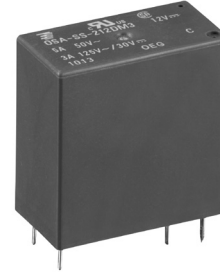


## Power PCB relay OSA

- 2 pole, 3A(DM3)/5A(DM5), 2 form A (NO)
- UL TV-3 rating (DM5) available
- Meet 3000V dielectric voltage between coil and contacts
- Meet 5000V surge voltage between coil and contacts

Typical applications  
Audio equipment, home appliances, office machines



### Approvals

UL E82292, CSA LR48471-68, TuV R50137386(DM5), SEMKO 613297(DM5), CQC 07001021623

Technical data of approved types on request

| Contact Data                              | DM3                            | DM5          |
|-------------------------------------------|--------------------------------|--------------|
| Contact arrangement                       | 2 form A (NO)                  |              |
| Rated voltage                             | 240VAC                         |              |
| Max. switching voltage                    | 30VDC, 240VAC                  |              |
| Rated current                             | 3A                             | 5A           |
| Switching power                           | 300VA, 72W                     | 1100VA, 150W |
| Contact material                          | Ag alloy                       | AgSnO        |
| Min. recommended contact load             | 100mA, 5VDC                    |              |
| Initial contact resistance                | 100mΩ at 1A, 6VDC              |              |
| Frequency of operation, with/without load | 1800/18000h <sup>-1</sup>      |              |
| Operate/release time max.                 | 20/10ms                        |              |
| Electrical endurance                      |                                |              |
| DM3 : 3A, 120VAC, resistive,              | 100x10 <sup>3</sup> ops.       |              |
| DM5 : 5A, 240VAC, resistive,              | 100x10 <sup>3</sup> ops.       |              |
| Contact ratings                           |                                |              |
| DM3:                                      | 3A, 125VAC/30VDC               |              |
| DM5:                                      | 5A, 240VAC/DC30V, TV-3, 125VAC |              |
| Mechanical endurance                      | 10x10 <sup>6</sup> operations  |              |

### Coil Data

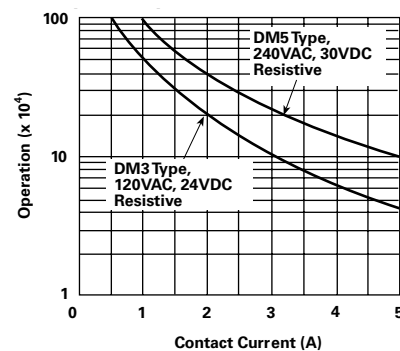
|                                     |               |
|-------------------------------------|---------------|
| Coil voltage range                  | 5 to 48VDC    |
| Coil insulation system according UL | class 105 (A) |

### Coil versions, DC coil

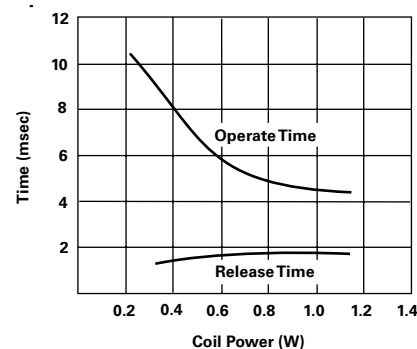
| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| 05        | 5                 | 3.75                | 0.25                | 47                    | 540                 |
| 06        | 6                 | 4.5                 | 0.3                 | 68                    | 540                 |
| 09        | 9                 | 6.75                | 0.45                | 155                   | 540                 |
| 12        | 12                | 9.0                 | 0.6                 | 270                   | 540                 |
| 24        | 24                | 18.0                | 1.2                 | 1100                  | 540                 |
| 48        | 48                | 36.0                | 2.4                 | 4400                  | 540                 |

All figures are given for coil without pre-energization, at ambient temperature +23°C.

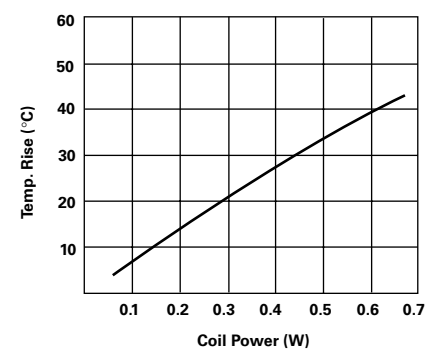
### Electrical endurance



### Operate time



### Coil temperature rise



**Power PCB relay OSA** (Continued)

**Insulation Data**

|                                 |                      |
|---------------------------------|----------------------|
| Initial dielectric strength     |                      |
| between open contacts           | 1000V <sub>rms</sub> |
| between contact and coil        | 4000V <sub>rms</sub> |
| between adjacent contacts       | 2500V <sub>rms</sub> |
| Initial surge withstand voltage |                      |
| between contact and coil        | 7000V                |
| Initial insulation resistance   | 1000MΩ               |
| Clearance/creepage              |                      |
| between contact and coil        | 7/7mm                |

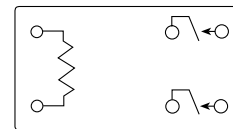
**Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at [www.te.com/customersupport/rohssupportcenter](http://www.te.com/customersupport/rohssupportcenter)

|                                      |                                          |
|--------------------------------------|------------------------------------------|
| Ambient temperature                  | -30 to 60°C                              |
| Category of environmental protection |                                          |
| IEC 61810                            | RTII - flux proof,<br>RTIII - wash tight |
| Vibration resistance (functional)    | 10 to 50Hz, 1.5mm double amplitude       |
| Shock resistance (functional)        |                                          |
| IEC 60068-2-27 (half sine)           | 98m/s <sup>2</sup> , 11ms                |
| Terminal type                        | PCB-THT                                  |
| Weight                               | 13g                                      |
| Resistance to soldering heat THT     |                                          |
| IEC 60068-2-20                       | 260°C/5s                                 |
| Packaging/unit                       | box/1000 pcs.                            |

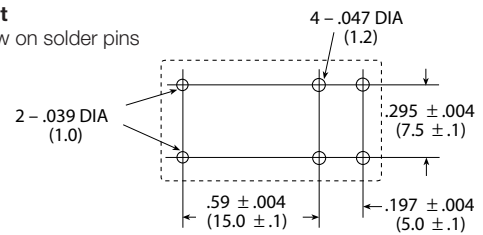
**Terminal assignment**

Bottom view on solder pins

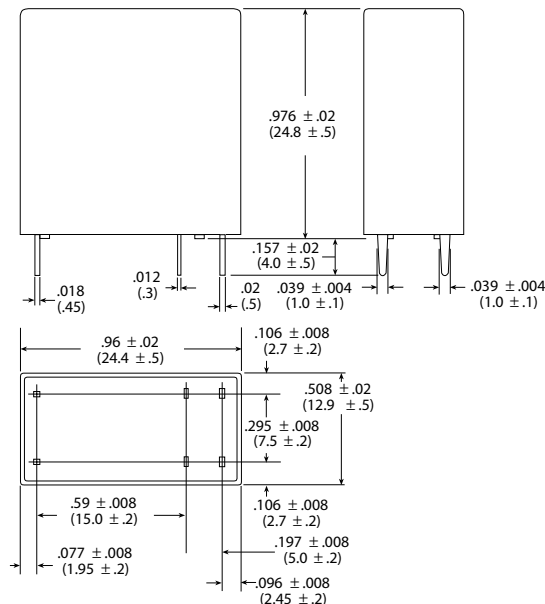


**PCB layout**

Bottom view on solder pins



**Dimensions**



**Power PCB relay OSA** (Continued)

| Product code structure |                                                | Typical product code |            |           |           |          |          |          |             |
|------------------------|------------------------------------------------|----------------------|------------|-----------|-----------|----------|----------|----------|-------------|
|                        |                                                | <b>OSA</b>           | <b>-SS</b> | <b>-2</b> | <b>12</b> | <b>D</b> | <b>M</b> | <b>3</b> | <b>,000</b> |
| Type                   |                                                |                      |            |           |           |          |          |          |             |
|                        | <b>OSA</b> Power PCB Relay OSA                 |                      |            |           |           |          |          |          |             |
| Sealing                |                                                |                      |            |           |           |          |          |          |             |
|                        | <b>SS</b> Flux Proof <b>SH</b> Wash Tight      |                      |            |           |           |          |          |          |             |
| Pole                   |                                                |                      |            |           |           |          |          |          |             |
|                        | <b>2</b> 2 pole                                |                      |            |           |           |          |          |          |             |
| Coil                   |                                                |                      |            |           |           |          |          |          |             |
|                        | Coil code: please refer to coil versions table |                      |            |           |           |          |          |          |             |
| Coil power             |                                                |                      |            |           |           |          |          |          |             |
|                        | <b>D</b> Standard, 540mW                       |                      |            |           |           |          |          |          |             |
| Contact arrangement    |                                                |                      |            |           |           |          |          |          |             |
|                        | <b>M</b> 2 form A (2 NO) contacts              |                      |            |           |           |          |          |          |             |
| Contact rating         |                                                |                      |            |           |           |          |          |          |             |
|                        | <b>3</b> 3A, 120VAC, resistive (DM3)           |                      |            |           |           |          |          |          |             |
|                        | <b>5</b> 5A, 240VAC resistive, TV-3 (DM5)      |                      |            |           |           |          |          |          |             |
| Suffix                 |                                                |                      |            |           |           |          |          |          |             |
|                        | <b>,000</b> Standard                           |                      |            |           |           |          |          |          |             |

| Product code      | Version | Contact         | Cont.material | Coil power | Coil voltage | Sealing    | Part number |
|-------------------|---------|-----------------|---------------|------------|--------------|------------|-------------|
| OSA-SS-205DM3,000 | 3A      | 2 form A (2 NO) | Ag Alloy      | 540mW      | 5VDC         | Flux proof | 3-1419145-2 |
| OSA-SS-212DM3,000 |         |                 |               |            | 12VDC        |            | 5-1419124-6 |
| OSA-SS-224DM3,000 |         |                 |               |            | 24VDC        |            | 5-1419124-9 |
| OSA-SH-205DM3,000 |         |                 |               |            | 5VDC         | Wash tight | 1461388-1   |
| OSA-SH-212DM3,000 |         |                 |               |            | 12VDC        |            | 3-1419124-5 |
| OSA-SH-224DM3,000 |         |                 |               |            | 24VDC        |            | 2-1440007-5 |
| OSA-SS-205DM5,000 | 5A      |                 | AgSnO         |            | 5VDC         | Flux proof | 5-1419124-3 |
| OSA-SS-212DM5,000 |         |                 |               |            | 12VDC        |            | 5-1419124-7 |
| OSA-SS-224DM5,000 |         |                 |               |            | 24VDC        |            | 6-1419124-1 |
| OSA-SH-205DM5,000 |         |                 |               |            | 5VDC         | Wash tight | 7-1440004-6 |
| OSA-SH-212DM5,000 |         |                 |               |            | 12VDC        |            | 3-1419124-9 |
| OSA-SH-224DM5,000 |         |                 |               |            | 24VDC        |            | 1461388-4   |