# 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**

R10 R10-R R10S R10-T

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 |
|---|---|---|
| **UL 508** | | |
| 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 | $100x10^3$ |
| | 5A, 120VAC, resistive | $6x10^3$ |
| | 5A, 30VDC, resistive | $100x10^3$ |
| | 1/20HP, 120VAC, same polarity | |
| | 1/10HP, 240VAC, same polarity | |
| M type, AgCdO, bifurcated contact | | |
| | 5A, 120VAC, resistive | $6x10^3$ |
| | 5A, 28VDC, resistive | $6x10^3$ |
| Y type, Ag, single contact | | |
| | 2A, 120VAC | $6x10^3$ |
| | 2A, 28VDC | $6x10^3$ |
| | 250VA, 250VAC | $30x10^3$ |
| | 125VA, 125VAC | $100x10^3$ |
| Z type, Ag, bifurcated crossbar contact | | |
| | 3A, 120VAC | $6x10^3$ |
| | 3A, 28VDC | $6x10^3$ |
| | 2A, 30VDC | $100x10^3$ |

**Contact ratings** (continued)

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



08-2015, Rev. 0815
www.te.com
© 2015 Tyco Electronics Corporation,
a TE Connectivity Ltd. company

Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.

Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at http://relays.te.com/definitions

Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.

## R10 Series Relay (Continued)

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

| Coil code | Rated voltage VDC | Operate voltage VDC | Coil resistance Ω±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 Ω±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 Ω±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[1)] | – | 4.5 | 500 | 10 |
| J1.0K[1)] | – | 3.2 | 1000 | 10 |
| J2.5K | – | 2 | 2500 | 10 |
| J5.0K[2)] | – | 1.4 | 5000 | 10 |
| J10.0K | – | 1 | 10000 | 10 |
| J16.0K | – | 0.8 | 16000 | 10 |
| J30.0K[3)] | – | 0.6 | 30000 | 11 |



08-2015, Rev. 0815
www.te.com
© 2015 Tyco Electronics Corporation,
a TE Connectivity Ltd. company

Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.

Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at http://relays.te.com/definitions

Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.