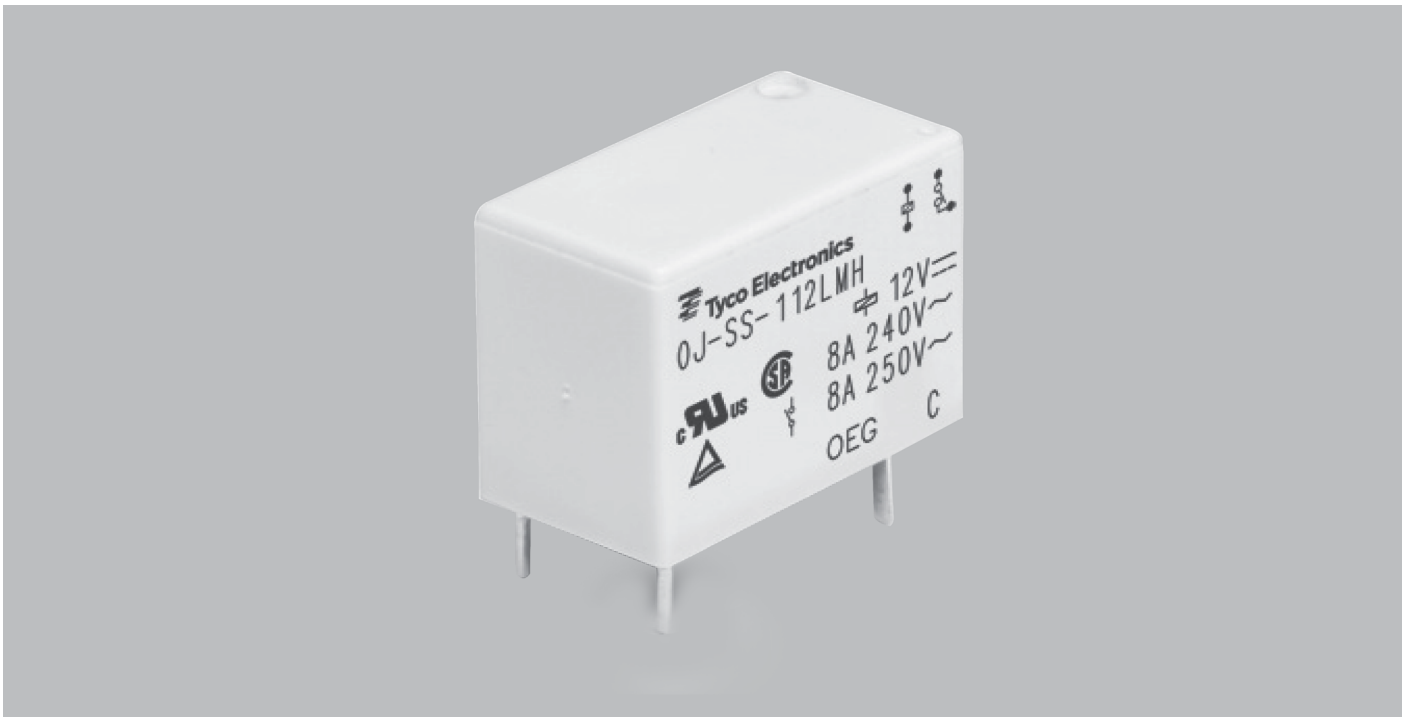


MINIATURE PCB RELAY OJ/OJE

- 1 Pole, 1 Form A (NO) Contact
- 3-10A contact rating
- Small size with outline dimension if 18.2L*10.2W*14.7H(mm)
- 4000Vrms coil contact di-electric 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

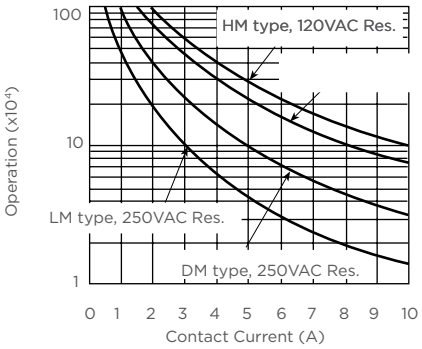
Coil versions, DC coil, OJ/OJE-L sensitive type

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil Resistance Ω±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

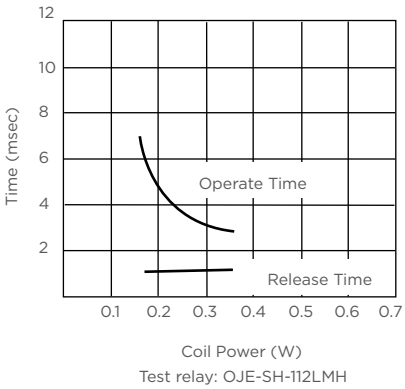
Coil versions, DC coil, OJ/OJE-D and -H type

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil Resistance Ω±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

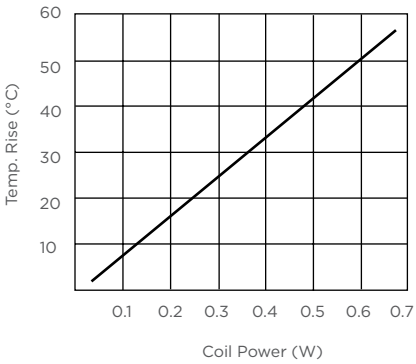


Operate time



Test relay: OJE-SH-112LMH

Coil temperature rise



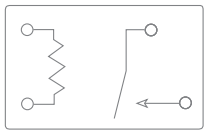
Insulation Data

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

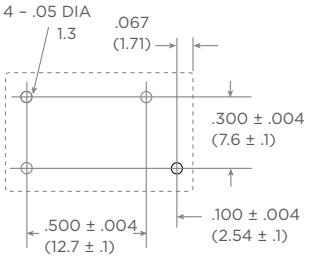
Other Data

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

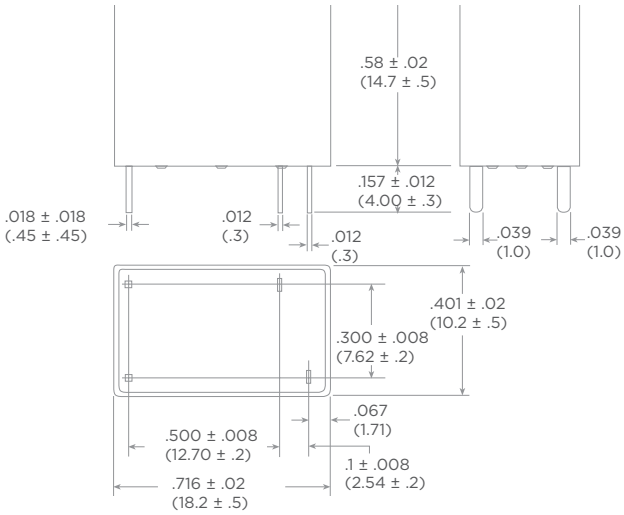
Terminal assignment
Bottom view on solder pins



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 complaint: 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							Flux proof
OJ-SS-124LM,000	3-1419129-1			24VDC				
OJ-SH-105LM,000	1461404-1			5VDC				Wash tight
OJ-SH-112LM,000	1461404-6			12VDC				
OJE-SH-112DM,00E0W	2071369-1	5A			450mW	EX-version		
OJE-SH-105DM,000	1461400-1			5VDC		standard		
OJE-SS-112DM,000	4-1419128-2			12VDC				Flux proof
OJE-SH-124DM,000	1461400-5			24VDC				Wash tight
OJ-SH-112DM,000	1461406-4			12VDC				
OJ-SH-105LMH,000	8-1419128-1	8A	AgCdO	5VDC	200mW			
OJ-SH-112LMH,000	9-1419128-8			12VDC				
OJ-SS-112LMH2	1721260-5		AgSnO					Flux proof
OJ-SS-112LMH2-WG	1721874-5					WG version		
OJ-SS-124LMH2	1721260-6			24VDC		standard		
OJE-SH-105LMH,000	1461403-3		AgCdO	5VDC				Wash tight
OJE-SH-112LMH,000	1461403-4			12VDC				
OJE-SS-112LMH2	1721261-5		AgSnO					Flux proof
OJE-SH-105HM,000	1461402-4	10A	AgCdO	5VDC	450mW			Wash tight
OJE-SH-112HM,000	1461402-6			12VDC				
OJE-SS-112HM2,000	1721539-5		AgSnO					Flux proof
OJE-SS-112HMF,F000	4-1419128-4		AgCdO					
OJE-SS-124HMF,F000	6-1419128-6			24VDC				
OJ-SS-112HM6-WG,00000	2071398-1		AgSnO	12VDC		WG version		
OJ-SS-124HM2,000	1721538-7			24VDC		standard		
OJE-SH-112HMF,00E0W	2071370-1		AgCdO	12VDC		EX-version		Wash tight
OJ-SS-112LMH2-WEX1,00000	2071404-1	8A	AgSnO		200mW	EX-version + WG		Flux proof
OJ-SH-112HM2-WG,00000	2071505-1	10A		12V	450mW	WG version		Wash tight

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