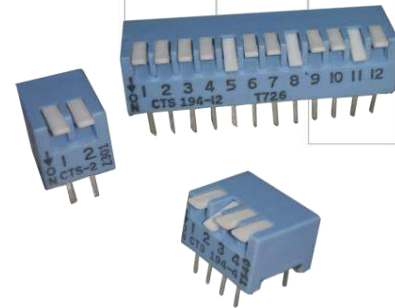




Series 194

Side Actuated, Through-Hole DIP Switch

- Contact wiping action on make and break
- Enclosed actuators shield contacts from foreign particles throughout life of switch
- Series 194 – gold plated contacts for long-term contact corrosion resistance and with blue housing
- RoHS compliant
- Optional top tape seal for board spray washing



Ordering Information

| Series | Number of Actuator | Switch Positions Height | Bottom Seal | Top Tape Seal | Shipping Position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|---|-------------------------|-------------------------|---------------|-------------------|---|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|-------------|----|--------------|----|--------------|---|------|-------|---|--------------------------------|--|------|---------------|-------|------------------|---|---------------|--|------|-------|-------|----------------------|---|---------------------|
| 194- | XX | M | S | T | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Code</th> <th>No. of switch positions</th> </tr> </thead> <tbody> <tr><td>2</td><td>2 positions</td></tr> <tr><td>3</td><td>3 positions</td></tr> <tr><td>4</td><td>4 positions</td></tr> <tr><td>5</td><td>5 positions</td></tr> <tr><td>6</td><td>6 positions</td></tr> <tr><td>7</td><td>7 positions</td></tr> <tr><td>8</td><td>8 positions</td></tr> <tr><td>9</td><td>9 positions</td></tr> <tr><td>10</td><td>10 positions</td></tr> <tr><td>12</td><td>12 positions</td></tr> </tbody> </table> | Code | No. of switch positions | 2 | 2 positions | 3 | 3 positions | 4 | 4 positions | 5 | 5 positions | 6 | 6 positions | 7 | 7 positions | 8 | 8 positions | 9 | 9 positions | 10 | 10 positions | 12 | 12 positions | <table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>M</td> <td>Medium actuator (1.14mm/.045")</td> </tr> </tbody> </table> | Code | Spec. | M | Medium actuator (1.14mm/.045") | <table border="1"> <thead> <tr> <th>Code</th> <th>Top tape seal</th> </tr> </thead> <tbody> <tr> <td>Blank</td> <td>No top tape seal</td> </tr> <tr> <td>T</td> <td>Top tape seal</td> </tr> </tbody> </table> | Code | Top tape seal | Blank | No top tape seal | T | Top tape seal | <table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>BLANK</td> <td>Ship at OFF position</td> </tr> <tr> <td>N</td> <td>Ship at ON position</td> </tr> </tbody> </table> | Code | Spec. | BLANK | Ship at OFF position | N | Ship at ON position |
| Code | No. of switch positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 2 positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 4 positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 5 positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 6 positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 7 positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 8 positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 9 positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 10 positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 12 positions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | Spec. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M | Medium actuator (1.14mm/.045") | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | Top tape seal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blank | No top tape seal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T | Top tape seal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | Spec. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BLANK | Ship at OFF position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | Ship at ON position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Notes: Contact CTS for other common features not listed.



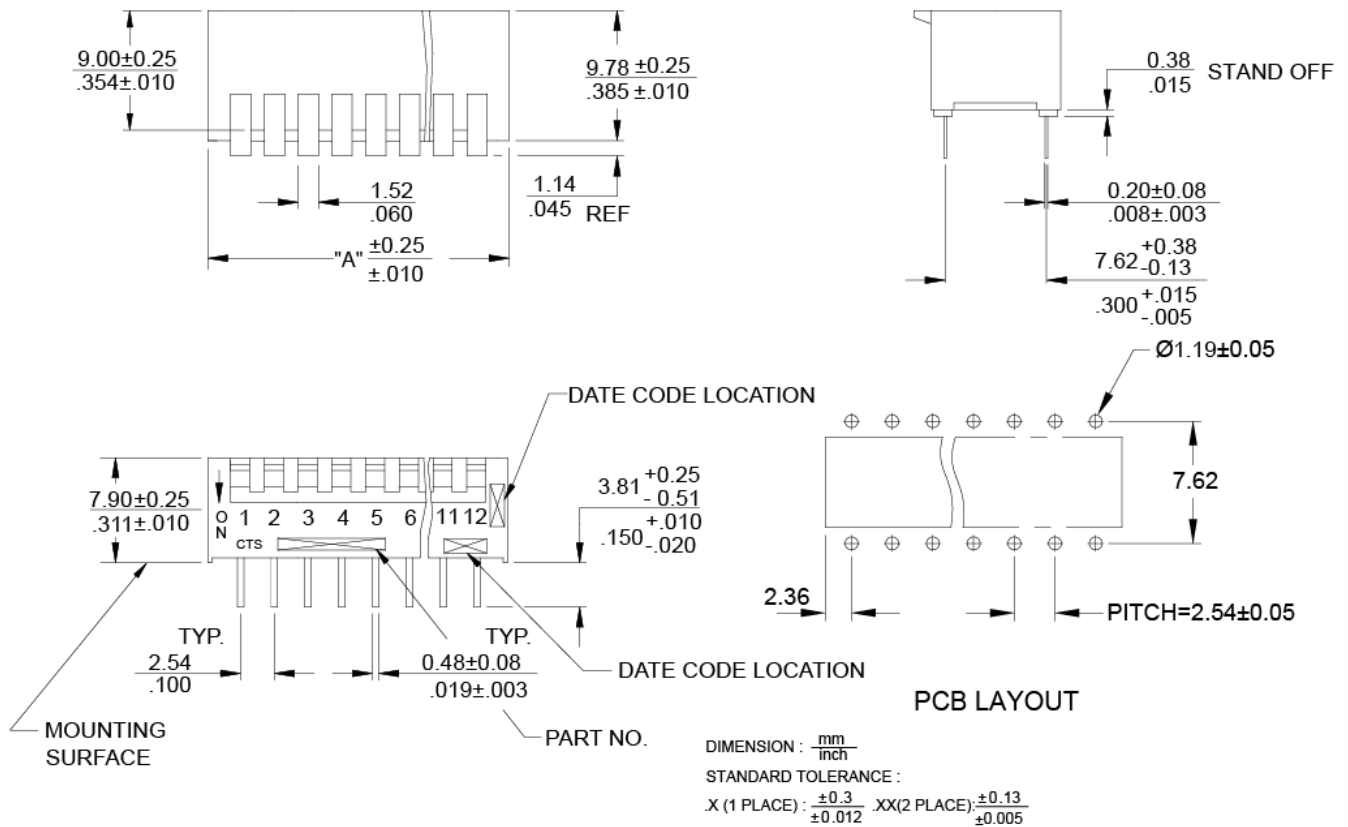
Electrical Specifications

| Parameter | Conditions & Remarks | Min | Max | Unit |
|-----------------------|-----------------------------------|------|-----------------|-----------------|
| Circuit | SPST | 2 | 12 | position |
| Contact Resistance | Initial At end of life | | 50 100 | milliohms |
| Insulation Resistance | Between insulated terminals | 1000 | | megohms |
| Dielectric Strength | 500 VAC between adjacent switches | | 1 | minute |
| Switch Capacitance | Between adjacent closed switches | | 5.0 | pF |
| Nonswitching Rating | | | 100 or 50 | mA or VDC |

Mechanical and Environmental

| | |
|-----------------------------|---|
| Actuation Life | 7000 cycles switching at 50mA and 24 VDC |
| Soldering | Maximum wave temperature, 260°C for 5 seconds |
| MSL | Level 1 |
| RoHS | Lead-Free. Fully compliant to RoHS Directive 2011/65/EU |
| Shock | Per MIL-STD-202F, method 213B, condition A(50G's) with no contact inconsistencies greater than 1 microsecond |
| Vibration | Per MIL-STD-202F, method 204D, condition B (.06" or 15G's between 10 HZ to 2K HZ) with no contact inconsistencies greater than 1 microsecond |
| Seal | Bottom seal standard Top tape seal optional |
| Marking | Special side marking available-consult CTS |
| Packaging: | Standard anti-static tube packaging |
| Operating Temperature Range | -40°C to +85°C |
| Storage Temperature Range | -40°C to +85°C |

Mechanical Specifications



| "A" Overall Dimensions | No. of Switch Positions | Part Number |
|------------------------|-------------------------|-------------|
| 7.26 / .286 | 2 | 194-2MS |
| 9.80 / .386 | 3 | 194-3MS |
| 12.34 / .486 | 4 | 194-4MS |
| 14.88 / .586 | 5 | 194-5MS |
| 17.42 / .686 | 6 | 194-6MS |
| 19.96 / .786 | 7 | 194-7MS |
| 22.50 / .886 | 8 | 194-8MS |
| 25.04 / .986 | 9 | 194-9MS |
| 27.58 / 1.086 | 10 | 194-10MS |
| 32.66 / 1.286 | 12 | 194-12MS |