Справочный раздел

Интернет Портала «Радиодар»

ТЕХНИЧЕСКИЙ СПРАВОЧНИК

«Реле электромагнитное OMIH-SS-124L производства фирмы TE Connectivity»

Версия:	1
Ревизия:	1.0.0
Дата:	2013 г.

«Радиодар»

2024

OMI/OMIH series

16A Miniature Power PC Board Relay

Appliances, HVAC, Office Machines.

UL File No. E58304
CSA File No. LR48471
VDE File No. 6678
SEMKO File No. 9517235 (OMI)
9143112 (OMIH)

Users should thoroughly review the technical data before selecting a product part number. It is recommended that user also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

Features

- Meet UL 508, VDE0435 and SEMKO requirements.
- 1 Form A and 1 Form C contact arrangements.
- Immersion cleanable, sealed version available.
- Meet 5,000V dielectric voltage between coil and contacts.
- Meet 10,000V surge voltage between coil and contacts (1.2 / 50µs).

Contact Data @ 20°C

Arrangements: 1 Form A (SPST-NO) and 1 Form C (SPDT).
Material: Ag Alloy (OMI), AgSnO (OMIH).
Max. Switching Rate: 300 ops./min. (no load).
30 ops./min. (rated load).
Expected Mechanical Life: 10 million operations (no load).
Expected Electrical Life: 100,000 operations (rated load).
Minimum Load: 100mA @ 5VDC.
Initial Contact Resistance: 100 milliohms @ 1A, 6VDC.

Contact Ratings

Ratings: OMI: 10A @ 240VAC resistive,
10A @ 30VDC resistive,
3A @ 240VAC inductive (cosø= 0.4),
3A @ 30VDC inductive (L/R=7msec).
OMIH: 16A @ 240VAC resistive,
16A @ 30VDC resistive,
4A @ 240VAC inductive (cosø= 0.4),
4A @ 24VDC inductive (L/R=7msec).

Max. Switched Voltage: AC: 250V.
DC: 30V.
Max. Switched Current: 10A (OMI), 16A (OMIH).
Max. Switched Power: OMI: 2,400VA, 300W.
OMIH: 3,800VA, 480W.

Initial Dielectric Strength

Between Open Contacts: 1,000VAC 50/60 Hz. (1 minute).
Between Coil and Contacts: 5,000VAC 50/60 Hz. (1 minute).
Surge Voltage Between Coil and Contacts: 10,000V (1.2 / 50µs).

Initial Insulation Resistance

Between Mutually Insulated Elements: 1,000M ohms min. @ 500VDC.

Coil Data

Voltage: 5 to 48VDC.
Nominal Power: 720 mW (OMI-D), 540mW (OMI-L).
Coil Temperature Rise: 45°C max., at rated coil voltage.
Max. Coil Power: 130% of nominal.
Duty Cycle: Continuous.

Coil Data @ 20°C

OMI/OMIH-L Sensitive				
Rated Coil Voltage (VDC)	**Nominal Current (mA)**	**Coil Resistance (ohms) ± 10%**	**Must Operate Voltage (VDC)**	**Must Release Voltage (VDC)**
5	106.4	47	3.75	0.50
6	88.0	68	4.50	0.60
9	58.0	155	6.75	0.90
12	44.4	270	9.00	1.20
24	21.8	1,100	18.00	2.40
48	10.9	4,400	36.00	4.80
OMI/OMIH-D Standard				
Rated Coil Voltage (VDC)	**Nominal Current (mA)**	**Coil Resistance (ohms) ± 10%**	**Must Operate Voltage (VDC)**	**Must Release Voltage (VDC)**
5	138.9	36	3.50	0.50
6	120.0	50	4.20	0.60
9	78.3	115	6.30	0.90
12	60.0	200	8.40	1.20
24	29.3	820	16.80	2.40
48	14.5	3,300	33.60	4.80

Operate Data

Must Operate Voltage:
OMI/OMIH-D: 70% of nominal voltage or less.
OMI/OMIH-L: 75% of nominal voltage or less.
Must Release Voltage: 5% of nominal voltage or more.
Operate Time: OMI/OMIH-D: 15 ms max.
OMI/OMIH-L: 20 ms max.
Release Time: 8 ms max.

Environmental Data

Temperature Range:
Operating: OMI/OMIH-D:
-30°C to +55°C
OMI/OMIH-L:
-30°C to +70 °C
Vibration, Mechanical: 10 to 55 Hz., 1.5mm double amplitude
Operational: 10 to 55 Hz., 1.5mm double amplitude.
Shock, Mechanical: 1,000m/s² (100G approximately).
Operational: 100m/s² (10G approximately).
Operating Humidity: 20 to 85% RH. (Non-condensing).

Mechanical Data

Termination: Printed circuit terminals.
Enclosure (94V-0 Flammability Ratings):
OMI/OMIH-SS: Vented (Flux-tight) plastic cover.
OMI/OMIH-SH: Sealed plastic case.
Weight: 0.46 oz (13g) approximately.

Ordering Information

Typical Part Number ▶	OMIH	-SH	-1	24	L	,294

1. Basic Series:
OMI = 10A rating OMIH = 16A rating

2. Enclosure:
SS = Vent (Flux-tight)* plastic cover.
SH = Sealed, plastic case.

3. Termination:
1 = 1 pole

4. Coil Voltage:
05 = 5VDC 09 = 9VDC 24 = 24VDC
06 = 6VDC 12 = 12VDC 48 = 48VDC

5. Coil Input:
D = Standard (720mW) L = Sensitive (540mW)

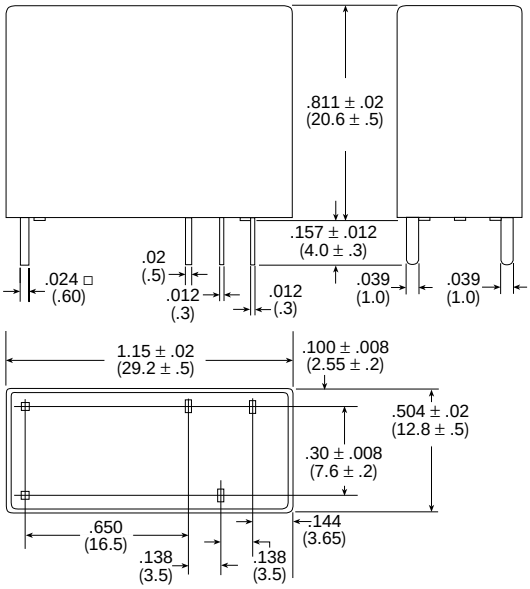
6. Contact Arrangement:
Blank = 1 Form C, SPDT M = 1 Form A, SPST-NO

7. Suffix:
,300 = Standard model for "SS" enclosure ,394 = Standard model for "SH" enclosure Other Suffix = Custom model

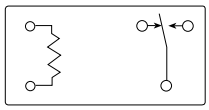
Our authorized distributors are more likely to stock the following items for immediate delivery.

OMIH-SH-105D,394 OMIH-SH-105L,394
OMIH-SH-112D,394 OMIH-SH-112L,394
OMIH-SH-124D,394 OMIH-SH-124L,394

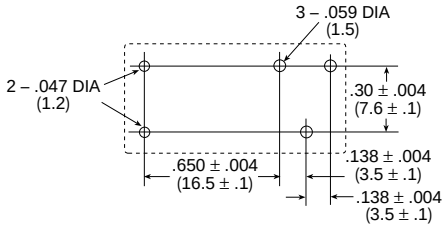
Outline Dimensions



Wiring Diagram (Bottom View)

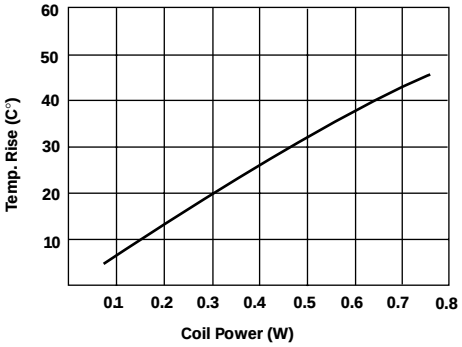


PC Board Layout (Bottom View)

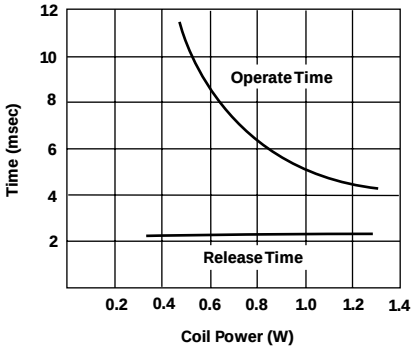


Reference Data

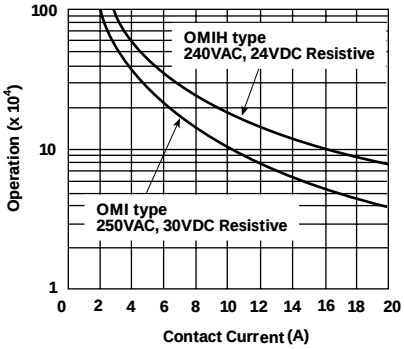
Coil Temperature Rise



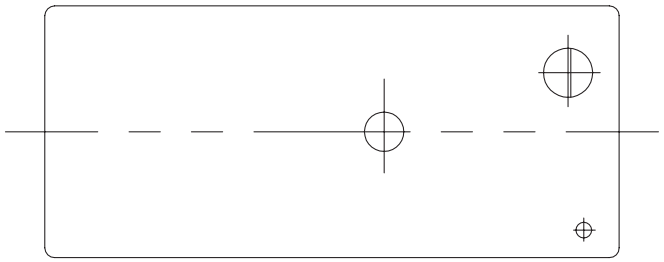
Operate Time

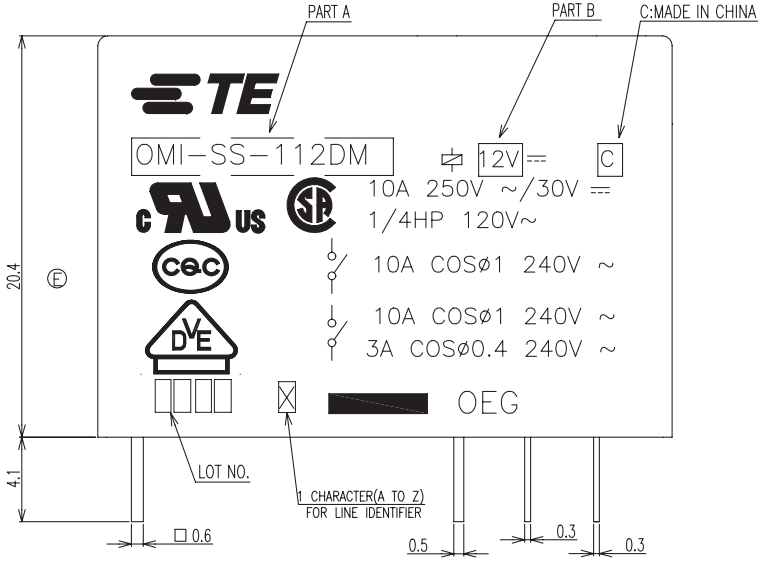


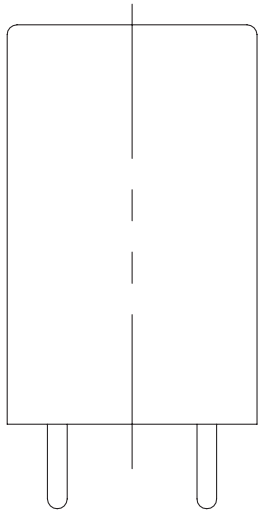
Life Expectancy

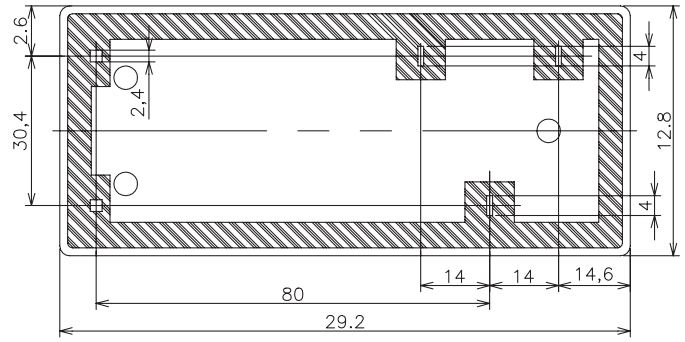


REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	E	BASE MATERIAL CHANGE TO PBT, DIMENSION CHANGE, CANCEL SEMKO MARK. ECN-21-117512	08-SEP-21	XR.L	K.T

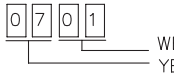








NOTES:
1.-SS-:PLASTIC SEALD TYPE
2.LOT NO. SYSTEM AS FOLLOWING:



3.GENERAL TOLERANCE AS FOLLOWING:

TOLERANCE	
0~0.99mm	±0.1
1mm~2.99mm	±0.2
3mmMIN.	±0.3

4.TERMINAL DIMENSION IS NOT INCLUDING SOLDER TIP.
FOR THE TIN-PLATING OF THE PINS:
+0.1mm FOR WIDTH,THICKNESS AND DIAMETER.
+0.5mm FOR LENGTH.

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ± –
1 PLC ± –
2 PLC ± –
3 PLC ± –
4 PLC ± –
ANGLES ± –

MATERIAL –
FINISH –

DWN	H.SASAKI
CHK	Y.OIKAWA –
APVD	A.NAGAI
PRODUCT SPEC	–
APPLICATION SPEC	–
WEIGHT	–

TE Connectivity

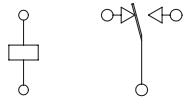
NAME
–
OMI-SS-D/L CUSTOMER DRAWING
–

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A3	00779	C-8-1419144-0	–

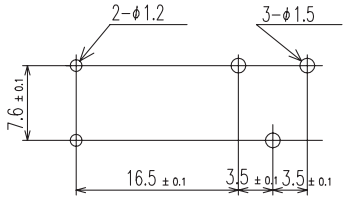
CUSTOMER DRAWING | SCALE 1:1 | SHEET 1 OF 2 | REV E

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD

CONNECTION DIAGRAM
(BOTTOM VIEW)



DRILLING DIAGRAM(2/1)
(BOTTOM VIEW)



PART NO	TE TYPE NAME	PART B	PART A
6-1419122-5	OMI-SS-148L	48V	OMI-SS-148L
8-1419144-7	OMI-SS-148D	48V	OMI-SS-148D
8-1419144-5	OMI-SS-136D	36V	OMI-SS-136D
6-1419122-0	OMI-SS-124L	24V	OMI-SS-124L
5-1419122-8	OMI-SS-124D	24V	OMI-SS-124D
5-1419122-3	OMI-SS-112L	12V	OMI-SS-112L
5-1419122-1	OMI-SS-112D	12V	OMI-SS-112D
5-1419122-0	OMI-SS-109L	9V	OMI-SS-109L
4-1419122-8	OMI-SS-106L	6V	OMI-SS-106L
8-1419144-2	OMI-SS-106D	6V	OMI-SS-106D
4-1419122-6	OMI-SS-105L	5V	OMI-SS-105L
8-1419144-0	OMI-SS-105D	5V	OMI-SS-105D

RELAY TYPE

ITEM	DESCRIPTION	MATERIAL	TREATMENT	INCOMBUSTIBILITY
17	RESIN	EPOXY RESIN		
16	CASE	PBT		UL94 V-0
15	TAPE	—		
14	MAGNETIC WIRE	UEW		CLASS E
13	BASE	PBT Ⓔ		UL94 V-0
12	BOBBIN	PBT		UL94 V-0
11	COIL TERMINAL	CP WIRE	SOLDER DIP	
10	CARD	PPS		UL94 V-0
9	MOVABLE CONTACT	Ag ALLOY		
8	STATIONARY CONTACT	Ag ALLOY		
7	HINGE SPRING	Cu ALLOY		
6	B TERMINAL	Cu ALLOY	SOLDER DIP	
5	M TERMINAL	Cu ALLOY	SOLDER DIP	
4	MOVABLE SPRING	Cu ALLOY	SOLDER DIP	
3	CORE	STEEL		
2	ARMATURE	STEEL		
1	YOKE	STEEL		

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DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ± –
1 PLC ± –
2 PLC ± –
3 PLC ± –
4 PLC ± –
ANGLES ± –

MATERIAL: –
FINISH: –

DWN: H.SASAKI
CHK: Y.OIKAWA –
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PRODUCT SPEC: —
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WEIGHT: —

TE Connectivity

NAME: – OMI-SS-D/L CUSTOMER DRAWING –

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A3	00779	Ⓒ-8-1419144-0	—

CUSTOMER DRAWING | SCALE 1:1 | SHEET 2 OF 2 | REV E