

## Power PCB relay OMI/OMIH

- 1pole 10/16A, 1 form A (NO) or 1 form C (CO) contact
- Meet 5000V dielectric voltage between coil and contacts
- Meet 10000V surge voltage between coil and contacts

Typical applications  
Home appliances, office machines



### Approvals

VDE 40005414, UL E58304, CSA LR48471, SEMKO 613298(OMI), SEMKO 903200(OMIH), CQC 08001024660

Technical data of approved types on request

| Contact Data                              | OMI                                       | OMIH                 |
|-------------------------------------------|-------------------------------------------|----------------------|
| Contact arrangement                       | 1 form A (NO), 1 form C (CO)              |                      |
| Rated voltage                             | 250VAC                                    |                      |
| Max. switching voltage                    | 30VDC, 250VAC                             |                      |
| Rated current                             | 10A                                       | 16A                  |
| Switching power                           | 2500VA, 300W                              | 4000VA, 480W         |
| Contact material                          | AgSnO                                     |                      |
| Min. recommended contact load             | 100mA, 5VDC                               |                      |
| Initial contact resistance                | 100mOhm at 1A 6VDC                        |                      |
| Frequency of operation, with/without load | 1800/18000h <sup>-1</sup>                 |                      |
| Operate/release time max.                 |                                           |                      |
| standard coil:                            | 15/8ms                                    |                      |
| sensitive coil:                           | 20/8ms                                    |                      |
| Electrical endurance                      |                                           |                      |
| OMI : NO 10A, 250VAC, resistive,          | 100x10 <sup>3</sup> ops.                  |                      |
| OMIH : NO 16A, 250VAC, resistive,         | 100x10 <sup>3</sup> ops.                  |                      |
| OMI : NC 5A, 250VAC, resistive,           | 100x10 <sup>3</sup> ops.                  |                      |
| OMIH : NC 8A, 250VAC, resistive,          | 100x10 <sup>3</sup> ops.                  |                      |
| Contact ratings                           | 10A,<br>250VAC (NO)<br>5A,<br>250VAC (NC) | 16A,<br>250VAC/30VDC |
| Mechanical endurance                      | 10x10 <sup>6</sup> operations             |                      |

### Coil Data

|                                     |               |
|-------------------------------------|---------------|
| Coil voltage range                  | 5 to 48VDC    |
| Coil insulation system according UL | class 105 (A) |

### Coil Data (continued)

#### Coil versions, DC coil

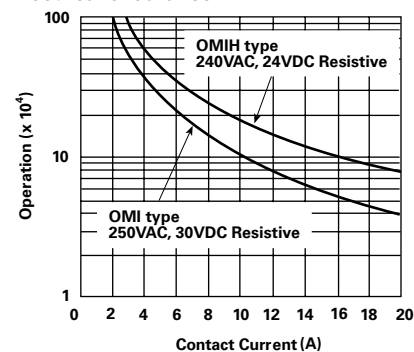
| Coil code                    | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance $\Omega \pm 10\%$ | Rated coil power mW |
|------------------------------|-------------------|---------------------|---------------------|-----------------------------------|---------------------|
| <b>Standard coil, 720mW</b>  |                   |                     |                     |                                   |                     |
| 05                           | 5                 | 3.5                 | 0.25                | 36                                | 720                 |
| 06                           | 6                 | 4.2                 | 0.3                 | 48.5                              | 720                 |
| 09                           | 9                 | 6.3                 | 0.45                | 115                               | 720                 |
| 12                           | 12                | 8.4                 | 0.6                 | 200                               | 720                 |
| 24                           | 24                | 16.8                | 1.2                 | 820                               | 720                 |
| 48                           | 48                | 33.6                | 2.4                 | 3300                              | 720                 |
| <b>Sensitive coil, 540mW</b> |                   |                     |                     |                                   |                     |
| 05                           | 5                 | 3.75                | 0.25                | 48.5                              | 540                 |
| 06                           | 6                 | 4.5                 | 0.3                 | 68                                | 540                 |
| 09                           | 9                 | 6.75                | 0.45                | 155                               | 540                 |
| 12                           | 12                | 9.0                 | 0.6                 | 270                               | 540                 |
| 24                           | 24                | 18.0                | 1.2                 | 1100                              | 540                 |
| 48                           | 48                | 36.0                | 2.4                 | 4400                              | 540                 |

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

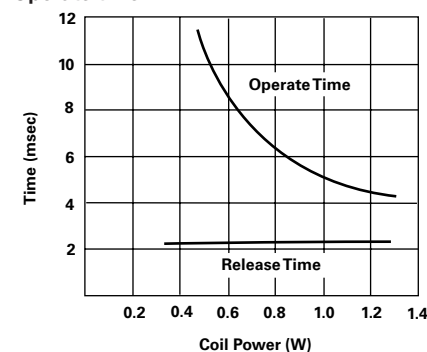
### Insulation Data

|                                 |                       |
|---------------------------------|-----------------------|
| Initial dielectric strength     |                       |
| between open contacts           | 1000V <sub>rms</sub>  |
| between contact and coil        | 5000V <sub>rms</sub>  |
| Initial surge withstand voltage |                       |
| between contact and coil        | 10000V                |
| Initial insulation resistance   | 1000M $\Omega$        |
| Clearance/creepage              |                       |
| between contact and coil        | $\geq 5.5/8\text{mm}$ |

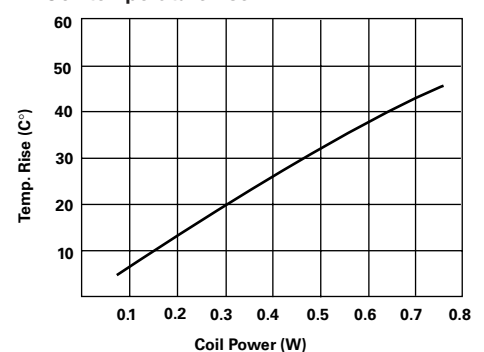
### Electrical endurance



### Operate time



### Coil temperature rise



**Power PCB relay OMI/OMIH** (Continued)

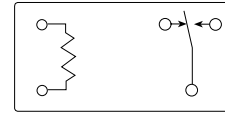
**Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at [www.te.com/customersupport/rohssupportcenter](http://www.te.com/customersupport/rohssupportcenter)

|                                      |                                          |
|--------------------------------------|------------------------------------------|
| Ambient temperature                  |                                          |
| standard coil                        | -30 to 60°C                              |
| sensitive coil                       | -30 to 70°C                              |
| Category of environmental protection |                                          |
| IEC 61810                            | RTII - flux proof,<br>RTIII - wash tight |
| Vibration resistance (functional)    | 10 to 50Hz, 1.5mm double amplitude       |
| Shock resistance (functional)        |                                          |
| IEC 60068-2-27 (half sine)           | 98m/s <sup>2</sup> , 11ms                |
| Terminal type                        | PCB-THT                                  |
| Weight                               | 13g                                      |
| Resistance to soldering heat THT     |                                          |
| IEC 60068-2-20                       | 260°C/5s                                 |
| Packaging/unit                       | box/1000 pcs.                            |

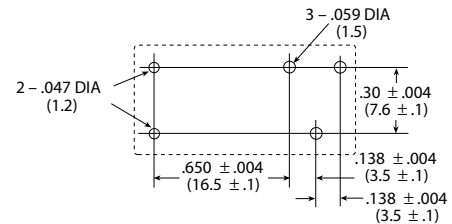
**Terminal assignment**

Bottom view on solder pins

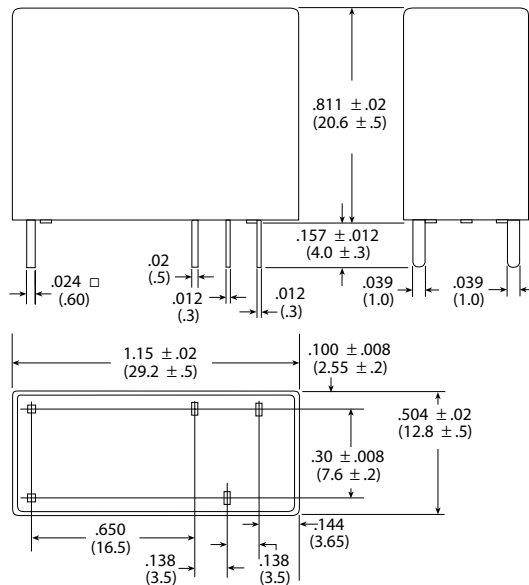


**PCB layout**

Bottom view on solder pins



**Dimensions**



**Product code structure**

Typical product code

**OMI -SS -1 12 D 1 ,300**

|                     |                                                |                                              |
|---------------------|------------------------------------------------|----------------------------------------------|
| Type                | OMI / OMIH Power PCB Relay OMI / OMIH          |                                              |
| Sealing             | SS Flux proof                                  | SH Wash tight                                |
| Pole                | 1 1pole                                        |                                              |
| Coil                | Coil code: please refer to coil versions table |                                              |
| Coil power          | D Standard 720mW                               | L Sensitive 540mW                            |
| Contact arrangement | 1 OMIH : 1 form C (CO) AgSnO                   | M1 OMI : 1form A (NO), AgSnO                 |
|                     | M OMIH : 1 form A (NO), AgSnO                  |                                              |
| Suffix              | Blank Standard (OMI)                           | 300 Standard OMIH, 1 form C (CO), flux proof |
|                     |                                                | 394 Standard OMIH, 1form A (NO), wash tight  |

**Power PCB relay OMI/OMIH** (Continued)

| Product code      | Version | Contact       | Cont.material | Coil power | Coil voltage | Sealing    | Part number |
|-------------------|---------|---------------|---------------|------------|--------------|------------|-------------|
| OMI-SS-105DM1     | 10A     | 1 form A (NO) | AgSnO         | 720mW      | 5VDC         | Flux proof | 1721129-3   |
| OMI-SS-112DM1     |         |               |               |            | 12VDC        |            | 1721129-9   |
| OMI-SS-124DM1     |         |               |               | 540mW      | 24VDC        |            | 1-1721129-3 |
| OMI-SS-105LM1     |         |               |               |            | 5VDC         |            | 1721129-4   |
| OMI-SS-112LM1     |         | 1 form C (CO) |               | 720mW      | 12VDC        |            | 1-1721129-0 |
| OMI-SS-124LM1     |         |               |               |            | 24VDC        |            | 1-1721129-4 |
| OMI-SS-105D1      |         |               |               | 540mW      | 5VDC         |            | 1721130-3   |
| OMI-SS-112D1      |         |               |               |            | 12VDC        |            | 1721130-9   |
| OMI-SS-124D1      |         | 1 form A (NO) |               | 720mW      | 24VDC        | Wash tight | 1-1721130-3 |
| OMI-SS-105L1      |         |               |               |            | 5VDC         |            | 1721130-4   |
| OMI-SS-112L1      |         |               |               | 540mW      | 12VDC        |            | 1-1721130-0 |
| OMI-SS-124L1      |         |               |               |            | 24VDC        |            | 1-1721130-4 |
| OMI-SH-105DM1     |         | 1 form C (CO) |               | 720mW      | 5VDC         |            | 1-1721129-9 |
| OMI-SH-112DM1     |         |               |               |            | 12VDC        |            | 2-1721129-5 |
| OMI-SH-124DM1     |         |               |               | 540mW      | 24VDC        |            | 2-1721129-9 |
| OMI-SH-105LM1     |         |               |               |            | 5VDC         |            | 2-1721129-0 |
| OMI-SH-112LM1     |         | 1 form A (NO) |               | 720mW      | 12VDC        |            | 2-1721129-6 |
| OMI-SH-124LM1     |         |               |               |            | 24VDC        |            | 3-1721129-0 |
| OMI-SH-105D1      |         |               |               | 540mW      | 5VDC         |            | 1-1721130-9 |
| OMI-SH-112D1      |         |               |               |            | 12VDC        |            | 2-1721130-5 |
| OMI-SH-124D1      |         | 1 form C (CO) |               | 720mW      | 24VDC        |            | 2-1721130-9 |
| OMI-SH-105L1      |         |               |               |            | 5VDC         |            | 2-1721130-0 |
| OMI-SH-112L1      |         |               |               | 540mW      | 12VDC        |            | 2-1721130-6 |
| OMI-SH-124L1      |         |               |               |            | 24VDC        |            | 3-1721130-0 |
| OMIH-SS-105DM,300 | 16A     | 1 form A (NO) |               | 720mW      | 5VDC         | Flux proof | 1461022-5   |
| OMIH-SS-112DM,300 |         |               |               |            | 12VDC        |            | 8-1440000-4 |
| OMIH-SS-124DM,300 |         |               |               | 540mW      | 24VDC        |            | 8-1440000-9 |
| OMIH-SS-105LM,300 |         |               |               |            | 5VDC         |            | 2-1419153-1 |
| OMIH-SS-112LM,300 |         | 1 form C (CO) |               | 720mW      | 12VDC        |            | 8-1440000-6 |
| OMIH-SS-124LM,300 |         |               |               |            | 24VDC        |            | 2-1419153-2 |
| OMIH-SS-105D1,300 |         |               |               | 540mW      | 5VDC         |            | 1721535-1   |
| OMIH-SS-112D1,300 |         |               |               |            | 12VDC        |            | 1721535-4   |
| OMIH-SS-124D1,300 |         | 1 form A (NO) |               | 720mW      | 24VDC        | Wash tight | 1721535-7   |
| OMIH-SS-105L1,300 |         |               |               |            | 5VDC         |            | 1721535-2   |
| OMIH-SS-112L1,300 |         |               |               | 540mW      | 12VDC        |            | 1721535-5   |
| OMIH-SS-124L1,300 |         |               |               |            | 24VDC        |            | 1721535-8   |
| OMIH-SH-105DM,394 |         | 1 form C (CO) |               | 720mW      | 5VDC         |            | 1-1461373-5 |
| OMIH-SH-112DM,394 |         |               |               |            | 12VDC        |            | 1-1461373-8 |
| OMIH-SH-124DM,394 |         |               |               | 540mW      | 24VDC        |            | 1-1461373-9 |
| OMIH-SH-105LM,394 |         |               |               |            | 5VDC         |            | 6-1440000-7 |
| OMIH-SH-112LM,394 |         | 1 form A (NO) |               | 720mW      | 12VDC        |            | 7-1440000-1 |
| OMIH-SH-124LM,394 |         |               |               |            | 24VDC        |            | 1461373-3   |
| OMIH-SH-105D1,300 |         |               |               | 540mW      | 5VDC         |            | 1-1721535-1 |
| OMIH-SH-112D1,300 |         |               |               |            | 12VDC        |            | 1-1721535-4 |
| OMIH-SH-124D1,300 |         | 1 form C (CO) |               | 720mW      | 24VDC        |            | 1-1721535-7 |
| OMIH-SH-105L1,300 |         |               |               |            | 5VDC         |            | 1-1721535-2 |
| OMIH-SH-112L1,300 |         |               |               | 540mW      | 12VDC        |            | 1-1721535-5 |
| OMIH-SH-124L1,300 |         |               |               |            | 24VDC        |            | 1-1721535-8 |

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