

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 ⁻¹ | |
| Operate/release time max. | 20/10ms | |
| Electrical endurance | | |
| DM3 : 3A, 120VAC, resistive, | 100x10 ³ ops. | |
| DM5 : 5A, 240VAC, resistive, | 100x10 ³ ops. | |
| Contact ratings | | |
| DM3: | 3A, 125VAC/30VDC | |
| DM5: | 5A, 240VAC/DC30V, TV-3, 125VAC | |
| Mechanical endurance | 10x10 ⁶ operations | |

Coil Data

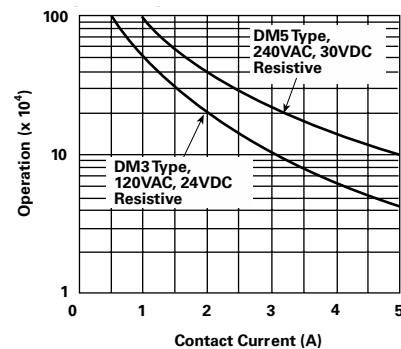
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|-------------------------------------|---------------|
| Coil voltage range | 5 to 48VDC |
| Coil insulation system according UL | class 105 (A) |

Coil versions, DC coil

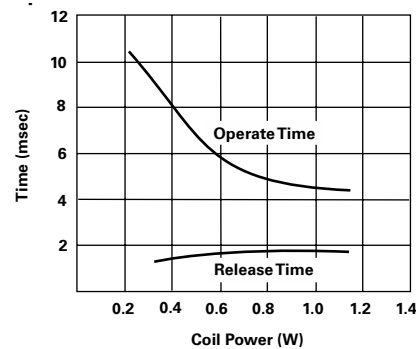
| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| 05 | 5 | 3.75 | 0.25 | 47 | 540 |
| 06 | 6 | 4.5 | 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.

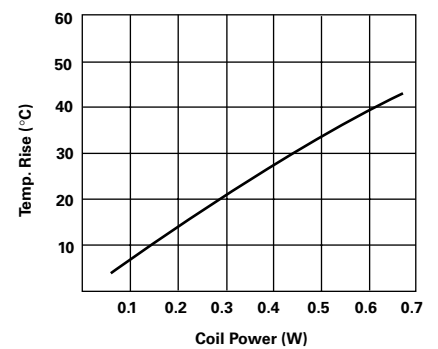
Electrical endurance



Operate time



Coil temperature rise



Power PCB relay OSA (Continued)

Insulation Data

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

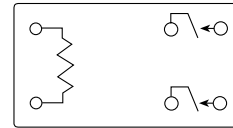
Other Data

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

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

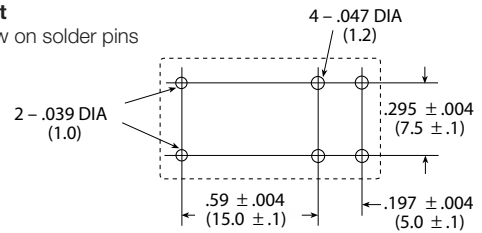
Terminal assignment

Bottom view on solder pins

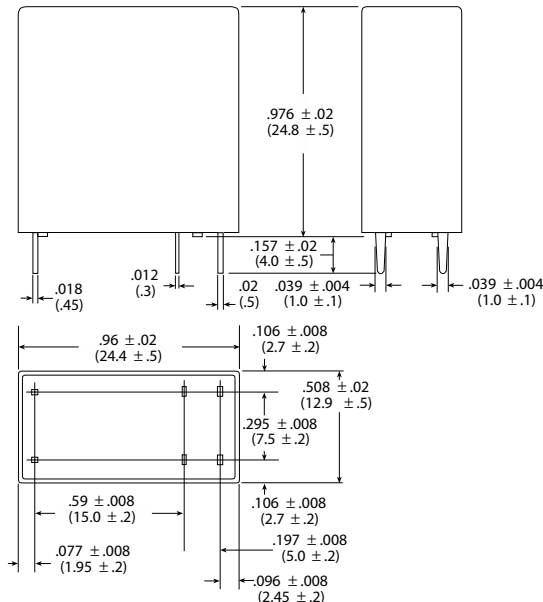


PCB layout

Bottom view on solder pins



Dimensions



Power PCB relay OSA (Continued)

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