

## ACR03F Series

### Features

- 60A switching capability
- 1 Form A & 1 Form C contact arrangement
- Coil voltage: 6~72VDC
- Various mounting terminations available
- Plastic sealed and dust protected types available



### ▶ CONTACT DATA

|                          |                           |                                |
|--------------------------|---------------------------|--------------------------------|
| Contact arrangement      | 1A                        | 1C                             |
| Contact Resistance       | 100mΩ (1A 24 VDC)         |                                |
| Contact material         | AgCdO, AgSnO <sub>2</sub> |                                |
| Contact rating(Res.load) | 80A 14VDC                 | NO 80 A 14VDC<br>NC 70 A 14VDC |
| Max.switching power      | 1120W                     |                                |
| Max.switching voltage    | 30VDC                     |                                |
| Max.switching current    | 80A                       |                                |
| Mechanical endurance     | 1×10 <sup>7</sup> OPS     |                                |
| Electrical endurance     | 1×10 <sup>5</sup> OPS     |                                |

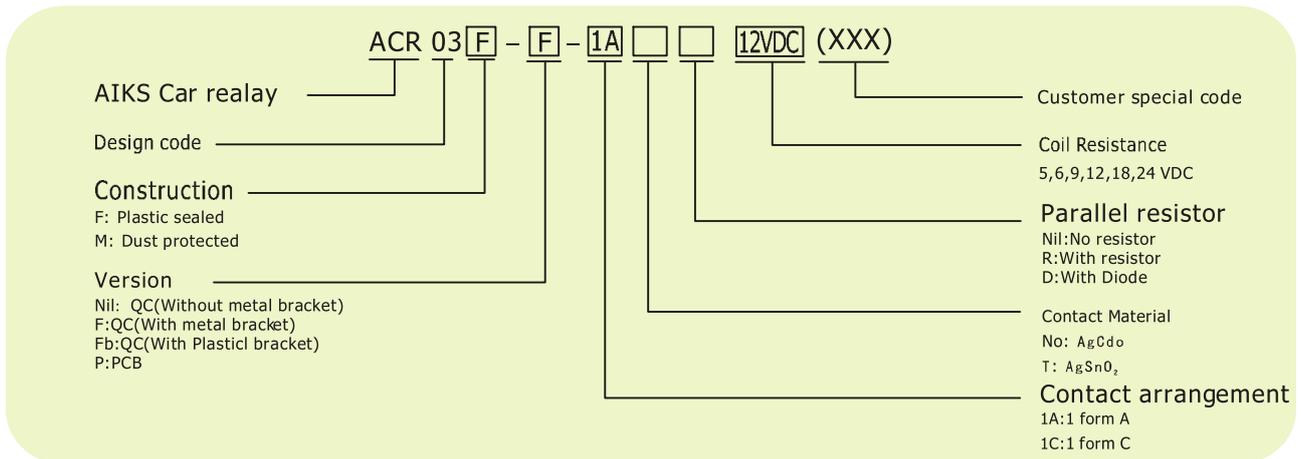
### ▶ CHARACTERISTICS

|                            |   |                     |
|----------------------------|---|---------------------|
| Insulation resistance      | 100MΩ (500VDC)                                      |                     |
| Dielectric strength        | Between coil & contacts                             | 750VAC 1 min        |
|                            | Between open contacts                               | 500VAC 1min         |
| Operate time(at nomi.volt) | 10ms max.   |                     |
| Release time(at nomi.volt) | 10ms max.   |                     |
| Shock resistance           | Functional  | 98m/s <sup>2</sup>  |
|                            | Destructive   | 980m/s <sup>2</sup> |
| Vibration resistance       | 10Hz ~55Hz 1.5mm DA                                 |                     |
| Humidity                   | 98% RH,40℃  |                     |
| Ambient temperature        | -55℃ ~85℃   |                     |
| Termination                | QC,PCB Terminal                                     |                     |
| Unit weight                | Weather-proof cover:Approx.55g<br>Others:Approx.35g |                     |
| Construction               | Plastic Sealed,Dust protected                       |                     |

► **COIL DATA** at 23°C

|                     | Nominal Voltage VDC | Pick-up Voltage VDC | Drop-out Voltage VDC | Coil Resistance $\times (1 \pm 10\%) \Omega$ | Parallel resistance <sup>2)</sup> $\times (1 \pm 5\%) \Omega$ | Equivalent resistance $\Omega$ | Power consumption W | Max. allowable overdrive Voltage <sup>1)</sup> VDC |       |
|---------------------|---------------------|---------------------|----------------------|--|---|--------------------------------|---------------------|--|-------|
|                     |                     |                     |                      |  |   |                                |                     | 23 °C  | 85 °C |
| Weather-proof cover | 6                   | 3.6                 | 0.6                  | 22   | ---   | ---                            | 1.6                 | 10.1   | 7.9   |
|                     | 6                   | 3.6                 | 0.6                  | 22   | 180   | 19.6                           | 1.8                 | 10.1   | 7.9   |
|                     | 12                  | 7.2                 | 1.2                  | 90   | ---   | ---                            | 1.6                 | 20.2   | 15.7  |
|                     | 12                  | 7.2                 | 1.2                  | 90   | 680   | 79.5                           | 1.8                 | 20.2   | 15.7  |
|                     | 24                  | 14.4                | 2.4                  | 360  | ---   | ---                            | 1.6                 | 40.5   | 31.5  |
|                     | 24                  | 14.4                | 2.4                  | 360  | 2700  | 317.6                          | 1.8                 | 40.5   | 31.5  |
| Others              | 6                   | 3.9                 | 0.6                  | 22   | ---   | ---                            | 1.6                 | 10.1   | 7.9   |
|                     | 6                   | 3.9                 | 0.6                  | 22   | 180   | 19.6                           | 1.8                 | 10.1   | 7.9   |
|                     | 12                  | 7.8                 | 1.2                  | 85   | ---   | ---                            | 1.7                 | 20.2   | 15.7  |
|                     | 12                  | 7.8                 | 1.2                  | 85   | 680   | 75.6                           | 1.9                 | 20.2   | 15.7  |
|                     | 24                  | 15.6                | 2.4                  | 350  | ---   | ---                            | 1.6                 | 40.5   | 31.5  |
|                     | 24                  | 15.6                | 2.4                  | 350  | 2700  | 309.8                          | 1.9                 | 40.5   | 31.5  |

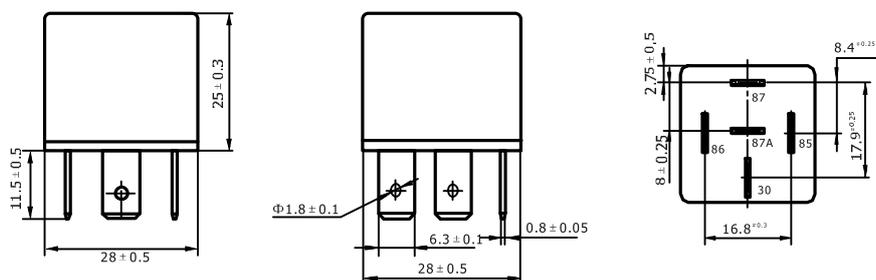
► **MODEL DESCRIPTION**



► **OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT**

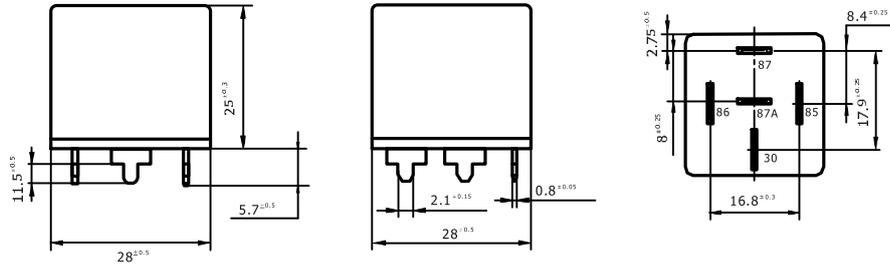
Unit: mm

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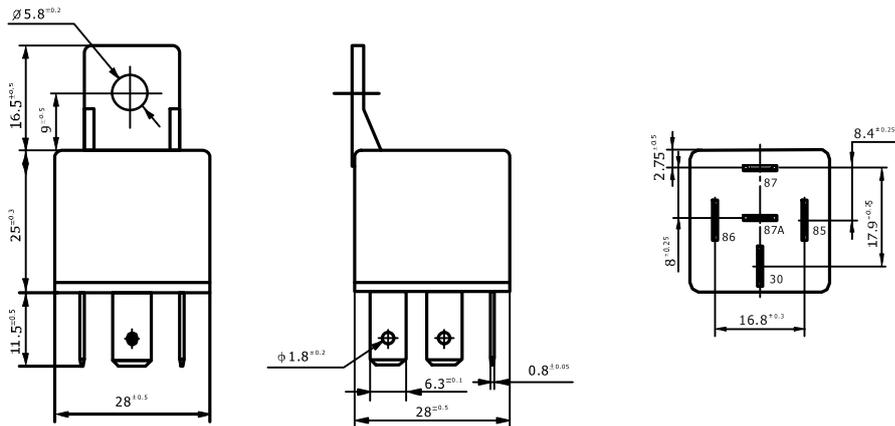


▶ OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT Unit: mm

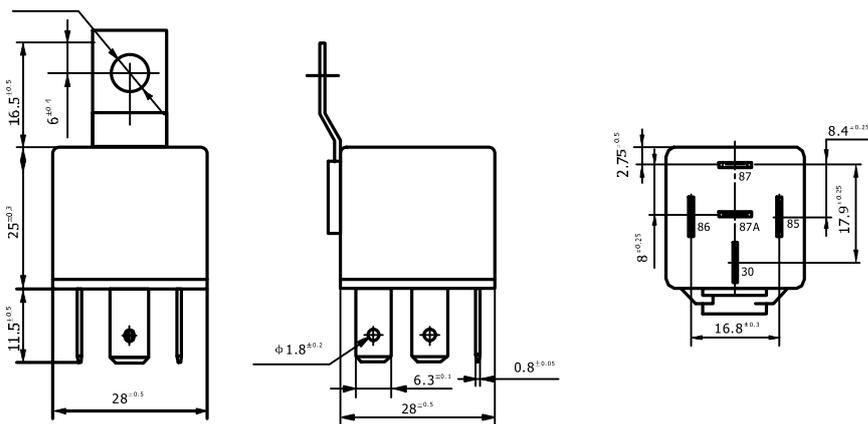
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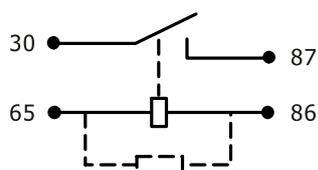
ACR03F-Fb



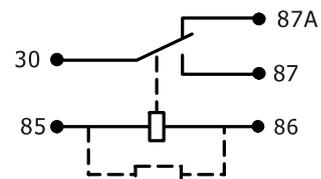
ACR03F-F



1 Form A



1 Form C



Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1$ mm, tolerance should be  $\pm 0.2$ mm; outline dimension  $> 1$ mm and  $\leq 5$ mm, tolerance should be  $\pm 0.3$ mm; outline dimension  $> 5$ mm, tolerance should be  $\pm 0.4$ mm  
2) The tolerance without indicating for PCB layout is always  $\pm 0.1$ mm..

► Characteristic curves

