

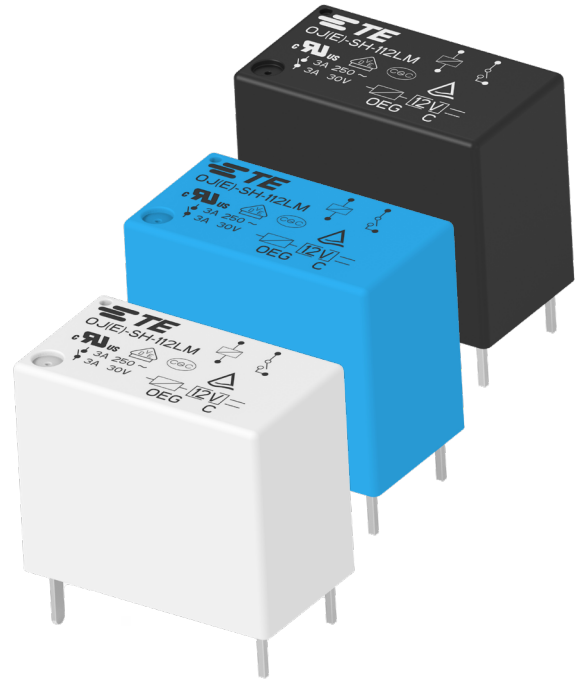
MINIATURE PCB RELAY OJ/OJE

INTRODUCTION

TE Connectivity (TE)'s Miniature Power PCB Relays OJ & OJE is general purpose relay designed for various types of loads (e.g., resistive, inductive) with compact size. The relay is designed as 1 form A contact arrangement with different contact rating current from 3A to 10A, also sensitive coil, WG version and Haz-Loc version are available.

FEATURES

- 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 di-electric strength (OJ type)
- Sensitive coil optional (200mW type);
- WG version, Anti-Ex version (Haz-Loc version) optional



APPLICATIONS

- Major home appliances
- Small appliances
- HVAC
- Industrial control

APPROVALS

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



MINIATURE PCB RELAY OJ/OJE

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 ₂ , AgCdO
Initial contact resistance	100 milliohms @ 1A, 6VDC
Minimum 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 85°C 60k ops, 10 LRA / 1.5 FLA, 120VAC, 100k ops
OJ/OJE-LMH	8A 277VAC res, 70°C 100k ops (SS), 6.6 LRA / 1.1 FLA, 120VAC, 105°C 100k ops
OJ/OJE-LMH2	8A 250VAC res, 85°C 30k ops, 12 LRA / 2 FLA 250VAC, 85°C 100k ops
OJ/OJE-HM	10A 250VAC, general use, 30k ops (SH type), 18 LRA / 4 FLA, 240VAC, 85°C 100k ops, 7.5A 240VAC res, 105°C 100k ops (SS)
OJ/OJE-HM2	10A 250VAC res, 100k ops (SS type), 7.5A 240VAC res, 105°C 100k ops (SS type)
OJ/OJE-HM6	10A 250VAC res, 85°C 50k ops (OJ WG type only), 7.5A 240VAC res, 105°C 100k ops
VDE	
OJ/OJE-LM	3A 250VAC res, 55°C 100k ops
OJE-DM	5A 250VAC res, 85°C 50k ops
OJ/OJE-LMH	8A 250VAC res, 85°C 10k ops
OJ-LMH2	8A 250VAC res, 85°C 25k ops
OJ-LMH2	5A 250VAC res, 105°C 50k ops
OJE-HM	10A 250VAC res, 85°C 30k ops
OJ-HM	10A 250VAC res, 85°C 10k ops
OJ-HM2	10A 250VAC res, 85°C 50k ops
Mechanical endurance, DC coil	10x10 ⁶ operations

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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

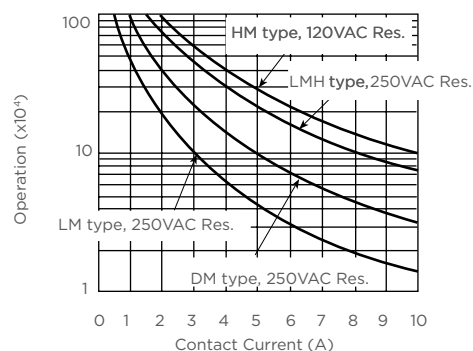
All figures are given for coil without pre-energization, at ambient temperature +23°C

COIL VERSIONS, DC COIL, OJ/OJE-D&H SENSITIVE TYPE

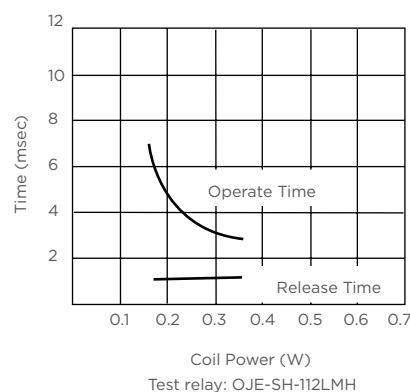
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance $\Omega \pm 10\%$	Rated coil power mW
003	3	2.25	0.3	20	450
005	5	3.75	0.5	55.5	450
006	6	4.5	0.6	80	450
009	9	6.75	0.9	180	450
012	12	9	1.2	320	450
024	24	18	2.4	1280	450
036	36	27	3.6	2880	450
048	48	36	4.8	5120	450

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

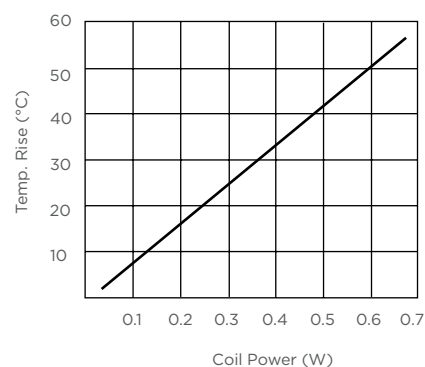
Electrical endurance



Operate time



Coil temperature rise



MINIATURE PCB RELAY OJ/OJE

INSULATION DATA

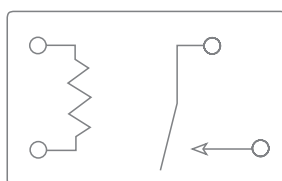
Initial dielectric strength	
Between open contacts	750Vrms
Between contact and coil	OJ: 4000Vrms
	OJE: 3000Vrms
Clearance/creepage	
Between contact and coil	OJ: > 7.7mm / 9.4mm
Between contact and coil	OJE: > 3.2mm / 3.6mm
Tracking index of relay base	PTI 250

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

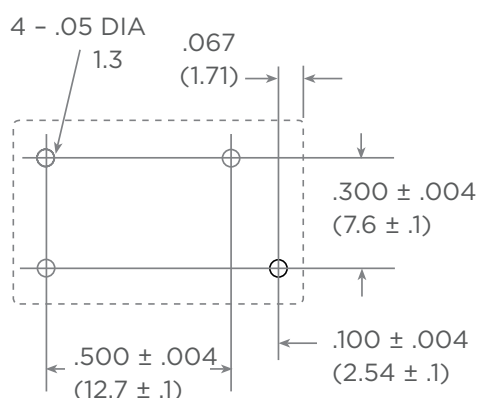
TERMINAL ASSIGNMENT

Bottom view on solder pins



PCB LAYOUT

Bottom view on solder pins



DIMENSIONS (Unit: mm)

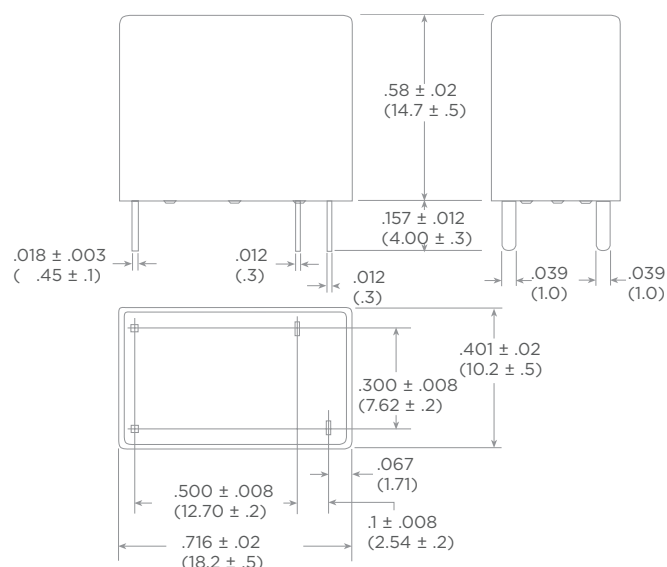
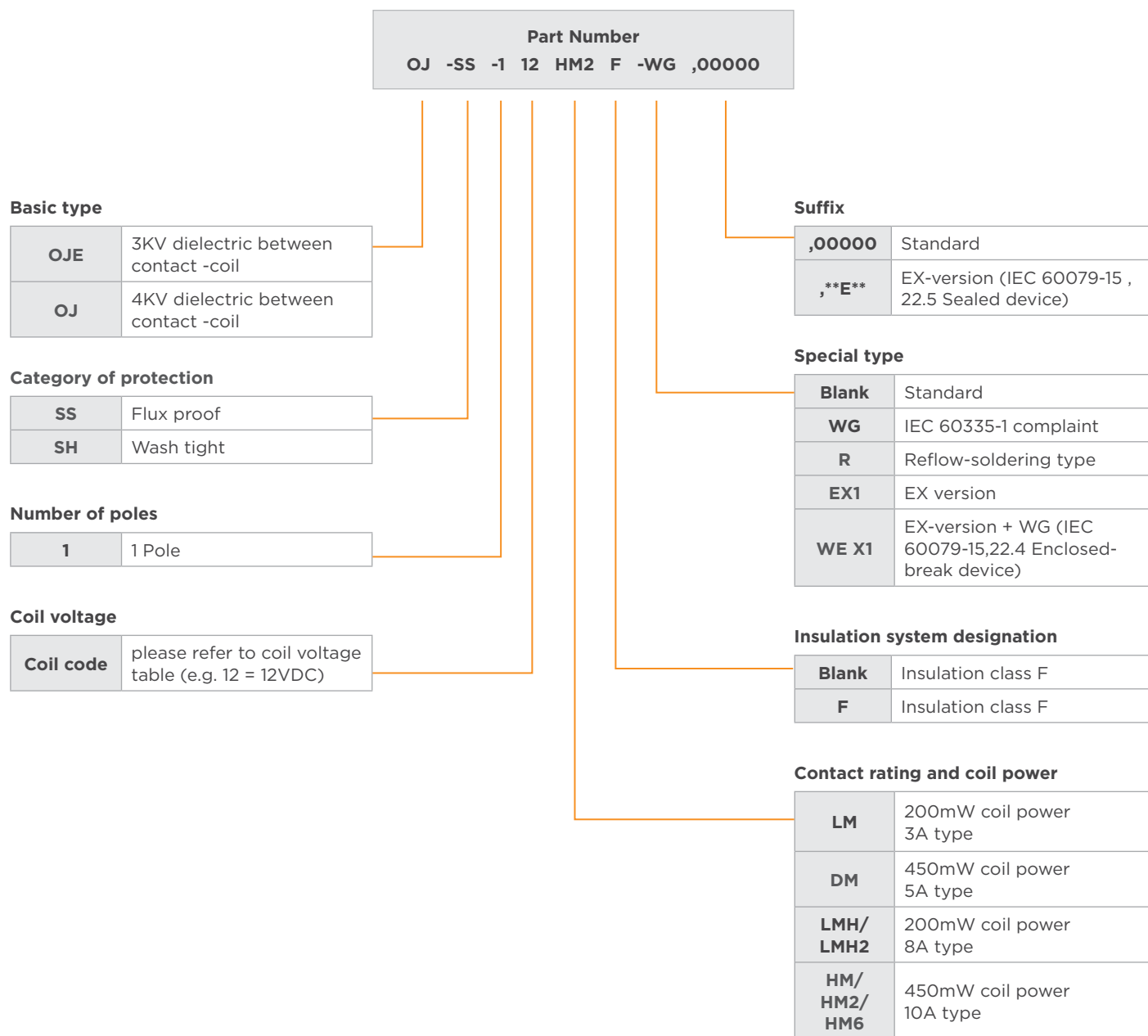


Diagram dimension	Tolerance
0.99mm max.	±0.1 mm
1-2.9mm	±0.2 mm
3mm min.	±0.3 mm

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ORDERING INFORMATION



MINIATURE PCB RELAY OJ/OJE

PRODUCT INFORMATION

Product Code	Rating	Contact Material	Coil voltage	Coil powder	Type	Insulation	Enclosure	Part Number		
OJE-SH-112LM,000	3 A	AgNi	12 VDC	200 mW	Standard	Class F	Wash tight	1461401-5		
OJ-SS-112LM,000			Flux proof				2-1419129-1			
OJ-SS-124LM,000							3-1419129-1			
OJE-SS-112LM,000							4-1419128-6			
OJ-SH-105LM,000			Wash tight				1461404-1			
OJ-SH-112LM,000	1461404-6									
OJE-SH-112DM,00E0W	2071369-1									
OJE-SH-105DM,000	5 A		5 VDC	450 mW	EX-version		1461400-1			
OJE-SS-112DM,000			12 VDC				Flux proof	4-1419128-2		
OJE-SH-124DM,000			24 VDC				Wash tight	1461400-5		
OJ-SH-112DM,000			12 VDC					1461406-4		
OJ-SH-105LMH,000		8 A	AgCdO					5 VDC	200 mW	WG version
OJ-SH-112LMH,000	12 VDC			9-1419128-8						
OJ-SS-112LMH2	AgSnO2		24 VDC	Standard	Flux proof		1721260-5			
OJ-SS-112LMH2-WG			5 VDC				1721874-5			
OJ-SS-124LMH2	AgCdO		12 VDC	WG version	Wash tight		1721260-6			
OJE-SH-105LMH,000			24 VDC				1461403-3			
OJE-SH-112LMH,000	AgSnO2		5 VDC	Standard	Flux proof		1461403-4			
OJE-SS-112LMH2			12 VDC				1721261-5			
OJE-SH-105HM,000	10 A	AgCdO	5 VDC	450 mW	Standard		Wash tight	1461402-4		
OJE-SH-112HMF,000M0			AgSnO2					12 VDC	Flux proof	1-1461402-1
OJE-SH-112HM,000								24 VDC		1461402-6
OJE-SS-112HM2,000		AgCdO					12 VDC	1721539-5		
OJE-SS-112HM2.000T0			24 VDC				1-1721539-7			
OJE-SS-112HMF,F000			5 VDC				4-1419128-4			
OJE-SS-124HMF,F000		AgSnO2	12 VDC				WG version	Wash tight	6-1419128-6	
OJ-SS-112HM6-WG,00000			24 VDC						2071398-1	
OJ-SS-124HM2,000			12 VDC						1721538-7	
OJE-SH-112HMF,00E0W		AgCdO			EX-version		Wash tight	2071370-1		
OJ-SS-112LMH2-WEX1,00000	8 A	AgSnO2	12 VDC	200 mW	EX-version + WG		Flux proof	2071404-1		
OJ-SH-112HM2-WG,00000	10 A		12 V	450 mW	WG version		Wash tight	2071505-1		

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