Safety relay
OA 5611, OA 5612

- according to EN 50 205, IEC/EN 60 255, IEC 60 664-1
- with positively driven contacts
- low rated power consumption
- high mechanical service life
- high switching reliability due to crown contacts with large relative movement
- compact size
- Approvals TÜV, UL, CSA

Applications:
To be used in circuits for safety applications. Escalators, moving pavement, lifts for people and load

OA 5611 OA 5612

Technical data

Relay type			OA 5611	OA 5612
1. 0	Relay coil			
1. 1	Nominal voltage	DC V	6, 12, 24, 48, 60, 110 (others on request)	
1. 2	Nominal consumption	W	0,6	0,8 [3]
1.11	Voltage range	U_N	0,7 ... 1,4	
2. 0	**Contacts**			
2. 1	Contact arrangement		2 NO / 2 NC 3 NO / 1 NC	2 NO / 4 NC 3 NO / 3 NC 4 NO / 2 NC 5 NO / 1 NC
2. 2	Contact material		AgCd O + 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 (AC/DC 100 mV / 60 V) [1]	
2. 4	Limiting continuous current I_{th}	A	4 x 8 (see operating voltage limit curve)	
	Switching current min./max.	A	> 10 mA[4] / 8 (1 mA / 0,3 A) [1]	
2. 5	Switching power min./max.	VA	3 / 2000 (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 AC 15	AC V / A	NC: 230 / 2; NO: 230 / 3	
	DC 13	DC V / A	NC: 24 / 2; NO: 24 / 2	
2. 7	Electrical life		bei 1 s On, 1 s Off (see contacts service life)	
	to AC 230 V 5 A cos φ = 1	switching cycles	> 3 x 10^5 AgCd 0	> 2 x 10^5 AgNi 10
	to AC 230 V 8 A cos φ = 1	switching cycles	> 1,5 x 10^5 AgCd 0	> 10^5 AgNi 10
2. 8	Switching frequency max.	switching cycles / s	10	
2. 9	Response time / Release time	ms	typically 20 / typically 6	
2.10	Contact force	cN	≥ 10	
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	- 25 ... + 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	
3. 6	Climate resistance		Humid heat IEC/EN 60 068-2-30	

[1] Values for AgNi 10-Kontakte + 5 µm Au
[2] over entire service life,even when under fault and at 1,4 x U_N
[3] 1 W at OA 5612.50 (2 NO / 4 NC)
[4] Typical values

Technical data

3. 8	Insulation according to IEC 60 664-1, EN 50 178				
	Rated insulation voltage		AC V		250
	Contamination level				3
	Overvoltage category				III
	Test voltage	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

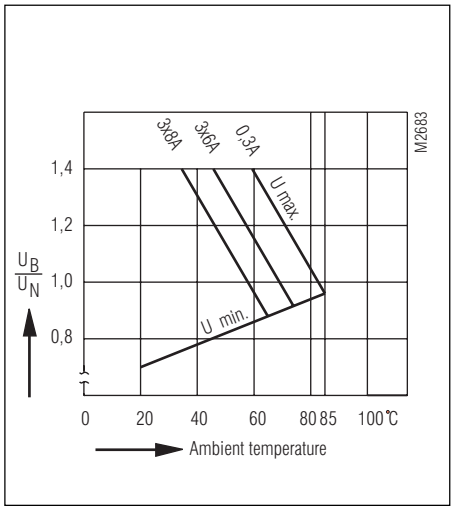
Design versions										
U_N (DC V)	Voltage range (DC V)	Ω ± 10% OA 5611	OA 5611 .48/ 3a / 1r	OA 5611 .52/ 2a / 2r	Ω ± 10% .18/.54/.60	Ω±10% .50	OA 5612 .18/ 3a / 3r	OA 5612 .54/ 4a / 2r	OA 5612 .60/ 5a / 1r	OA 5612 .50/ 2a / 4r
							AgCd O-contacts + 0,2 µm Au			
6	4,2 - 8,4	56	2491L1	2521L1	45	36	2401L1	2461L1	2571L1	2431L1
12	8,4 - 16,8	240	2492L1	2522L1	180	145	2402L1	2462L1	2572L1	2432L1
24	16,8 - 33,6	960	2493L1	2523L1	720	600	2403L1	2463L1	2573L1	2433L1
48	33,6 - 67,2	3 840	2494L1	2524L1	2 880	2 300	2404L1	2464L1	2574L1	2434L1
60	42,0 - 84,0	6 000	2495L1	2525L1	4 500	3 600	2405L1	2465L1	2575L1	2435L1
110	77,0 - 145,0	20 150	2496L1	2526L1	15 125	12 100	2406L1	2466L1	2576L1	2436L1
							AgNi 10-contacts + 0,2 µm Au			
6	4,2 - 8,4	56	2501L1	2531L1	45	36	2411L1	2471L1	2581L1	2441L1
12	8,4 - 16,8	240	2502L1	2532L1	180	145	2412L1	2472L1	2582L1	2442L1
24	16,8 - 33,6	960	2503L1	2533L1	720	600	2413L1	2473L1	2583L1	2443L1
48	33,6 - 67,2	3 840	2504L1	2534L1	2 880	2 300	2414L1	2474L1	2584L1	2444L1
60	42,0 - 84,0	6 000	2505L1	2535L1	4 500	3 600	2415L1	2475L1	2585L1	2445L1
110	77,0 - 145,0	20 150	2506L1	2536L1	15 125	12 100	2416L1	2476L1	2586L1	2446L1
							AgNi 10-contacts + 5 µm Au			
6	4,2 - 8,4	56	2511L1	2541L1	45	36	2421L1	2481L1	2591L1	2451L1
12	8,4 - 16,8	240	2512L1	2542L1	180	145	2422L1	2482L1	2592L1	2452L1
24	16,8 - 33,6	960	2513L1	2543L1	720	600	2423L1	2483L1	2593L1	2453L1
48	33,6 - 67,2	3 840	2514L1	2544L1	2 880	2 300	2424L1	2484L1	2594L1	2454L1
60	42,0 - 84,0	6 000	2515L1	2545L1	4 500	3 600	2425L1	2485L1	2595L1	2455L1
110	77,0 - 145,0	20 150	2516L1	2546L1	15 125	12 100	2426L1	2486L1	2596L1	2456L1

Ordering example

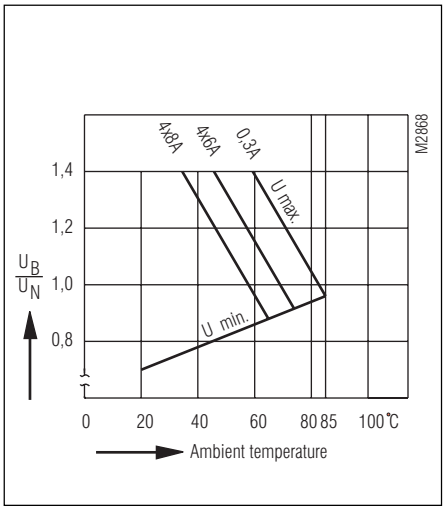
OA 5611 .48 /_ _ _ _ L1

- Design version
- Contact arrangement
  - .48 3 NO, 1 NC
  - .52 2 NO, 2 NC
- Relay type

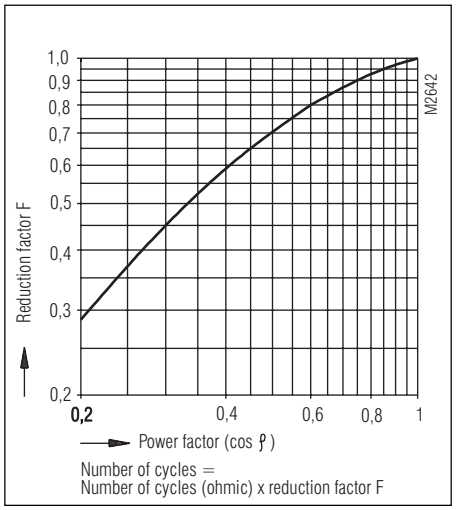
Characteristics



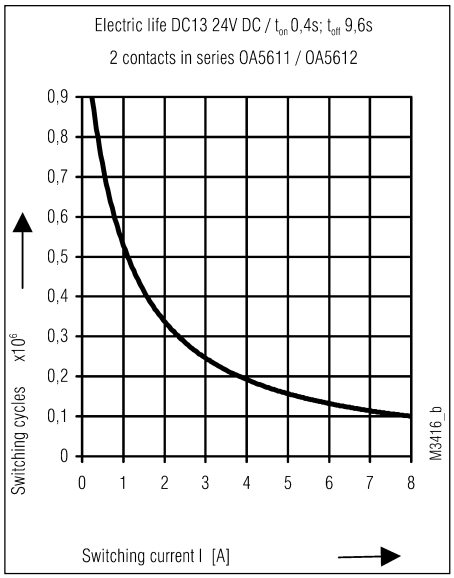
Operating voltage limit curve OA 5611



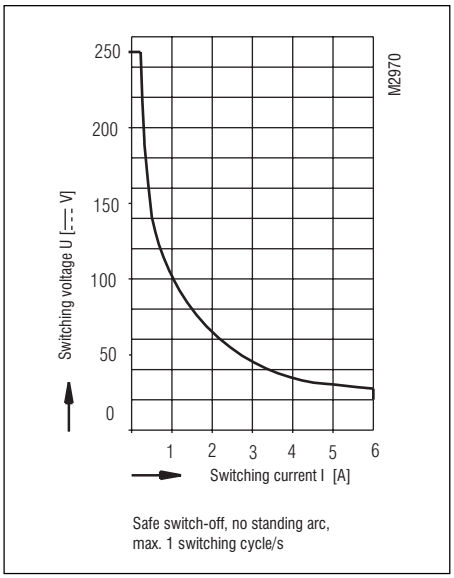
Operating voltage limit curve OA 5612



Reduction factor for inductive loads



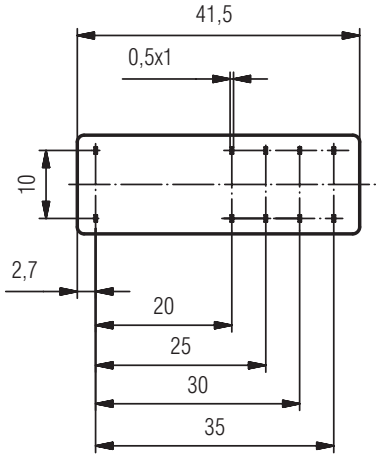
Contact service life

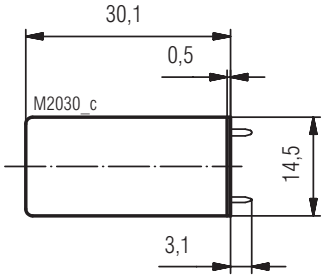


Limit curve for arc-free operation
(load limit curve)

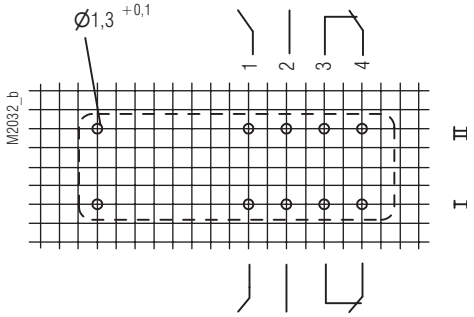
Dimensions, pin configuration, connection diagrams

OA 5611

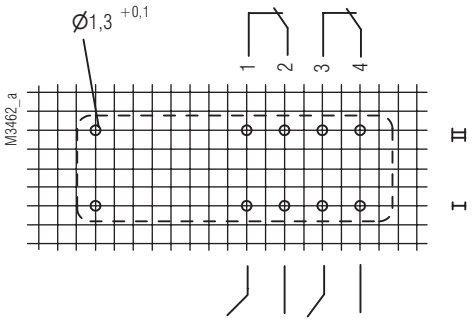




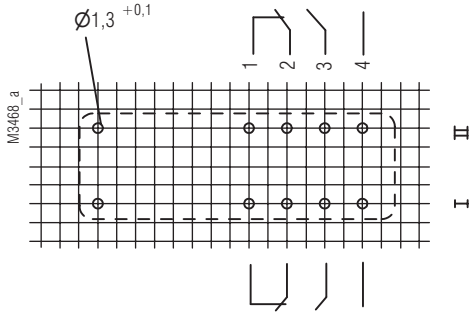
Pin arrangements OA 5611.52/...L1 2a / 2r



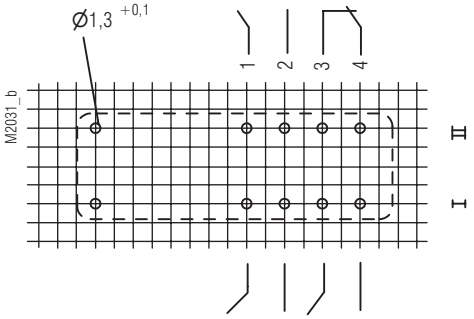
Pin arrangements OA 5611.52/...L4 2r / 2a



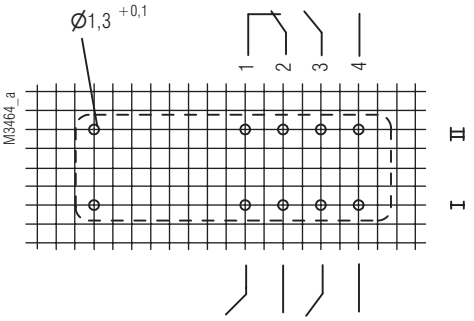
Pin arrangements OA 5611.52/...L5 2r / 2a



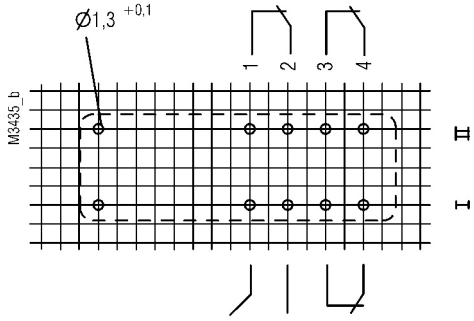
Pin arrangements OA 5611.48/...L1 3a / 1r



Pin arrangements OA 5611.48/...L4 1r / 3a



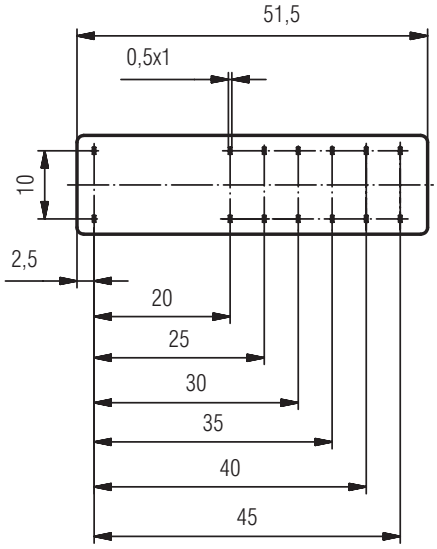
Pin arrangements OA 5611.28 1a / 3r

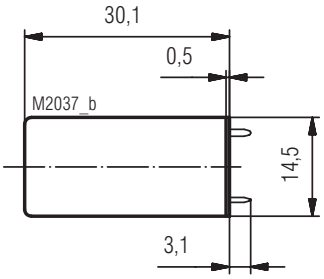


Connection for basic grid divensions 2,5 mm as well as 2,54 mm according to IEC/EN 60 097 and IEC 60 326 average

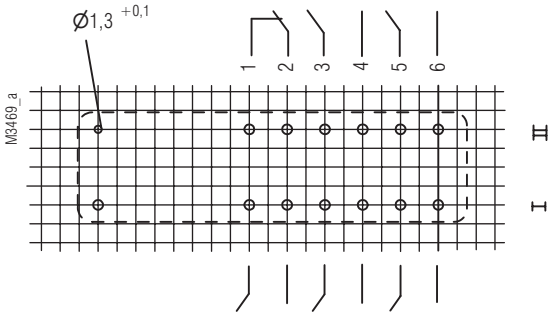
Dimensions, pin configuration, connection diagrams

OA 5612

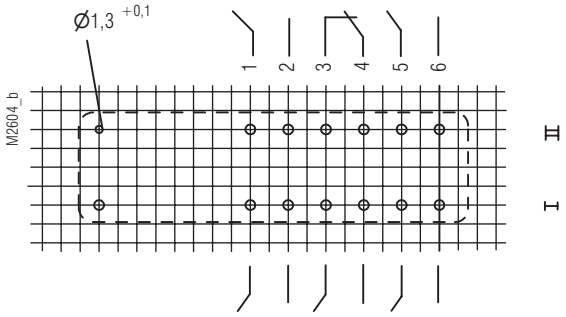




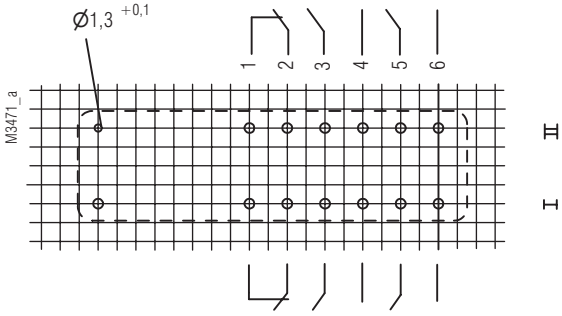
Pin arrangements OA 5612.60/...L4 1r / 5a



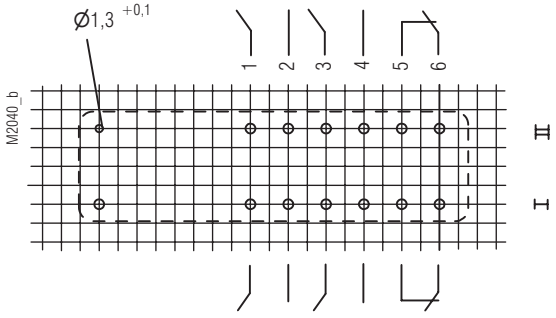
Pin arrangements OA 5612.60/...L1 5a / 1r



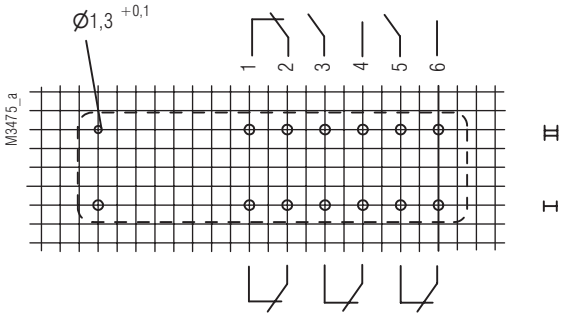
Pin arrangements OA 5612.54/...L4 2r / 4a



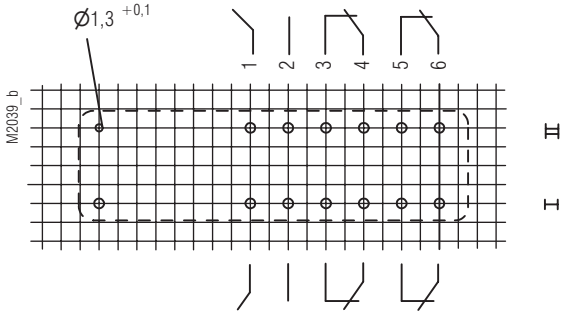
Pin arrangements OA 5612.54/...L1 4a / 2r



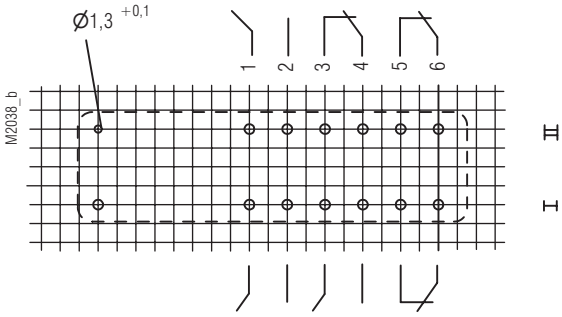
Pin arrangements OA 5612.50/...L4 4r / 2a



Pin arrangements OA 5612.50/...L1 2a / 4r



Pin arrangements OA 5612.18/...L1 3a / 3r



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