

## Features

- Large switching capacity up to 80A
- PCB pin and quick connect mounting available
- Suitable for automobile and lamp accessories
- QS-9000, ISO-9002 Certified Manufacturing



## Contact Data\*

|                     |   |                                      |
|---------------------|---|--------------------------------------|
| Contact Arrangement | 1A = SPST N.O.<br>1B = SPST N.C.<br>1C = SPDT<br>1U = SPST N.O. (2 terminals) |                                      |
| Contact Rating      | Standard  | Heavy Duty                           |
| 1A                  | 60A @ 14VDC   | 80A @ 14VDC                          |
| 1B                  | 40A @ 14VDC   | 70A @ 14VDC                          |
| 1C                  | 60A @ 14VDC N.O.<br>40A @ 14VDC N.C.  | 80A @ 14VDC N.O.<br>70A @ 14VDC N.C. |
| 1U                  | 2x25A @ 14VDC   | 2x25@ 14VDC                          |

|                       |   |
|-----------------------|---|
| Contact Resistance    | < 30 milliohms initial                            |
| Contact Material      | AgSnO <sub>2</sub> In <sub>2</sub> O <sub>3</sub> |
| Max Switching Power   | 1120W   |
| Max Switching Voltage | 75VDC   |
| Max Switching Current | 80A   |

## Coil Data\*

| Coil Voltage VDC |      | Coil Resistance Ω +/- 10% | Pick Up Voltage VDC (max)<br>70% of rated voltage | Release Voltage VDC (min)<br>10% of rated voltage | Coil Power W | Operate Time ms | Release Time ms |
|------------------|------|---------------------------|---|---|--------------|-----------------|-----------------|
| Rated            | Max  |                           |   |   |              |                 |                 |
| 12               | 15.6 | 80                        | 8.4   | 1.2   | 1.8          | 7               | 5               |
| 24               | 31.2 | 320                       | 16.8  | 2.4   |              |                 |                 |

## General Data\*

|                                      |                                   |
|--------------------------------------|-----------------------------------|
| Electrical Life @ rated load         | 100K cycles, average              |
| Mechanical Life                      | 10M cycles, average               |
| Insulation Resistance                | 100M Ω min. @ 500VDC initial      |
| Dielectric Strength, Coil to Contact | 500V rms min. @ sea level initial |
| Contact to Contact                   | 500V rms min. @ sea level initial |
| Shock Resistance                     | 147m/s <sup>2</sup> for 11 ms     |
| Vibration Resistance                 | 1.5mm double amplitude 10~40Hz    |
| Terminal (Copper Alloy) Strength     | 8N (quick connect), 4N (PCB pins) |
| Operating Temperature                | -40°C to +125°C                   |
| Storage Temperature                  | -40°C to +155°C                   |
| Solderability                        | 260°C for 5 s                     |
| Weight                               | 46g                               |

\* Values can change due to the switching frequency, desired reliability levels, environmental conditions and in-rush load levels. It is recommended to test actual load conditions for the application. It is the user's responsibility to determine the performance suitability for their specific application. The use of any coil voltage less than the rated coil voltage may compromise the operation of the relay.

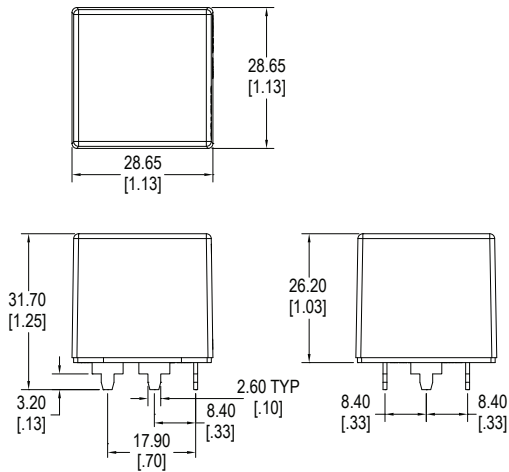


## Ordering Information

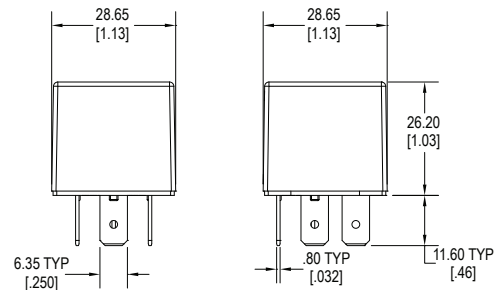
|   |     |    |   |   |       |   |
|---|-----|----|---|---|-------|---|
| 1. Series   | A3F | 1C | S | Q | 24VDC | 2 |
| A3 standard<br>A3F with mounting flange<br>A3M with metal bracket   |     |    |   |   |       |   |
| 2. Contact Arrangement  |     |    |   |   |       |   |
| 1A = SPST N.O.<br>1B = SPST N.C.<br>1C = SPDT<br>1U = SPST N.O. *only available with standard contacts  |     |    |   |   |       |   |
| 3. Sealing Option   |     |    |   |   |       |   |
| S = Sealed *Sealing only available with heavy duty contacts<br>C = Dust Cover   |     |    |   |   |       |   |
| 4. Termination  |     |    |   |   |       |   |
| P = PCB Pins<br>Q = Quick Connect   |     |    |   |   |       |   |
| 5. Coil Voltage   |     |    |   |   |       |   |
| 12VDC<br>24VDC  |     |    |   |   |       |   |
| 6. Contacts   |     |    |   |   |       |   |
| 1 = Standard *Sockets for these models can be found on the CIT Relay Socket catalog page<br>2 = Heavy Duty *We recommend the PR series socket from Custom Connector Corporation   |     |    |   |   |       |   |
| 7. Coil Suppression   |     |    |   |   |       |   |
| Blank = Standard<br>D = Diode (1N4005) Cathode on "86" terminal<br>R = Resistor (180Ω for 6VDC; 680Ω for 12VDC; 2700Ω for 24VDC)<br>** Consult factory if other values are needed |     |    |   |   |       |   |

## Dimensions - A3

Units = mm



Standard contacts (1) with PC Pin

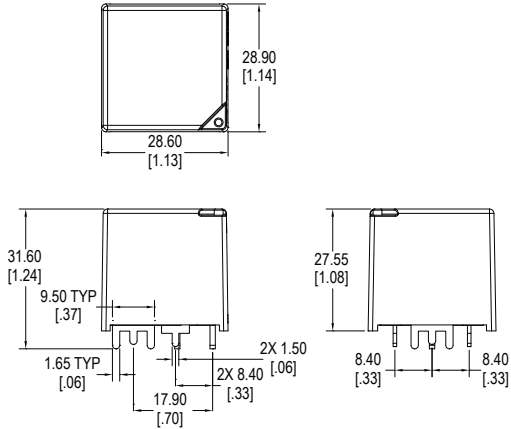


Standard contacts (1) with Quick Connect

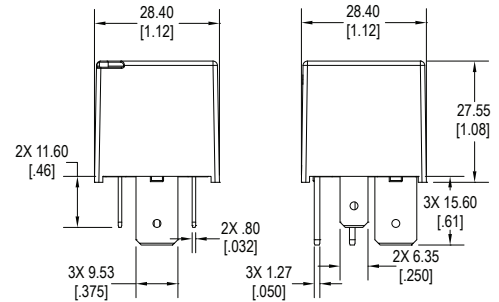


## Dimensions - A3 Heavy Duty

Units = mm



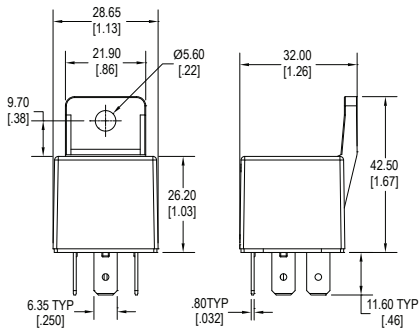
Heavy Duty contacts (2) with PC Pins



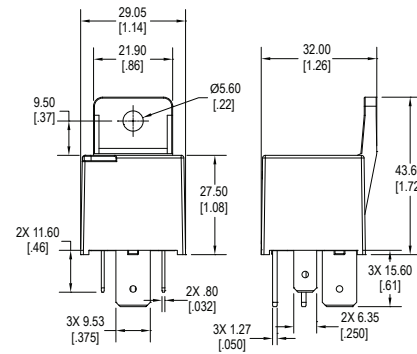
Heavy Duty contacts (2) with Quick Connects

## Dimensions - A3F

Units = mm



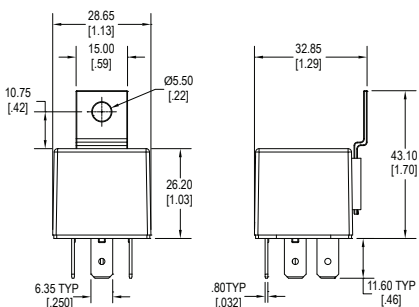
Standard contacts (1) with Quick Connect



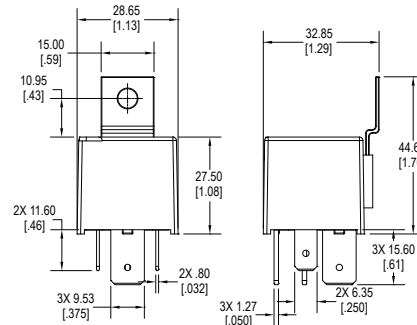
Heavy Duty contacts (2) with Quick Connects

## Dimensions - A3M

Units = mm



Standard contacts (1) with Quick Connect

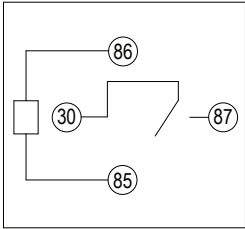


Heavy Duty contacts (2) with Quick Connects

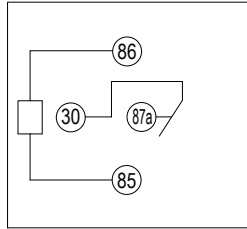


**Schematics & PC Layouts**

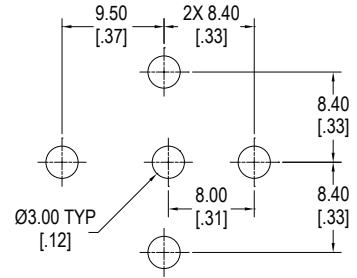
**Bottom Views**



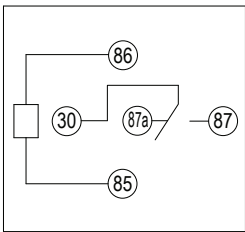
**1A**



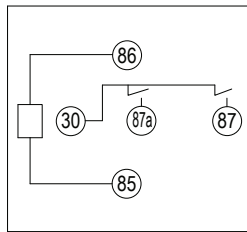
**1B**



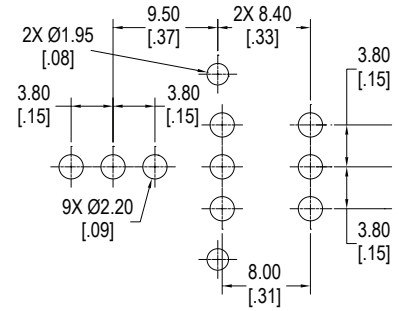
**Standard PC Layout**



**1C**



**1U**



**Heavy Duty PC Layout**