

## R10 Series Panel Plug-in Relay

- 1 through 8 form C (CO) contact arrangement
- Broad range of coil options provides sensitivity ranging from 25 to 750mW
- Various contacts switch from dry circuit to 7.5 amps
- Many mounting and termination options

### Typical applications

Coin changers, audio equipment, elevators, traffic controls, ultrasonic test equipment, parking toll readers



### Approvals

UL E29244; CSA LR15734

Technical data of approved types on request

### Contact Data

|                                            |                                  |
|--------------------------------------------|----------------------------------|
| Contact arrangement                        | 1, 2, 3, 4, 6 and 8 Form C (CO)  |
| Rated voltage                              | 120VAC                           |
| Rated current                              | 7.5A                             |
| Contact material                           | Ag, AgCdO, Au overlay Ag, AuPtAg |
| Contact style                              | Single or bifurcated crossbar    |
| Min. recommended contact load              |                                  |
| W type, AgCdO, single contact              | 300mA, 12VDC                     |
| X type, AgCdO, single contact              | 300mA, 12VDC                     |
| M type, AgCdO, bifurcated contact          | 300mA, 12VDC                     |
| Y type, Ag, single contact                 | 100mA, 12VDC                     |
| Z type, Ag, bifurcated crossbar            | 1mA, 12VDC                       |
| P type, Au overlay Ag, bifurcated crossbar | dry circuit                      |
| L type, AuPtAg, bifurcated crossbar        | dry circuit                      |
| Initial contact resistance                 |                                  |
| All AgCdO contact types                    | 100mΩ                            |
| All other contact materials and types      | 50mΩ                             |
| Frequency of operation                     | 360 ops./hr                      |

### Contact ratings

| Type                                    | Load                          | Cycles              |
|-----------------------------------------|-------------------------------|---------------------|
| <b>UL 508</b>                           |                               |                     |
| W type, AgCdO, single contact           |                               |                     |
|                                         | 7.5A, 120VAC, resistive       |                     |
|                                         | 7.5A, 28VDC, resistive        |                     |
|                                         | 1/8HP, 120VAC, same polarity  |                     |
|                                         | 1/6HP, 240VAC, same polarity  |                     |
| X type, AgCdO, single contact           |                               |                     |
|                                         | 2A, 30VDC, resistive          | 100x10 <sup>3</sup> |
|                                         | 5A, 120VAC, resistive         | 6x10 <sup>3</sup>   |
|                                         | 5A, 30VDC, resistive          | 100x10 <sup>3</sup> |
|                                         | 1/20HP, 120VAC, same polarity |                     |
|                                         | 1/10HP, 240VAC, same polarity |                     |
| M type, AgCdO, bifurcated contact       |                               |                     |
|                                         | 5A, 120VAC, resistive         | 6x10 <sup>3</sup>   |
|                                         | 5A, 28VDC, resistive          | 6x10 <sup>3</sup>   |
| Y type, Ag, single contact              |                               |                     |
|                                         | 2A, 120VAC                    | 6x10 <sup>3</sup>   |
|                                         | 2A, 28VDC                     | 6x10 <sup>3</sup>   |
|                                         | 250VA, 250VAC                 | 30x10 <sup>3</sup>  |
|                                         | 125VA, 125VAC                 | 100x10 <sup>3</sup> |
| Z type, Ag, bifurcated crossbar contact |                               |                     |
|                                         | 3A, 120VAC                    | 6x10 <sup>3</sup>   |
|                                         | 3A, 28VDC                     | 6x10 <sup>3</sup>   |
|                                         | 2A, 30VDC                     | 100x10 <sup>3</sup> |

### Contact ratings (continued)

| Type                                               | Load                                                             | Cycles              |
|----------------------------------------------------|------------------------------------------------------------------|---------------------|
| <b>UL 508</b>                                      |                                                                  |                     |
| P type, Au overlay Ag, bifurcated crossbar contact |                                                                  |                     |
|                                                    | 2A, 120VAC, resistive                                            | 100x10 <sup>3</sup> |
|                                                    | 3 A, 120 VAC, resistive                                          | 6x10 <sup>3</sup>   |
|                                                    | 3 A, 30 VDC, resistive                                           | 100x10 <sup>3</sup> |
| L type, AuPtAg, bifurcated crossbar contact        |                                                                  |                     |
|                                                    | 500mA, 28VDC, resistive                                          | 6x10 <sup>3</sup>   |
| Mechanical endurance                               | 10x10 <sup>6</sup> ops., except W type is 1x10 <sup>6</sup> ops. |                     |

### Coil Data

|                    |                                             |
|--------------------|---------------------------------------------|
| Coil voltage range | 3 to 115VDC<br>4.5mA to 20mA<br>6 to 115VAC |
|--------------------|---------------------------------------------|

### Coil versions, DC coil

| Coil code                          | Rated voltage VDC | Operate voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|------------------------------------|-------------------|---------------------|-----------------------|---------------------|
| V - standard DC voltage adjustment |                   |                     |                       |                     |
| 1, 2 and 4 pole                    |                   |                     |                       |                     |
| V10                                | 3                 | 2.25                | 10                    | 900                 |
| V28                                | 5                 | 3.75                | 28                    | 900                 |
| V52                                | 6                 | 4.5                 | 52                    | 900                 |
| V185                               | 12                | 9                   | 185                   | 900                 |
| V700                               | 24                | 18                  | 700                   | 900                 |
| V2.5K                              | 48                | 36                  | 2500                  | 900                 |
| V5.8K                              | 72                | 54                  | 5800                  | 900                 |
| V15.0K                             | 115               | 86                  | 15000                 | 900                 |
| 6 pole                             |                   |                     |                       |                     |
| V6                                 | 3                 | 2.25                | 6                     | 1,500               |
| V16                                | 5                 | 3.75                | 16                    | 1,600               |
| V25                                | 6                 | 4.5                 | 25                    | 1,500               |
| V90                                | 12                | 9                   | 90                    | 1,600               |
| V430                               | 24                | 18                  | 430                   | 1,400               |
| V1.5K                              | 48                | 36                  | 1500                  | 1,600               |
| V3.5K                              | 72                | 54                  | 3500                  | 1,500               |
| V9.0K                              | 115               | 86                  | 9000                  | 1,500               |
| 8 pole                             |                   |                     |                       |                     |
| V5                                 | 3                 | 2.25                | 5                     | 1,800               |
| V14                                | 5                 | 3.75                | 14                    | 1,800               |
| V20                                | 6                 | 4.5                 | 20                    | 1,800               |
| V72                                | 12                | 9                   | 72                    | 2,000               |
| V350                               | 24                | 18                  | 350                   | 1,700               |
| V1.25K                             | 48                | 36                  | 1250                  | 1,900               |
| V2.8K                              | 72                | 54                  | 2800                  | 1,900               |
| V8.0K                              | 115               | 86                  | 8000                  | 1,700               |

|        |     |      |      |       |
|--------|-----|------|------|-------|
| 6 pole |     |      |      |       |
| V6     | 3   | 2.25 | 6    | 1,500 |
| V16    | 5   | 3.75 | 16   | 1,600 |
| V25    | 6   | 4.5  | 25   | 1,500 |
| V90    | 12  | 9    | 90   | 1,600 |
| V430   | 24  | 18   | 430  | 1,400 |
| V1.5K  | 48  | 36   | 1500 | 1,600 |
| V3.5K  | 72  | 54   | 3500 | 1,500 |
| V9.0K  | 115 | 86   | 9000 | 1,500 |
| 8 pole |     |      |      |       |
| V5     | 3   | 2.25 | 5    | 1,800 |
| V14    | 5   | 3.75 | 14   | 1,800 |
| V20    | 6   | 4.5  | 20   | 1,800 |
| V72    | 12  | 9    | 72   | 2,000 |
| V350   | 24  | 18   | 350  | 1,700 |
| V1.25K | 48  | 36   | 1250 | 1,900 |
| V2.8K  | 72  | 54   | 2800 | 1,900 |
| V8.0K  | 115 | 86   | 8000 | 1,700 |

|        |     |      |      |       |
|--------|-----|------|------|-------|
| 8 pole |     |      |      |       |
| V5     | 3   | 2.25 | 5    | 1,800 |
| V14    | 5   | 3.75 | 14   | 1,800 |
| V20    | 6   | 4.5  | 20   | 1,800 |
| V72    | 12  | 9    | 72   | 2,000 |
| V350   | 24  | 18   | 350  | 1,700 |
| V1.25K | 48  | 36   | 1250 | 1,900 |
| V2.8K  | 72  | 54   | 2800 | 1,900 |
| V8.0K  | 115 | 86   | 8000 | 1,700 |

All figures are given for coil without preenergization, at ambient temperature +23°C.

## R10 Series Panel Plug-in Relay (Continued)

### Coil versions, DC coil (continued)

| Coil code                                  | Rated voltage VDC | Operate voltage VDC | Coil resistance $\Omega \pm 10\%$ | Rated coil power mW |
|--------------------------------------------|-------------------|---------------------|-----------------------------------|---------------------|
| Q - special DC voltage adjustment          |                   |                     |                                   |                     |
| 1 and 2 pole                               |                   |                     |                                   |                     |
| Q52                                        | 5                 | 3.1                 | 52                                | 500                 |
| Q110                                       | 6                 | 4.5                 | 110                               | 350                 |
| Q450                                       | 12                | 9.2                 | 450                               | 350                 |
| Q1.8K                                      | 24                | 17.4                | 1,800                             | 350                 |
| Q7.5K                                      | 48                | 36.2                | 7500                              | 310                 |
| Q15.0K                                     | 72                | 49.5                | 15000                             | 350                 |
| Q30.0K                                     | 115               | 67.5                | 30000                             | 450                 |
| 3 and 4 pole                               |                   |                     |                                   |                     |
| Q32                                        | 5                 | 3.8                 | 32                                | 800                 |
| Q52                                        | 6                 | 4.2                 | 52                                | 700                 |
| Q185                                       | 12                | 8.4                 | 185                               | 800                 |
| Q1.0K                                      | 24                | 17.2                | 1000                              | 600                 |
| Q3.2K                                      | 48                | 31.1                | 3200                              | 750                 |
| Q7.5K                                      | 72                | 49.3                | 7500                              | 700                 |
| Q15.0K                                     | 115               | 67.5                | 15000                             | 900                 |
| S - sensitive DC voltage adjustment        |                   |                     |                                   |                     |
| 1 and 2 pole                               |                   |                     |                                   |                     |
| S50                                        | 3                 | 2.25                | 50                                | 180                 |
| S140                                       | 5                 | 3.75                | 140                               | 180                 |
| S200                                       | 6                 | 4.5                 | 200                               | 180                 |
| S800                                       | 12                | 9                   | 800                               | 180                 |
| S3.2K                                      | 24                | 18                  | 3200                              | 180                 |
| S13.0K                                     | 48                | 36                  | 13000                             | 180                 |
| S28.0K                                     | 72                | 54                  | 28000                             | 190                 |
| S50.0K                                     | 115               | 86                  | 50000                             | 270                 |
| 3 and 4 pole                               |                   |                     |                                   |                     |
| S30                                        | 3                 | 2.25                | 30                                | 300                 |
| S80                                        | 5                 | 3.75                | 80                                | 350                 |
| S110                                       | 6                 | 4.5                 | 110                               | 350                 |
| S450                                       | 12                | 9                   | 450                               | 350                 |
| S1.8K                                      | 24                | 18                  | 1800                              | 350                 |
| S7.5K                                      | 48                | 36                  | 7500                              | 300                 |
| S16.0K                                     | 72                | 54                  | 16000                             | 350                 |
| S40.0K                                     | 115               | 86                  | 40000                             | 350                 |
| 6 pole                                     |                   |                     |                                   |                     |
| S20                                        | 3                 | 2.25                | 20                                | 500                 |
| S56                                        | 5                 | 3.75                | 56                                | 500                 |
| S80                                        | 6                 | 4.5                 | 80                                | 500                 |
| S320                                       | 12                | 9                   | 320                               | 500                 |
| S1.2K                                      | 24                | 18                  | 1200                              | 500                 |
| S5.2K                                      | 48                | 36                  | 5200                              | 500                 |
| S13.0K                                     | 72                | 54                  | 13000                             | 400                 |
| S30.0K                                     | 115               | 86                  | 30000                             | 500                 |
| 8 pole                                     |                   |                     |                                   |                     |
| S12                                        | 3                 | 2.25                | 12                                | 750                 |
| S35                                        | 5                 | 3.75                | 35                                | 750                 |
| S52                                        | 6                 | 4.5                 | 52                                | 700                 |
| S200                                       | 12                | 9                   | 200                               | 750                 |
| S800                                       | 24                | 18                  | 800                               | 750                 |
| S3.2K                                      | 48                | 36                  | 3200                              | 750                 |
| S7.5K                                      | 72                | 54                  | 7500                              | 700                 |
| S16.0K                                     | 115               | 86                  | 16000                             | 850                 |
| SS - ultra sensitive DC voltage adjustment |                   |                     |                                   |                     |
| 1 pole                                     |                   |                     |                                   |                     |
| SS220                                      | 3                 | 2.25                | 220                               | 45                  |
| SS700                                      | 5                 | 3.75                | 700                               | 40                  |
| SS1.0K                                     | 6                 | 4.5                 | 1000                              | 40                  |
| SS4.0K                                     | 12                | 9                   | 4000                              | 40                  |
| SS9.0K                                     | 18                | 13.5                | 9000                              | 40                  |
| SS15.0K                                    | 24                | 18                  | 15000                             | 40                  |
| SS30.0K                                    | 36                | 27                  | 30000                             | 45                  |

### Coil versions, DC coil (continued)

| Coil code                                             | Rated voltage VDC         | Operate voltage VDC  | Coil resistance $\Omega \pm 10\%$ | Rated coil power mW   |
|-------------------------------------------------------|---------------------------|----------------------|-----------------------------------|-----------------------|
| S - sensitive DC voltage adjustment (continued)       |                           |                      |                                   |                       |
| 2 pole                                                |                           |                      |                                   |                       |
| SS110                                                 | 3                         | 2.25                 | 110                               | 85                    |
| SS350                                                 | 5                         | 3.75                 | 350                               | 75                    |
| SS500                                                 | 6                         | 4.5                  | 500                               | 75                    |
| SS2.0K                                                | 12                        | 9                    | 2000                              | 75                    |
| SS4.5K                                                | 18                        | 13.5                 | 4500                              | 75                    |
| SS7.5K                                                | 24                        | 18                   | 7500                              | 80                    |
| SS15.0K                                               | 36                        | 27                   | 15000                             | 85                    |
| SS30.0K                                               | 48                        | 36                   | 30000                             | 80                    |
| 3 and 4 pole                                          |                           |                      |                                   |                       |
| SS52                                                  | 3                         | 2.25                 | 52                                | 175                   |
| SS175                                                 | 5                         | 3.75                 | 175                               | 150                   |
| SS250                                                 | 6                         | 4.5                  | 250                               | 150                   |
| SS1.0K                                                | 12                        | 9                    | 1000                              | 150                   |
| SS2.2K                                                | 18                        | 13.5                 | 2200                              | 150                   |
| SS3.7K                                                | 24                        | 18                   | 3700                              | 150                   |
| SS7.5K                                                | 36                        | 27                   | 7500                              | 175                   |
| SS15.0K                                               | 48                        | 36                   | 15000                             | 150                   |
| Coil code                                             | Maximum coil current mADC | Operate current mADC | Coil resistance $\Omega \pm 10\%$ | Pick-up coil power mW |
| J - sensitive DC current adjustment                   |                           |                      |                                   |                       |
| 2 pole                                                |                           |                      |                                   |                       |
| J1.0K                                                 | 45                        | 8.5                  | 1000                              | 75                    |
| J2.5K                                                 | 28                        | 5.8                  | 2500                              | 85                    |
| J5.0K                                                 | 20                        | 4.1                  | 5000                              | 85                    |
| J10.0K                                                | 14                        | 3.1                  | 10000                             | 100                   |
| J15.0K                                                | 11.5                      | 2.6                  | 15000                             | 100                   |
| J30.0K                                                | 8.3                       | 1.7                  | 30000                             | 85                    |
| 4 pole                                                |                           |                      |                                   |                       |
| J1.0K                                                 | 45                        | 13                   | 1000                              | 175                   |
| J2.5K                                                 | 28                        | 8.4                  | 2500                              | 175                   |
| J5.0K                                                 | 20                        | 6.2                  | 5000                              | 200                   |
| J10.0K                                                | 14                        | 4.5                  | 10000                             | 200                   |
| J15.0K                                                | 11.5                      | 3.5                  | 15000                             | 200                   |
| J30.0K                                                | 8.3                       | 2.5                  | 30000                             | 200                   |
| 6 pole                                                |                           |                      |                                   |                       |
| J1.0K                                                 | 45                        | 16                   | 1000                              | 250                   |
| J2.5K                                                 | 28                        | 10                   | 2500                              | 250                   |
| J5.0K                                                 | 20                        | 7.2                  | 5000                              | 250                   |
| J10.0K                                                | 14                        | 5                    | 10000                             | 250                   |
| J15.0K                                                | 11.5                      | 4.2                  | 15000                             | 270                   |
| J30.0K                                                | 8.3                       | 2.9                  | 30000                             | 250                   |
| 8 pole                                                |                           |                      |                                   |                       |
| J1.0K                                                 | 45                        | 20                   | 1000                              | 250                   |
| J2.5K                                                 | 28                        | 13                   | 2500                              | 250                   |
| J5.0K                                                 | 20                        | 9                    | 5000                              | 250                   |
| J10.0K                                                | 14                        | 6.4                  | 10000                             | 250                   |
| J15.0K                                                | 11.5                      | 5.3                  | 15000                             | 270                   |
| J30.0K                                                | 8.3                       | 3.7                  | 30000                             | 250                   |
| J - sensitive DC current adjustment - R10S types only |                           |                      |                                   |                       |
| 1 pole                                                |                           |                      |                                   |                       |
| J500 <sup>1)</sup>                                    | —                         | 4.5                  | 500                               | 10                    |
| J1.0K <sup>1)</sup>                                   | —                         | 3.2                  | 1000                              | 10                    |
| J2.5K                                                 | —                         | 2                    | 2500                              | 10                    |
| J5.0K <sup>2)</sup>                                   | —                         | 1.4                  | 5000                              | 10                    |
| J10.0K                                                | —                         | 1                    | 10000                             | 10                    |
| J16.0K                                                | —                         | 0.8                  | 16000                             | 10                    |
| J30.0K <sup>3)</sup>                                  | —                         | 0.6                  | 30000                             | 11                    |

**R10 Series Panel Plug-in Relay (Continued)**

**Coil versions, DC coil (continued)**

| Coil code                                             | Maximum coil current mADC | Operate current mADC | Coil resistance $\Omega \pm 10\%$ | Pick-up coil power mW |
|-------------------------------------------------------|---------------------------|----------------------|-----------------------------------|-----------------------|
| J - sensitive DC current adjustment – R10S types only |                           |                      |                                   |                       |
| 2 pole                                                |                           |                      |                                   |                       |
| J500 <sup>1)</sup>                                    | –                         | 6.3                  | 500                               | 20                    |
| J1.0K                                                 | –                         | 4.5                  | 1000                              | 20                    |
| J2.5K <sup>2)</sup>                                   | –                         | 2.9                  | 2500                              | 25                    |
| J5.0K                                                 | –                         | 2                    | 5000                              | 20                    |
| J10.0K <sup>3)</sup>                                  | –                         | 1.4                  | 10000                             | 20                    |
| J16.0K                                                | –                         | 1.2                  | 16000                             | 25                    |
| J30.0K                                                | –                         | 0.8                  | 30000                             | 20                    |
| 4 pole                                                |                           |                      |                                   |                       |
| J500                                                  | –                         | 9                    | 500                               | 45                    |
| J1.0K                                                 | –                         | 6.5                  | 1000                              | 45                    |
| J2.5K <sup>2)</sup>                                   | –                         | 4.1                  | 2500                              | 45                    |
| J5.0K <sup>3)</sup>                                   | –                         | 2.9                  | 5000                              | 45                    |
| J10.0K                                                | –                         | 2                    | 10000                             | 40                    |
| J16.0K                                                | –                         | 1.4                  | 16000                             | 35                    |
| J30.0K                                                | –                         | 1.2                  | 30000                             | 45                    |

1) Suggested for 5VDC operation  
2) Suggested for 12VDC operation  
3) Suggested for 24VDC operation

**JJ - ultrasensitive DC current adjustment**

|         |      |      |       |    |
|---------|------|------|-------|----|
| 1 pole  |      |      |       |    |
| JJ1.0K  | 45   | 4.5  | 1000  | 20 |
| JJ2.5K  | 28   | 2.9  | 2500  | 25 |
| JJ5.0K  | 20   | 2.1  | 5000  | 25 |
| JJ10.0K | 14   | 1.5  | 10000 | 25 |
| JJ15.0K | 11.5 | 1.2  | 15000 | 25 |
| JJ30.0K | 8.3  | 0.85 | 30000 | 25 |
| 2 pole  |      |      |       |    |
| JJ1.0K  | 45   | 6.5  | 1000  | 45 |
| JJ2.5K  | 28   | 4.1  | 2500  | 45 |
| JJ5.0K  | 20   | 2.9  | 5000  | 45 |
| JJ10.0K | 14   | 2    | 10000 | 40 |
| JJ15.0K | 11.5 | 1.7  | 15000 | 45 |
| JJ30.0K | 8.3  | 1.2  | 30000 | 45 |
| 4 pole  |      |      |       |    |
| JJ1.0K  | 45   | 9    | 1000  | 85 |
| JJ2.5K  | 28   | 5.8  | 2500  | 85 |
| JJ5.0K  | 20   | 4.1  | 5000  | 85 |
| JJ10.0K | 14   | 3    | 10000 | 90 |
| JJ15.0K | 11.5 | 2.4  | 15000 | 85 |
| JJ30.0K | 8.3  | 1.7  | 30000 | 90 |

All figures are given for coil without preenergization, at ambient temperature +23°C.

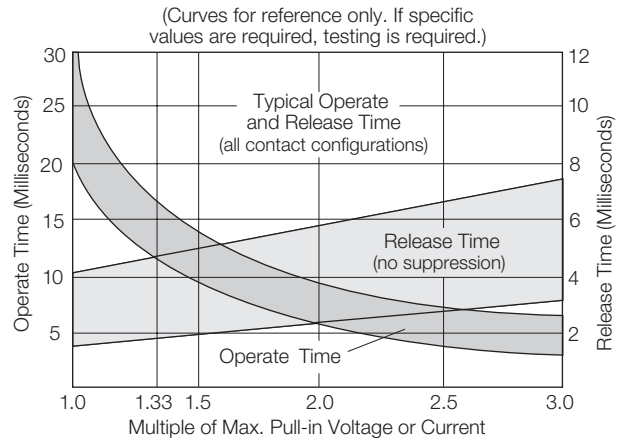
**Coil versions, AC coil (dual coil diode rectified construction)**

| Coil code    | Rated voltage VAC | Operate voltage VAC | Coil resistance $\Omega \pm 20\%$ |
|--------------|-------------------|---------------------|-----------------------------------|
| Standard AC  |                   |                     |                                   |
| 2 and 4 pole |                   |                     |                                   |
| 6V           | 6                 | 5                   | 25                                |
| 12V          | 12                | 9                   | 120                               |
| 24V          | 24                | 18                  | 500                               |
| 48V          | 48                | 36                  | 2000                              |
| 115V         | 115               | 86                  | 9000                              |
| 6 and 8 pole |                   |                     |                                   |
| 6V           | 6                 | 5                   | 15                                |
| 12V          | 12                | 9                   | 90                                |
| 24V          | 24                | 18                  | 350                               |
| 48V          | 48                | 36                  | 1400                              |
| 115V         | 115               | 86                  | 7500                              |

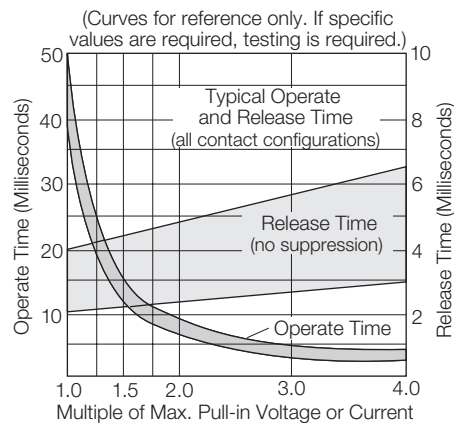
All figures are given for coil without preenergization, at ambient temperature +23°C.

**Operative Range**

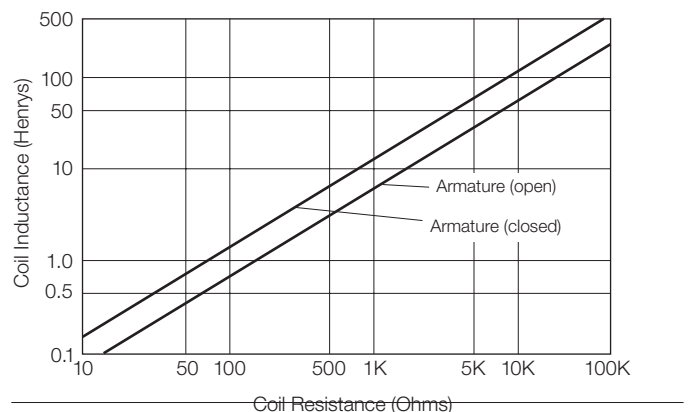
R10 Relays (DC Only) Typical Ranges of Operations @ 25°C



R10 Ultra-Sensitive "SS" and "JJ" Typical Ranges of Operation @ 25°C



**Typical Coil Inductance**



## R10 Series Panel Plug-in Relay (Continued)

### Insulation Data

|                               |                      |
|-------------------------------|----------------------|
| Initial dielectric strength   |                      |
| between open contacts         | 500V <sub>rms</sub>  |
| between contact and coil      | 1000V <sub>rms</sub> |
| between adjacent contacts     | 1000V <sub>rms</sub> |
| Initial insulation resistance |                      |
| between insulated elements    | 10GΩ, 500VDC         |

### Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at [www.te.com/customer-support/rohssupportcenter](http://www.te.com/customer-support/rohssupportcenter)

|                                      |                                             |
|--------------------------------------|---------------------------------------------|
| Ambient temperature                  | -55°C to 75°C                               |
| Category of environmental protection |                                             |
| IEC 61810                            | RTI - dust protected and RTIII - wash tight |

### Other Data (continued)

|                |                                                                 |
|----------------|-----------------------------------------------------------------|
| Terminal type  | Solder/plug-in terminals, PCB-THT, 8- or 11-PIN octal type plug |
| Weight         | 23 to 40g                                                       |
| Packaging/unit | tray/50 pcs., box/350pcs.                                       |

### Accessories

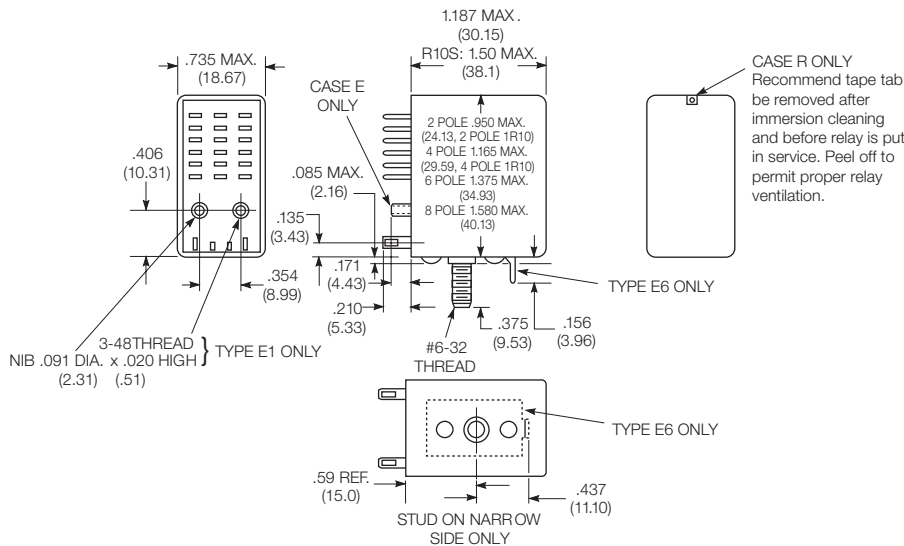
|                           |                                     |
|---------------------------|-------------------------------------|
| For details see datasheet | Sockets and Accessories, R10 Relays |
|---------------------------|-------------------------------------|

Product Code Description

Many versions of sockets and clips available.

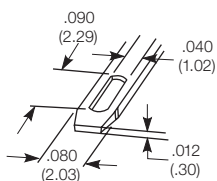
**NOTE:** Relays with contact current <50mA are not recommended for use in sockets.

### Dimensions

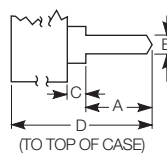


### Terminal dimensions

Solder terminal dimensions

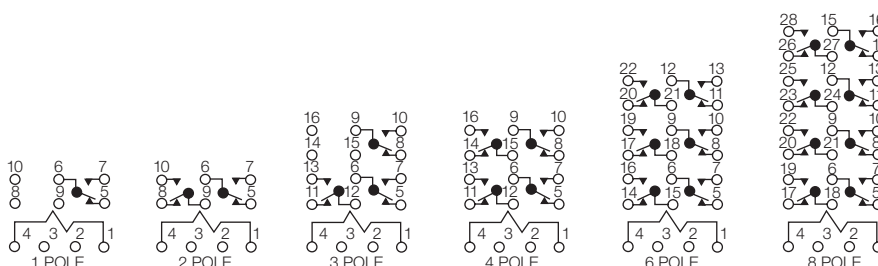


Printed circuit terminal dimensions

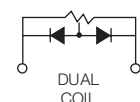


|           | A    | B    | C    | D     | Arrang.   |
|-----------|------|------|------|-------|-----------|
| Type 2    | .131 | .050 | .064 | 1.251 | Inline    |
| Type 7    | .131 | .040 | .013 | 1.20  | Inline    |
| Type 9    | .170 | .040 | .000 | 1.187 | Staggered |
| Thickness | .012 | .012 | .012 | .013  | —         |

### Terminal assignment



R10 - AC Coil Diagram

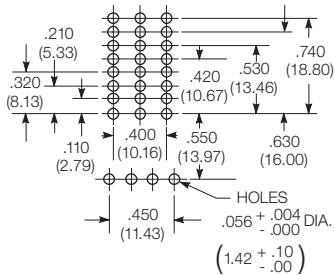


## R10 Series Panel Plug-in Relay (Continued)

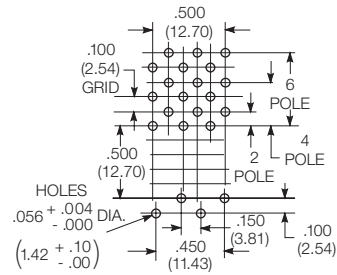
### PCB layout

Bottom view on solder pins

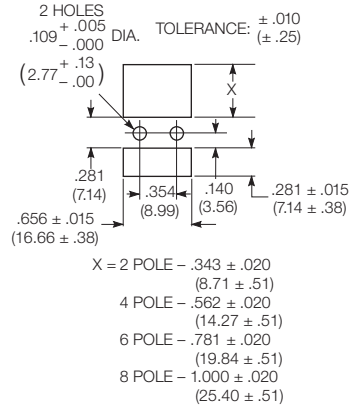
Terminal Types E2 & R2  
(Omit unnecessary holes)



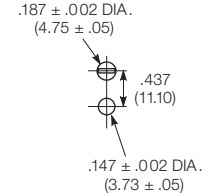
Terminal Types E9 & R9  
(Omit unnecessary holes)



### Suggested panel cutout for relay



### Mounting hole layout for terminal & mounting style 6



### Product code structure

Typical product code

**R10 -E 1 Y 4 -V700**

#### Type

- R10** Cradle-style relay with form C contacts  
**R10S** Super sensitive cradle-style relay with form C contacts

#### Case style

- E** Non-sealed polycarbonate dust cover (RTI)  
**R** Wash-tight (RTIII), tape sealed plastic case <sup>1)</sup>  
**T** Octal style base on non-sealed polycarbonate dust cover (terminal types 1 & 2 only; 1, 2 & 3 poles only)  
<sup>1)</sup> R10 type only, terminal code 2 or 9 only, no ground or stud

#### Terminal and mounting

- 1** Solder/Plug-in terminals with #3-48 mounting stud on R10-E; 8-pin octal type on R10-T  
**2** PCB terminals (std.) 1.62mm (.064in) clearance, 31.75mm (1.25in) seated ht.; 11-pin octal type on R10-T  
**6** Side mounting plate with #6-32 stud, solder/plug-in terminals (#3-48 stud not included)  
**7** Narrow 1.02mm (.04in) PCB terminals, .33mm (.013in) clearance, 30.48mm (1.2in) seated ht.  
**9** Non-shouldered, narrow 1.02mm (.04in) PCB terminals in staggered arrangement <sup>2)</sup>  
<sup>2)</sup> Available only on 1 through 6 pole models

#### Contact style and rating <sup>3)</sup>

- W** Single contact rated 7.5A max, 300mA min. <sup>4)</sup> <sup>5)</sup>  
**X** Single contact rated 5A max, 300mA min. <sup>5)</sup> <sup>6)</sup>  
**M** Bifurcated contact rated 5A max, 300 mA min. <sup>5)</sup> <sup>6)</sup>  
**Y** Single contact rated 2A typ, 3A max, 100mA min.  
**Z** Bifurcated low level contacts rated 100mA typ, 2A max, 1mA min.  
**P** Bifurcated crossbar dry circuit contacts rated 1mA typ, 3A max, dry circuit min.  
**L** Bifurcated crossbar dry circuit contacts rated 500 microA typ, 250 mA max, dry circuit min.  
<sup>3)</sup> Ratings are at 28VDCV or 115VAC. Total load must not exceed 30A per relay.  
<sup>4)</sup> Use ungrounded frame for AC load of ≥5A. Max ratings are 7.5A at 115VAC and 4A at 28VDC for coil codes S & J  
<sup>5)</sup> Only available on R10 type, only available with coil adjustment code V, Q, S and J.  
<sup>6)</sup> Use ungrounded frame for AC load of ≥5A. Max ratings are 5A at 115VAC and 3A at 28VDC for coil codes S & J

#### Number of poles

- 1** 1 pole  
**2** 2 pole  
**3** 3 pole  
**4** 4 pole (not available on R10-T)  
**6** 6 pole (not available on R10-T) <sup>7)</sup>  
**8** 8 pole (not available on R10-T) <sup>8)</sup>

<sup>7)</sup> Not available with contact code W

<sup>8)</sup> Only available with case style E, not available with contact code W

#### Coil voltage

Coil code: please refer to coil versions table

**AC voltage** Specify coil code consisting of nominal coil voltage followed by W (example: 24V)

**DC voltage** Specify coil code consisting of coil adjustment code letter followed by coil resistance (example: V700)

### R10 Series Panel Plug-in Relay (Continued)

| Product Code    | Arrangement    | Material      | Contact Style/Rating        | Nom. Coil V    | Terminals & Mounting                   | Part Number |
|-----------------|----------------|---------------|-----------------------------|----------------|----------------------------------------|-------------|
| R10-E1P2-115V   | 2 Form C, 2 CO | Au overlay Ag | Bif crossbar / dry circuit  | 115 VAC        | Solder/plug-in w/ #3-48 mounting stud  | 7-1393765-0 |
| R10-E1P2-V700   |                |               |                             | 24 VDC         |                                        | 6-1393765-9 |
| R10-E1P4-115V   | 4 Form C, 4 CO |               |                             | 115 VAC        |                                        | 7-1393765-6 |
| R10-E1P4-V700   |                |               |                             | 24 VDC         |                                        | 7-1393765-5 |
| R10-E1W2-V185   | 2 Form C, 2 CO | AgCdO         | Single contact / 7.5A       | 12 VDC         |                                        | 8-1393765-9 |
| R10-E1W2-V700   |                |               |                             | 24 VDC         |                                        | 9-1393765-1 |
| R10-E1W4-V185   | 4 Form C, 4 CO |               |                             | 12 VDC         |                                        | 9-1393765-3 |
| R10-E1W4-V700   |                |               |                             | 24 VDC         |                                        | 9-1393765-5 |
| R10-E1X2-24V    | 2 Form C, 2 CO |               | Single contact / 5A         | 24 VAC         |                                        | 1-1393766-1 |
| R10-E1X2-115V   |                |               |                             | 115 VAC        |                                        | 1-1393766-0 |
| R10-E1X2-S800   |                |               |                             | 12 VDC         |                                        | 1393766-3   |
| R10-E1X2-V185   |                |               |                             |                |                                        | 1393766-5   |
| R10-E1X2-V700   |                |               |                             | 24 VDC         |                                        | 1393766-9   |
| R10-E1X4-115V   | 4 Form C, 4 CO |               |                             | 115 VAC        |                                        | 1-1393766-8 |
| R10-E1X4-V185   |                |               |                             | 12 VDC         |                                        | 1-1393766-4 |
| R10-E1X4-V700   |                |               |                             | 24 VDC         |                                        | 1-1393766-7 |
| R10-E1X4-V2.5K  |                |               |                             | 48 VDC         |                                        | 1-1393766-5 |
| R10-E1X6-115V   | 6 Form C, 6 CO |               |                             | 115 VAC        |                                        | 2-1393766-5 |
| R10-E1X6-V90    |                |               |                             | 12 VDC         |                                        | 2-1393766-4 |
| R10-E1X6-V430   |                |               |                             | 24 VAC         |                                        | 2-1393766-2 |
| R10-E1Y2-J1.0K  | 2 Form C, 2 CO | Ag            | Single contact / 2A typical | Not applicable |                                        | 3-1393766-3 |
| R10-E1Y2-J2.5K  |                |               |                             |                |                                        | 3-1393766-4 |
| R10-E1Y2-V185   |                |               |                             | 12 VDC         |                                        | 4-1393766-0 |
| R10-E1Y2-V700   |                |               |                             | 24 VDC         |                                        | 4-1393766-4 |
| R10-E1Y2-V2.5K  |                |               |                             | 48 VDC         |                                        | 4-1393766-1 |
| R10-E1Y2-V15.0K |                |               |                             | 115 VDC        |                                        | 3-1393766-9 |
| R10-E1Y4-J10.0K | 4 Form C, 4 CO |               |                             | Not applicable |                                        | 4-1393766-9 |
| R10-E1Y4-V52    |                |               |                             |                |                                        | 5-1393766-6 |
| R10-E1Y4-V2.5K  |                |               |                             | 48 VDC         |                                        | 5-1393766-5 |
| R10-E1Y4-V700   |                |               |                             | 24 VDC         |                                        | 5-1393766-7 |
| R10-E1Y6-V430   | 6 Form C, 6 CO |               |                             |                |                                        | 6-1393766-1 |
| R10-E1Y6-V1.5K  |                |               |                             | 48 VDC         |                                        | 6-1393766-0 |
| R10-E1Z2-V185   | 2 Form C, 2 CO |               | Bifurcated / 100mA typical  | 12 VDC         |                                        | 7-1393766-2 |
| R10-E1Z2-V700   |                |               |                             | 24 VDC         |                                        | 7-1393766-4 |
| R10-E1Z4-V185   | 4 Form C, 4 CO |               |                             | 12 VDC         |                                        | 7-1393766-9 |
| R10-E1Z4-V700   |                |               |                             | 24 VDC         |                                        | 8-1393766-1 |
| R10-E1Z4-V2.5K  |                |               |                             | 48 VDC         |                                        | 8-1393766-0 |
| R10-E1Z6-V430   | 6 Form C, 6 CO |               |                             | 24 VDC         |                                        | 8-1393766-6 |
| R10-E1Z6-V1.5K  |                |               |                             | 48 VDC         |                                        | 8-1393766-5 |
| R10-T1P2-115V   | 2 Form C, 2 CO | Au overlay Ag | Bif crossbar / dry circuit  | 115 VAC        |                                        | 2-1393769-8 |
| R10S-E1Y1-J1.0K | 1 Form C, 1 CO | Ag            | Single contact / 2A typical | Not applicable |                                        | 7-1393769-0 |
| R10S-E1Y2-J5.0K | 2 Form C, 2 CO |               |                             |                |                                        | 7-1393769-5 |
| R10-E2P4-V185   | 4 Form C, 4 CO | Au overlay Ag | Bif crossbar / dry circuit  | 12 VDC         | PCB, .064" clearance, 1.25" seated ht. | 1393767-3   |
| R10-E2P4-V700   |                |               |                             | 24 VDC         |                                        | 1393767-4   |
| R10-E2W2-V185   | 2 Form C, 2 CO | AgCdO         | Single contact / 5A         | 12 VDC         |                                        | 1393767-7   |
| R10-E2X2-V185   |                |               |                             |                |                                        | 1-1393767-1 |
| R10-E2X2-V700   |                |               |                             | 24 VDC         |                                        | 1-1393767-5 |
| R10-E2X4-V185   | 4 Form C, 4 CO |               |                             | 12 VDC         |                                        | 1-1393767-7 |
| R10-E2X4-V700   |                |               |                             | 24 VDC         |                                        | 1-1393767-8 |
| R10-E2Y2-V185   | 2 Form C, 2 CO | Ag            | Single contact / 2A typical | 12 VDC         |                                        | 2-1393767-6 |
| R10-E2Y2-V700   |                |               |                             | 24 VDC         |                                        | 2-1393767-9 |
| R10-E2Y4-V185   | 4 Form C, 4 CO |               |                             | 12 VDC         |                                        | 3-1393767-5 |
| R10-E2Y4-V700   |                |               |                             | 24 VDC         |                                        | 3-1393767-6 |
| R10S-E2Y1-J1.0K | 1 Form C, 1 CO |               |                             | Not applicable |                                        | 8-1393769-1 |