

RT series (Latching) 16 Amp Miniature Printed Circuit Board Relay

UL File E38891

VDE 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

- Latching relay with 1 or 2 coils.
- SPDT (16A) and DPDT (8A) contact arrangements.
- Flux tight enclosure.
- Meets VDE 10mm spacing, 5kV dielectric, coil to contacts.
- Conforms to UL 508, 1873 and 353.
- UL Class F (155°C) coil construction
- Schrack brand

Contact Data

Arrangements: 1 Form C (SPDT) Wiring Diagram Code 3.
2 Form C (DPDT) Wiring Diagram Code 5.

Material: Silver-nickel 90/10.

Minimum Load: 12V/100mA.

Expected Mechanical Life: 5 million operations, 1 pole.
2 million operations, 2 pole.

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

UL/CSA ratings @ 70°C:

| Code | NO/NC Load | Type | Operations |
|------|-----------------------------|------------------|------------|
| 3 | 16A/8A @ 240VAC | GP | 6K |
| | 8A @ 28VDC | Resistive | 30K |
| | 1/2 HP @ 120VAC* | Motor | 6K |
| | 1HP @ 240VAC* | Motor | 6K |
| | 48 LRA, 8 FLA @ 240VAC B300 | Motor Pilot Duty | 30K 6K |
| 5 | 8A @ 240VAC | Resistive | 30K |
| | 8A @ 28VDC | Resistive/GP | 30K |
| | 1/2 HP @ 240VAC | Motor | 6K |
| | 1/4 HP @ 120VAC | Motor | 6K |
| | B300 | Pilot Duty | 6K |

* Form A only

VDE Ratings @ 70°C:

| Code | NO/NC Load | Type | Operations |
|------|--------------|-----------|------------|
| 3 | 16A @ 250VAC | Resistive | 10K |
| | 8A @ 250VAC | Resistive | 30K |
| 5 | 8A @ 250VAC | Resistive | 30K |
| | 8A @ 250VAC | Resistive | 100K |

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).

Creepage/Clearance, Coil to Contact: 10/10mm.

Coil Data @ 20°C

Voltage: 5 to 24VDC*, 1 coil.

3 to 24VDC*, 2 coil.

Nominal Power @ 25°C: 400mW, 1 coil.

600mW, 2 coil.

Duty Cycle: Continuous.

Initial Insulation Resistance: 10,000 megohms, min., at 20°C, 500VDC and 50% rel. humidity.

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

* Other coil voltages upon request.

1 Coil Data

| Nominal Voltage VDC | DC Resistance in Ohms $\pm 10\%$ | Set Voltage VDC | Reset Voltage VDC | Nominal Coil Current (mA) |
|---------------------|----------------------------------|-----------------|-------------------|---------------------------|
| 05 | 62 | 3.5—6.0 | 2.75—6.0 | 80.0 |
| 06 | 90 | 4.2—7.2 | 3.30—7.2 | 66.7 |
| 12 | 360 | 8.4—14.4 | 6.60—14.4 | 33.3 |
| 24 | 1,440 | 16.8—28.8 | 13.20—28.8 | 16.7 |

2 Coil Data

| Nominal Voltage VDC | DC Resistance in Ohms $\pm 10\%$ | Set Voltage VDC | Reset Voltage VDC | Nominal Coil Current (mA) |
|---------------------|----------------------------------|-----------------|-------------------|---------------------------|
| 05 | 42 | 3.5—7.5 | 2.75—4.5 | 120.0 |
| 06 | 55 | 4.2—9.0 | 3.30—9.0 | 108.0 |
| 12 | 240 | 8.4—18.0 | 6.60—18.0 | 50.0 |
| 24 | 886 | 16.8—36.0 | 13.20—36.0 | 27.0 |

Operate Data @ 20°C

Must Operate Voltage: See coil data.

Operate Time (Excluding Bounce): 5 ms, typ., at nom. voltage.

Release Time (Excluding Bounce): 4 ms, typ., at nom. voltage.

Max. Switching Rate: 360 ops. at rated load.

Environmental Data

Temperature Range:

Storage: -40°C to +105°C.

Operating: -40°C to +70°C at rated current.

Vibration: 30 - 500 Hz:

N/C opens at >3g and changes from reset to set at >5g;

Shock: N/C opens at >6g and changes from reset to set at >15g.;

Mechanical Data

Termination: Printed circuit terminals.

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

Weight: 0.46 oz. (13g) approximately.

Ordering Information (Latching Model)

Typical Part Number ▶

RT

3

2

4

A05

1. Basic Series:

RT = Miniature, printed circuit board relay.

2. Enclosure:

3 = 1 pole 16A, Pinning 5mm, flux-tight (Code 3).

4 = 2 pole 8A, Pinning 5mm, flux-tight (Code 5).

3. Contact Arrangement:

1 = 1 Form C (SPDT) (Requires wiring diagram code 3.)

2 = 2 Form C (DPDT) (Requires wiring diagram code 5.)

4. Contact Material:

4 = Silver-nickel 90/10.

5. Coil Voltage:

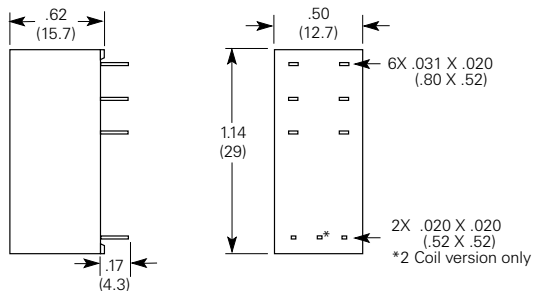
| 1 Coil | 2 Coil | Voltage |
|--------|--------|---------|
| A05 | F05 | = 5VDC |
| A06 | F06 | = 6VDC |
| A12 | F12 | = 12VDC |
| A24 | F24 | = 24VDC |

Note: All latching model RT part numbers are Schrack brand, are orange in color and have UL Class F (155°C) coil construction.

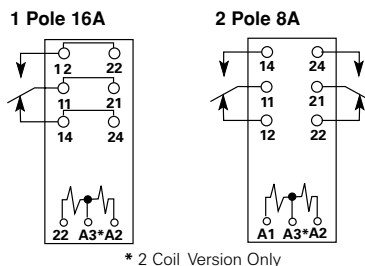
Our authorized distributors are more likely to stock the following items for immediate delivery.

None at present.

Outline Dimensions



Wiring Diagrams (Bottom View)



Code 3

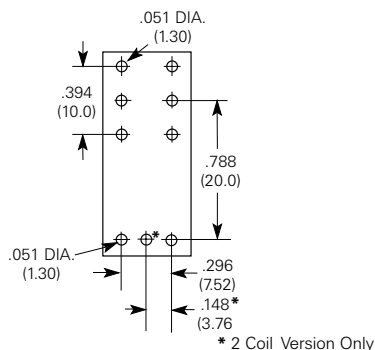
Code 5

| | 1 Coil | | 2 Coils | | |
|----------------|--------|----|---------|----|----|
| Coil Terminals | A1 | A2 | A1 | A3 | A2 |
| Operate | + | - | | + | - |
| Reset | - | + | - | + | |

Contact position not defined at delivery.

PC Board Layout (Bottom View)

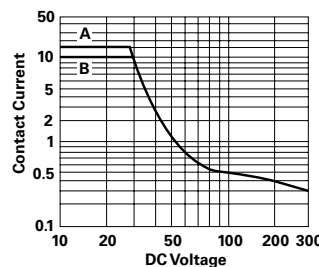
**1 Pole 16A
2 Pole 8A
5mm**



Code 3 & 5

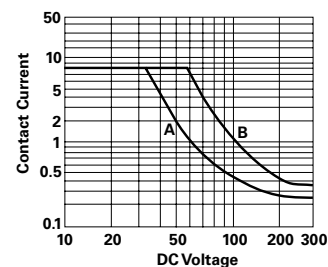
Breaking Capacity

1 Pole



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

2 Pole



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