

# MICRO SURFACE MOUNT RELAY 1 POLE—25 A (For Automotive Applications)

## FTR-P6 SERIES

### ■ FEATURES

- Surface mount relays for automotive applications.
- Miniature size (67% of the volume of FTR-P3 relays)
- High contact capacity with proven contact material (100,000 operations, 14V, 25A achieved even with reduced size).
- Coil power savings (800mW nominal achieved with state-of-the-art magnetic analysis design)
- Semi-quiet relay (average acoustic noise level: 60dB distance 5cm).

### ■ ORDERING INFORMATION

[Example]    FTR-P6    G    N    012    WA    \*\*  
                  (a)    (b)    (c)    (d)    (e)    (f)

|     |                               |   |
|-----|-------------------------------|---|
| (a) | Series Name                   | FTR-P6 : FTR-P6 Series                          |
| (b) | Contact Arrangement           | G : 1 Form C                                    |
| (c) | Contact Gap                   | N : 0.3 mm Gap                                  |
| (d) | Nominal Voltage               | 010 : 10 VDC<br>012 : 12 VDC                    |
| (e) | Contact Material              | WA : Silver Oxide-Tin<br>Indium                 |
| (f) | Special product specification | Symbol to specify special specification product |

Note: The part number on the relay cover does not include 'FTR'  
Example:            Ordering part number: FTR-P6GN010WA  
                          Stamped part number: P6GN010WA



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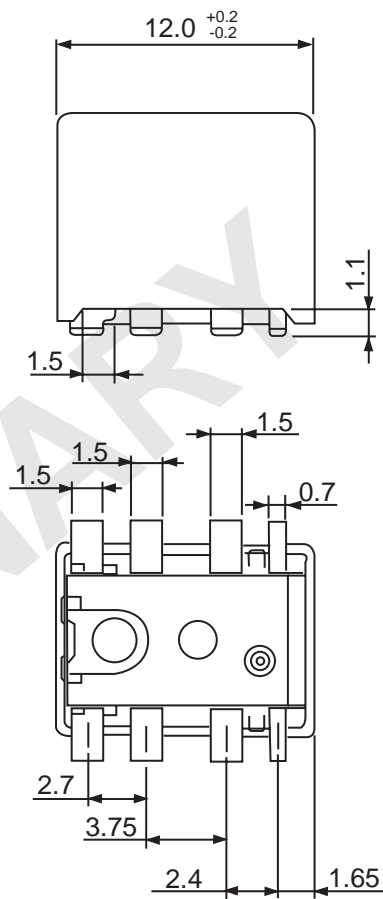
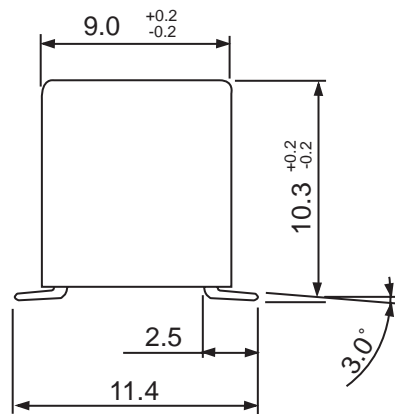
## ■ SPECIFICATIONS

| Item       |                                 | Specification   |  |  |
|------------|---------------------------------|---|--|--|
|            |                                 | FTR-P6GN010-WA  | FTR-P6GN012-WA   |  |
| Contact    | Arrangement                     | 1 FormC   |  |  |
|            | Material                        | Silver Oxide Tin-Indium   |  |  |
|            | Contact rating                  | DC 14V, 25A (motor locked)                                      |  |  |
|            | Maximum Carrying Current        | 25 A/ 1 hour (20° C, nominal voltage applied to coil)           |  |  |
|            | Maximum Inrush Current          | 35 A  |  |  |
|            | Contact Resistance              | 100mΩ maximum(at 6VDC, 1A after stabilization)                  |  |  |
|            | Rated Coil Voltage              | 10 VDC  | 12 VDC   |  |
|            | Pick-up Voltage                 | 6.5 VDC maximum   | 7.3 VDC maximum  |  |
|            | Drop-out Voltage                | 0.9 VDC minimum   | 1.0 VDC minimum  |  |
|            | Coil Resistance                 | 125 ±10%  | 180 ±10%   |  |
| Coil       | Coil Power Consumption          | Approximately 0.8 W (at rated coil voltage)                     |  |  |
|            | Operating Temperature Range     | -30° C to +85° C (no frost)                                     |  |  |
|            | Storage Temperature Range       | -40° C to +100° C (no frost)                                    |  |  |
|            | Operating Humidity              | 45 to 85%RH   |  |  |
| Insulation | Initial resistance              | 100M maximum at 500VDC  |  |  |
|            | Dielectric withstanding voltage | 500 VAC   |  |  |
| Time       | Operate (at nominal voltage)    | 10 ms maximum   |  |  |
|            | Release (at nominal voltage)    | 5 ms maximum  |  |  |
| Life       | Mechanical                      | 1x10 <sup>7</sup> operations minimum (with no load for contact) |  |  |
|            | Electrical                      | 1x10 <sup>5</sup> operations minimum (14VDC 25A locked motor)   |  |  |
| Other      | Vibration resistance            | Misoperation  | 10-55Hz, 1.5mm double amplitude, 10 to 100Hz (45m/s <sup>2</sup> ) |  |
|            |                                 | Endurance   | 10 to 100Hz (45m/s <sup>2</sup> )                                  |  |
|            | Shock resistance                | Misoperation  | 100 m/s <sup>2</sup> (11ms)  |  |
|            |                                 | Endurance   | 1000 m/s <sup>2</sup> (11ms)                                       |  |
|            | Weight                          | Approximately 3 grams   |  |  |

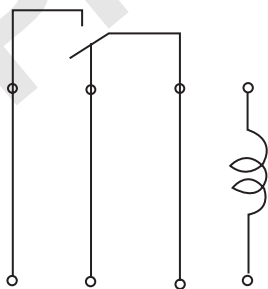
# FTR-P6 SERIES

## ■ DIMENSIONS

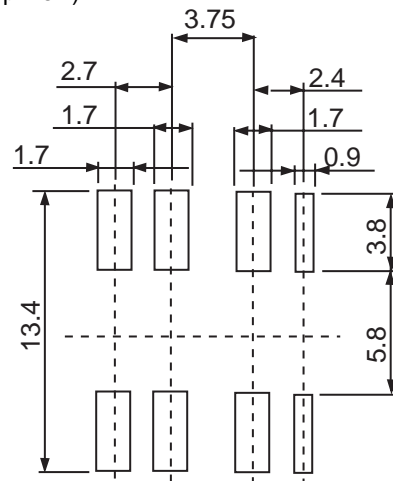
### • Dimensions



### • Schematic (bottom view)



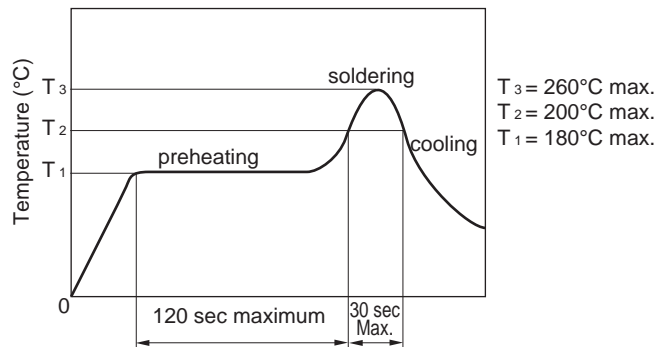
### • PCB mounting hole layout (top view)



Unit: mm

## ■ REFERENCE DATA

- Temperature Profile



Note: Temperature profile shows temperature of PC board surface.

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