004	0.40)
(4.49 ± 0.10)	

.280 _



 Tyco Electronics
 Alcoswitch
 Dim. A
 Force

 9-1437565-9
 FSMRACD
 .095 (2,42)
 100±50g

 1437566-1
 FSMRACDA
 .110 (2,80)
 160±50g

Catalog 1308390 Issued 9-04

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

www.tycoelectronics.com

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

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 Resistance......FSMSM 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)

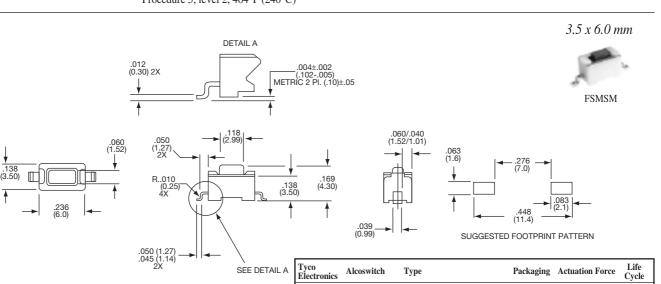
TYPICAL PERFORMANCE CHARACTERISTICS:

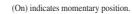
Contact Rating50 mA @ 12 VDC Initial Contact Resistance100 Milliohms max.

Insulation Resistance100 Megohms min. @ 500 VDC

Dielectric Strength500 VAC for 1 minute

Actuator Travel.......010"(.254)
Life Expectancy20,000-40,000 Cycles





FSMSM

FSMSMTR

SPST

Bulk

Reel

180±50

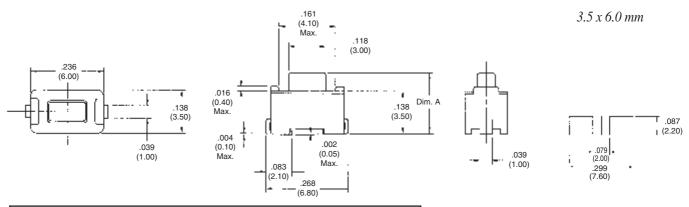
180±50

20,000

20,000

1437566-3

1437566-4



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

E9

Downloaded from Arrow.com.



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 $+185^{\circ}$ F (-20° C to $+85^{\circ}$ 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 Resistance 100 Milliohms max.

Dielectric Strength500 VAC for 1 minute

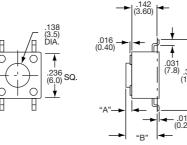
Actuation ForceSee Below

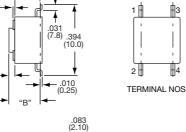
Life ExpectancyUp to 100,000 Cycles

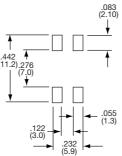
6 x 6 mm



FSMJSMA







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	FSM2ISML	1571527-2	FSM2ISMLTR	028 (0.70)	169 (4 30)	100 + 50 grams