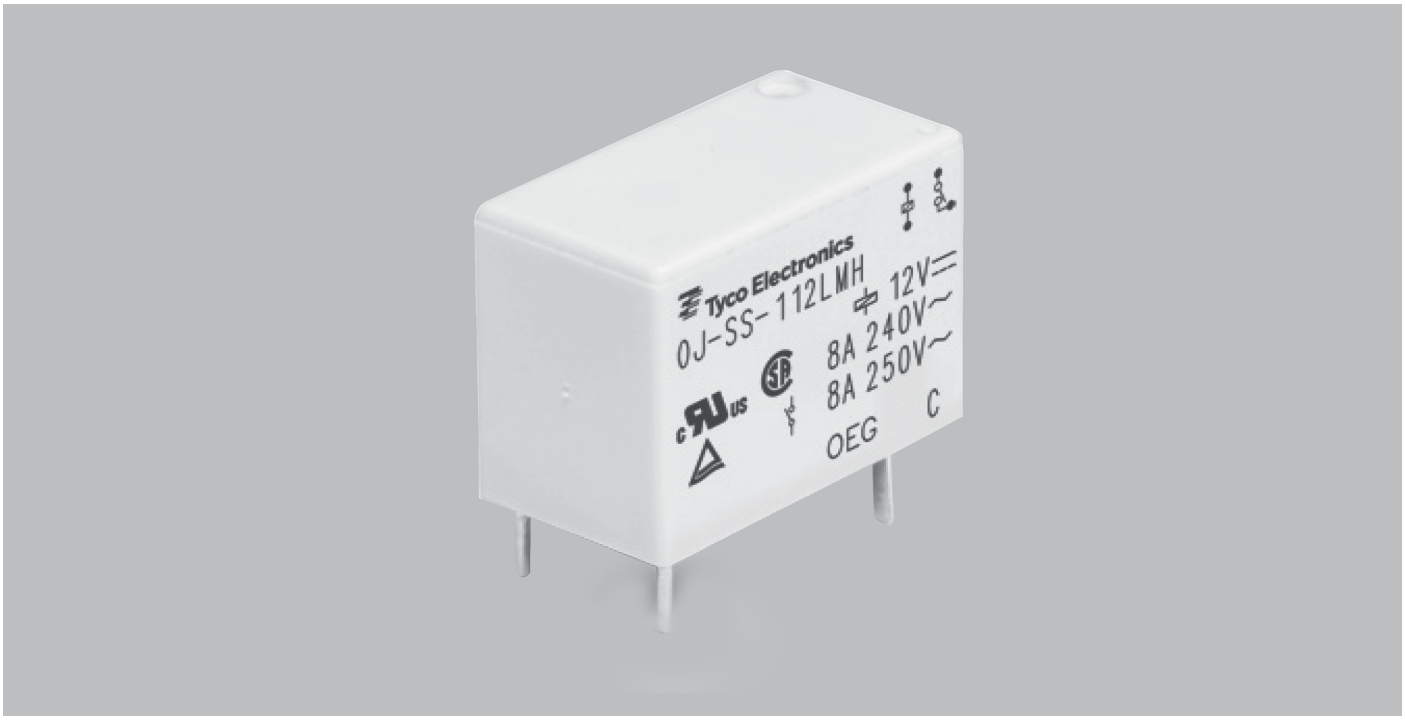


MINIATURE PCB RELAY OJ/OJE

- 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

Downloaded from Arrow.com.

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

Downloaded from Arrow.com.

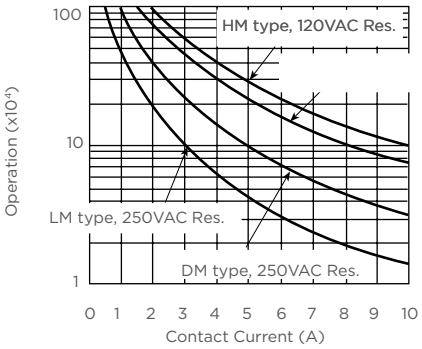
Coil versions, DC coil, OJ/OJE-L sensitive type

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

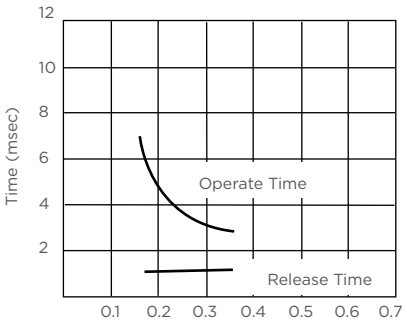
Coil versions, DC coil, OJ/OJE-D and -H type

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

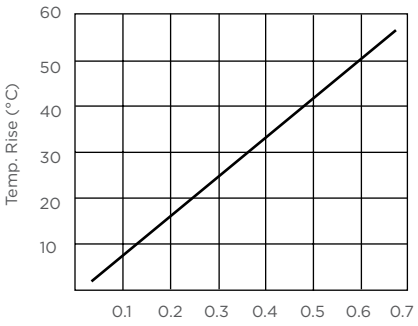


Operate time



Test relay: OJE-SH-112LMH

Coil temperature rise



Downloaded from Arrow.com.

Insulation Data

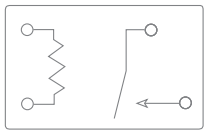
Initial dielectric strength	
Between open contacts	750Vrms
Between contact and coil	OJ: 4000Vrms
	OJE: 3000Vrms
Clearance/creepage	
Between contact and coil	OJ: > 7.7mm / 9.4mm
Between contact and coil	OJE: > 3.2mm / 3.6mm
Tracking index of relay base	PTI 250

Other Data

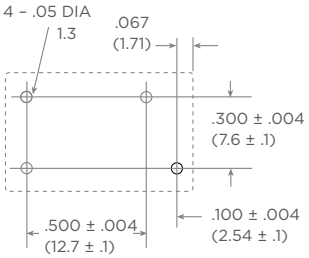
Material compliance	EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter
Ambient temperature	
LM	-40 ~ +105C
DM	-40 ~ +85C
LMH(2)	-40 ~ +105C
HM(2)/HM6	-40 ~ +105C
Category of environmental protection	
IEC 61810	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

Downloaded from Arrow.com.

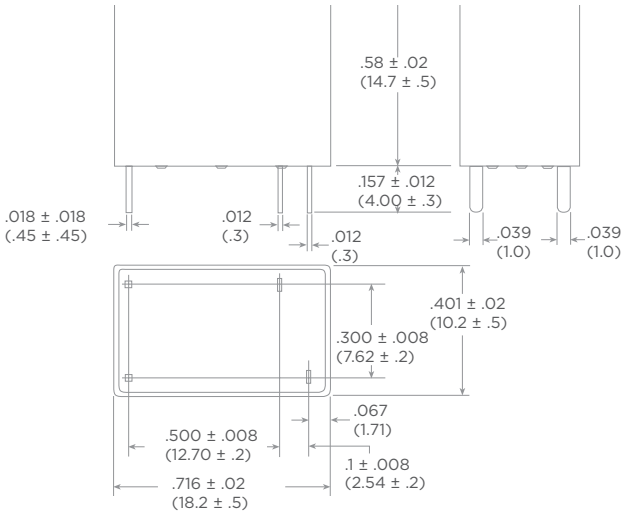
Terminal assignment
Bottom view on solder pins



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)							

Downloaded from Arrow.com.

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

te.com

TE Connectivity, TE Connectivity (logo) and Every Connection Counts are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2020 TE Connectivity Ltd. family of companies All Rights Reserved.

11/20 Original

Downloaded from Arrow.com.