

## 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

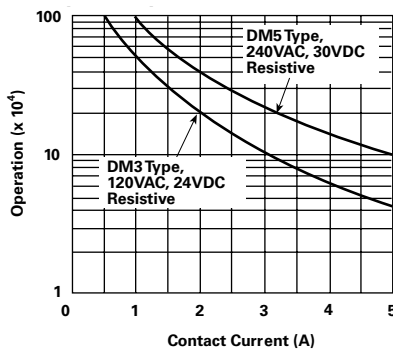
Coil voltage range	5 to 48VDC
Coil insulation system according UL	class 105 (A)

### Coil versions, DC coil

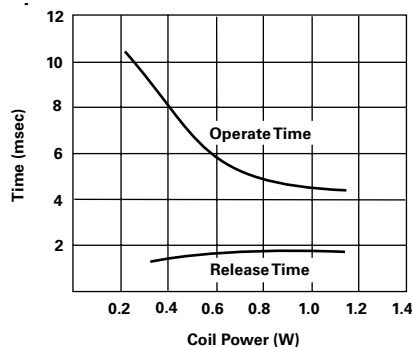
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
05	5	3.75	0.25	47	540
06	6	4.5	0.3	68	540
09	9	6.75	0.45	155	540
12	12	9.0	0.6	270	540
24	24	18.0	1.2	1100	540
48	48	36.0	2.4	4400	540

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

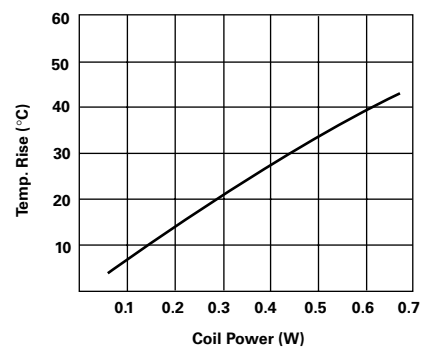
### Electrical endurance



### 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

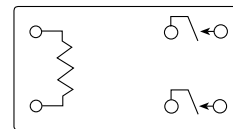
### Other Data

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

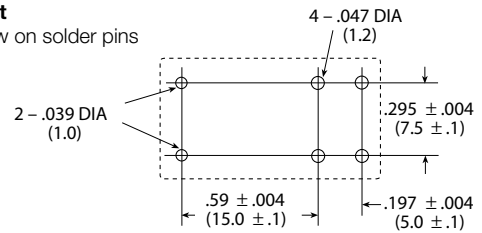
### Terminal assignment

Bottom view on solder pins

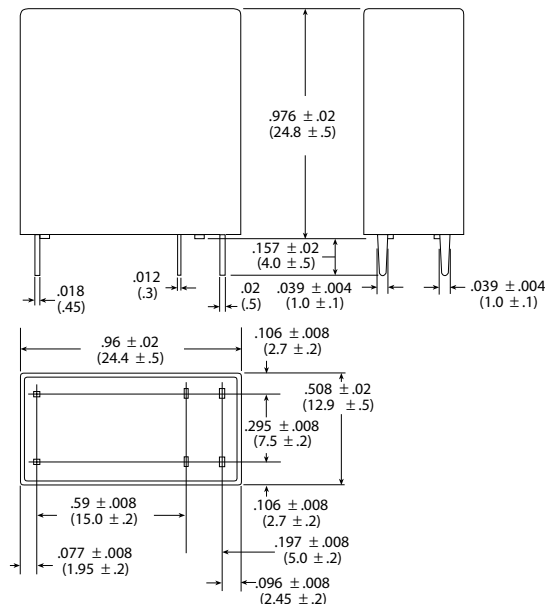


### PCB layout

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