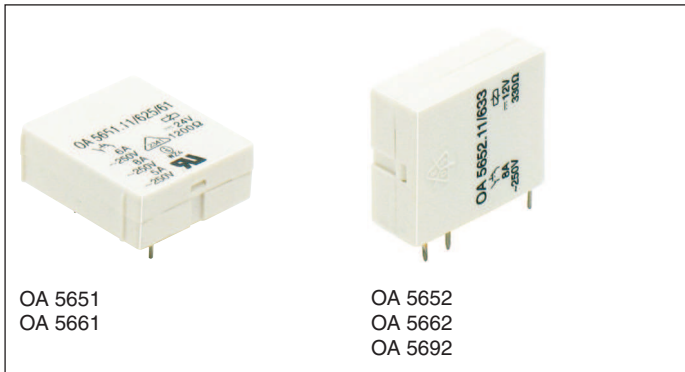


Printed Circuit Board Relays

monostable

OA 5651, OA 5652, OA 5661, OA 5662, OA 5692



- According to DIN EN 61810-1, DIN EN 60664-1
- Different pin configurations and pin arrangements
- Clearance and creepage distances:
contact-coil ≥ 8 mm
- Compact size, small height (horizontal model)
- OA 5651, 5661 horizontal models
- OA 5652, 5662, 5692 vertical models
- Solder line proof

Applications

- Control technique
- Interface

Approvals and Markings



Technical Data

| Relay type | | OA 5651, OA 5652, OA 5661, OA 5662, OA 5692 |
|--|--------------------|--|
| 1.0 Relay coil | | |
| 1.1 Nominal voltage | DC V | 6, 12, 15, 20, 24, 48, 60 (others on request) |
| 1.2 Nominal consumption | W | 0.48 |
| 1.11 Voltage range | U_N | 0.7 ... 1.8 |
| 1.13 Holding power (at 0.5 x U_N) | W | 0.12 |
| 2.0 Contacts | | |
| 2.1 Contact arrangement | | 1 changeover contact ¹⁾ |
| 2.2 Contact material | | AgSnO ₂ + 0.2 μ m Au; AgNi + 0.2 μ m Au |
| 2.3 Rated insulation voltage | AC V | 250 |
| Switching voltage min./max. | V | 10 / 400 |
| 2.4 Limiting continuous current I_{th} | A | 8 (see operating voltage limit curve) |
| Switching current min./max. | A | 10 mA ⁴⁾ / 10 ²⁾ |
| 2.5 Switching power min./max. | VA | 4 / 2000 |
| Switching power min./max. | W | 30 ... 250 (see limit curve for arc-free operation) |
| 2.6 Switching capacity to IEC/EN 60947-5-1 | | |
| AC 15 | | NC: 230 / 1; NO: 230 / 3 |
| DC 13 | AC V/A | NC: 24 / 1; NO: 24 / 1 |
| to UL 508 | DC V/A | B150 |
| 2.7 Electrical life | | at 1 s On, 1 s Off (see contacts service life) |
| at AC 250 V, 8 A, $\cos\phi = 1$ | switching cycles | $> 2 \times 10^5$ AgNi 10 $> 3 \times 10^5$ AgSnO ₂ |
| 2.8 Switching frequency max. | switching cycles/s | 20 |
| 2.9 Response time / Release time | ms | typically 5 / typically 7 |
| 2.10 Contact force | cN | > 25 / > 10 ³⁾ / > 8 ³⁾ |
| 2.14 Contact gap | mm | $> 0,5$ ²⁾ |
| 3.0 Other | | |
| 3.1 Mechanical life | switching cycles | 30×10^6 |
| 3.2 Temperature range | $^{\circ}$ C | - 40 ... + 80 |
| 3.3 Degree of protection | | Solder line proof RT II |
| 3.5 Vibration resistance | | ≥ 4 g, to max. 100 Hz, IEC/EN 60068-2-6 |
| 3.6 Climate resistance | | 40 / 080 / 04 (climate category); A/B/D IEC/EN 60068-1 |

¹⁾ NO and NC on request

²⁾ max. 4 s or 10 % ED

³⁾ at OA 5651, OA 5652

⁴⁾ Typical values

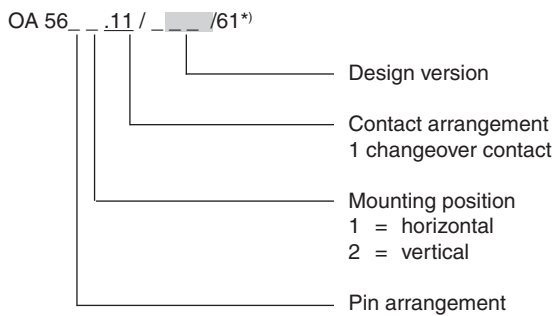
Technical Data

| | | | |
|--------------------------|--|------------|---------------------------|
| 3.8 | Insulation acc. to IEC 60664-1, EN 50178 | | |
| | Rated insulation voltage | AC V | 250 |
| | Pollution degree | | 3 |
| | Overtoltage category | | III |
| | Test voltage | | |
| | Contact- Coil (1 min) | AC kV eff. | ≥ 4 |
| | Transient voltage | | |
| | Contact- Coil (1,2 - 50 μs) | kV | ≥ 6 |
| | Clearance and creepage distances | mm | ≥ 8 |
| 3.9 | Weight | g | 13 |
| 4.0 Packing | | | |
| 4.1 | in blister | piece | 20 |
| 4.2 | in case package | piece | 200 |
| 5.0 Solder method | | | |
| 5.1 | Solder method /-temperature /-duration | °C / s | Wafer soldering / 260 / 5 |

Design Versions

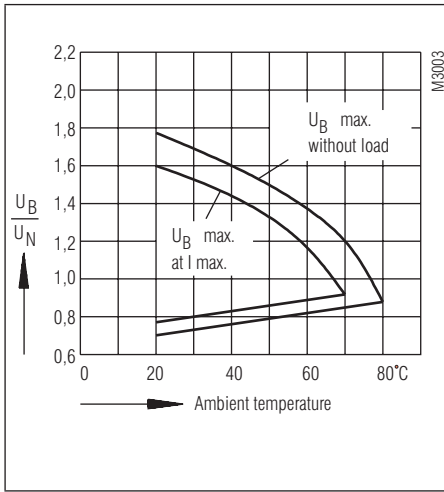
| U _N DC V | Voltage range DC V | Resistance at 20°C Ω | AgNi10-contacts + 0.2 μm Au | | | | | AgSnO ₂ -contacts + 0.2 μm Au | | | | |
|---------------------------|--------------------------|----------------------------|-----------------------------|------------|------------|------------|------------|--|------------|------------|------------|------------|
| | | | OA 5651 | OA 5652 | OA 5661 | OA 5662 | OA 5692 | OA 5651 | OA 5652 | OA 5661 | OA 5662 | OA 5692 |
| 6 | 4,2 ... 10,8 | 80 | 621 | 635 | 285 | 270 | 411 | 651 | 665 | 323 | 328 | 432 |
| 12 | 8,4 ... 21,6 | 330 | 622 | 636 | 286 | 271 | 412 | 652 | 666 | 324 | 329 | 433 |
| 15 | 10,5 ... 27,0 | 475 | 623 | 637 | 291 | 272 | 413 | 653 | 667 | 321 | 330 | 434 |
| 20 | 14,0 ... 36,0 | 880 | 624 | 638 | 287 | 273 | 414 | 654 | 668 | 325 | 331 | 435 |
| 24 | 16,8 ... 43,2 | 1 200 | 625 | 639 | 288 | 274 | 415 | 655 | 669 | 326 | 332 | 436 |
| 48 | 33,6 ... 86,4 | 4 700 | 626 | 640 | 289 | 275 | 416 | 656 | 670 | 327 | 333 | 437 |
| 60 | 42,0 ... 108,0 | 7 250 | 627 | 641 | 293 | 276 | 417 | 657 | 671 | 322 | 334 | 438 |

Ordering Example

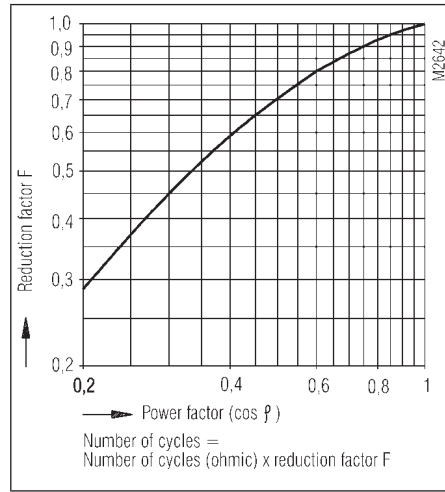


*) /61 cURus approval

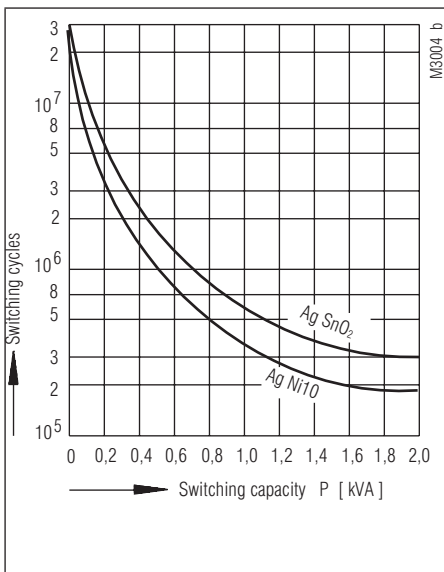
Characteristics



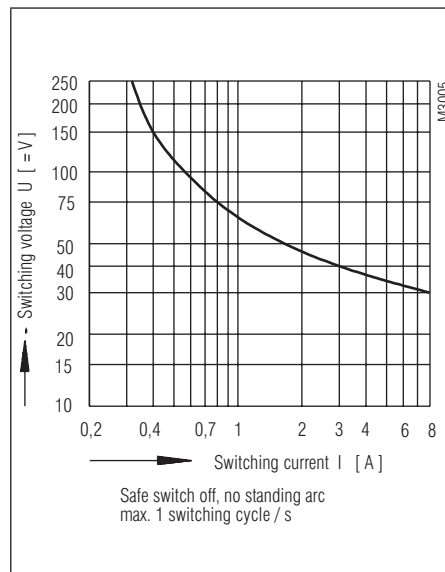
Operating voltage limit curve



Reduction factor for inductive loads



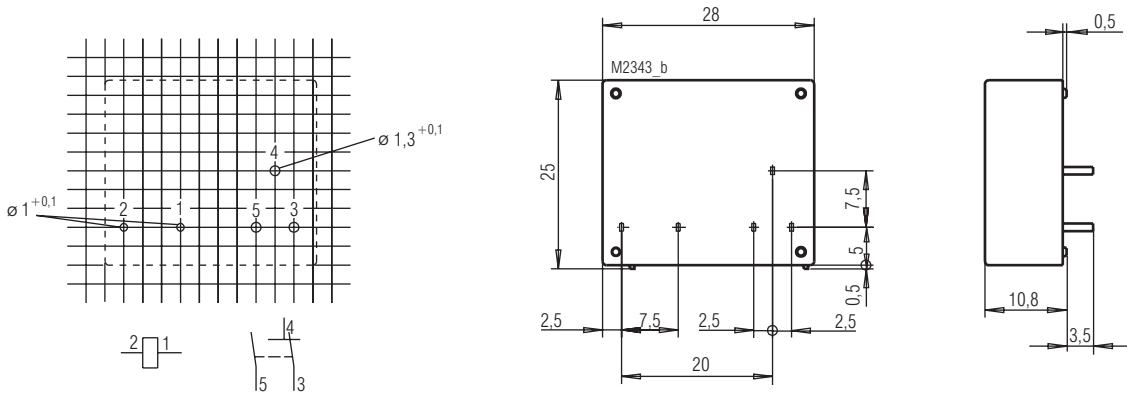
Contact service life (at $t_u = 20^\circ\text{C}$)



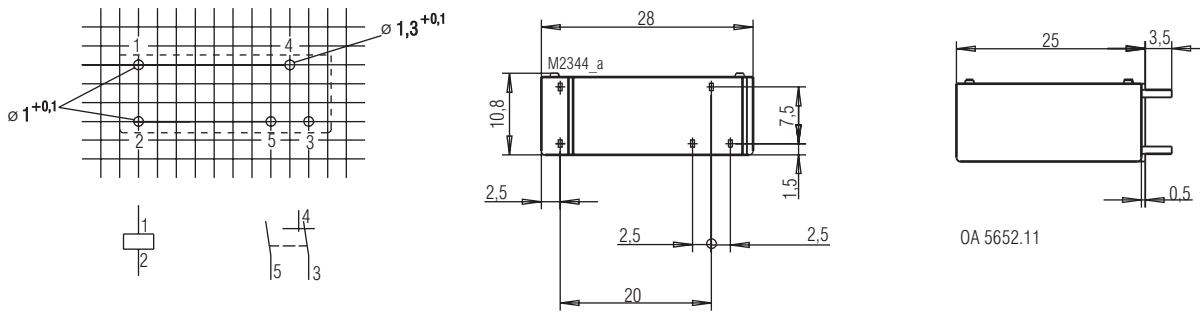
Limit curve for arc-free operation (at $t_u = 20^\circ\text{C}$)

Drilling plan (solder side)

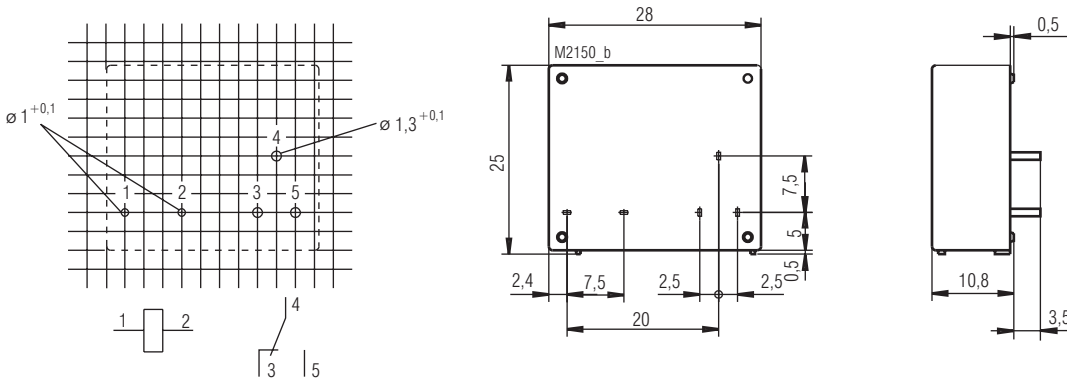
OA 5651



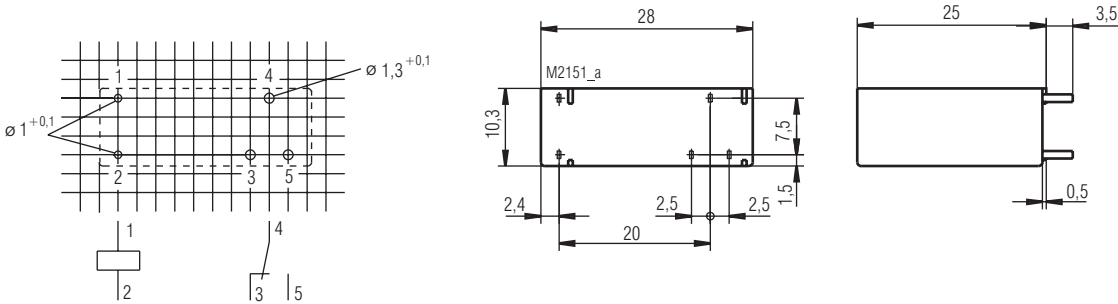
OA 5652



OA 5661



OA 5662

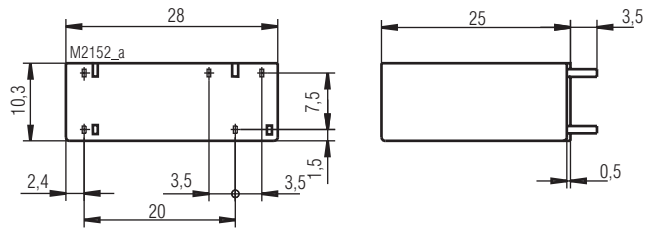
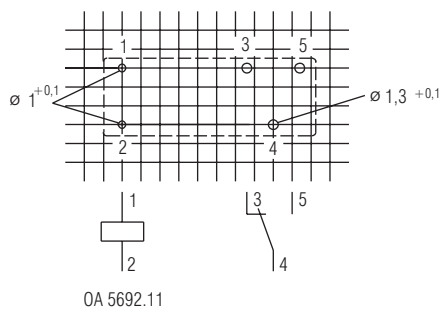


OA 5662.11

Connection for basic grid dimensions 2.5 mm as well as 2.54 mm according to IEC/EN 60097 and IEC 60326 average

Drilling plan (solder side)

OA 5692



Connection for basic grid divions 2.5 mm as well as 2.54 mm according to IEC/EN 60097 and IEC 60326 average

