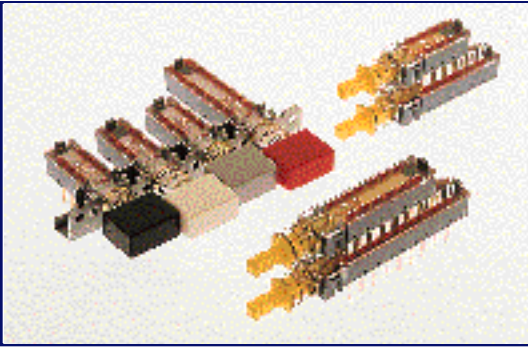


PUSHBUTTON SWITCHES

SERIES TA/LT



TA/LT Series push button switches offer an “ultra-lite” alternative to design engineers working in a variety of applications. Available features include:

- Spring loaded, wiping contacts for smooth, silent actuation stroke and excellent reliability
- Up to 16 poles per module
- Mounting chassis available.
- Interlocked assemblies up to 20 stations
- Optional terminal length
- Snap-on buttons
- Solder lugs on top for hand wiring; PC at bottom for flow soldering
- Switch plunger with sliding contacts can be removed from the front without disturbing electrical connections.
- Fixed terminals are epoxied and “staked” in position, providing an extra seal to help prevent wicking of solder or flux.

SPECIFICATIONS

RATING: 0.5 A@ 100 VAC, 0.2A@ 250 VAC, 1A@ 25 VDC
CONTACT RESISTANCE: 20 m typical
INSULATION RESISTANCE: Adjacent Contacts — 2×10^{12} min.
 (Dry Condition)
DIELECTRIC STRENGTH: 1,500 V RMS min.
LIFE CYCLE: 100,000 cycles min.
OPERATING TEMPERATURE RANGE: -20° to +70°C
FUNCTIONS AVAILABLE:
 GR = Interlocking
 OA = Momentary
 EE = Latching
 TA = Standard Operating Force (See Next Page)
 LT = Light Touch Operating Force (See Next Page)
 S = Shorting (MBB)
 N = Non-Shorting (BBM)



MATERIALS

HOUSING: Polycarbonate (UL94-HB) Std.
 Valox (UL94-VO)
PLUNGER: Duracon (UL94-HB) Std.
 Valox (UL94-VO)
TERMINALBOARD: Polycarbonate (UL94-HB) Std.
MOVING CONTACTS: Silver plated copper alloy
 Gold plate over nickel plated copper alloy
FIXED CONTACTS: Copper alloy with silver plate over nickel plate
TERMINAL SEAL: High strength bonding red resin
RELEASE BAR: Steel / zinc plated
CHASSIS: Steel / Nickel plated or steel/zinc plated

HOW TO ORDER INDIVIDUAL MODULES

| Series (Operating Force) | Pole | Mechanical Configuration | Termination | Contact Material | Housing/Plunger Material | Timing | Cap | Cap Color |
|-----------------------------|------|-----------------------------|-------------|---------------------|-----------------------------|-----------|---------------------|-----------|
| TA | 2U | EE= Latching | A | AG= Silver | P= UL94HB | N= BBM | TAA ¹ | Blk |
| LT | 4U | OA= Momentary | B | AU= Gold | V= UL94VO | S= MBB | TAB ² | Wht |
| | 6U | | C | | | | TAC ¹ | Gry |
| | 8U | | E | | | | TAD ¹ | Red |
| | 10U | | F | | | | TAE ¹ | Blu |
| | 16U | | | | | | TAG ² | Chr |
| | | | | | | | TAK ³ | |
| | | | | | | | TAL ³ | Blk |
| | | | | | | | TAM ⁴ | Gry |
| | | | | | | | TA12 | Yel |
| | | | | | | | TA2800 ⁵ | Blu |
| | | | | | | | .08 | Red |
| | | | | | | | .09 | Grn |
| | | | | | | | .094 | Wht |

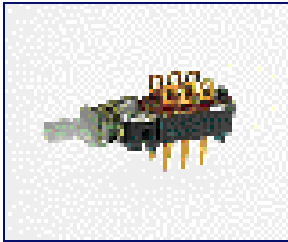
¹Blk, Gry, Wht, Red Only
²Blk, Gry, Wht, Red, Chr Only
³Blk & Gry Only
⁴Blk, Gry, Wht Only
⁵Blk & Red Only

Example:

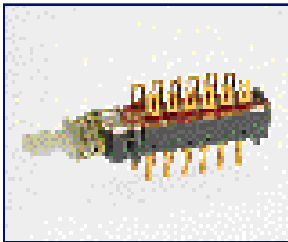
TA → 10U → OA → E → AU → P → S → TA12 → Blu

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

TA2UEE A

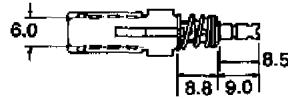


TA4UEE A

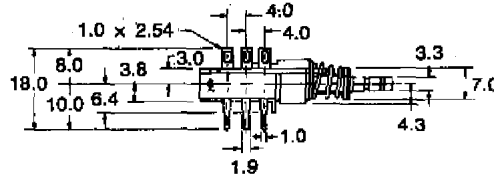


MODULE SCHEMATICS

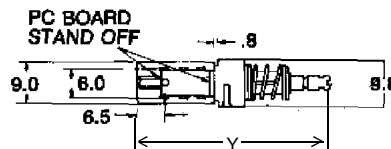
TOP



SIDE



BOTTOM



CIRCUIT OPTIONS

2U = DPDT 8U = 8PDT
 4U = 4PDT 10U = 10PDT
 6U = 6PDT 16U = 16PDT

TRAVEL 4.8
 TRAVEL TO LOCK 3.3
 TOLERANCE ±0.2MM

POLE DIMENSIONS

| | Y |
|-------|--------|
| 2PDT | 42.15 |
| 4PDT | 54.15 |
| 6PDT | 66.15 |
| 8PDT | 78.15 |
| 10PDT | 90.15 |
| 16PDT | 126.15 |

OPERATING FORCE OPTIONS

(TA) STANDARD OPERATING FORCE

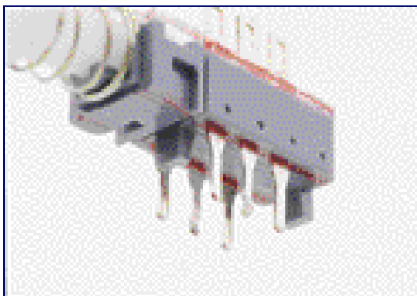
2PDT 700 grams
 4PDT 700 grams
 6PDT 1000 grams
 8PDT 1000 grams
 10PDT 1200 grams
 16PDT 1200 grams

(LT) LIGHT TOUCH OPERATING FORCE

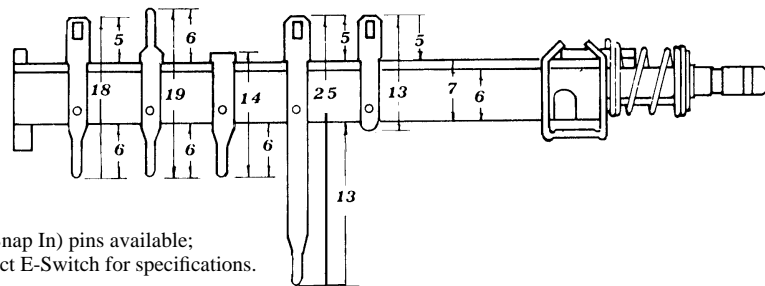
2PDT 250 grams
 4PDT 400 grams
 6PDT 650 grams

TERMINATION OPTIONS

RETENTIVE PIN OPTION



A B C E F



*Retentive (Snap In) pins available;
 please contact E-Switch for specifications.

PLATING, MATERIAL & TIMING OPTIONS

PLATING

AG = Silver
 AU = Gold

MATERIAL

P = Polycarbonate UL94HB
 V = Valox UL94VO

TIMING

N = (BBM) Non-Shorting
 S = (MBB) Shorting

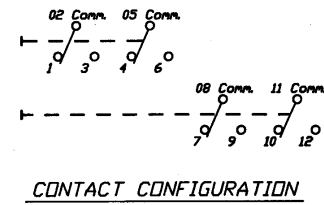
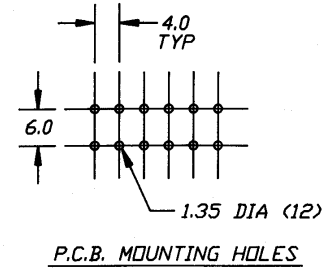
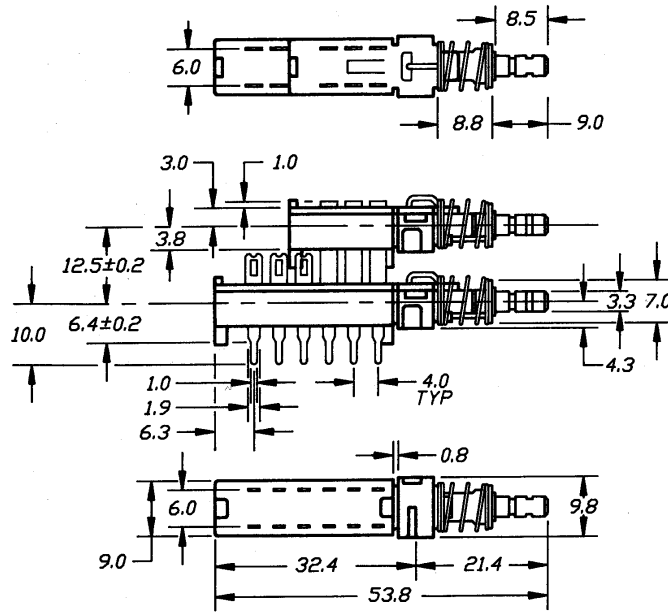
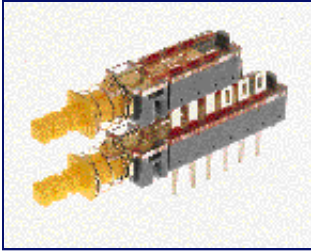
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

PIGGYBACK PUSHBUTTON SWITCHES

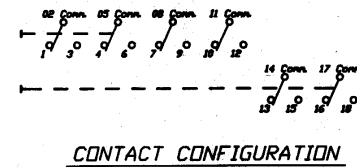
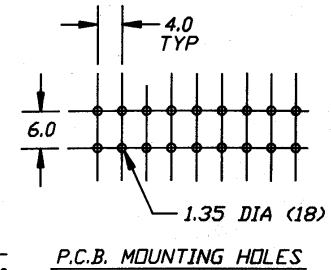
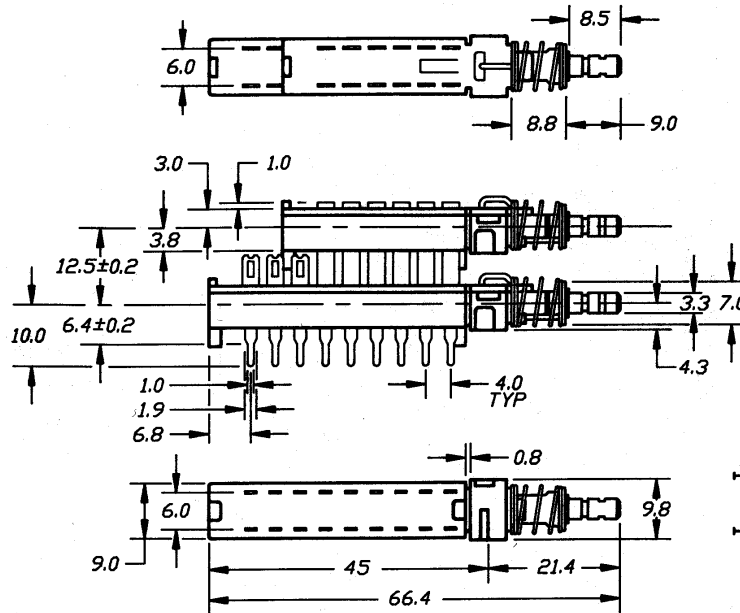
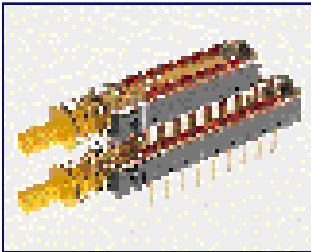
SERIES TA/LT

LIGHT TOUCH PIGGYBACK

A020901



A020903



The light touch piggyback is often used where space is a premium or where 2 vertical push buttons are required. The top switch mechanism controls the front terminals. The bottom switch mechanism controls the back terminals.

HOW TO ORDER LIGHT TOUCH PIGGYBACK MODULES

To order, simply give model number:

MODEL NUMBER:

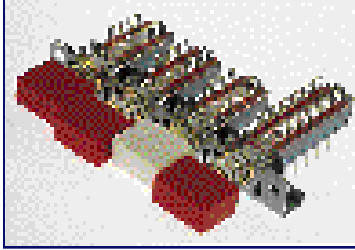
A020901

A020903

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

CHASSIS & ASSEMBLY

ASSEMBLY CHASSIS



THE ABOVE EXAMPLE SHOWS:

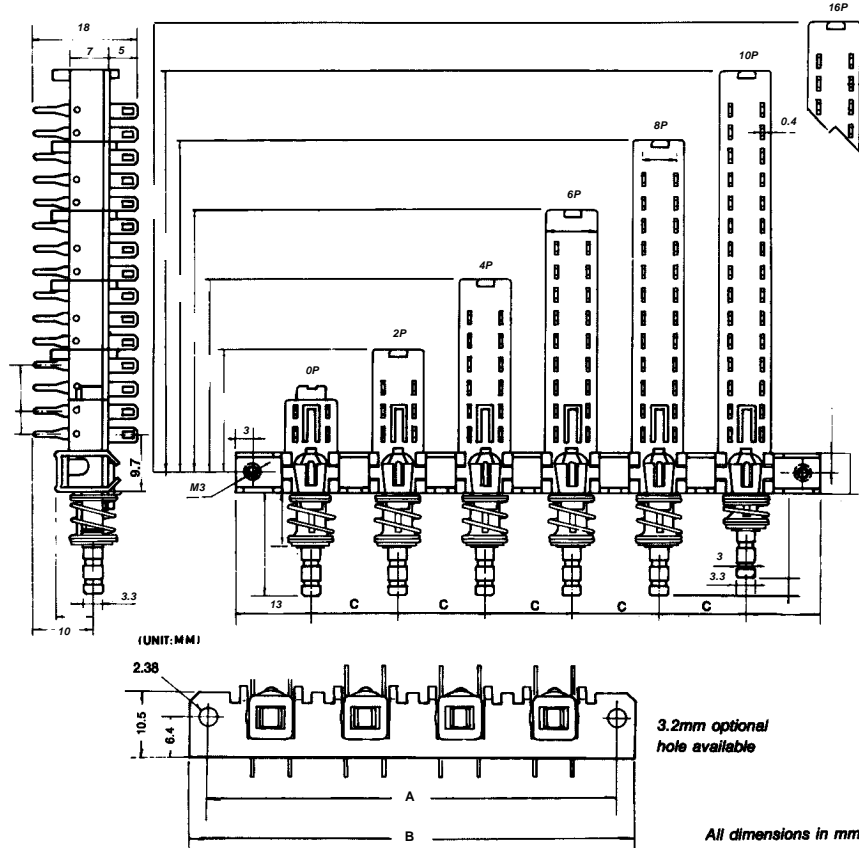
- A 4 station TAs with
- 15mm spacing
- All buttons TAB/RED except station 3 which is TAB/WHT
- First 3 stations are 2 pole switches, interlocked
- Station 4 is 4 pole momentary switch
- All switches have standard terminal type A

WHEN ORDERING AN ASSEMBLY:

(See Next Page For Ordering Procedure)

1. When applicable, state whether buttons are to be mounted horizontally or vertically.
2. Please state if buttons are to be shipped bulk.
3. State requirement for cut mounting tabs on chassis in exception area.
4. Inquire about non-standard mounting holes on chassis ends.

REFERENCE DIAGRAMS



Tolerance $\pm .2m$

STANDARD CHASSIS DIMENSIONS (refer to above schematics)

| Number of Stations | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|--------------------|---------|------|----|------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| ‘C’Dim. 10mm | ‘A’Dim. | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | 210 |
| | ‘B’Dim. | 36 | 46 | 56 | 66 | 76 | 86 | 96 | 106 | 116 | 126 | 136 | 146 | 156 | 166 | 176 | 186 | 196 | 206 | 216 |
| ‘C’Dim. 12.5mm | ‘A’Dim. | 32.5 | 45 | 57.5 | 70 | 82.5 | 95 | 107.5 | 120 | 132.5 | 145 | 157.5 | 170 | 182.5 | 195 | 207.5 | 220 | 232.5 | 245 | 257.5 |
| | ‘B’Dim. | 38.5 | 51 | 63.5 | 76 | 88.5 | 101 | 113.5 | 126 | 138.5 | 151 | 163.5 | 176 | 188.5 | 201 | 213.5 | 226 | 238.5 | 251 | 263.5 |
| ‘C’Dim. 15mm | ‘A’Dim. | 35 | 50 | 65 | 80 | 95 | 110 | 125 | 140 | 155 | 170 | 185 | 200 | 215 | 230 | 245 | 260 | 275 | 290 | 305 |
| | ‘B’Dim. | 41 | 56 | 71 | 86 | 101 | 116 | 131 | 146 | 161 | 176 | 191 | 206 | 221 | 236 | 251 | 266 | 281 | 296 | 311 |
| ‘C’Dim. 17.5mm | ‘A’Dim. | 37.5 | 55 | 72.5 | 90 | 107.5 | 125 | 142.5 | 160 | 177.5 | 195 | 212.5 | 230 | 247.5 | 265 | 282.5 | 300 | 317.5 | 335 | 352.5 |
| | ‘B’Dim. | 43.5 | 61 | 78.5 | 96 | 113.5 | 131 | 148.5 | 166 | 183.5 | 201 | 218.5 | 236 | 253.5 | 271 | 288.5 | 306 | 323.5 | 341 | 358.5 |
| ‘C’Dim. 20mm | ‘A’Dim. | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 360 | 380 | 400 |
| | ‘B’Dim. | 46 | 66 | 86 | 106 | 126 | 146 | 166 | 186 | 206 | 226 | 246 | 266 | 286 | 306 | 326 | 346 | 366 | 386 | 406 |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

PUSHBUTTON ASSEMBLIES

SERIES TA/LT

HOW TO ORDER SINGLE STATION ASSEMBLIES

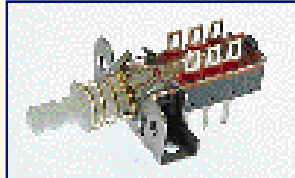
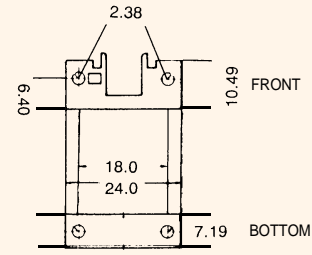
| Number of Switches Per Chassis (Operating Force) | Series | Chassis Spacing | Cap | Cap Color | Pole | Mechanical Configuration | Termination | Contact Material | Housing & Plunger Material | Timing | Exceptions to Part Number By Station |
|--|--------|-----------------|---------------------|-----------|------|--------------------------|-------------|------------------|----------------------------|--------|--------------------------------------|
| 1* | TA | 0003-00 | TAA ¹ | Blk, Wht | 2U | EE= | A | AG= | P= | N= | (None) |
| *Single Key Chassis | LT | 0003-02 | TAB ² | Gry, Red | 4U | Latching | B | Silver | Standard | BBM | |
| | | 0003-03 | TAC ¹ | Blu, Chr | 6U | OA= | C | AU= | V= | S= | |
| | | | TAD ¹ | | 8U | Momentary | E | Gold | Valox | MBB | |
| | | | TAE ¹ | | 10U | | F | | | | |
| | | | TAG ² | | 16U | | | | | | |
| | | | TAK ³ | | | | | | | | |
| | | | TAL ³ | | | | | | | | |
| | | | TAM ⁴ | | | | | | | | |
| | | | TA12 | | | | | | | | |
| | | | TA2800 ⁵ | Blk, Gry | | | | | | | |
| | | | | Yel, Blu | | | | | | | |
| | | | | Red, Grn | | | | | | | |
| | | | | Wht | | | | | | | |
| | | | TH100 | Wht, Yel | | | | | | | |
| | | | TH120 | Orn, Grn | | | | | | | |
| | | | TH201 | Blu | | | | | | | |

Desc. (TA0003-00)
ID#A021251
Standard
2.38 mm holes (.094)

Desc. (TA0003-02)
ID#A021276
Tapped For 4-40 screws

Desc. (TA0003-03)
ID#A021252
3.18 mm holes (.125)

SINGLE KEY CHASSIS

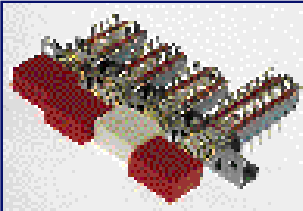



TA0003-00

HOW TO ORDER MULTISTATION ASSEMBLIES

| Number of Stations | Series | Chassis Spacing | Cap | Cap Color | Pole | Mechanical Configuration | Termination | Contact Material | Housing & Plunger Material | Timing | Exceptions to Part Number By Station |
|--------------------|--------|-----------------|---------------------|-----------|------|--------------------------|-------------|------------------|----------------------------|--------|--------------------------------------|
| 2 | TA | In mm: | TAA ¹ | Blk, Wht | 2U | EE= | A | AG= | P= | N= | See Below for Procedure |
| 3 | LT | 10 (.394") | TAB ² | Gry, Red | 4U | Latching | B | Silver | Standard | BBM | |
| 4 | | 12.5 (.492") | TAC ¹ | Blu, Chr | 6U | OA= | C | AU= | V= | S= | |
| 5 | | 15 (.591") | TAD ¹ | | 8U | Momentary | E | Gold | Valox | MBB | |
| 6 | | 17.5 (.689") | TAE ¹ | | 10U | GR= | F | | | | |
| 7 | | 20 (.787") | TAG ² | | 16U | Interlocked | | | | | |
| 8 | | | TAK ³ | | | | | | | | |
| 9 | | | TAL ³ | | | | | | | | |
| 10 | | | TAM ⁴ | | | | | | | | |
| 11 | | | TA12 | | | | | | | | |
| 12 | | | TA2800 ⁵ | Blk, Gry | | | | | | | |
| 13 | | | | Yel, Blu | | | | | | | |
| 14 | | | | Red, Grn | | | | | | | |
| 15 | | | | Wht | | | | | | | |
| 16 | | | | | | | | | | | |
| 17 | | | | | | | | | | | |
| 18 | | | TH100 | Wht, Yel | | | | | | | |
| 19 | | | TH120 | Orn, Grn | | | | | | | |
| 20 | | | TH201 | Blu | | | | | | | |

ASSEMBLY CHASSIS



Exceptions to Part Number:
List By Chassis Station #
examples: Station4=4UOA
Station3=TAB/Wht

ORIENTATION: PC pins down, plungers forward—station No. 1 on left.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Example:

12x → TA → 15 → (TAB/Red) → 2U → EE → A → AG → P → N