

Safety relay, sensitive

OA 5611.____ / _____ S _ ; OA 5612.____ / _____ S _

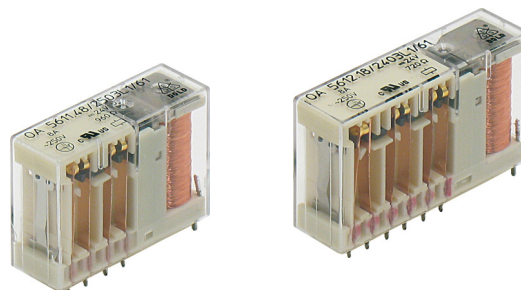


- acc. to DIN EN 50 205, DIN EN 61 810-1, DIN EN 60 664-1
- with positively driven contacts
- very low rated power consumption
- high mechanical service life
- high switching reliability due to crown contacts with large relative movement
- compact size
- Approval: **TUV**  

Applications:

To be used in electrical circuits for safety applications

Escalators, moving pavements, lifts for people and load, railway signalling circuits



OA 5611.____ / _____ S _ OA 5612.____ / _____ S _

Technical data

Relay type	OA 5611.____ / _____ S _	OA 5612.____ / _____ S _
1. 0 Relay coil		
1. 1 Nominal voltage	DC V	6, 12, 24, 48, 60, 110 (others on request) polarised
1. 2 Nominal consumption	W	0,36 0,5 ³⁾
1.11 Voltage range	U _N	0,75 ... 1,5
2. 0 Contacts		
2. 1 Contact arrangement	2 NO contacts / 2 NC contacts 3 NO contacts / 1 NC contact	2 NO contacts / 4 NC contacts 3 NO contacts / 3 NC contacts 4 NO contacts / 2 NC contacts 5 NO contacts / 1 NC contact
2. 2 Contact material	AgSnO ₂ + 0,2 µm Au; AgNi 10 + 0,2 µm Au optionally + 5 µm Au	
2. 3 Rated insulation voltage	AC V	250
Switching voltage min./max.	V	AC/DC 10 / DC 250, AC 400 (UC 100 mV / 60 V) ¹⁾
2. 4 Limiting continuous current I _{th}	A	4 x 6 (see operating voltage limit curve)
Switching current min./max.	A	> 10 mA ⁴⁾ / 6 (1 mA / 0,3 A) ¹⁾
2. 5 Switching power min./max.	VA	3 / 1500 (1 mVA / 7 VA) ¹⁾
Switching power min./max.	W	0,1 ⁴⁾ / 200 (1 mW / 7 W) ¹⁾ (see limit curve for arc-free operation)
2. 6 Switching capacity to IEC/EN 60 947-5-1 AC15 DC 13	AC V/A DC V/A	NC: 230 / 2; NO: 230 / 3 NC: 24 / 2; NO: 24 / 2 B300
2. 7 Electrical life at AC 230 V 6 A cos φ = 1	switching cycles	at 1 s On, 1 s Off (see contacts service life) > 3 x 10 ⁵ AgSnO ₂ > 2 x 10 ⁵ AgNi 10
2. 8 Switching frequency max.	switching cycles / s	10
2. 9 Response - / Release time	ms	typically 20 / typically 6
2.10 Contact force NO/NC	cN	≥ 8
2.14 Contact gap	mm	> 0,5 ²⁾
3. 0 Other		
3. 1 Mechanical life	switching cycles	≥ 50 x 10 ⁶
3. 2 Temperature range	°C	- 40 ... + 85
3. 3 Degree of protection, housing		IP40 IEC/EN 60 529
3. 4 Housing		Thermoplast
3. 5 Vibration resistance		10 ... 200 Hz; 0,35 mm amplitude; 3 g max. IEC/EN 60 068-2-6

¹⁾ Values for AgNi10-contacts + 5 µm Au ²⁾ over entire service life, even under fault and at 1,5 x U_N
³⁾ 0,8 W at OA 5612.50 (2 NO contacts / 4 NC contacts) ⁴⁾ Typical values

All technical data in this list relate to the state at the moment of edition. We reserve the right for technical improvements and changes at any time.

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Technical data

3. 6	Climate resistance	Humid Heat IEC/EN 60 068-2-30	
3. 8	Insulation according to IEC 60 664-1, EN 50 178		
	Rated insulation voltage	AC V	250
	Contamination level		3
	Overvoltage category		III
	Testvoltage	Contact-Coil (1 min) AC kV eff.	≥ 4
		Contact-Contact (1 min) AC kV eff.	≥ 2,5
	Transient volt.	Contact-Coil (1,2-50 μs) kV	≥ 6
	Clearance and creepage distances as per IEC/EN 60 730, IEC/EN 60 335	≥ 8 mm	
3. 9	Weight	g	35
			38

Standard variants

Coil datas for OA 5611

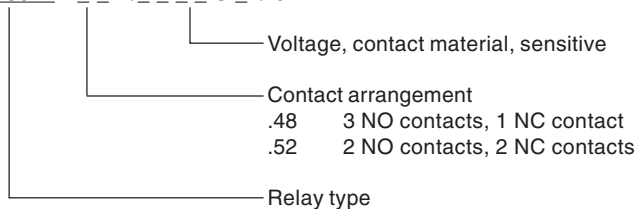
U _N (DC V)	Voltage range (DC V)	R _{sp} at 20 °C Ω
6	4,5 - 9,0	100
12	9,0 - 18,0	400
24	18,0 - 36,0	1 600
48	36,0 - 72,0	6 400
60	45,0 - 90,0	10 000
110	82,5 - 165,0	33 600

Coil datas for OA 5612.18 OA 5612.54 OA 5612.60

U _N (DC V)	Voltage range (DC V)	R _{sp} at 20 °C Ω	R _{sp} at 20 °C Ω
6	4,5 - 9,0	70	45
12	9,0 - 18,0	290	180
24	18,0 - 36,0	1 150	720
48	36,0 - 72,0	4 600	2 880
60	45,0 - 90,0	7 200	4 500
110	82,5 - 165,0	24 200	15 125

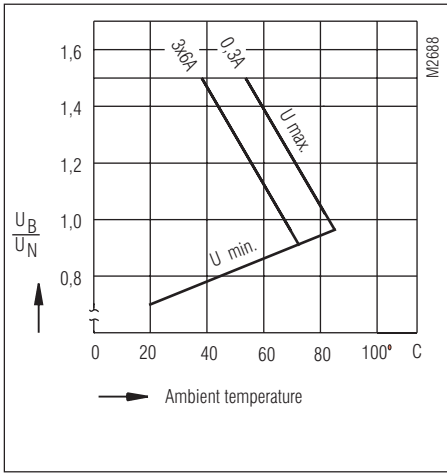
Ordering example

OA 5611 . _ _ / _ _ _ _ S _ / 61*)

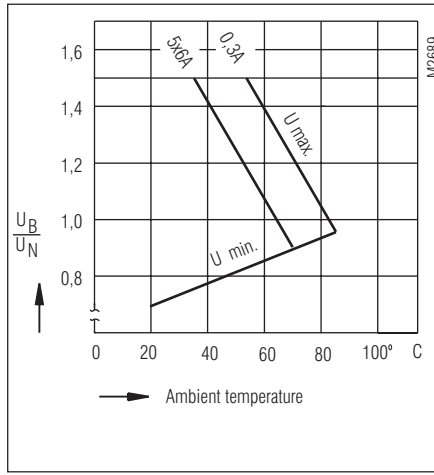


*) / 61 cURus approval

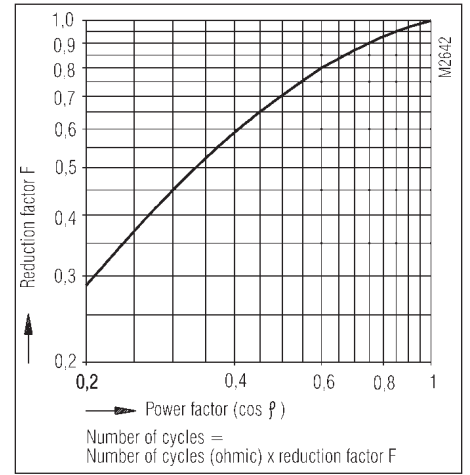
Characteristics



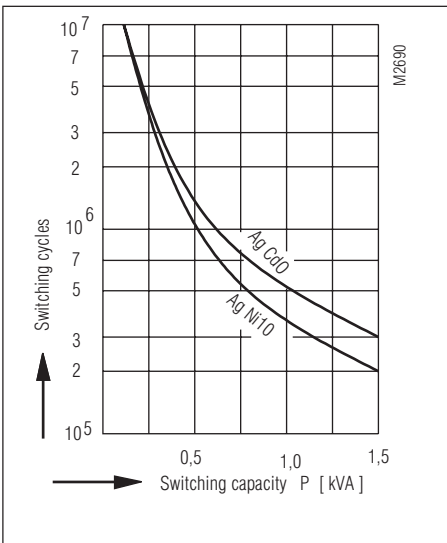
Operating voltage limit curve OA 5611



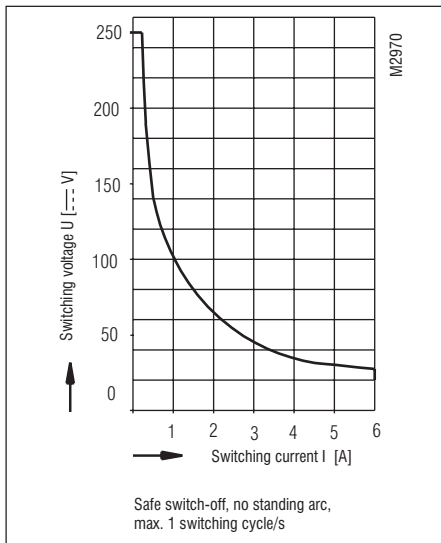
Operating voltage limit curve OA 5612



Reduction factor for inductive loads



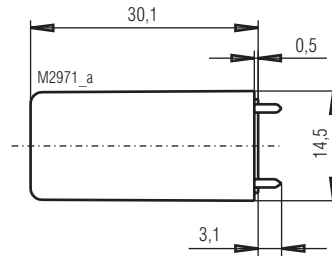
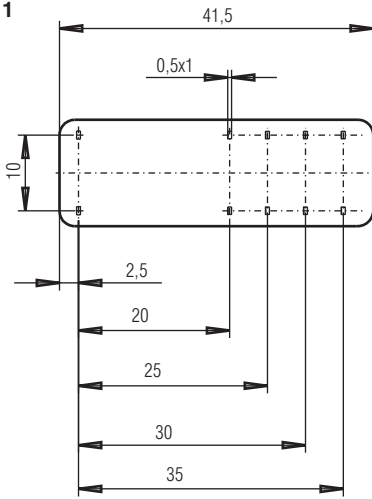
Contact service life



Limit curve for arc-free operation (load limit curve)

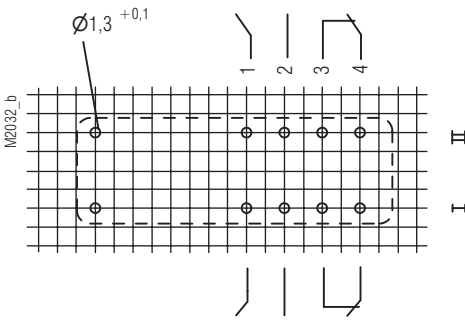
Dimensions, pin configuration, connection diagrams

OA 5611

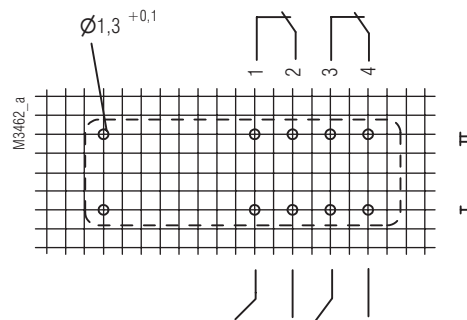


Drilling plan (solder side)

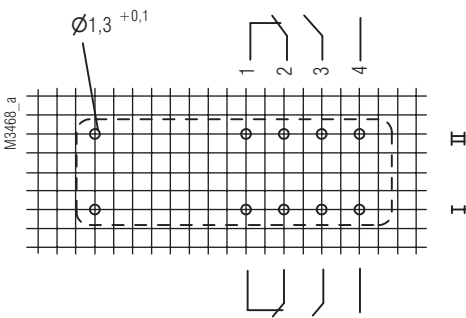
Pin arrangement OA 5611.52/...L1 2NO / 2NC



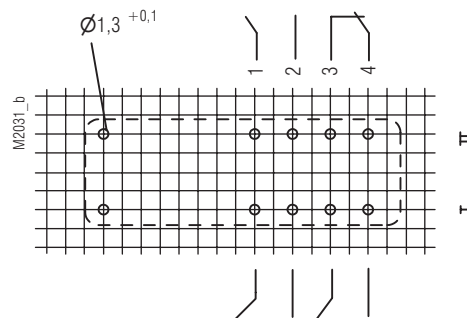
Pin arrangement OA 5611.52/...L4 2NC / 2NO



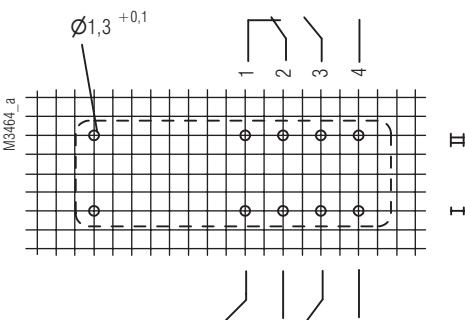
Pin arrangement OA 5611.52/...L5 2NC / 2NO



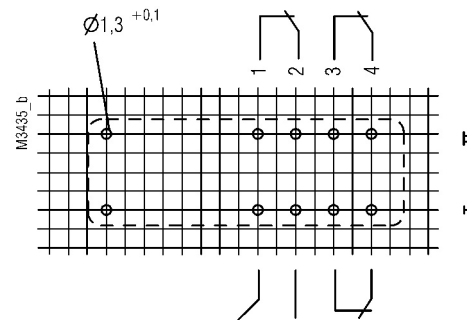
Pin arrangement OA 5611.48/...L1 3NO / 1NC



Pin arrangement OA 5611.48/...L4 1NC / 3NO



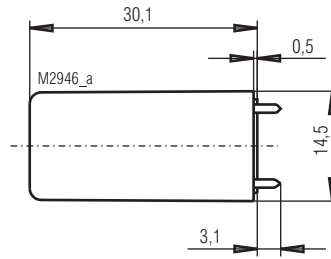
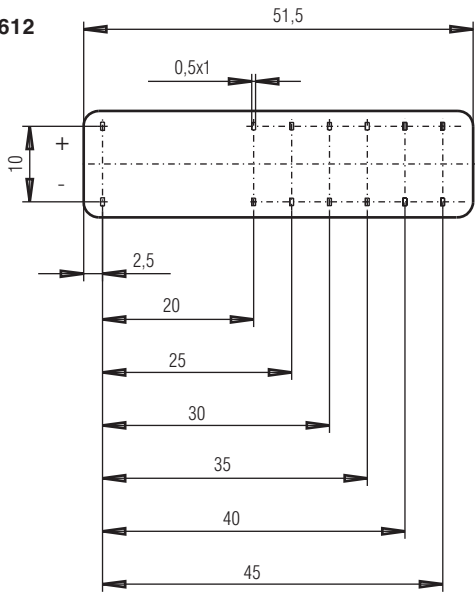
Pin arrangement OA 5611.28 1NO / 3NC



Connection for basic grid dimensions 2,5 mm as well as 2,54 mm according to IEC/EN 60 097 and IEC 60 326 average

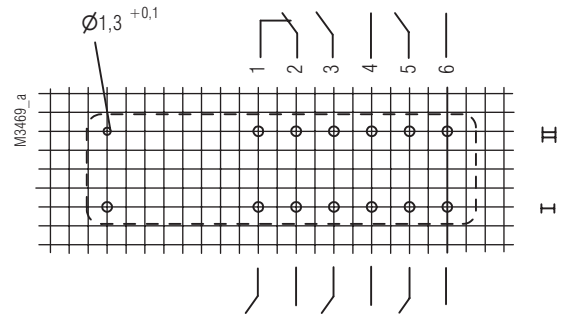
Dimensions, pin configuration, connection diagrams

OA 5612



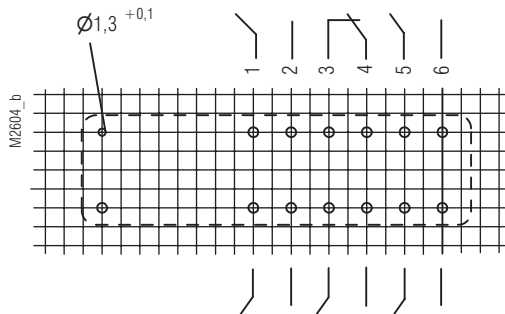
Drilling plan (solder side)

Pin arrangement OA 5612.60/...L4 1NC / 5NO

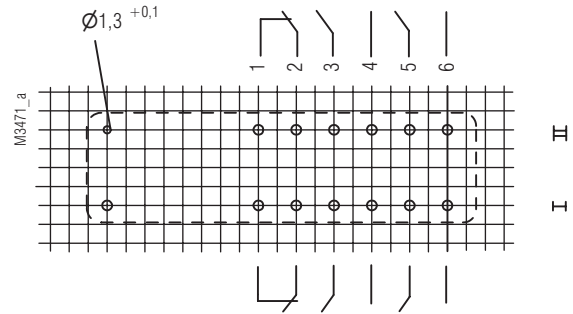


Drilling plan (solder side)

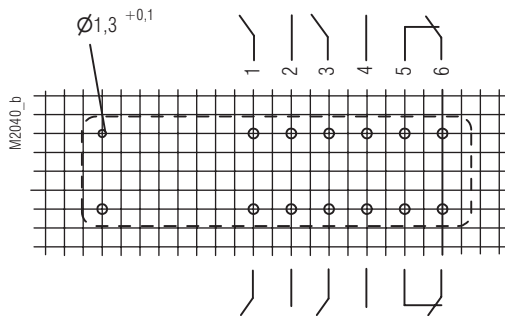
Pin arrangement OA 5612.60/...L1 5NO / 1NC



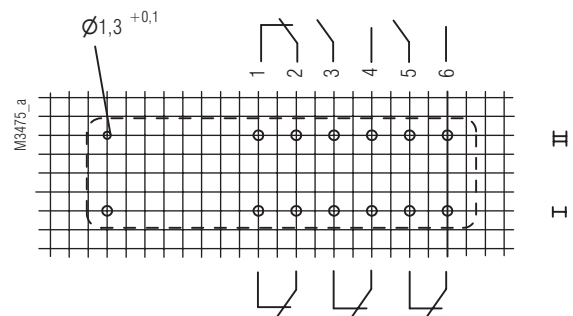
Pin arrangement OA 5612.54/...L4 2NC / 4NO



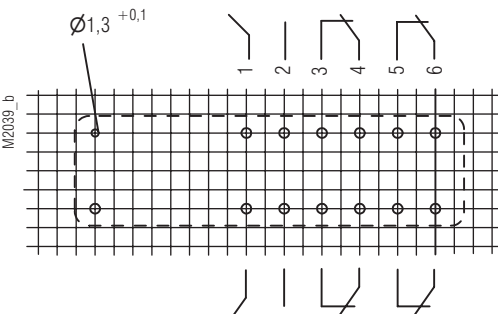
Pin arrangement OA 5612.54/...L1 4NO / 2NC



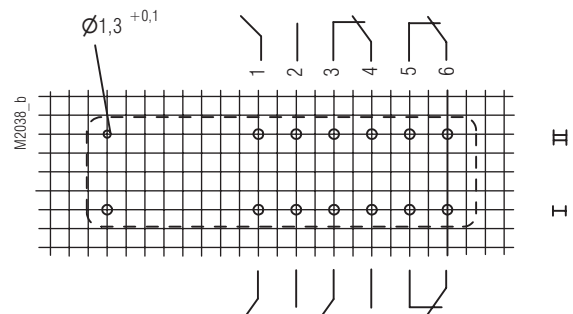
Pin arrangement OA 5612.50/...L4 4NC / 2NO



Pin arrangement OA 5612.50/...L1 2NO / 4NC



Pin arrangement OA 5612.18/...L1 3NO / 3NC



Connection for basic grid dimensions 2,5 mm as well as 2,54 mm according to IEC/EN 60 097 and IEC 60 326 average

