

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 ⁶ operations

Coil Data

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

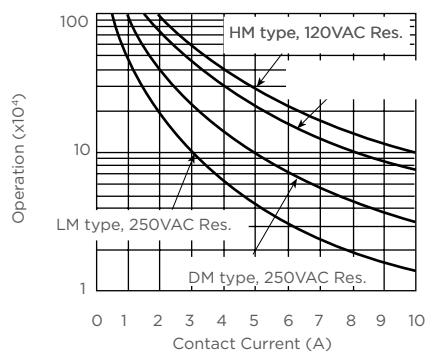
Coil versions, DC coil, OJ/OJE-L sensitive type

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

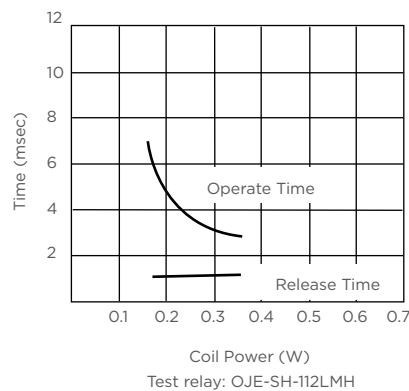
Coil versions, DC coil, OJ/OJE-D and -H type

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

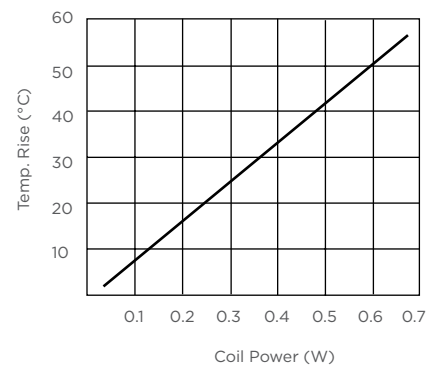
Electrical endurance



Operate time



Coil temperature rise



Insulation Data

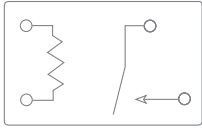
Initial dielectric strength	
Between open contacts	750Vrms
Between contact and coil	OJ: 4000Vrms
	OJE: 3000Vrms
Clearance/creepage	
Between contact and coil	OJ: > 7.7mm / 9.4mm
Between contact and coil	OJE: > 3.2mm / 3.6mm
Tracking index of relay base	PTI 250

Other Data

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

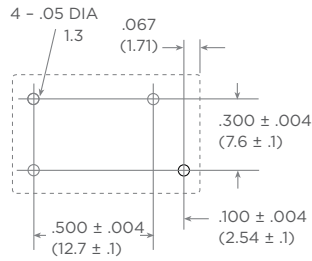
Terminal assignment

Bottom view on solder pins

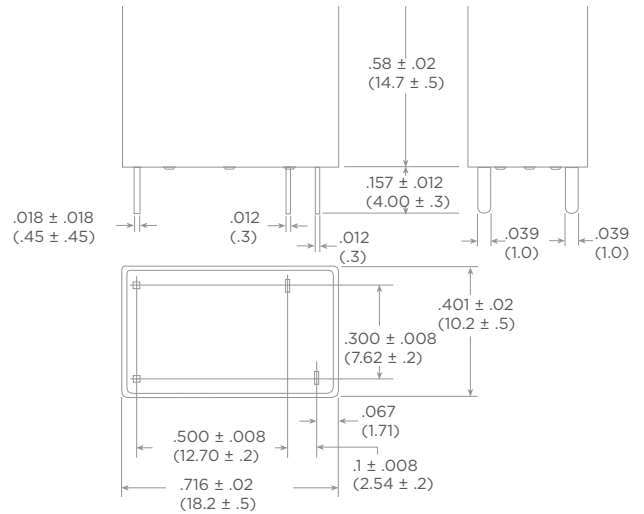


PCB layout

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	OJE	3KV dielectric between contact -coil				
	OJ	4KV dielectric between contact -coil				
Category of protection	SS	Flux proof				
	SH	Wash tight				
Number of poles	1	1 Pole				
Coil voltage	Coil code: please refer to coil voltage table (e.g. 12 = 12VDC)					
Contact rating and coil power		200mW coil power				
	LM	3A type	DM	5A type		
	LMH/LMH2	8A type	HM/HM2/HM6	10A type		
Insulation system designation	Blank	Insulation class F	F	Insulation class F		
Special type	Blank-standard	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	,00000	Standard				
	,**E**	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	450mW	EX-version		standard	Flux proof	
OJE-SH-105DM,000	1461400-1			5VDC						
OJE-SS-112DM,000	4-1419128-2			12VDC		Wash tight				
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	Flux proof		
OJ-SH-112LMH,000	9-1419128-8		12VDC	WG version						
OJ-SS-112LMH2	1721260-5		24VDC	standard				Wash tight		
OJ-SS-112LMH2-WG	1721874-5		5VDC						Flux proof	
OJ-SS-124LMH2	1721260-6		12VDC							
OJE-SH-105LMH,000	1461403-3		AgCdO	5VDC		450mW		standard	Class F	Wash tight
OJE-SH-112LMH,000	1461403-4		12VDC	Flux proof						
OJE-SS-112LMH2	1721261-5		AgSnO							Wash tight
OJE-SH-105HM,000	1461402-4		AgCdO							
OJE-SH-112HM,000	1461402-6		AgSnO	12VDC						standard
OJE-SS-112HM2,000	1721539-5	AgCdO	24VDC	EX-version	Wash tight					
OJE-SS-112HMF,F000	4-1419128-4	AgCdO	12VDC				WG version			
OJE-SS-124HMF,F000	6-1419128-6	AgSnO	24VDC	standard	Flux proof					
OJ-SS-112HM6-WG,00000	2071398-1	AgSnO	12VDC				EX-version			
OJ-SS-124HM2,000	1721538-7	AgCdO	24VDC	EX-version + WG	Wash tight					
OJE-SH-112HMF,00EOW	2071370-1	AgCdO	12VDC			WG version	Flux proof			
OJ-SS-112LMH2-WEX1,00000	2071404-1	8A	AgSnO	12VDC	200mW			EX-version + WG	Flux proof	
OJ-SH-112HM2-WG,00000	2071505-1	10A	AgSnO	12V	450mW	WG version	Wash tight			

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