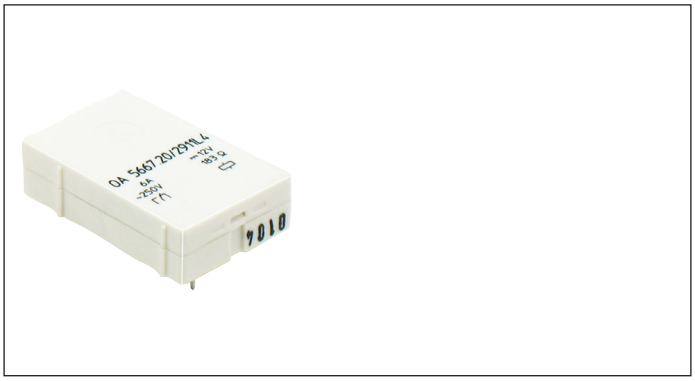
PCB Relays

Safety relay monostable OA 5667/_ _ _ _ _4



- Acc. to DIN EN 50205, DIN EN 61810-1, DIN EN 60664-1
- With forcibly guided contacts
- **Double and reinforced insulation acc. to EN 50178 between contact sets by:**
  - Clearance and creepage distances ≥ 5,5 mm
  - dielectric strength ≥ 4 kV at contamination level 2
- Clearance and creepage distances, contact - coil ≥ 8 mm
- Low rated power consumption
- High mechanical service life
- Compact size, small height

Applications

- Switchgear for safety technology
- Press controls

Approvals and Markings

CE, TÜVRheinland CERTIFIED, Type Approved, www.tuv.com ID 0004000000, c UL us Canada / USA

Technical Data

Relay type			OA 5667._ _ /_ _ _ _ _4
1.0	**Relay coil**		
1.1	Nominal voltage	DC V	6, 12, 24, 48, 60, 110
1.2	Nominal consumption	W	0.75
1.11	Voltage range	U_N	0.75 ... 1.3
1.13	Holding Power (at 0.5 x U_N)	W	0.19
2.0	**Contacts**		
2.1	Contact arrangement		2 changeover contacts / 1 NO, 1 NC
2.2	Contact material		$AgSnO_2$ + 0.2 µm Au; AgNi + 0.2 µm Au, AgNi + 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	2 x 6 (see operating voltage limit curve)
	Switching current min./max.	A	10 mA[3] / 6 (1 mA / 0.3 A)[1]
2.5	Switching power min./max.	VA	3 / 1 500 (1 mVA / 7 VA)[1]
	Switching power min./max.	W	3 / 200 (1 mW / 7 W)[1] (see limit curve for arc-free operation)
2.6	Switching capacity		
	to IEC/EN 60947-5-1 AC 15 [4]	AC V/A	NO: 250 / 3 NC: 250 / 1
	to IEC/EN 60947-5-1 AC 15 [5]	AC V/A	NO: 250 / 3 NC: 250 / 1
	to IEC/EN 60947-5-1 DC 13 [4]	DC V/A	NO: 24 / 2 NC: 24 / 1
	at 0.1 Hz DC 13 [4]	DC V/A	NO: 24 / 4 NC: 24 / 3
	to UL 508		R300
2.7	Electrical life	switching cycles	at 1 s On, 1 s Off (see contacts service life)
	at AC 250 V, 6 A, cosφ = 1	switching cycles	> 10^5 AgNi 10 > 1.25 x 10^5 $AgSnO_2$
2.8	Switching frequency max.	switching cycles / s	10
2.9	Response time / Release time	ms	typically 10 / typically 6
2.10	Contact force NO / NC	cN	≥ 20 / ≥ 8
2.14	Contact gap	mm	> 0,5[2]
3.0	**Other**		
3.1	Mechanical life	switching cycles	≥ 10^7
3.2	Temperature range	°C	- 40 ... + 75
3.3	Degree of protection, housing		Solder line proof RT II
3.5	Vibration resistance		10 ... 100 Hz; 0.35 mm Amplitude; 4 g max. IEC/EN 60068-2-6
3.6	Climate resistance		40 / 075 / 04 (Climate category); A/B/D IEC/EN 60068-1
3.7	Short circuit strength 1 kA / AC 250 V	AgNi or $AgSnO_2$	6 AgL EN 60947-5-1

[1] Values for AgNi 10-contacts + 5 µm Au
[2] over entire service life, even when under fault and at 1,3 x U_N
[3] Typical values
[4] Values for AgNi-contacts
[5] Values for $AgSnO_2$-contacts

Technical Data

3.8	Insulation acc. to IEC 60664-1, EN 50178		**double and reinforced insulation**
	Rated insulation voltage	AC V	250
	Contamination level		2
	Overvoltage category		III
	Test voltage		
	Contact-coil (1 min)	AC kV eff.	≥ 4
	Contact-contact (1min)	AC kV eff.	≥ 4
	Open contact acc. to DIN EN 61810-1	AC kV eff.	1.5
	Transient voltage		
	Contatct-coil (1.2 - 50 µs)	kV	≥ 6
	Clearance and creepage distances		
	Contact-coil	mm	≥ 8
	Contact-contact	mm	≥ 5.5
3.9	Weight	g	approx. 17
4.0	**Packing**		
4.1	on cardboard	piece	24
4.2	in case package	piece	240
5.0	**Solder method**		
5.1	Solder method /-temperature /-duration	°C / s	Wafe soldering / 260 / 5

Design Versions

U_N (DC V)	Voltage range (DC V)	Resistance at 20°C	AgNi10-contacts + 0,2 µm Au		AgNi10-contacts + 5 µm Au	
			OA 5667.12 2 C/O	OA 5667.16 1NO, 1NC	OA 5667.12 2 C/O	OA 5667.16 1NO, 1NC
6	4.5 ... 7.8	48	2861	2891	2871	2901
12	9.0 ... 15.6	183	2862	2892	2872	2902
24	18.0 ... 31.2	750	2863	2893	2873	2903
48	36.0 ... 62.4	3200	2864	2894	2874	2904
60	45.0 ... 78.0	4700	2865	2895	2875	2905
110	82.5 ... 143.5	15300	2866	2896	2876	2906

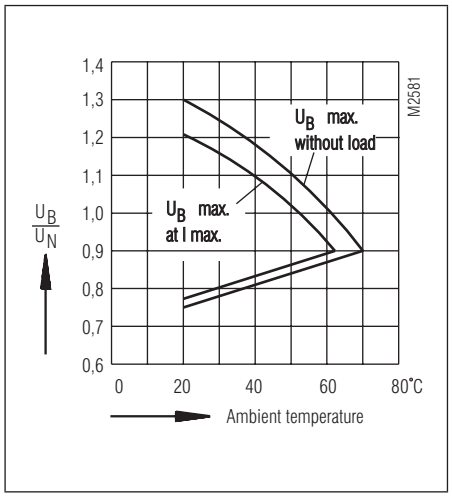
Ordering Example

OA 5667 ._ _ / _ _ _ _ L 4 / 61*)

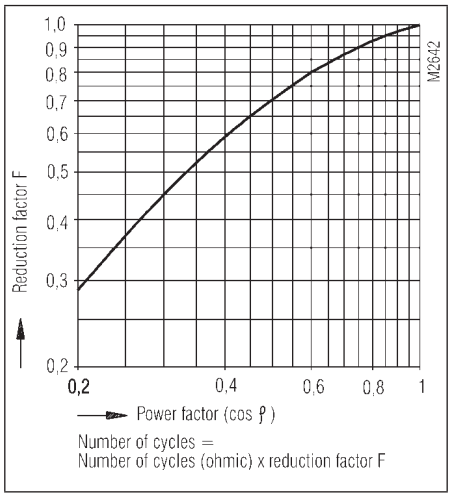
- Test voltage contact-contact 4 kV
- L = solder line proof RT II
- Design version
- Contact arrangement
  - .16 1 NC / 1 NO
  - .12 2 changeover contacts
  - .20 1 changeover contact / 1 NO (without design version)
  - .36 1 changeover contact / 1 NC (without design version)
- Relay type

*) /61 cURus approval

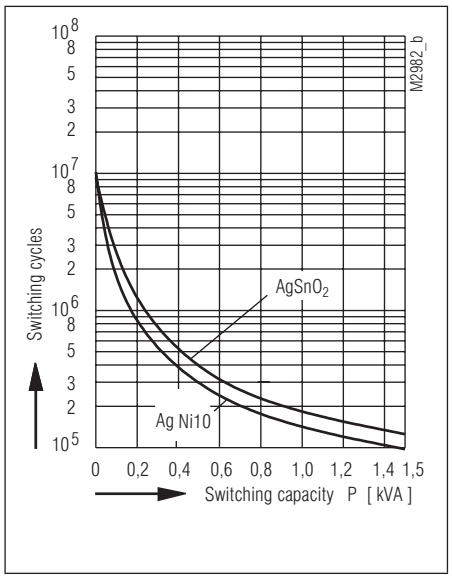
Characteristics



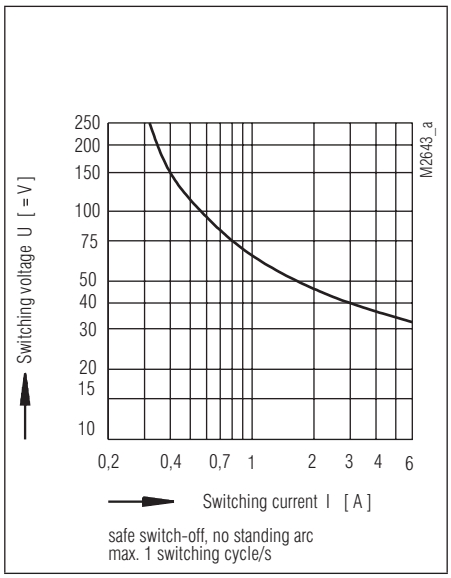
Operating voltage limit curve



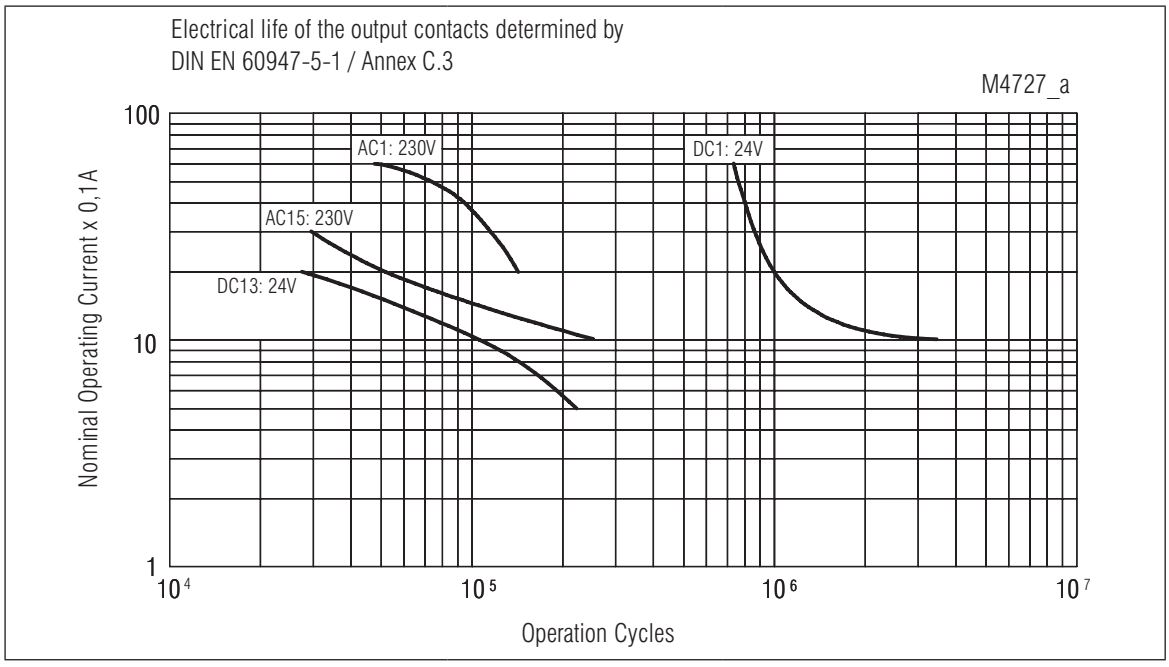
Reduction factor for inductive loads



Contact service life

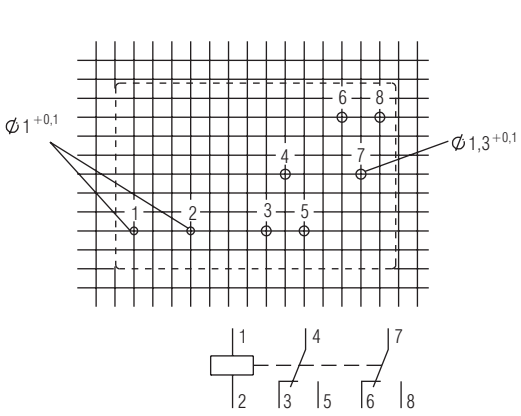


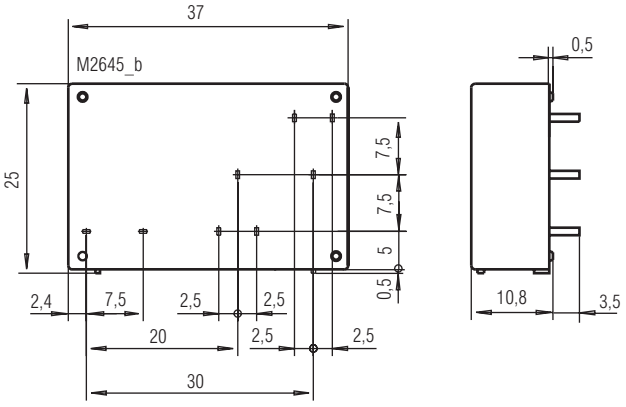
Limit curve for arc-free operation



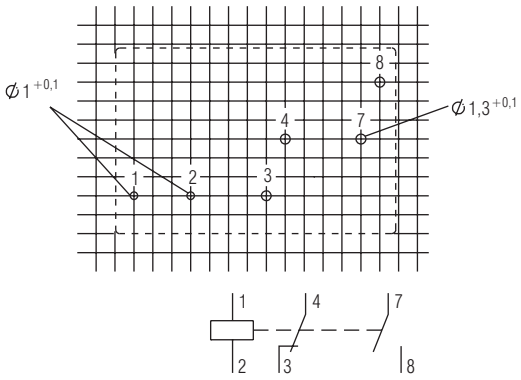
Electrical life

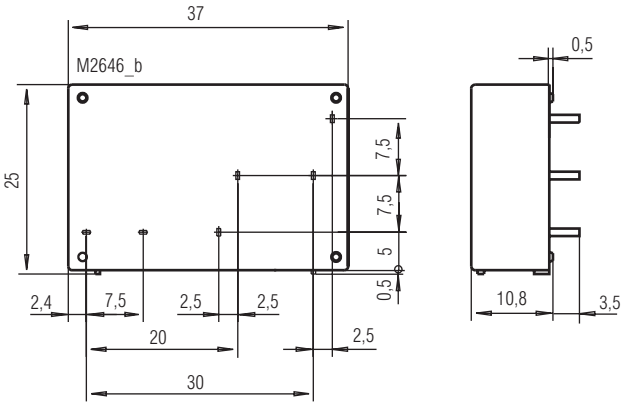
Drilling plan (solder side)





OA 5667.12/____4
OA 5667.20/____4 without contact 6
OA 5667.36/-----4 without contact 8





OA 5667.16/_ _ _ _ _4

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