

Distributor: **Electro-Stock** [www.electrostock.com](http://www.electrostock.com) Tel: 630-682-1542 Fax: 630-682-1562

## FEATURES:

- UL F class rated standard
- Small size and light weight
- PC board mounting
- UL/CUL certified

 **E197851**



22.3 x 17.3 x 14.5 mm

## CONTACT DATA

|                           |                                                                                              |
|---------------------------|----------------------------------------------------------------------------------------------|
| Contact Arrangement       | 1A = SPST N.O.<br>1B = SPST N.C.<br>1C = SPDT                                                |
| Contact Rating            | 6A @ 300VAC & 28VDC<br>10A @ 125/240VAC & 28VDC<br>12A @ 125VAC & 28VDC, 1/3hp - 120/240 VAC |
| Contact Resistance        | < 50 milliohms initial                                                                       |
| Contact Material          | AgCdO, AgSnO <sub>2</sub>                                                                    |
| Maximum Switching Power   | 336W                                                                                         |
| Maximum Switching Voltage | 380VAC, 110VDC                                                                               |
| Maximum Switching Current | 20A                                                                                          |

## COIL DATA

| Coil Voltage<br>VDC |      | Coil Resistance<br>$\Omega \pm 10\%$ |      |      |      | Pick Up Voltage<br>VDC (max) | Release Voltage<br>VDC (min) | Coil<br>Power<br>W       | Operate<br>Time<br>ms | Release<br>Time<br>ms |
|---------------------|------|--------------------------------------|------|------|------|------------------------------|------------------------------|--------------------------|-----------------------|-----------------------|
| Rated               | Max. | .36W                                 | .45W | .50W | .80W | 75%<br>of rated voltage      | 10%<br>of rated voltage      |                          |                       |                       |
| 3                   | 3.9  | 25                                   | 20   | 18   | 11   | 2.25                         | 0.3                          | .36<br>.45<br>.50<br>.80 | 7                     | 4                     |
| 5                   | 6.5  | 70                                   | 56   | 50   | 31   | 3.75                         | 0.5                          |                          |                       |                       |
| 6                   | 7.8  | 100                                  | 80   | 72   | 45   | 4.50                         | 0.6                          |                          |                       |                       |
| 9                   | 11.7 | 225                                  | 180  | 162  | 101  | 6.75                         | 0.9                          |                          |                       |                       |
| 12                  | 15.6 | 400                                  | 320  | 288  | 180  | 9.00                         | 1.2                          |                          |                       |                       |
| 18                  | 23.4 | 900                                  | 720  | 648  | 405  | 13.5                         | 1.8                          |                          |                       |                       |
| 24                  | 31.2 | 1600                                 | 1280 | 1152 | 720  | 18.00                        | 2.4                          |                          |                       |                       |
| 48                  | 62.4 | 6400                                 | 5120 | 4608 | 2880 | 36.00                        | 4.8                          |                          |                       |                       |

## CAUTION:

1. The use of any coil voltage less than the rated coil voltage may compromise the operation of the relay.
2. Pickup and release voltages are for test purposes only and are not to be used as design criteria.

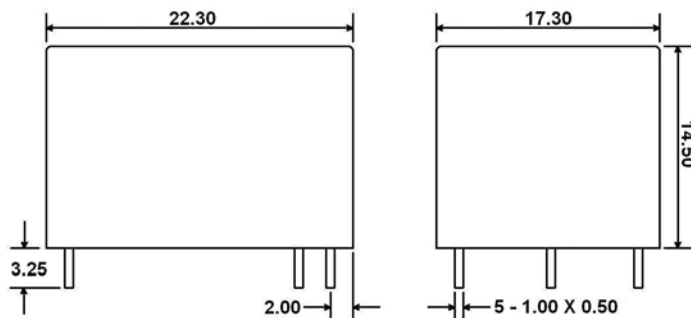
## GENERAL DATA

|                                      |                                     |
|--------------------------------------|-------------------------------------|
| Electrical Life @ rated load         | 100K cycles, typical                |
| Mechanical Life                      | 10M cycles, typical                 |
| Insulation Resistance                | 100M $\Omega$ min @ 500VDC          |
| Dielectric Strength, Coil to Contact | 2500V rms min. @ sea level          |
| Contact to Contact                   | 1000V rms min. @ sea level          |
| Shock Resistance                     | 100m/s <sup>2</sup> for 11ms        |
| Vibration Resistance                 | 1.50mm double amplitude 10-40Hz     |
| Terminal (Copper Alloy) Strength     | 10N                                 |
| Operating Temperature                | -55 °C to + 125 °C                  |
| Storage Temperature                  | -55 °C to + 155 °C                  |
| Solderability                        | 230 °C $\pm$ 2 °C for 10 $\pm$ 0.5s |
| Weight                               | 11g                                 |

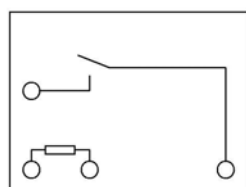
## ORDERING INFORMATION

|                               |        |    |   |   |       |     |
|-------------------------------|--------|----|---|---|-------|-----|
| <b>1. Series:</b>             | WJ109F | 1C | S | 6 | 24VDC | .45 |
| WJ109F                        |        |    |   |   |       |     |
| <b>2.Contact Arrangement:</b> |        |    |   |   |       |     |
| 1A = SPST N.O.                |        |    |   |   |       |     |
| 1B = SPST N.C.                |        |    |   |   |       |     |
| 1C = SPDT                     |        |    |   |   |       |     |
| <b>3. Sealing Options:</b>    |        |    |   |   |       |     |
| S = Sealed                    |        |    |   |   |       |     |
| <b>4. Contact Rating:</b>     |        |    |   |   |       |     |
| 6 = 6A                        |        |    |   |   |       |     |
| 10 = 10A                      |        |    |   |   |       |     |
| 12 = 12A                      |        |    |   |   |       |     |
| <b>5. Coil Voltage:</b>       |        |    |   |   |       |     |
| 3VDC                          |        |    |   |   |       |     |
| 5VDC                          |        |    |   |   |       |     |
| 6VDC                          |        |    |   |   |       |     |
| 9VDC                          |        |    |   |   |       |     |
| 12VDC                         |        |    |   |   |       |     |
| 18VDC                         |        |    |   |   |       |     |
| 24VDC                         |        |    |   |   |       |     |
| 48VDC                         |        |    |   |   |       |     |
| <b>6. Coil Power:</b>         |        |    |   |   |       |     |
| .36 = .36W                    |        |    |   |   |       |     |
| .45 = .45W                    |        |    |   |   |       |     |
| .50 = .50W                    |        |    |   |   |       |     |
| .80 = .80W                    |        |    |   |   |       |     |
| <b>7. Contact Material:</b>   |        |    |   |   |       |     |
| Blank = AgCdO                 |        |    |   |   |       |     |
| Z = AgSnO <sub>2</sub>        |        |    |   |   |       |     |

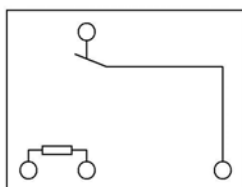
## DIMENSIONS (Units = mm)



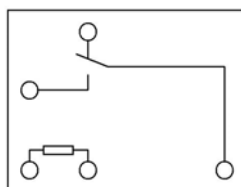
## SCHEMATICS & PC LAYOUTS (BOTTOM VIEWS)



1A



1B



1C

