

## MA SERIES - MICRO-LIMIT SWITCHES



### FEATURES

- **Ratings: 16 Amps 250 VAC (resistive load). 4 Amps 250 VAC (motor load) or 3 Amps 250 VAC (resistive load). 0.1 Amps 250 VAC (motor load).**
- **Single pole CO (change-over or alternate action), NC (normally closed momentary) and NO (normally open momentary) configurations.**
- **Close tolerance switching action with long life (10,000,000 mechanical cycles min.).**
- **Pin plunger, hinge lever or roller lever actuator options.**

### MATERIALS

|                          |   |
|--------------------------|---|
| <b>Contacts:</b>         | Stationary: Nicker silver    Shorting: Beryllium copper |
| <b>Actuator:</b>         | FS 161 (UL94V-O)  |
| <b>Case &amp; cover:</b> | PBT (UL94V-O)   |
| <b>Terminals:</b>        | Silver plated copper/zinc                               |

### AGENCY RECOGNITION



Approval pending.

### SPECIFICATIONS

|                        |   |
|------------------------|---|
| Operating force:       | ≤ 12.59 oz. (343 grams) approx. for 16 Amp models<br>≤ 0.72 oz. (20 grams) approx. for 3 Amp models |
| Pretravel:             | ≤ .047" (1.2mm)   |
| Overtravel:            | ≥ .059" (1.5mm) min.  |
| Movement differential: | ≤ .016" (0.4mm)   |
| Free position:         | ≤ .649" (16.5mm)  |
| Operating position:    | .578" ± .020" (14.7mm ± 0.5mm)  |
| Operating temperature: | -40°C to +85°C  |
| Contact gap:           | less than .118" (3mm)   |
| Tracking resistance:   | > PTI 175   |

# MA SERIES - MICRO-LIMIT SWITCHES

## ORDER FORMAT

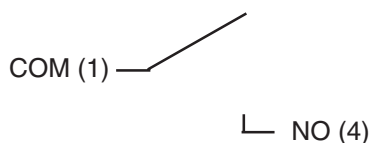
**M A A 6 B**

| Series    | Circuit & quick-connect terminals   | Switch rating                                       | Actuator style   |
|-----------|---|---|--|
| <b>MA</b> | <b>A</b> Normally open (standard) .031 x .248" (0.8x6.3mm)<br><b>B</b> Normally closed (standard) .031 x .248" (0.8x6.3mm)<br><b>C</b> Change-over (standard) .031 x .248" (0.8x6.3mm)<br><b>D</b> Normally open, .031 x .248" (0.8x6.3mm), spacing .197" (5mm)<br><b>E</b> Normally closed, .031 x .248" (0.8x6.3mm), spacing .197" (5mm)<br><b>F</b> Change-over, .031 x .248" (0.8x6.3mm), spacing .197" (5mm)<br><b>G</b> Normally open, .020 x .189" (0.5x4.8mm)<br><b>H</b> Normally closed, .020 x .189" (0.5x4.8mm)<br><b>I</b> Change-over, .020 x .189" (0.5x4.8mm)<br><b>J</b> Normally open, .031 x .189" (0.8x4.8mm)<br><b>K</b> Normally closed, .031 x .189" (0.8x4.8mm)<br><b>L</b> Change-over, .031 x .189" (0.8x4.8mm) | <b>6</b> 16(4)A 250 VAC<br><b>7</b> 3(0.1)A 250 VAC | <b>A</b> Pin actuator<br><b>B</b> Hinge actuator<br><b>C</b> Roller actuator |

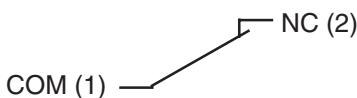
## STANDARD MODELS

| Quick-connect terminal |    | .031x.248"<br>(0.8x6.3mm) |              | .031x.248"<br>(0.8x6.3mm)<br>pin spacing -<br>.197"(5mm) |              | .020x.189"<br>(0.5x4.8mm) |              | .031x.189"<br>(0.8x4.8mm) |  |
|------------------------|----|---------------------------|--------------|--|--------------|---------------------------|--------------|---------------------------|--|
| Switching capacity     |    | 16(4)A                    | 3(0.1)A      | 16(4)A   | 16(4)A       | 3(0.1)A                   | 16(4)A       | 3(0.1)A                   |  |
| Pin plunger            | NO | <b>MAA6A</b>              | <b>MAA7A</b> | <b>MAD6A</b>   | <b>MAG6A</b> | <b>MAG7A</b>              | <b>MAJ6A</b> | <b>MAJ7A</b>              |  |
|                        | NC | <b>MAB6A</b>              | <b>MAB7A</b> | <b>MAE6A</b>   | <b>MAH6A</b> | <b>MAH7A</b>              | <b>MAK6A</b> | <b>MAK7A</b>              |  |
|                        | CO | <b>MAC6A</b>              | <b>MAC7A</b> | <b>MAF6A</b>   | <b>MAI6A</b> | <b>MAI7A</b>              | <b>MAL6A</b> | <b>MAL7A</b>              |  |
| Hinge lever            | NO | <b>MAA6B</b>              | -            | <b>MAD6B</b>   | <b>MAG6B</b> | -                         | <b>MAJ6B</b> | -                         |  |
|                        | NC | <b>MAB6B</b>              | -            | <b>MAE6B</b>   | <b>MAH6B</b> | -                         | <b>MAK6B</b> | -                         |  |
|                        | CO | <b>MAC6B</b>              | -            | <b>MAF6B</b>   | <b>MAI6B</b> | -                         | <b>MAL6B</b> | -                         |  |
| Roller lever           | NO | <b>MAA6C</b>              | -            | <b>MAD6C</b>   | <b>MAG6C</b> | -                         | <b>MAJ6C</b> | -                         |  |
|                        | NC | <b>MAB6C</b>              | -            | <b>MAE6C</b>   | <b>MAH6C</b> | -                         | <b>MAK6C</b> | -                         |  |
|                        | CO | <b>MAC6C</b>              | -            | <b>MAF6C</b>   | <b>MAI6C</b> | -                         | <b>MAL6C</b> | -                         |  |

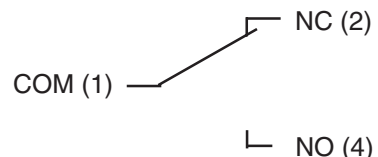
NO =  
NORMALLY OPEN:



NC =  
NORMALLY CLOSED:



CO =  
CHANGE-OVER:



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

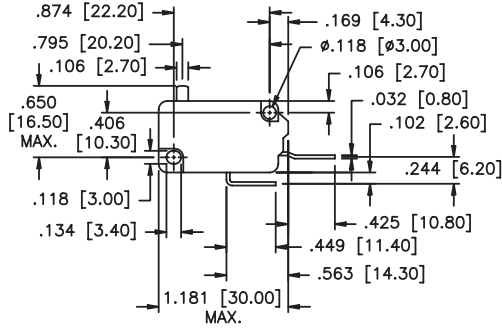
H

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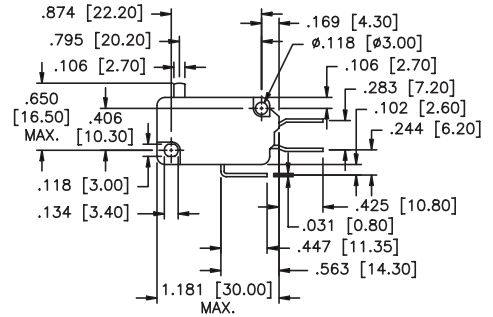
## MECHANICAL OUTLINES

Models with quick-connect terminal .031x.248" (0.8x6.3mm)

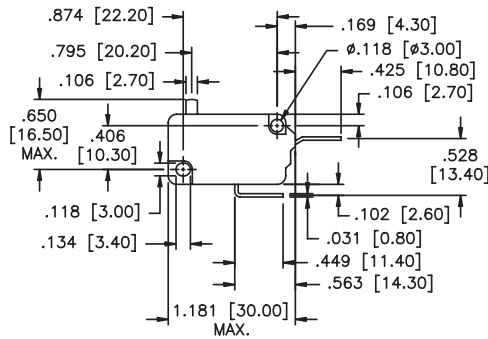
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



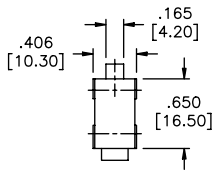
**Normally open**



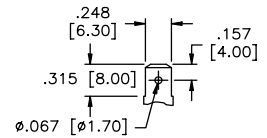
**Change-over**



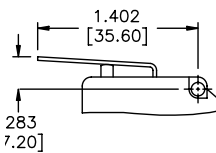
**Normally closed**



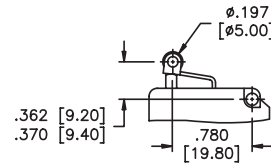
**Side view**



**Quick-connect terminal**



**Hinge lever**



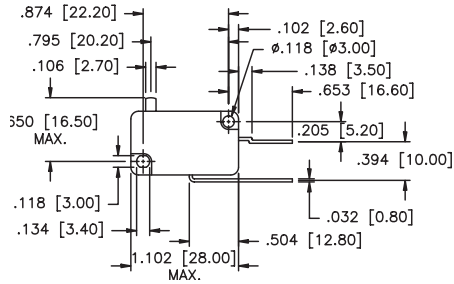
**Roller lever**

H

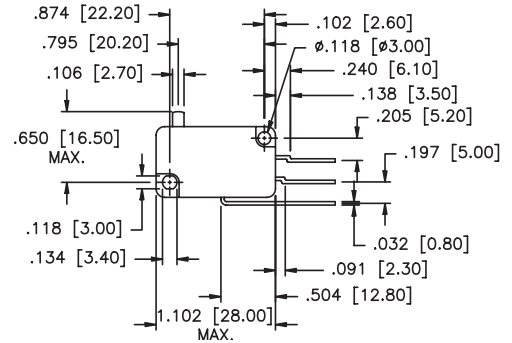
# MA SERIES - MICRO-LIMIT SWITCHES

## MECHANICAL OUTLINES

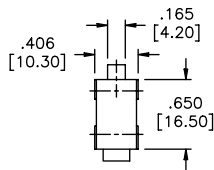
Models with quick-connect terminal .031x.248" (0.8x6.3mm) & pin spacing .197" (5mm)



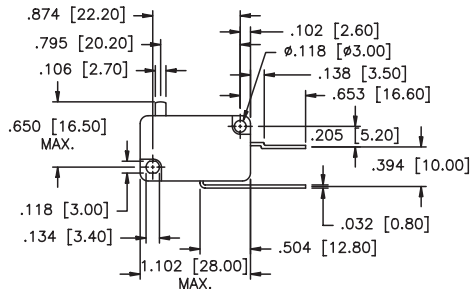
Normally open



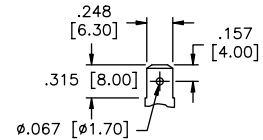
Change-over



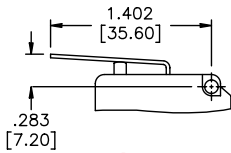
Side view



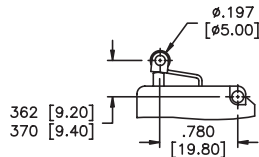
Normally closed



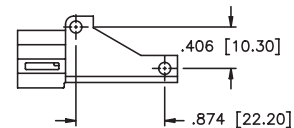
Quick-connect terminal



Hinge lever



Roller lever



Adaptor element

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

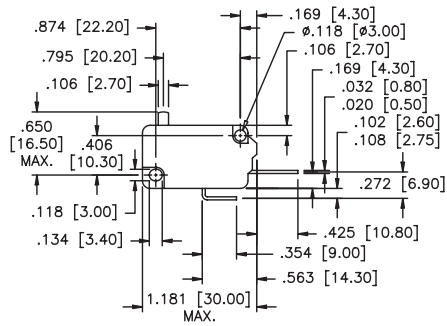
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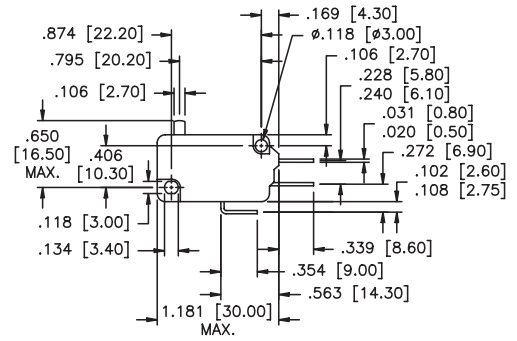
## MECHANICAL OUTLINES

Models with quick-connect terminal .020 or .031x.248" (0.8 or 0.8x6.3mm)

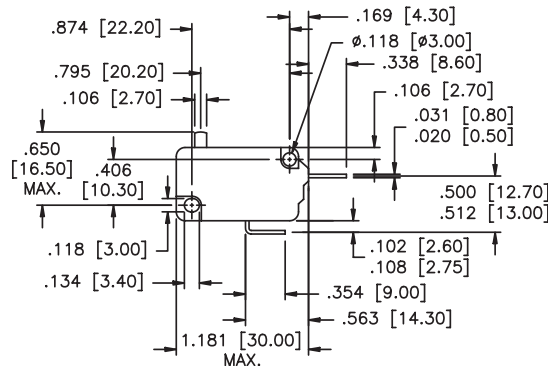
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



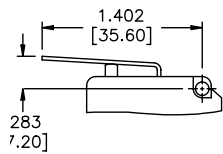
**Normally open**



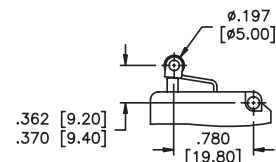
**Change-over**



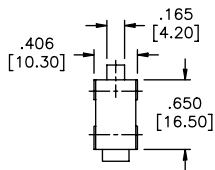
**Normally closed**



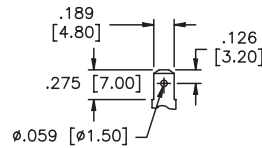
**Hinge lever**



**Roller lever**



**Side view**



**Quick connect terminal**

H

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