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Base material

copper alloy

stainless steel

cold rolled steel

cold rolled steel

music wire

brass

brass

brass

steel

High temp, UL 94V-0, green

Phenol resin, UL94 HB, black

Polyamide, UL94 HB, black

silver clad copper alloy

silver clad copper alloy

No. Component name

1 Housing

5 Actuator

6 Plunger

7 Spring 8 Toggle

10 Frame

11 Bushing

9 Retainer

2 End terminal

3 Center terminal

4 Rocker contact

12 Mounting nuts (2)

14 Internal tooth lockwasher

13 Locating ring

REVISIONS AD OO P LTR DESCRIPTION 18JUL2014 NK RH E4 REVISED PER ECO-14-010935

| | (10) |
|-----------------|-------|
| | 9 3 |
| 8 7 12 14 13 11 | 6 5 1 |

TOGGLE SWITCH, MTA SERIES

VERTICAL MOUNT

SCALE 2:1 SHEET 1 OF 3 REV E4

1 00779 **C-**1-1437558-0

SIZE CAGE CODE DRAWING NO

| | NDT | \top | SCALE | |
|--|-----|--------|-------|--|
| | | | | |

0 PLC ± -1 PLC ± -2 PLC ± -3 PLC ± .005 4 PLC ± -

APPLICATION SPEC

USTOMER DRAWING

| | Specifications-see note 3 | | | | |
|-------------------------|--------------------------------|------------|------------|-----------|----------------|
| Current rating UL & CSA | 6A @ 125 VAC (resistive) | | | | |
| | 3A @ 250 VAC (resistive) | | | / | <u>/</u> 8 |
| | 4A @ 28 VDC (resistive) | | | / | \\e |
| Termination resistance | 20 milliohms max @ 2-4 VDC, 1A | | | | |
| Insulation resistance | 1,000 megohms min. | | | | |
| Withstanding voltage | 1,000 VAC | | | | |
| Travel | 24 + /-6 degrees | | | | \^ 8 |
| Actuation force | .05 to 1.5 kgf | | | | / ₈ |
| Operating temperature | -20C to +85C | | | | |
| Storage temperature | -40C to +85C | | | | |
| Contact timing | break before make | | | | |
| Terminal seal | epoxy or insert molded | | | | |
| Durability | Parameter | 2 Position | 3 Position | Momentary | |
| | mechanical (no load) | 150,000 | 100,000 | 80,000 | \^ 8 |
| | 250 VAC (3A resistive) | 80,000 | 60,000 | 60,000 | |
| | 125 VAC (6A resistive) | 80,000 | 60,000 | 60,000 | \^ 8 |
| | 28 VDC (4A resistive) | 60,000 | 50,000 | 40,000 | |
| | , | • | - | | |

Materials

Finish

5 microinches min. gold

5 microinches min. gold

5 microinches min. gold

200 microinches min. bright nickel

100 microinches min. nickel over 10 microinches min. copper

chrome or nickel

zinc or nickel

zinc or nickel

zinc or nickel

| | ø.076 .072 TYP |
|--------------------|-------------------------------------|
| 1 POLE | + $+$ $+$ |
| 2 POLES | → → → |
| 3 POLES | ϕ ϕ ϕ \uparrow TYP |
| 4 POLES | $\phi \phi \phi - 1$ |
| .170±.002 — TYP | |

PC BOARD LAYOUT PC TERMINAL ONLY

TO PREVENT ROTATION

- 1. TERMINAL NUMBERS ARE FOR REFERENCE ONLY AND DO NOT APPEAR ON THE SWITCHES.
- 2. EACH SWITCH SUPPLIED WITH THE FOLLOWING MOUNTING HARDWARE:

TO PREVENT ROTATION

- (2) 1/4-40 UNS-2B HEX NUTS
- (1) INTERNAL TOOTH LOCKWASHER
- (1) LOCATING RING

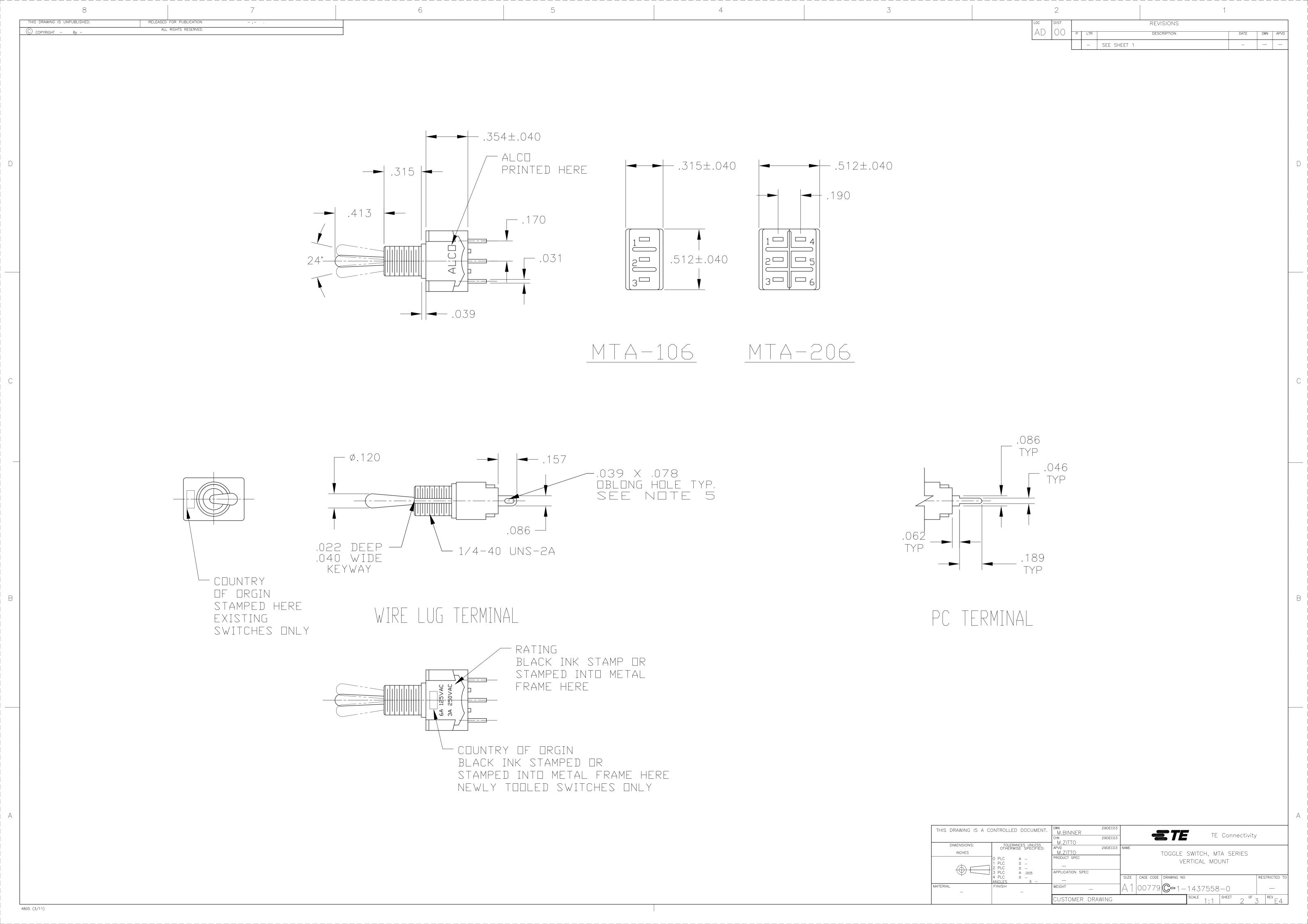
| 5. | WIRE LUG | CONTACTS | WILL | ACCEPT | 2 | #20 | AWG | SOLID | OR | STRANDED | WIRES. | |
|----|----------|----------|------|--------|---|-----|-----|-------|----|----------|--------|--|

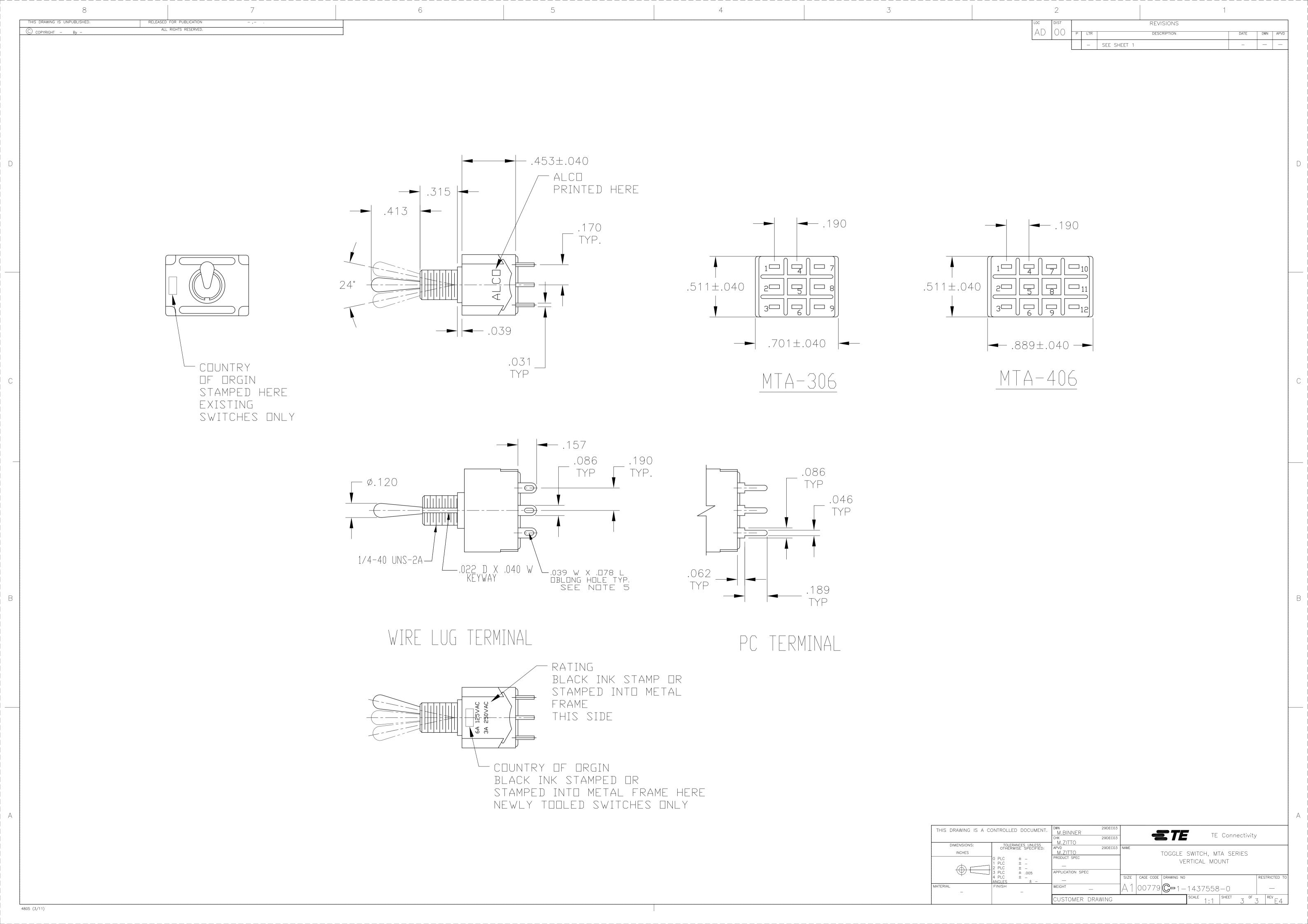
- 6. CUSTOMER INSTALLED EXTERNAL JUMPER BETWEEN TERMINALS 2 AND 4 REQUIRED FOR 1 POLE 3 THROW FUNCTION.
 7. CUSTOMER INSTALLED EXTERNAL JUMPERS BETWEEN TERMINALS 2 AND 4 AS WELL AS 8 AND 10 REQUIRED FOR 2 POLE 3 THROW FUNCTION.

| 3501 | _ETE | | | | |
|------|---------|------|-----|--------|--|
| SER | MARKING | USED | FOR | PARTS. | |

RECOMMENDED PANEL LAYOUT

| | Part Number | Alco Model | Poles | Throws | Function | Terminal | ALCO- 3 2 1 6 5 4 9 8 7 12 11 10 | ALCO 3 2 1 6 5 4 9 8 7 12 11 10 | ALCU- 3 2 1 6 5 4 9 8 7 12 11 10 | Comments |
|----------|----------------------------|------------|-------|--------|-----------------------|-------------|--|---|--|-------------|
| | 4-1437558-8 | MTA406PPC | 4 | 2 | ON OFF ON | PC | 2-3, 5-6, 8-9, 11-12 | Off | 2-1, 5-4, 8-7, 11-10 | |
| 3 | 4-1437558-7 | MTA406PAPC | 2 | 3 | ON ON ON | PC | 5-6, 11-12 | 5-3, 11-9 | 5-1, 11-7 | note 7 |
| 3 | 4-1437558-6 | MTA406PA | 2 | 3 | ON ON ON | Wire lug | 5-6, 11-12 | 5-3, 11-9 | 5-1, 11-7 | note 7 |
| | 4-1437558-5 | MTA406P | 4 | 2 | ON OFF ON | Wire lug | 2-3, 5-6, 8-9, 11-12 | Off | 2-1, 5-4, 8-7, 11-10 | |
| | 4-1437558-4 | MTA406NPC | 4 | 2 | ON ON | PC | 2-3, 5-6, 8-9, 11-12 | | 2-1, 5-4, 8-7, 11-10 | |
| | 4-1437558-3 | | 4 | 2 | ON ON | Wire lug | | | 2-1, 5-4, 8-7, 11-10 | |
| 3 | 4-1437558-2 | | 3 | 2 | ON OFF(ON) | PC | 2-3, 5-6, 8-9 | Off | 2-1, 5-4, 8-7 | |
| 3 | | MTA306H | 3 | 2 | ON OFF(ON) | Wire lug | | Off | 2-1, 5-4, 8-7 | |
| - | 4-1437558-0 | | 3 | 2 | ON (ON) | PC | 2-3, 5-6, 8-9 | | 2-1, 5-4, 8-7 | |
| - | | MTA306F | 3 | 2 | ON (ON) | Wire lug | | ——— | 2-1, 5-4, 8-7 | |
| - | 3-1437558-8 | | 3 | 2 | ON OFF ON | PC | 2-3, 5-6, 8-9 | Off | 2-1, 5-4, 8-7 | |
| - | | MTA306E | 3 | 2 | ON OFF ON | Wire lug | | Off | 2-1, 5-4, 8-7 | |
| - | 3-1437558-6 | | 3 | 2 | ON ON | PC Wise lug | 2-3, 5-6, 8-9 2-3, 5-6, 8-9 | | 2-1, 5-4, 8-7 2-1, 5-4, 8-7 | |
| <u>,</u> | 3-1437558-5 3-1437558-4 | | 2 | 2 2 | ON ON | Wire lug | 2-3, 5-6 | OFF | 2-1, 5-4 | |
| 3 | 3-1437558-3 | | 1 | 3 | ON OFF(ON) ON ON (ON) | Wire lug | | 5-3 | 5-1 | note 6 |
| , | 3-1437558-2 | | 2 | 2 | ON OFF(ON) | Wire lug | | OFF | 2-1, 5-4 | |
| 5 | 3-1437558-1 | | 2 | 2 | (ON) OFF (ON) | | 2-3, 5-6 | OFF | 2-1, 5-4 | |
| <u>,</u> | 3-1437558-0 | | 1 | 3 | (ON) ON (ON) | Wire lug | | 5-3 | 5-1 | note 6 |
| | 2-1437558-9 | | 2 | 2 | (ON) OFF (ON) | | | OFF | 2-1, 5-4 | |
| + | 2-1437558-8 | | | 2 | ON (ON) | PC PC | 2-3, 5-6 | ——— | 2-1, 5-4 | |
| + | 2-1437558-7 | | 2 | 2 | ON (ON) | Wire lug | | | 2-1, 5-4 | |
| + | 2-1437558-5 | | | 2 | ON OFF ON | PC PC | 2-3, 5-6 | OFF | 2-1, 5-4 | |
| <u> </u> | 2-1437558-4 | | | 3 | ON ON ON | PC | 5-6 | 5-3 | 5-1 | note 6 |
| <i>y</i> | 2-1437558-3 | | 1 | 3 | ON ON ON | Wire lug | | 5-3 | 5-1 | note 6 |
| | 2-1437558-2 | | 2 | 2 | ON OFF ON | Wire lug | | OFF | 2-1, 5-4 | |
| + | 2-1437558-1 | | | 2 | ON ON | PC | 2-3, 5-6 | | 2-1, 5-4 | |
| | 2-1437558-0 | | 2 | 2 | ON ON | Wire lug | | | 2-1, 5-4 | |
| 3 | 1-1437558-9 | | | 2 | ON OFF(ON) | PC | 2-3 | OFF | 2-1 | |
| 3 | 1-1437558-8 | | 1 | 2 | ON OFF(ON) | Wire lug | | OFF | 2-1 | |
| | 1-1437558-7 | | 1 | 2 | (ON) OFF (ON) | PC | 2-3 | OFF | 2-1 | |
| | 1-1437558-6 | MTA106G | 1 | 2 | (ON) OFF (ON) | Wire lug | | OFF | 2-1 | |
| | 1-1437558-5 | MTA106FPC | 1 | 2 | ON (ON) | PC | 2-3 | | 2-1 | |
| | 1-1437558-4 | MTA106F | 1 | 2 | ON (ON) | Wire lug | 2-3 | | 2-1 | |
| | 1-1437558-3 | MTA106EPC | 1 | 2 | ON OFF ON | PC | 2-3 | Off | 2-1 | |
| | 1-1437558-2 | MTA106E | 1 | 2 | ON OFF ON | Wire lug | 2-3 | Off | 2-1 | |
| | 1-1437558-1 | MTA106DPC | 1 | 2 | ON ON | PC | 2-3 | | 2-1 | |
| 3 | 1571616-1 | MTA106DUL | 1 | 2 | ON ON | Wire lug | 2-3 | | 2-1 | |
| 1 | 1-1437558-0 | MTA106D | 1 | 2 | ON ON | Wire lug | 2-3 | | 2-1 | |
| | | | | | | | THIS DRAWING IS A CONTROLLE | D DOCUMENT. DWN M.BINNER CHK M.ZITTO | 29DEC03 | onnectivity |





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