

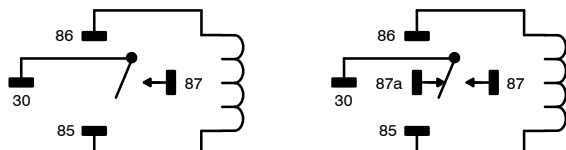
# Automotive Relays

## R51 Series

### Features

- .250" (6.35mm) Quick Connect Terminals
- Industry Standard Pinout
- SPST & SPDT Versions
- Flange Mount – “F” Suffix
- PC Board Mount – “P” Suffix
- Standard Version is IP54 Dust and Splash Protected
- New Weatherproof Versions (Shrouded Terminals) – “W” Suffix

SPST-NO, 1 Form “A” SPDT, 1 Form “C”



Contact Rating @ 14VDC

| Maximum Load Current | 50 Amp Rated |                    | 70 Amp Rated |
|----------------------|--------------|--------------------|--------------|
|                      | SPST-NO      | SPDT               | SPST-NO      |
| Resistive Load       | 50A          | 50A (NO); 30A (NC) | 70A          |

### DC OPERATED

| NTE Type No.  | Nom. Volt. | Contact Arr. | Coil Res. Ohms (Typ) | Nom. Power | Max. Contact Cur. @ 14VDC | Diag No. |
|---------------|------------|--------------|----------------------|------------|---------------------------|----------|
| R51-1D40-12   | 12VDC      | SPST-NO      | 90                   | 1.6W       | 50A                       | D38      |
| R51-1D40-12F  | 12VDC      | SPST-NO      | 90                   | 1.6W       | 50A                       | D38      |
| R51-1D40-12FW | 12VDC      | SPST-NO      | 90                   | 1.6W       | 50A                       | D38c     |
| R51-1D40-24   | 24VDC      | SPST-NO      | 360                  | 1.6W       | 50A                       | D38      |
| R51-1D40-24F  | 24VDC      | SPST-NO      | 360                  | 1.6W       | 50A                       | D38      |
| R51-1D40-24FW | 24VDC      | SPST-NO      | 360                  | 1.6W       | 50A                       | D38c     |
| R51-5D40-12   | 12VDC      | SPDT         | 90                   | 1.6W       | 50A                       | D38      |
| R51-5D40-12F  | 12VDC      | SPDT         | 90                   | 1.6W       | 50A                       | D38      |
| R51-5D40-12FW | 12VDC      | SPDT         | 90                   | 1.6W       | 50A                       | D38c     |
| R51-5D40-24   | 24VDC      | SPDT         | 360                  | 1.6W       | 50A                       | D38      |
| R51-5D40-24F  | 24VDC      | SPDT         | 360                  | 1.6W       | 50A                       | D38      |
| R51-5D40-24FW | 24VDC      | SPDT         | 360                  | 1.6W       | 50A                       | D38c     |
| R51-1D70-12   | 12VDC      | SPST-NO      | 90                   | 1.6W       | 70A                       | D38a     |
| R51-1D70-12F  | 12VDC      | SPST-NO      | 90                   | 1.6W       | 70A                       | D38a     |
| R51-1D70-12P  | 12VDC      | SPST-NO      | 90                   | 1.6W       | 70A                       | D38b     |
| R51-1D70-24   | 24VDC      | SPST-NO      | 360                  | 1.6W       | 70A                       | D38a     |
| R51-1D70-24F  | 24VDC      | SPST-NO      | 360                  | 1.6W       | 70A                       | D38a     |

### ACCESSORIES

| MOUNTING STYLES | DESCRIPTION                       | NTE TYPE NO.        |
|-----------------|-----------------------------------|---------------------|
| PC MOUNT        | 4-PIN                             | R95-159 (70A ONLY)  |
| PC MOUNT        | 5-PIN                             | R95-160 (50A ONLY)  |
| WIRE LEADS      | 4-PIN                             | R95-189 (50A ONLY)  |
| WIRE LEADS      | 5-PIN                             | R95-188 (50A ONLY)  |
| WIRE HARNESSING | 4-PIN                             | R95-160A (70A ONLY) |
| WIRE LEADS      | 4-PIN SPST-NO Weatherproof Socket | R95-190             |
| WIRE LEADS      | 5-PIN SPDT Weatherproof socket    | R95-191             |

Note 1. To ensure a weatherproof connection, R51 Series weatherproof relays (W-suffix) should be used in combination with the appropriate weatherproof socket.

50 Amp and 70 Amp, SPST and SPDT Relays for use in Automotive/Marine/Tractor/Lawn Mower/Rec. Vehicles/Golf Cart Applications.



## Electrical Specifications

### Contact

Contact Material: AgSnO alloy

Contact Rating: See Chart

### Coil

Coil voltage: See Chart

Coil resistances: See Chart

### Operational Characteristics

Timing Values . . . . . Operate Time: 20 mS max

Release Time: 20 mS max

### Insulation Characteristics

Dielectric strength: 500 VRMS, between Contacts and Coil

### Environmental Characteristics

Operating: -40°C to +125°C

Storage: -40°C to +155°C

### Life Expectancy

Mechanical Life: 10,000,000 operations (18,000 operations/hr)

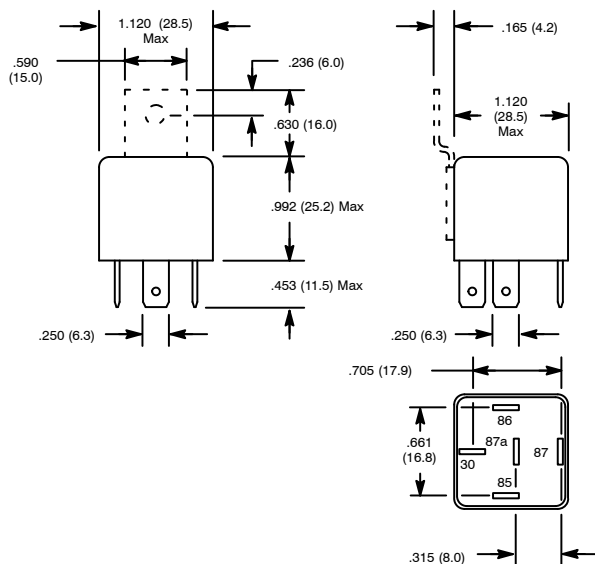
Electrical Life: 100,000 operations (1,200 operations/hr)

### Weight

Std: 1.1 oz (31 gram) approx

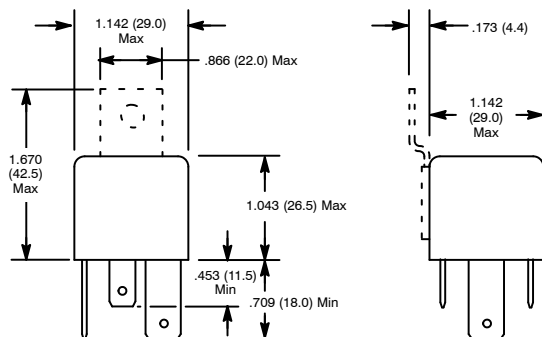
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## D38

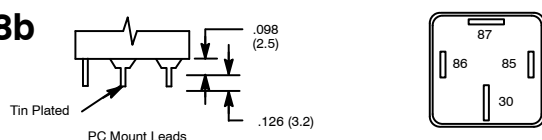


**NOTE:** Dotted line indicates Flange Mount Pin87a for SPDT devices **ONLY**.

## D38a



## D38b



## D38c

