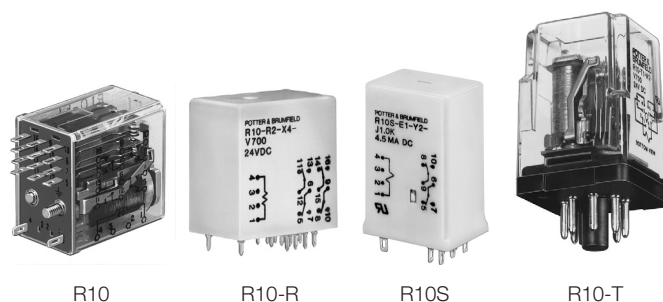


## R10 Series Relay

- 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               |

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

## R10 Series 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                    |
| 3 and 4 poles                                         |                           |                      |                                   |                       |
| 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                    |