

MTA-PC GREEN SERIES Miniature Bat Toggle • PC

A-25-13

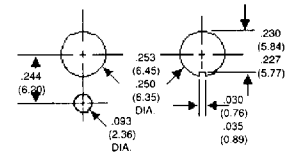
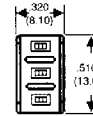
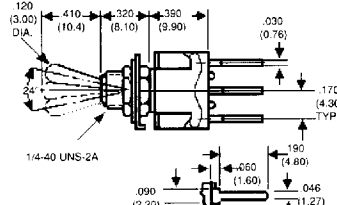
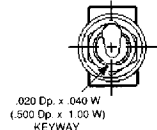
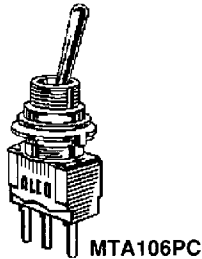
SPECIFICATIONS

Contacts: gold flash over silver
Contact Rating: 6A at 125 VAC, 3A at 250 VAC,
 4A at 28 VDC
Initial Contact Resistance: 20 milliohms max.
Contact Timing: BBM
Insulation Resistance: 1000 megohms min.
Dielectric Strength: 1500 volts RMS at sea level
Life Expectancy: see page M4
Operating Temperature: -20°C to +80°C (-4°F TO +176°F)
Storage Temperature: -40°C to +80°C (-40°F TO + 176°F)

Case Material: thermoset 94V-D
Actuator Material: nickel plated brass
Actuation Force: 0.5-1.5 kg.
Plunger/Actuator Travel: 24°
Terminal Seal: insert molded
Process Seal: N/A
Terminals: gold flash
High Torque Bushing Shoulder: standard
Solder Heat Resistance: see page 11

SPDT

For Terminal Connections refer to Code Chart. (see page 12)



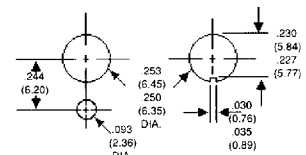
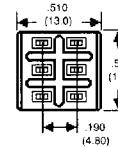
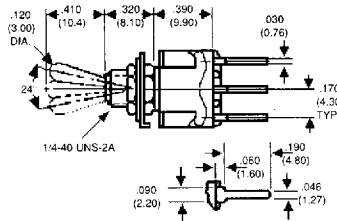
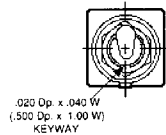
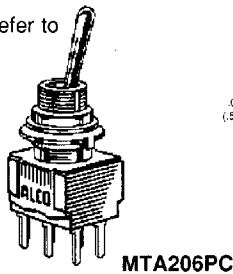
MODEL	TYPE	ACT. CODE	P. 12
MTA106DPC	SPDT	1	ON
MTA106EPC	SPDT	5	NONE
MTA106FPC	SPDT	1	OFF
MTA106GPC	SPDT	5	NONE (ON)
MTA106HPC	SPDT	5	OFF (ON)

ON	NONE	ON
ON	OFF	ON
ON	NONE	(ON)
(ON)	OFF	(ON)
ON	OFF	(ON)

(ON) INDICATES MOMENTARY POSITION.

DPDT/SP3T

For Terminal Connections refer to Code Chart. (see page 12)



MTA206NPC	DPDT	2	ON	NONE	ON
MTA206PPC	DPDT	6	ON	OFF	ON
MTA206RPC	DPDT	2	ON	NONE	(ON)
MTA206SPC	DPDT	6	(ON)	OFF	(ON)
MTA206TPC	DPDT	6	ON	OFF	(ON)
* MTA206PAPC	SP3T	11	ON	ON	ON
MTA206SAPC	SP3T	11	(ON)	ON	(ON)

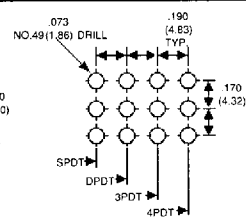
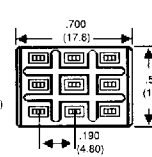
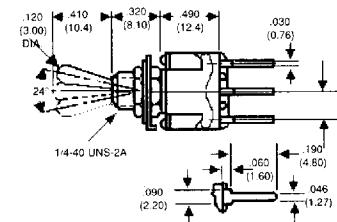
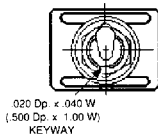
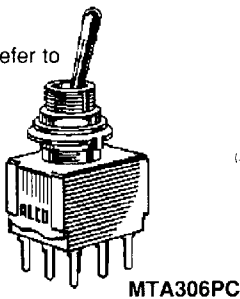
* NOTE: PA TYPES - CASE .100/(2.50) LONGER THAN OTHER TYPES.

ON	NONE	ON
ON	OFF	ON
ON	NONE	(ON)
(ON)	OFF	(ON)
ON	OFF	(ON)
ON	ON	ON
(ON)	ON	(ON)

(ON) INDICATES MOMENTARY POSITION.

3PDT

For Terminal Connections refer to Code Chart. (see page 12)



MTA306DPC	3PDT	3	ON	NONE	ON
MTA306EPC	3PDT	7	ON	OFF	ON
MTA306FPC	3PDT	3	ON	NONE	(ON)
MTA306HPC	3PDT	7	ON	OFF	(ON)

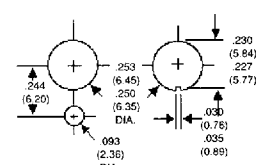
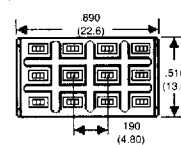
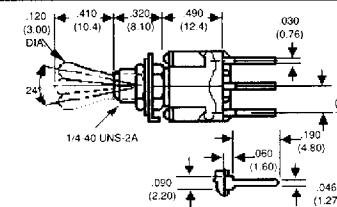
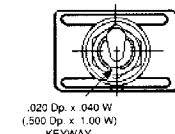
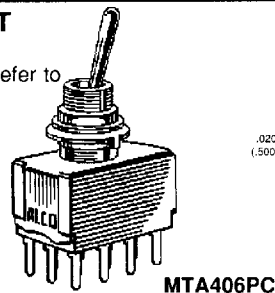
NOTE: STANDARD PC MOUNTING.

ON	NONE	ON
ON	OFF	ON
ON	NONE	(ON)
ON	OFF	(ON)

(ON) INDICATES MOMENTARY POSITION.

4PDT/DP3T

For Terminal Connections refer to Code Chart. (see page 12)



MTA406NPC	4PDT	4	ON	NONE	ON
MTA406PPC	4PDT	8	ON	OFF	ON
MTA406PAPC	DP3T	12	ON	ON	ON

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

SOLDERING PROCESS RECOMMENDATION GUIDE

AUGAT/ INTCON PRDT GP

49E D ■ 1095335 0001533 628 ■ AUIP ○

The majority of customers utilizing miniature or sub miniature switches in the industry today have a great concern about the switches capabilities during their soldering and cleaning cycles. This concern centers around the introduction of contaminants into the switch contact area which could cause the switch to experience various failure modes either immediately or during the life cycle of the switches usage. These failure modes can show in a number of manners. The following are just a few examples: high contact resistance, open contacts, low dielectric strength breakdown, and high actuation forces causing use related applications to malfunction. Since most fluxes become active with the introduction of the high temperatures used in all soldering techniques, the switch must either prevent these fluxes from entering into its contact area or allow cleaning techniques to carry flux particles out. It must be understood that switch contamination can occur during any procedure: from hand soldering to the new age Surface Mount systems using vapor phase, I.R., or Convection chambers for solder reflow.

We at Augat/Alcoswitch offer a wide range of switches to handle any soldering operations. However, certain soldering conditions will not apply to all switches. The following conditions and charts should help assist you in the soldering of our switches in your application. If you need additional information, feel free to contact the factory.

SOLDERING TYPES

A. Wave Soldering:

Top & Bottom board preheats: 200°F(93°C) for approximately 3 to 4 minutes.
Solder Temperature and Dwell Time: 500°F(260°C) for approximately 3 to 5 seconds.

B. Hand Soldering

1. 500°F-600°F(260°C-316°C)utilizing a controlled 40 Watt iron for 3 to 5 seconds maximum.
2. 500°F(260°C) utilizing a controlled 30 Watt iron for 10 seconds maximum.

C. Dip Soldering

Solder Temperature & Dwell Time: 500°F(260°C) for 10 seconds maximum.

D.Surface Mount

1. Convection IR
Zone 1 = 212°F(100°C) for 120 seconds maximum.
Zone 2 = 419°F(215°C) is reaches in approximately 160 seconds after zone 1, and held at that temperature for approximately 10 seconds.
2. Radiant IR
Zones 1 & 2 combined = 330°F(166°C) maximum with a total run of 210°C(99°C) seconds.
Zone 3 & 4 combined = 460°F(238°C) is reached in approximately 30 seconds after zones 1 & 2 and held at that temperature for approximately 10 seconds.
3. Vapor Phase
Zone 1 = 140°F (60°C) for 15 seconds.
Zone 2 = 419°F(215°C) for 30 seconds.

CLEANING TYPES

- A. Solvent Wash (1.1.1 Trichlorethylene, T.M.S., T.M.C.)
- B. Vapor Degreasing
- C. Solvent Immersion
- D. Aqueous Cleaning

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SOLDERING PROCESS RECOMMENDATION GUIDE

SWITCH SERIES	SOLDERING TYPE			SURFACE MOUNT PROCESS			CLEANING PROCESSES			
	Wave	Hand	Dip*	Convection I.R.	Radiant I.R.	Vapor Phase	Solvent Wash	Vapor Degrease	Solvent Immerse	Aqueous Clean
MRS-RA SERIES	X	X	X				X	X		
MRSB SERIES	X	X	X				X	X	X	X
MRSK SERIES		X	X				X	X		
MSP-3 /MSPS SERIES		X	X							
MSP-5 SERIES		X	X				X	X		
MSPF SERIES		X	X				X	X		
MSPM SERIES		X	X				X	X		
MSS SERIES	X	X	X				X	X	X	X
MSSA SERIES	X	X	X				X	X	X	X
MSSA-01 & 04	X	X	X				X	X	X	X
PBL SERIES	X									X
PUSHWHEELS, CARD EDGE		X								
PUSHWHEELS, PC PINS	X	X	X							
QAS SERIES		X	X				X			
SC CIRCUIT BREAKERS	X	X								
SDS SERIES	X	X	X				X	X	X	X
SE SERIES	X	X	X				X	X	X	X
SKC SERIES		X								
SKF SERIES		X								
SKFC1		X	X				X	X		
SKFC2L		X								
SKT SERIES		X	X				X	X		
SL SERIES	X	X	X				X	X	X	
SLS/SLSA SERIES	X	X	X				X	X	X	
SMT/SMP:PC,PCV,RA,VRA	X	X	X				X	X	X	X
SMT/SMP:SPC,SRA,SRAB				X	X	X	X	X	X	X
SSA/SSJ SERIES	X	X	X				X	X		
SSB SERIES	X	X	X				X	X	X	X
SSM SERIES	X	X	X				X	X	X	X
STS SERIES	X	X	X				X	X	X	X
SWK SERIES		X								
TP SERIES: ALL PC/BLUE CASES	X									
TP SERIES:TP-ES	X	X	X				X	X	X	X
TP SERIES:W/TACT. FEEL & PROC. SEAL	X	X	X				X	X	X	X
TP SERIES:TPC,TPD,TPF,TP-N		X	X				X	X		
TP200 SERIES:TP1M,TP1L,TP2M,TP2L		X	X				X	X		
TR SERIES	X	X	X				X			
TRD	X	X	X				X			
TRD W/L.E.D.		X	X							
TS SERIES	X	X	X				X	X	X	X
TSS-PC, TSS-RA	X	X					X			
TT ALL PC/BLUE CASES	X	X					X			
TT,TTE-ES,TT-RA	X	X	X				X	X	X	X
TT,TTETT,TTE,TTN-WIRE LUG		X	X				X			
XR110, XR210, XRM		X								

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Alcoswitch® 1551 Osgood Street N. Andover, MA 01845 USA Tel: (508)685-4371 FAX: (508)686-9545 TLX: 275423

ACTUATION CODE CHART

Toggles, Rockers and Paddles

TT SERIES ONLY

						TT SERIES ONLY				
						A	REF. FLAT 1 3	NONE	REF. FLAT 1 3	
						D	1 2 3	NONE	1 2 3	
1	1 2 3	NONE	8	10 11 12 7 8 9 4 5 6 1 2 3	10 11 12 7 8 9 4 5 6 1 2 3	10 11 12 7 8 9 4 5 6 1 2 3	E	1 2 3	1 2 3	1 2 3
2	4 5 6 1 2 3	NONE	9	NONE	1 2 3	1 2 3	F	1 2 3	NONE	MOMENTARY 1 2 3
3	7 8 9 4 5 6 1 2 3	NONE	10	NONE	4 5 6 1 2 3	4 5 6 1 2 3	K	4 6 1 3	NONE	4 6 1 3
4	10 11 12 7 8 9 4 5 6 1 2 3	NONE	11	4 5 6 1 2 3	4 5 6 1 2 3	4 5 6 1 2 3	N	4 5 6 1 2 3	NONE	4 5 6 1 2 3
5	1 2 3	1 2 3	12	A COM B SHUNTS	COM SHUNTS	COM SHUNT	P	4 5 6 1 2 3	4 5 6 1 2 3	4 5 6 1 2 3
6	4 5 6 1 2 3	4 5 6 1 2 3		10 11 12 7 8 9 4 5 6 1 2 3	10 11 12 7 8 9 4 5 6 1 2 3	10 11 12 7 8 9 4 5 6 1 2 3	R	4 5 6 1 2 3	NONE	MOMENTARY 4 5 6 1 2 3
7	7 8 9 4 5 6 1 2 3	7 8 9 4 5 6 1 2 3		D COM COM COM	COM COM COM	COM COM COM	PA*	OUT#1 IN 4 5 6 1 2 3	IN 4 5 6 1 2 3	IN 4 5 6 1 2 3
	1 2 3	1 2 3		A COM B SHUNTS	COM SHUNTS	COM SHUNTS		OUT#2 4 5 6 1 2 3	OUT#3 4 5 6 1 2 3	OUT#3 4 5 6 1 2 3

* NOTE: On PA function (TT) Jumper supplied by customer between terminals 2 and 6 required to achieve ON-ON function. SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

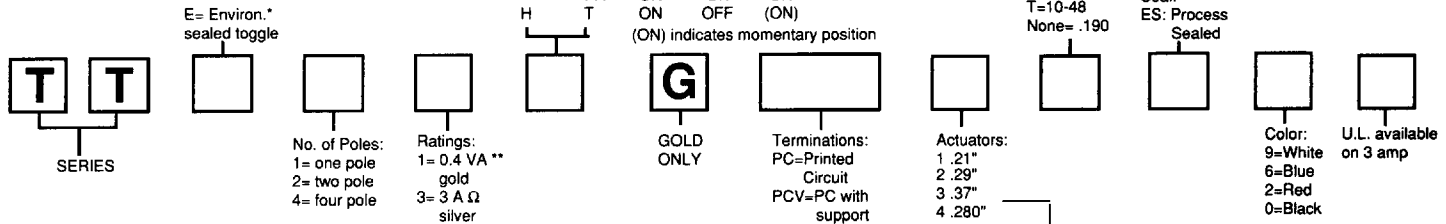
TINY TOGGLE SWITCHES

How To Order

NOT ALL COMBINATIONS ARE AVAILABLE. PLEASE CONSULT FACTORY BEFORE ORDERING.

ONE POLE	2 & 4 POLE			
A	K	ON	NONE	OFF ~
D	N	ON	NONE	ON
E	P	ON	OFF	ON
F	R	ON	NONE	(ON)
	PA	ON	ON	ON
H	T	ON	OFF	(ON)

(ON) indicates momentary position



TINY TOGGLE SWITCH LIFE EXPECTANCY CHART

ONE POLE	0.4VA	80,000 (2 POS.)	60,000 (3 POS.)
POLE	3 AMP	20,000 (2 POS.)	10,000 (3 POS.)
TWO POLE	0.4VA	80,000 (2 POS.)	60,000 (3 POS.)
POLE	3 AMP	20,000 (2 POS.)	10,000 (3 POS.)
FOUR POLE	0.4VA	80,000 (2 POS.)	60,000 (3 POS.)
POLE	3 AMP	20,000 (2 POS.)	10,000 (3 POS.)

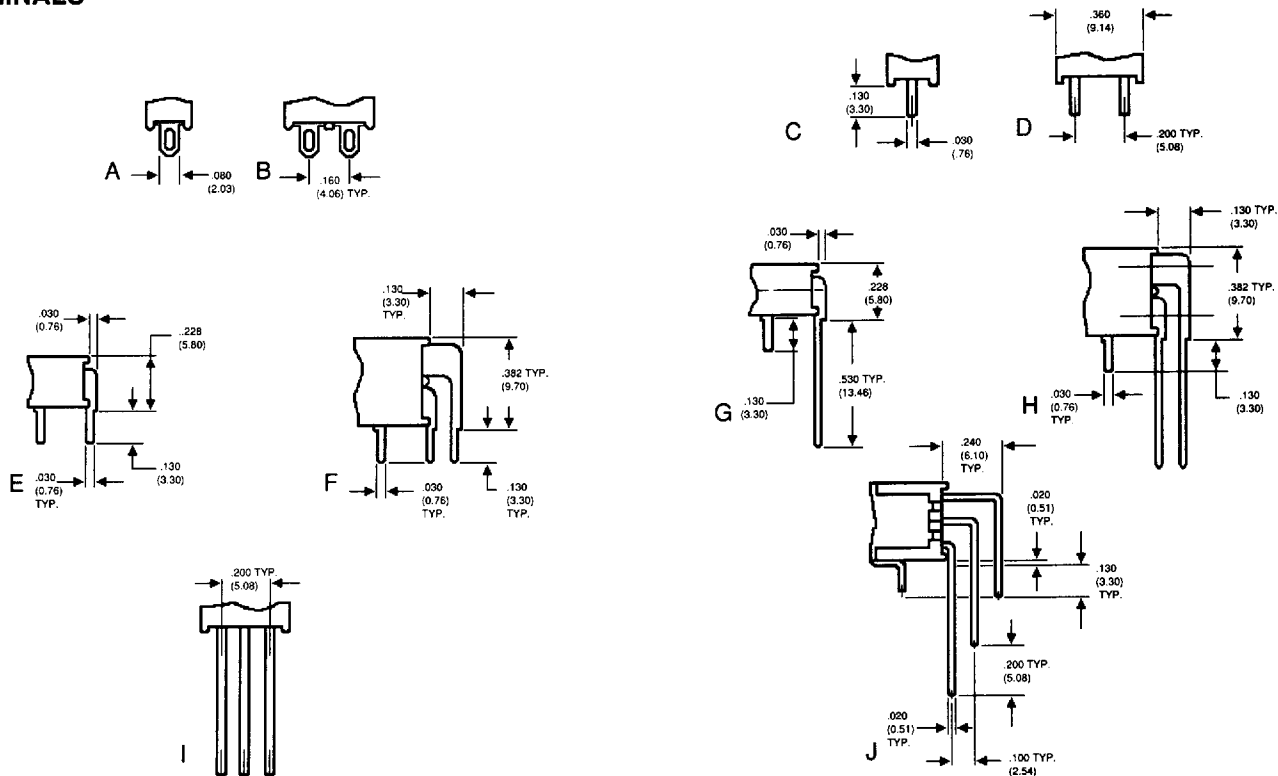
GREEN SERIES TOGGLE LIFE EXPECTANCY CHART

PARAMETER	2 POS.	3 POS.	MOMENTARY
MECHANICAL (no load)	150,000	100,000	80,000
250AC (3A Resistive)	80,000	60,000	60,000
125AC (6A Resistive)	80,000	60,000	60,000
28DC (4A Resistive)	60,000	50,000	40,000

THE FOLLOWING U.S. PATENTS COVER ALCOSWITCH "TT" SWITCHES:
 4,480,159
 4,254,310
 4,117,284

* Not available on 5 & 7 actuators or with RA.
 ** Not available in RA.
 Ω Available in PC & WL only.
 ~ Available in WL & PC only.
 = RA available with .190 bushing only not available without a bushing.

TERMINALS



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Alcoswitch

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