

## MINIATURE PCB RELAY OJ/OJE

- 1 Pole, 1 Form A (NO) Contact
- 3-10A contact rating
- Small size with outline dimension of 18.2L\*10.2W\*14.7H(mm)
- 4000Vrms coil contact dielectric strength (OJ type)
- Sensitive coil optional (200mW type);
- WG version, Anti-Ex version (Haz-Loc version) optional

### Typical applications

Major home appliances, small appliances, HVAC, Industrial control

## Approvals

VDE 40007630, cULus E82292, CQC03001007764, TUV R 501391660014-0015

## Contact Data

Contact arrangement	1 form A, 1 NO
Rated voltage	30VDC, 250VAC
Max. switching voltage	30VDC, 277VAC
Rated current	3 to 10A
Contact material	AgNi, AgSnO, AgCdO
Initial contact resistance	100 milliohms @ 1A,6VDC
Min. recommended contact load	100mA, 5VDC
Operate time max.	OJ/OJE-L: 15ms
	OJ/OJE-D/H: 10ms
Release time max.	4ms
Electrical endurance	
UL	
OJ/OJE-LM	3A 250VAC, general use, 100k ops
OJ/OJE-DM	5A 250VAC 85C 60k ops, 10 LRA / 1.5 FLA, 120VAC, 100k ops
OJ/OJE-LMH	8A 277VAC res, 70C 100k ops (SS), 6.6 LRA / 1.1 FLA, 120VAC, 105C 100k ops
OJ/OJE-LMH2	8A 250VAC res, 85C 30k ops, 12 LRA / 2 FLA 250VAC, 85C 100k ops
OJ/OJE-HM	10A 250VAC, general use, 30k ops (SH type), 18 LRA / 4 FLA, 240VAC, 85C 100k ops, 7.5A 240VAC res, 105C 100k ops (SS)
OJ/OJE-HM2	10A 250VAC res, 100k ops (SS type), 7.5A 240VAC res, 105C 100k ops (SS type)
OJ/OJE-HM6	10A 250VAC res, 85C 50k ops (OJ WG type only), 7.5A 240VAC res, 105C 100k ops
VDE	
OJ/OJE-LM	3A 250VAC res, 55C 100k ops
OJE-DM	5A 250VAC res, 85C 50k ops
OJ/OJE-LMH	8A 250VAC res, 85C 10k ops
OJ-LMH2	8A 250VAC res, 85C 25k ops
OJ-LMH2	5A 250VAC res, 105C 50k ops
OJE-HM	10A 250VAC res, 85C 30k ops
OJ-HM	10A 250VAC res, 85C 10k ops
OJ-HM2	10A 250VAC res, 85C 50k ops
Mechanical endurance, DC coil	10x10 <sup>6</sup> operations

## Coil Data

Coil voltage range	3 to 48VDC
Operative range, IEC 61810	2
Coil insulation system according UL	Class F

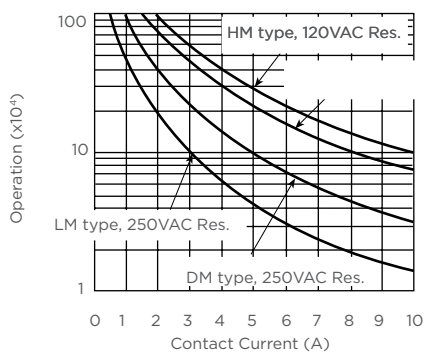
## Coil versions, DC coil, OJ/OJE-L sensitive type

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil Resistance $\Omega \pm 10\%$	Rated coil power mW
003	3	2.25	0.3	45	200
005	5	3.75	0.5	125	200
006	6	4.5	0.6	180	200
009	9	6.75	0.9	405	200
012	12	9	1.2	720	200
024	24	18	2.4	2880	200
036	36	27	3.6	6480	200
048	48	36	4.8	11520	200

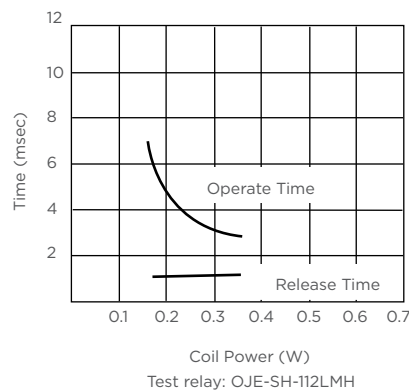
## Coil versions, DC coil, OJ/OJE-D and -H type

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil Resistance $\Omega \pm 10\%$	Rated coil power mW
003	3	2.25	0.3	20	450
005	5	3.75	0.5	55.5	450
006	6	4.5	0.6	80	450
009	9	6.75	0.9	180	450
012	12	9	1.2	320	450
024	24	18	2.4	1280	450
036	36	27	3.6	2880	450
048	48	36	4.8	5120	450

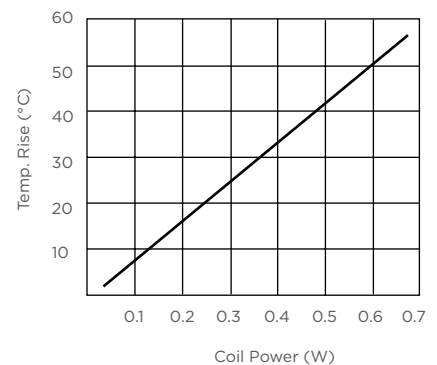
Electrical endurance



Operate time



Coil temperature rise



## Insulation Data

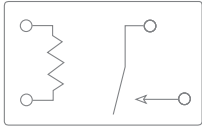
Initial dielectric strength	
Between open contacts	750Vrms
Between contact and coil	OJ: 4000Vrms
	OJE: 3000Vrms
Clearance/creepage	
Between contact and coil	OJ: > 7.7mm / 9.4mm
Between contact and coil	OJE: > 3.2mm / 3.6mm
Tracking index of relay base	PTI 250

## Other Data

Material compliance	EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.te.com/customer-support/rohssupportcenter">www.te.com/customer-support/rohssupportcenter</a>
Ambient temperature	
LM	-40 ~ +105C
DM	-40 ~ +85C
LMH(2)	-40 ~ +105C
HM(2)/HM6	-40 ~ +105C
Category of environmental protection	
IEC 61810	RTII - flux proof
	RTIII - wash tight
Shock resistance (functional)	10g
Shock resistance (destructive)	100g
Weight	6g
Resistance to soldering heat THT	
IEC 60068-2-20	RTII: 270°C/10s
	RTIII: 260°C/5s
Packaging unit	Tray/100, carton box/1000

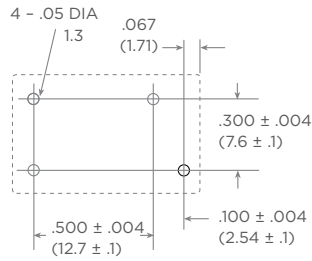
### Terminal assignment

Bottom view on solder pins

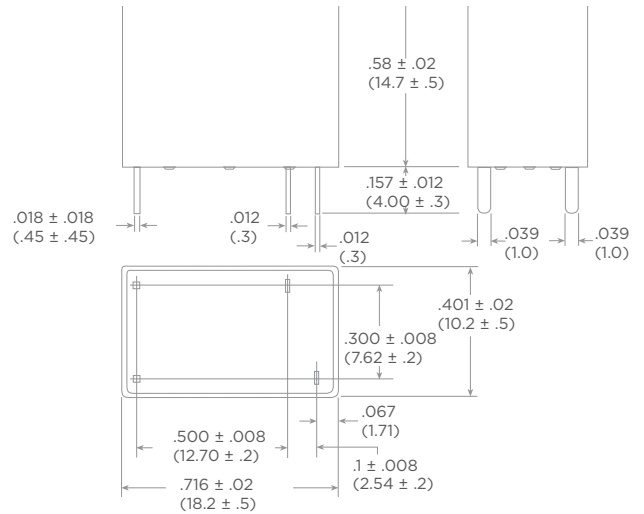


### PCB layout

Bottom view on solder pins



### Dimensions



Subheaders	Code description	Codes	Description	Codes	Description
Product code structure	typical structure code OJ	-SS	-1	12	HM2 F -WG ,00000
Basic type	<b>OJE</b> 3KV dielectric between contact -coil <b>OJ</b> 4KV dielectric between contact -coil				
Category of protection	<b>SS</b> Flux proof <b>SH</b> Wash tight				
Number of poles	<b>1</b> 1 Pole				
Coil voltage	Coil code: please refer to coil voltage table (e.g. 12 = 12VDC)				
Contact rating and coil power	200mW coil power <b>LM</b> 3A type <b>LMH/LMH2</b> 8A type	<b>DM</b> <b>HM/HM2/HM6</b>	5A type 10A type		
Insulation system designation	<b>Blank</b> Insulation class F	<b>F</b>	Insulation class F		
Special type	<b>Blank-standard</b> WG - IEC 60335-1 compliant: R - reflow-soldering type: EX1 - EX version & WE X1 - EX-version + WG (IEC 60079-15,22.4 Enclosed-break device)				
Suffix	<b>,00000</b> Standard <b>,**E**</b> EX-version (IEC 60079-15 , 22.5 Sealed device)				

Product Code	Part Number	Rating	Contact Material	Coil voltage	Coil powder	Type	Insulation	Enclosure			
OJE-SH-112LM,000	1461401-5	3A	AgNi	12VDC	200mW	standard	Class F	Wash tight			
OJ-SS-112LM,000	2-1419129-1			24VDC				Flux proof			
OJ-SS-124LM,000	3-1419129-1			5VDC				Wash tight			
OJ-SH-105LM,000	1461404-1			12VDC							
OJ-SH-112LM,000	1461404-6			5VDC							
OJE-SH-112DM,00EOW	2071369-1	5A		12VDC	EX-version	standard			Flux proof		
OJE-SH-105DM,000	1461400-1			5VDC							
OJE-SS-112DM,000	4-1419128-2			12VDC							
OJE-SH-124DM,000	1461400-5			24VDC							
OJ-SH-112DM,000	1461406-4			12VDC							
OJ-SH-105LMH,000	8-1419128-1	8A	AgCdO	5VDC	200mW	standard	Class F	Wash tight			
OJ-SH-112LMH,000	9-1419128-8		AgCdO	12VDC					WG version	Flux proof	
OJ-SS-112LMH2	1721260-5			24VDC							
OJ-SS-112LMH2-WG	1721874-5		AgCdO	5VDC					standard		Wash tight
OJ-SS-124LMH2	1721260-6			12VDC							
OJE-SH-105LMH,000	1461403-3		AgSnO	5VDC				Flux proof			
OJE-SH-112LMH,000	1461403-4		AgSnO	12VDC							
OJE-SS-112LMH2	1721261-5			5VDC						Wash tight	
OJE-SH-105HM,000	1461402-4		AgCdO	12VDC							
OJE-SH-112HM,000	1461402-6		AgSnO	24VDC					Flux proof		
OJE-SS-112HM2,000	1721539-5	AgCdO	12VDC								
OJE-SS-112HMF,F000	4-1419128-4		24VDC								
OJE-SS-124HMF,F000	6-1419128-6	AgSnO	12VDC	WG version	Wash tight						
OJ-SS-112HM6-WG,00000	2071398-1		24VDC	standard							
OJ-SS-124HM2,000	1721538-7	AgCdO	12VDC	EX-version		Flux proof					
OJE-SH-112HMF,00EOW	2071370-1			EX-version + WG							
OJ-SS-112LMH2-WEX1,00000	2071404-1	8A	AgSnO	200mW			WG version	Wash tight			
OJ-SH-112HM2-WG,00000	2071505-1	10A		12V	450mW		WG version	Wash tight			

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