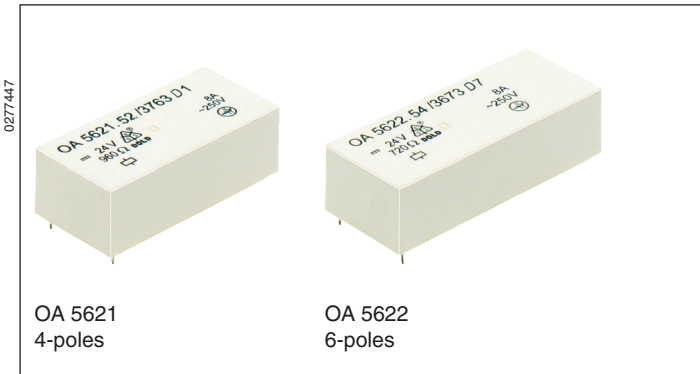


Safety Relay with double contacts OA 5621, OA 5622

Translation
of the original instructions



- According to DIN EN 61810-1, DIN EN 61810-3 (Type A)
- With forcibly guided contacts
- High switching safety because of gold plated double contacts
- Clearance and creepage distances:
Contact - contact ≥ 5.5 mm
- Low rated power consumption and holding power
- High mechanical service life
- High temperature range
- High thermal continuous current
- Voltage range $0.75 \dots 1.2 U_N$
- 15.5 mm height

Applications

- To be used in electrical circuits for safety applications
- Escalators and walkways
- Elevators for men and load
- Railway technology

Approvals and Markings



Technical Data

| Relay type | OA 5621 | OA 5622 | OA 5622.50 |
|--|---|--|---------------|
| 1.0 Coil | | | |
| 1.1 Nominal voltage | DC 6, 12, 24, 48, 60, 110 V (others on request) | | |
| 1.2 Nominal consumption | 0.6 W | 0.8 W | 0.9 W |
| 1.11 Voltage range | $0.75 \dots 1.2 U_N$ | | |
| 1.12 Thermal resistance | 55 K/W (mounting distance between relays ≥ 5 mm) | | |
| 1.13 Holding capacity | ≥ 150 mW | ≥ 200 mW | ≥ 225 mW |
| 2.0 Contacts | | | |
| 2.1 Contact arrangement (Type A) | 2 NO / 2 NC 3 NO / 1 NC | 3 NO / 3 NC 4 NO / 2 NC 5 NO / 1 NC | 2 NO / 4 NC |
| 2.2 Contact material | AgNi + 5 μ m Au | | |
| 2.3 Rated insulation voltage | AC 250 V | | |
| Switching voltage min./max | AC/DC 2 V / AC/DC 60 V (AC 250 V, DC 220 V) ¹⁾ | | |
| 2.4 Limiting continuous current I_{th} | 3 x 5 A | 5 x 5 A (s. operating voltage limit curve) | |
| Switching current min./max | AC/DC 1 mA / 0.3 A (AC 5 A, DC 3 A) ¹⁾ | | |
| 2.5 Switching power min./max. | 1 mVA / 7 VA (1250 VA) ¹⁾ | | |
| Switching power min./max. | 1 mW / 7 W (120 W) ¹⁾ | | |
| 2.6 Switching capacity to IEC/EN 60947-5-1 | | | |
| AC 15 | NO: AC 250 V / 3 A | NC: AC 250 V / 1 A | |
| DC 13 | NO: DC 24 V / 2 A | NC: DC 24 V / 2 A | |
| at 0.1 Hz | NO: DC 24 V / 4 A | NC: DC 24 V / 4 A | |
| to UL 508 | B300 / R300 | | |
| 2.7 Electrical life | At 1 s On, 1 s Off (see contacts service life) | | |
| at AC 230 V, 5 A, $\cos\phi = 1$ | $> 2 \times 10^5$ switching cycles AgNi 0.15 | | |
| at DC 24 V, 3 A ohmic | $> 1.5 \times 10^5$ switching cycles AgNi 0.15 | | |
| 2.8 Switching frequency max | 10 switching cycles/s | | |
| 2.9 Response time / Release time | Typically 12 ms / Typically 8 ms | | |
| 2.10 Contact force | ≥ 8 cN | | |
| 2.13 Contact resistance | ≤ 100 m Ω (DC 2 V, 100 mA) | | |
| 2.14 Contact gap | > 0.5 mm ²⁾ | | |
| 3.0 Other | | | |
| 3.1 Mechanical life | $> 20 \times 10^6$ switching cycles | | |
| 3.2 Temperature range | - 40 ... + 80 °C | | |
| 3.3 Degree of protection, housing | Wash proof RT III | | |
| 3.4 Test procedure | A (group mounting) | | |
| 3.5 Vibration resistance | 10 ... < 60 Hz; 0,35 mm Amplitude | IEC/EN 60068-2-6 | |
| | 60 ... 200 Hz, ≤ 10 g (NO contact) | IEC/EN 60068-2-6 | |
| | 60 ... 200 Hz, ≤ 5 g (NC contact) | IEC/EN 60068-2-6 | |
| 3.6 Climate resistance | 40 / 080 / 04; A / B / D IEC/EN 60068-1 | | |

¹⁾ These higher values are possible but the gold plate will be destroyed

²⁾ Over entire service life acc. to DIN EN 61810-3

Technical Data

| | | | | | |
|--------------------------|--|-------------------------------|--|--------------|--|
| 3.7 | Short circuit strength | 1 kA / AC 250 V | AgNi NO: 10 A gG / gL / NC: 6 A gG / gL IEC/EN 60947-5-1 | | |
| 3.8 | Insulation acc. to IEC 60664-1, EN 50178 | | | | |
| | Rated insulation voltage | | AC 250 V | | |
| | Pollution degree | | 2 | | |
| | Overtoltage category | | III | | |
| | Test voltage | | | | |
| | Contact-coil (1 min) | | ≥ AC 4 kV eff. | | |
| | Contact-contact (1 min) | | ≥ AC 4 kV eff. | | |
| | Contact open (1 min) | | ≥ AC 1.5 kV eff. | | |
| | Transient voltage | | | | |
| | Contact-coil (1.2 - 50 μs) | | ≥ 6 kV | | |
| | Clearance and creepage distance | | ≥ 5.5 mm | | |
| 3.9 | Weight | Approx. 35 g | Approx. 38 g | Approx. 38 g | |
| 4.0 Packing unit | | | | | |
| 4.1 | On cardboard in slipcase | 25 pieces | 20 pieces | 20 pieces | |
| 4.2 | In case package | 250 pieces | 200 pieces | 200 pieces | |
| 5.0 Solder method | | | | | |
| 5.1 | Solder method /-temperature /-duration | Wave soldering / 260 °C / 5 s | | | |

Design versions

| U _N (DC V) | Voltage range (DC V) | OA 5621 | | | OA 5622 | | | | | |
|------------------------------|-------------------------|------------------------------|-----------------|-----------------|------------------------------|-----------------|-----------------|-----------------|------------------------------|-----------------|
| | | R _{Coil} Ω ± 10% | .48 3NO, 1NC | .52 2NO, 2NC | R _{Coil} Ω ± 10% | .18 3NO, 3NC | .54 4NO, 2NC | .60 5NO, 1NC | R _{Coil} Ω ± 10% | .50 2NO, 4NC |
| AgNi 0,15-contacts + 5 μm Au | | | | | | | | | | |
| 6 | 4.5 ... 7.2 | 60 | 3791 | 3801 | 45 | 3821 | 3831 | 3841 | 38 | 3851 |
| 12 | 9.0 ... 14.4 | 240 | 3792 | 3802 | 180 | 3822 | 3832 | 3842 | 150 | 3852 |
| 24 | 18.0 ... 28.8 | 960 | 3793 | 3803 | 720 | 3823 | 3833 | 3843 | 600 | 3853 |
| 48 | 36.0 ... 57.6 | 3840 | 3794 | 3804 | 2880 | 3824 | 3834 | 3844 | 2425 | 3854 |
| 60 | 45.0 ... 72.0 | 6000 | 3795 | 3805 | 4500 | 3825 | 3835 | 3845 | 3790 | 3855 |
| 110 | 82.5 ... 132.0 | 20000 | 3796 | 3806 | 15125 | 3826 | 3836 | 3846 | 12735 | 3856 |

Ordering Example

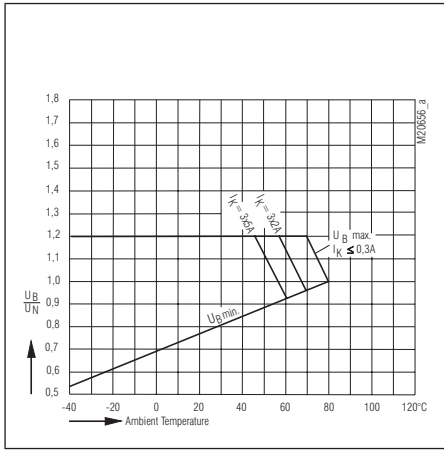
OA 562_ _ _ / D_ / 61*)

- Pin configuration
1
5
7
8
- D = Double cont., wash proof RT III
- Design version
- Contact arrangem. OA 5621 (Type A)
.48 3 NO, 1 NC
.52 2 NO, 2 NC
- Contact arrangem. OA 5622 (Type A)
.50 2 NO, 4 NC
.18 3 NO, 3 NC
.54 4 NO, 2 NC
.60 5 NO, 1 NC
- 1 = 4-poles
2 = 6-poles

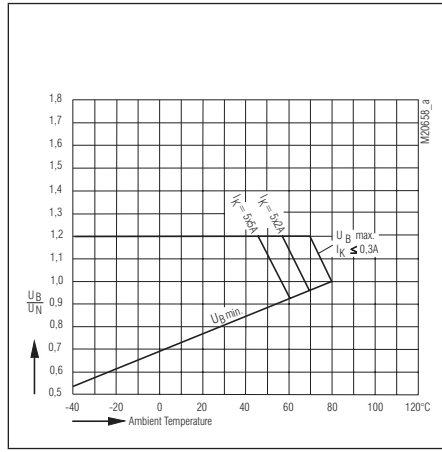
Notes

For the use and processing of our PCB relays, please refer to the **application and processing instructions** at www.dold.com

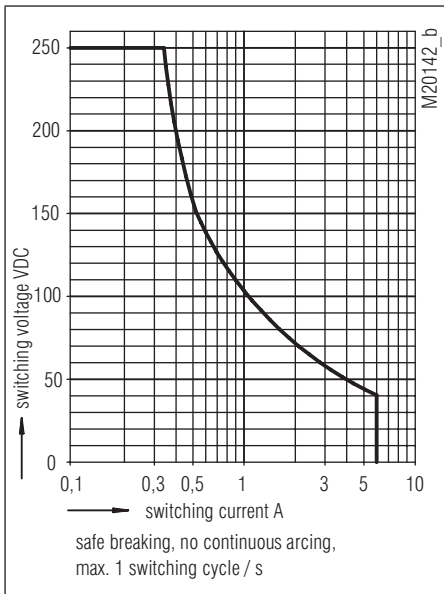
*) / 61 cURus approval



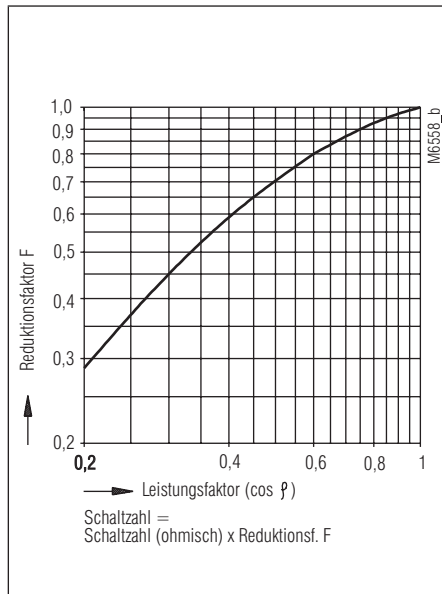
Operating voltage limit curve OA 5621



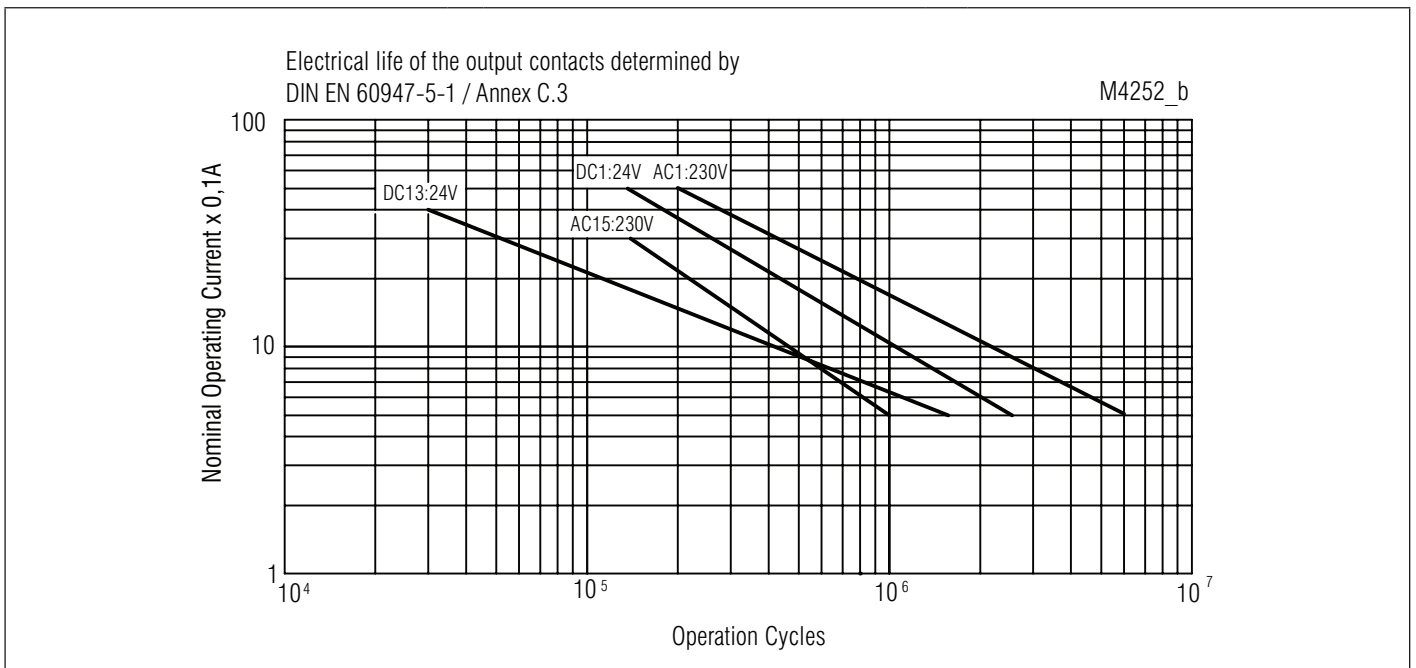
Operating voltage limit curve OA 5622



Arc limit curve (load limit curve)

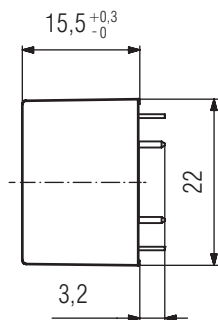
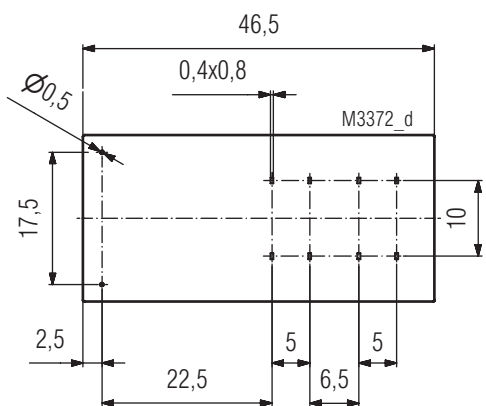


Reduction factor for inductive loads

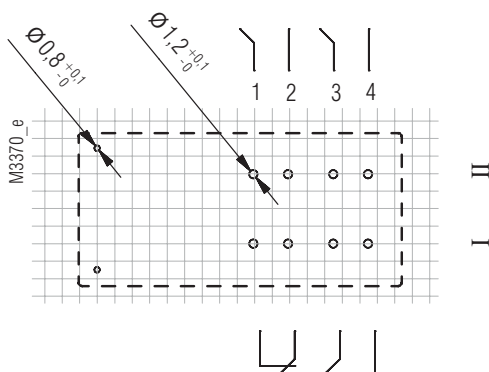


Electrical life

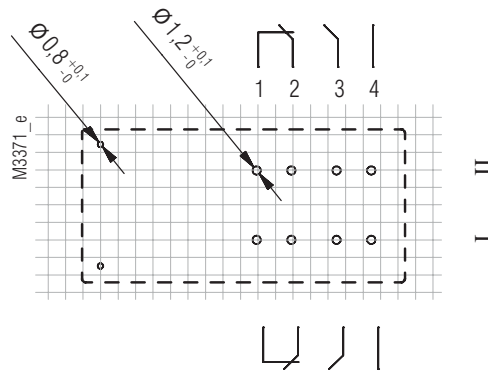
Pin Configurations D1 / D5



Pin Configuration D1
Drilling plan (solder side)

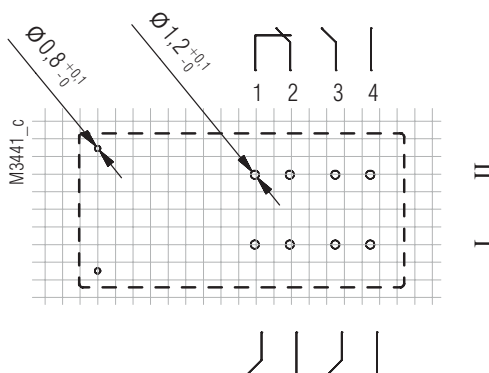


OA5621.48/___D1 3NO / 1NC



OA5621.52/___D1 2NO / 2NC

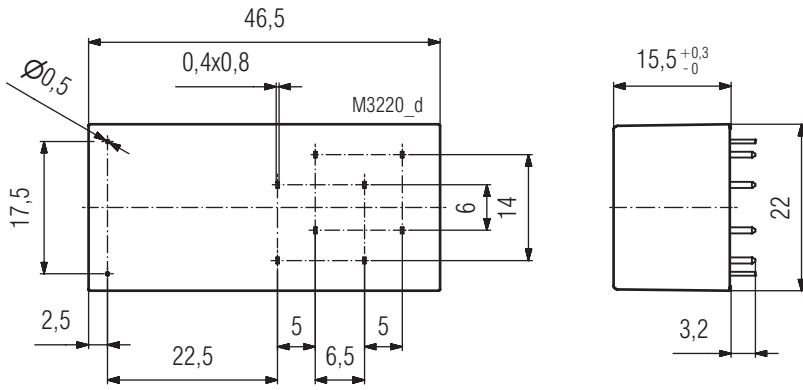
Pin Configuration D5
Drilling plan (solder side)



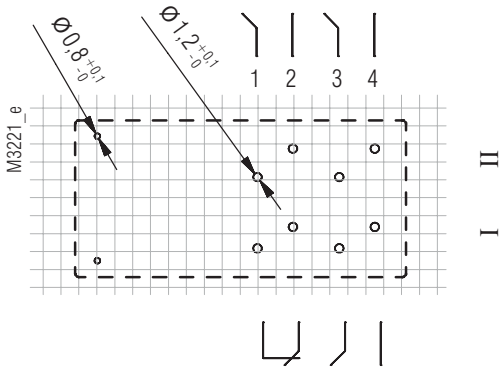
OA5621.48/___D5 3NO / 1 NC

Connection for basic grid dimensions 2,50 mm as well as 2,54 mm according to DIN EN 60097, DIN EN 60326

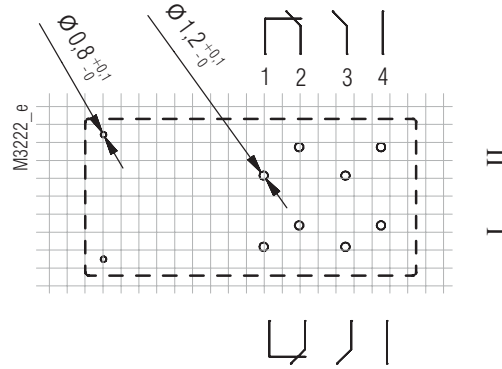
Pin Configurations D7 / D8



Pin Configuration D7
Drilling plan (solder side)

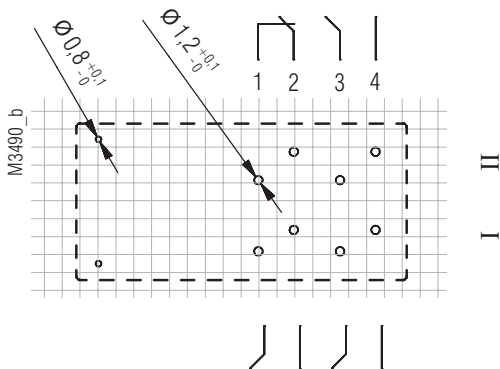


OA5621.48/___D7 3NO / 1NC



OA5621.52/___D7 2NO / 2NC

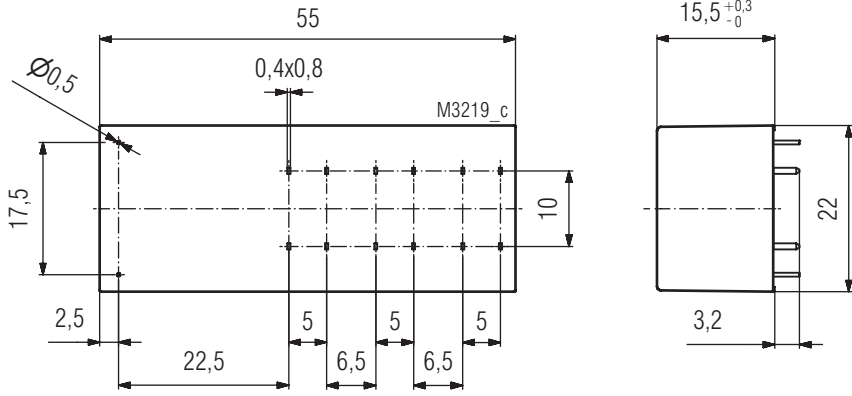
Pin Configuration D8
Drilling plan (solder side)



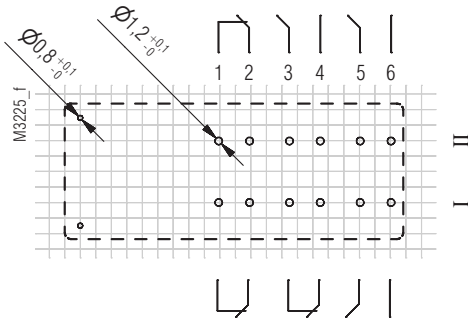
OA5621.48/___D8 3NO / 1NC

Connection for basic grid divisions 2,50 mm as well as 2,54 mm according to DIN EN 60097, DIN EN 60326

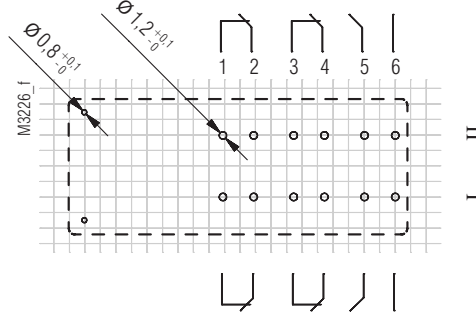
Pin Configurations D1 / D5



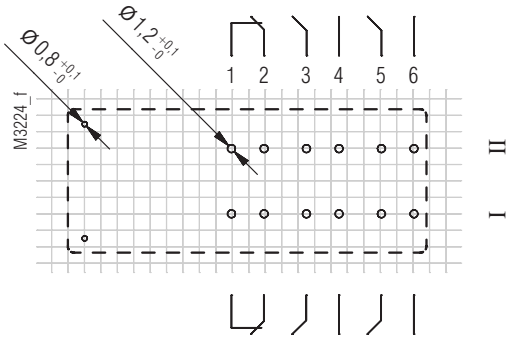
Pin Configuration D1
Drilling plan (solder side)



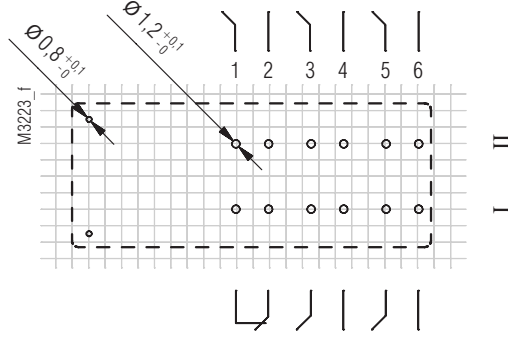
OA 5622.18/___D1 3NO / 3NC



OA 5622.50/___D1 2NO / 4NC

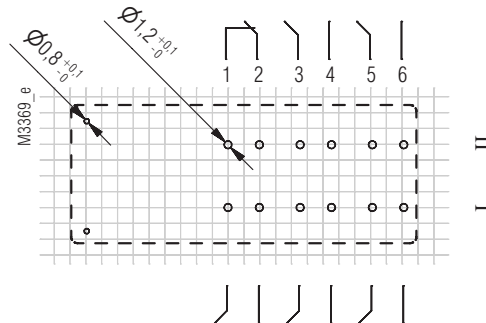


OA 5622.54/___D1 4NO / 2NC



OA 5622.60/___D1 5NO / 1NC

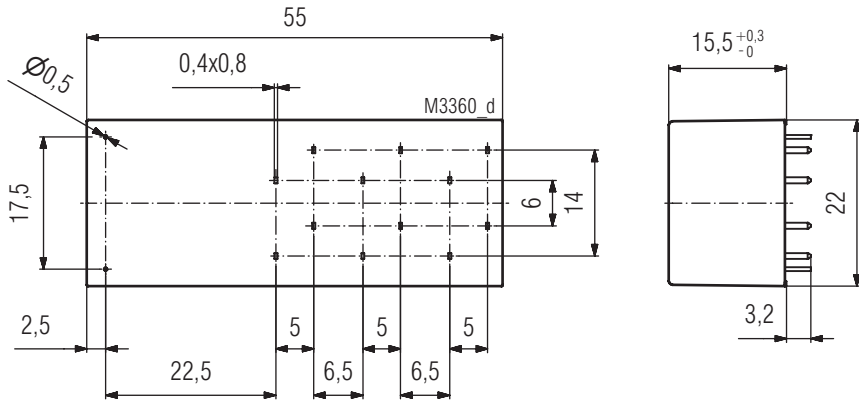
Pin Configuration D4
Drilling plan (solder side)



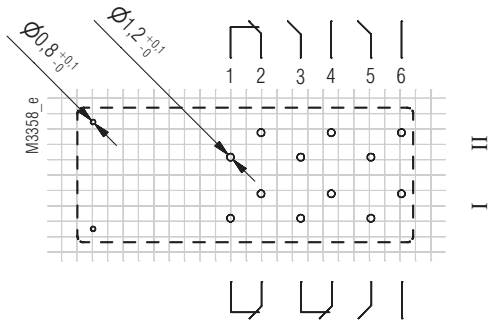
OA 5622.60/___D4 5NO / 1NC

Connection for basic grid dimensions 2,50 mm as well as 2,54 mm according to DIN EN 60097, DIN EN 60326

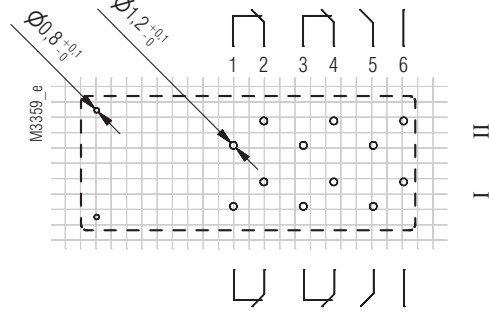
Pin Configuration D7



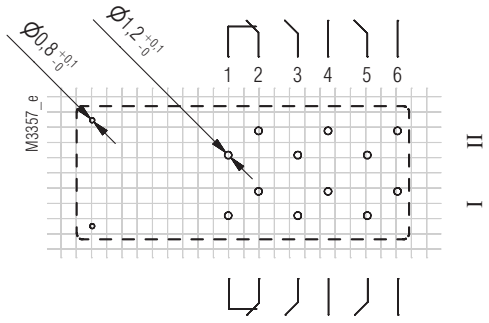
Pin Configuration D7
Drilling plan (solder side)



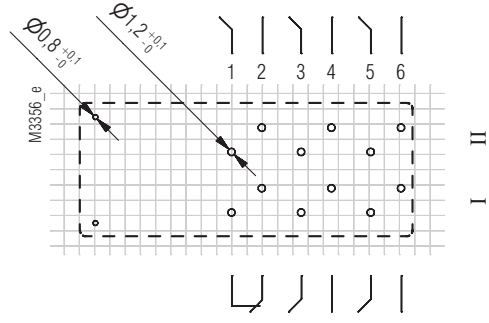
OA 5622.18/___D7 3NO / 3NC



OA 5622.50/___D7 2NO / 4NC

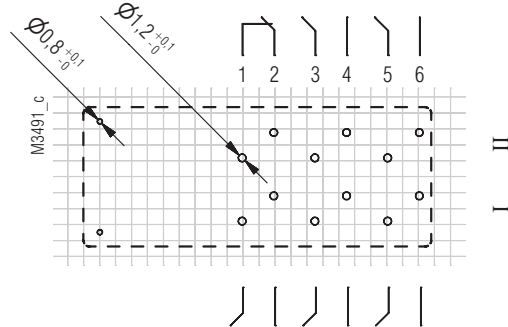


OA 5622.54/___D7 4NO / 2NC



OA 5622.60/___D7 5NO / 1NC

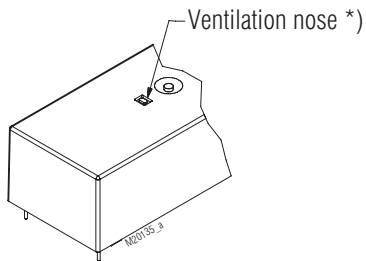
Pin Configuration D8
Drilling plan (solder side)



OA 5622.60/___D8 5NO / 1NC

Connection for basic grid dimensions 2,50 mm as well as 2,54 mm according to DIN EN 60097, DIN EN 60326

Notes

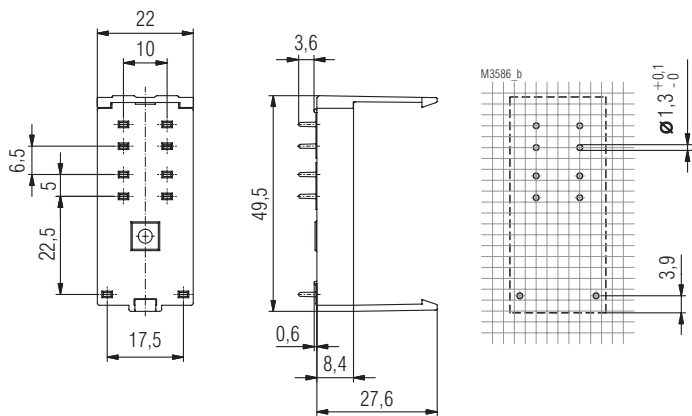


*) When using the maximum switching capacity it is recommended to open the relay at the indicated position.

Accessories

Relay socket ET 1415.035 for OA 5621

Article number: 0059509



Relay socket ET 1415.037 for OA 5622

Article number: 0059275

