



RT series (DC Coil)

16 Amp PC Board Miniature Relay

- UL File E22575
- SP File LR15734
- NR 6106

Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

Features

- SPST through DPDT contact arrangements.
- Immersion cleanable and flux tight versions available.
- VDE 10mm spacing, 5kV dielectric, coil to contacts.
- UL Class F (155°C) coil insulation system.
- Conforms to UL 508, 1873, 353 and 1950.
- Low profile; 15.7mm height.
- Sensitive coil; 400mW.
- Withstand surge voltage of 10,000V.
- Potter & Brumfield or Schrack brand.

Contact Data

- Arrangements:** 1 Form A (SPST-NO) Wiring Diagram Code 1, 2, 3.
 2 Form A (DPST-NO) Wiring Diagram Code 5.
 1 Form C (SPDT) Wiring Diagram Code 1, 2, 3.
 2 Form C (DPDT) Wiring Diagram Code 5.

Material: Silver-nickel 90/10.

Minimum Load: 12V/100mA.

Expected Mechanical Life: 10 million operations.

Initial Contact Resistance: 100 milliohms max @ 1A 12VDC.

Designed to meet UL/CSA/VDE ratings @ 25°C with relay properly vented. Remove vent nib after soldering and cleaning.

Ratings @ 25°C

| Code | NO/NC Load | Type | Operations |
|-------------------------|--------------------------|------------------|--------------|
| 1 | 10A/10A @ 277VAC | Resistive/GP | 100K |
| | 10A/10A @ 30VDC | Resistive | 100K |
| | 12A/12A @ 250VAC | Resistive/GP | 30K |
| | 12A/12A @ 30VDC | Resistive | 30K |
| | 3/4 HP @ 480VAC* | Motor | 6K |
| | 1/2 HP @ 240VAC* | Motor | 6K |
| | 1/3 HP @ 120VAC* | Motor | 6K |
| | 48 LRA/10 FLA @ 240VAC* | Motor | 30K |
| | TV-3 @ 120VAC* | Tungsten | 25K |
| | A300, 720VA @ 240VAC* | Pilot Duty | 30K |
| | 3 | 16A/16A @ 250VAC | Resistive/GP |
| 20A/20A @ 277VAC | | Resistive/GP | 30K |
| 20A/20A @ 24VDC | | Resistive | 30K |
| 16A/16A @ 30VDC | | Resistive | 30K |
| 1 HP @ 480VAC* | | Motor | 6K |
| 1 HP @ 240VAC* | | Motor | 6K |
| 1/2 HP @ 120VAC* | | Motor | 6K |
| 60 LRA/10 FLA @ 250VAC* | | Motor | 30K |
| TV-5 @ 120VAC* | | Tungsten | 25K |
| A300, 720VA @ 240VAC* | | Pilot Duty | 30K |
| B300, 360VA @ 240VAC** | | Pilot Duty | 30K |
| 5 | 8A/8A @ 277VAC | Resistive/GP | 100K |
| | 8A/8A @ 30VDC | Resistive | 100K |
| | 10A/10A @ 250VAC | Resistive/GP | 30K |
| | 10A/10A @ 30VDC | Resistive | 30K |
| | 1/2 HP @ 240VAC* | Motor | 6K |
| | 1/4 HP @ 120VAC* | Motor | 6K |
| | 34.8 LRA/6 FLA @ 120VAC* | Motor | 30K |
| | 17.4 LRA/5 FLA @ 240VAC* | Motor | 30K |
| | B300, 360VA @ 240VAC* | Pilot Duty | 30K |
| | TV-3 @ 120VAC* | Tungsten | 25K |

* Form A only

** Form B only

Initial Dielectric Strength

Between Open Contacts: >1,000VAC (1 minute).

Between Poles (code 5): >2,500VAC (1 minute).

Between Coil and Contacts: >5,000VAC (1 minute).

Surge Voltage (DC): >10,000VAC x (1.2 x 50 µsec).

Coil Data @ 25°C

Voltage: 5 to 110VDC.

Nominal Power @ 25°C: 400mW.

Duty Cycle: Continuous.

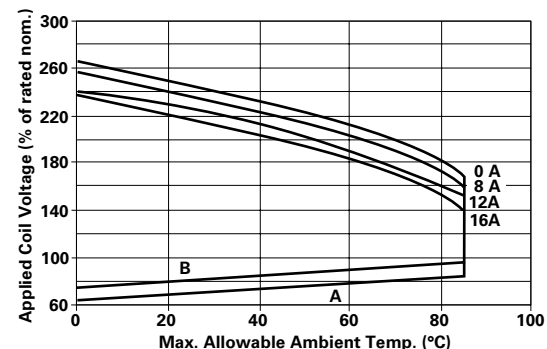
Initial Insulation Resistance: 10,000 megohms, min., at 25°C, 500VDC and 50% rel. humidity.

Coil Construction: UL Class F (155°C).

Coil Data @ 25°C

| Nominal Voltage VDC | DC Resistance in Ohms ±10% | Must Operate Voltage VDC | Nominal Coil Current (mA) – 50/60Hz. |
|---------------------|----------------------------|--------------------------|--------------------------------------|
| 005 | 62 | 3.5 | 80 |
| 006 | 90 | 4.2 | 66.7 |
| 009 | 202 | 6.3 | 44.4 |
| 012 | 360 | 8.4 | 33.3 |
| 018 | 810 | 12.6 | 22.2 |
| 024 | 1,440 | 16.8 | 16.7 |
| 048 | 5,760 | 33.6 | 8.3 |
| 060 | 9,000 | 42.0 | 8.0 |
| 110 | 30,250 | 77.0 | 4.3 |

Max. Ambient Temp. vs. Coil Voltage



A: Coil temperature = Ambient temperature.

B: 110% of nominal coil voltage at rated contact load.

Operate Data @ 25°C

Must Operate Voltage(DC): 70% of nominal.

Must Release Voltage(DC): 10% of nominal.

Operate Time (Excluding Bounce):

7 ms, typ., 15ms max. at nom. voltage.

Release Time (Excluding Bounce):

3 ms, typ., 6ms max. at nom. voltage.

Environmental Data

Temperature Range:

Storage: -40°C to +105°C.

Operating: -40°C to +85°C at rated current.

Vibration, Operational

N.O.:0.065”(1.65mm) max. excursions from 10 - 55 Hz:

N.C.:0.032”(0.82mm) max. excursions from 10 - 55 Hz:

with no contact opening >10µs.

Mechanical Data

Termination: Printed circuit terminals.

Enclosures: RT 1, 2, 3, 4: Flux-tight, top vented, plastic case.

RT B, C, D, E: Immersion cleanable, plastic case.

Weight: 0.35 oz. (10g) approximately.

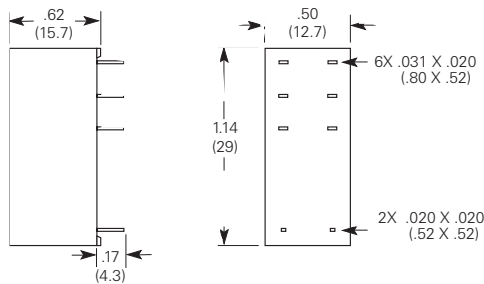
Ordering Information (DC Coil Models)

| | | | | | | |
|---|-----------|----------|----------|----------|------------|----------|
| Typical Part Number ▶ | RT | B | 3 | 4 | 012 | F |
| <p>1. Basic Series: RT = Miniature, printed circuit board relay.</p> <p>2. Enclosure: 1 = 1 pole 12A, Pinning 3.5mm, flux-tight (Code 1). B = 1 pole 12A, Pinning 3.5mm, sealed (Code 1). 2 = 1 pole 12A, Pinning 5mm, flux-tight (Code 2). C = 1 pole 12A, Pinning 5mm, sealed (Code 2). 3 = 1 pole 16A, Pinning 5mm, flux-tight (Code 3). D = 1 pole 16A, Pinning 5mm, sealed (Code 3). 4 = 2 pole 8A, Pinning 5mm, flux-tight (Code 5). E = 2 pole 8A, Pinning 5mm, sealed (Code 5).</p> <p>3. Contact Arrangement: 1 = 1 Form C (SPDT) (Requires wiring diagram codes 1, 2 or 3.) 2 = 2 Form C (DPDT) (Requires wiring diagram code 5.) 3 = 1 Form A (SPST-NO) (Requires wiring diagram codes 1, 2 or 3.) 4 = 2 Form A (DPST-NO) (Requires wiring diagram code 5.)</p> <p>4. Contact Material: 4 = Silver-nickel 90/10 (standard stock).</p> <p>5. Coil Voltage: 005 = 5VDC 009 = 9VDC 018 = 18VDC 048 = 48VDC 110 = 110VDC 006 = 6VDC 012 = 12VDC 024 = 24VDC 060 = 60VDC</p> <p>5. Coil Insulation Classification, Brand and Case Color F = UL Class F, Potter & Brumfield Brand, Black Case Leave Blank = UL Class F, Schrack Brand, Orange Case</p> | | | | | | |

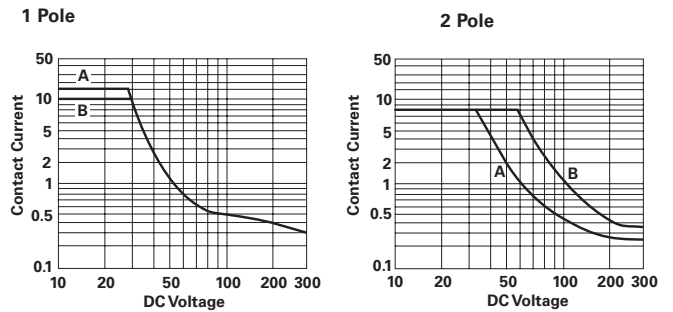
Our authorized distributors are more likely to stock the following items for immediate delivery.

RT114012F RTB14012F RTB34024F RTD14005F RTD34012F RTE24005F RTE44012F
 RT114024F RTB14024F RT314012F RTD14012F RT424012F RTE24012F RTE44024F
 RTB14005F RTB34012F RT314024F RTD14024F RT424024F RTE24024F

Outline Dimensions



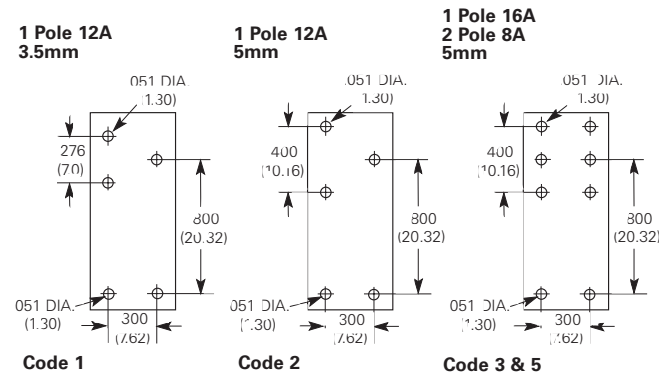
Breaking Capacity



A: 16A Version.
B: 12A Version.

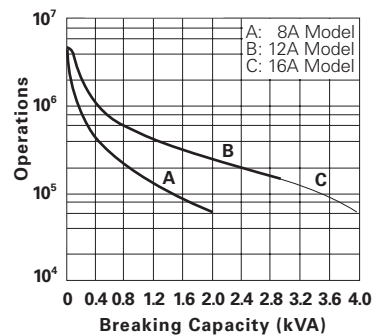
A: 1 Contact.
B: 2 Contacts in series.

PC Board Layouts (Bottom View)



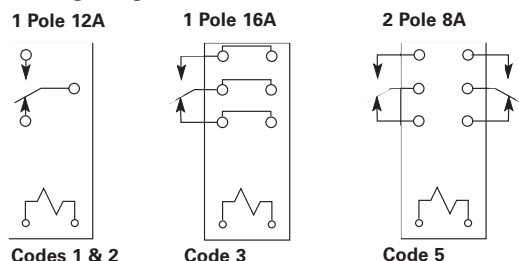
Notes: 1. On single throw models, only necessary terminals are present.
2. With the recommended PCB hole sizes, a grid with a pattern from 0.0984 to 0.1 in (2.5 - 2.54 mm) can be used.

Contact Life for Resistive AC Load (Typical)



Note: Data from 250VAC @ 70°C.

Wiring Diagrams (Bottom View)



Note: On single throw models, only necessary terminals are present.

Dimensions are shown for reference purposes only.

Dimensions are in inches over (millimeters) unless otherwise specified.

Specifications and availability subject to change.

www.tycoelectronics.com
Technical support:
Refer to inside back cover.



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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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