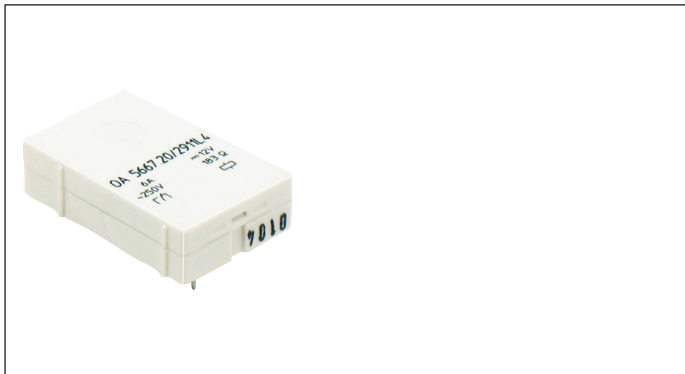


## Safety relay

OA 5667/\_\_\_\_4



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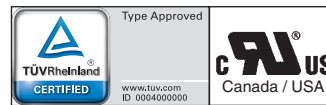


- According to DIN EN 61810-1, DIN EN 61810-3 (Type A resp. Type B)
- With forcibly guided contacts
- Clearance and creepage distances:  
Contact - coil  $\geq 8$  mm  
Contact - contact  $\geq 5,5$  mm
- **Double and reinforced insulation between contacts**
- Low rated power consumption
- High voltage resistance  $\geq 4$  kV at pollution degree 2
- High mechanical service life
- Compact size, small height

### Applications

- Switchgear for safety technology
- Press controls

### Approvals and Markings



### Technical Data

Relay type		OA 5667.____/____4	
<b>1.0 Relay coil</b>			
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	
<b>2.0 Contacts</b>			
2.1 Contact arrangement	2 changeover contacts (Type B) / 1 NO, 1 NC (Type A)		
2.2 Contact material	AgSnO <sub>2</sub> + 0.2 $\mu$ m Au; AgNi + 0.2 $\mu$ m Au, AgNi + 5 $\mu$ m Au		
2.3 Rated insulation voltage	AC V	250	
Switching voltage min./max.	V	AC/DC 10 / DC 250, AC 400 (AC/DC 2 V / 60 V) <sup>1)</sup>	
2.4 Limiting continuous current $I_{th}$	A	2 x 6 (see operating voltage limit curve)	
Switching current min./max.	A	10 mA <sup>3)</sup> / 6 (2 mA / 0.3 A) <sup>1)</sup>	
2.5 Switching power min./max.	VA	0.1 / 1 500 (10 mVA / 12 VA) <sup>1)</sup>	
Switching power min./max.	W	0.1 / 200 (10 mW / 12 W) <sup>1)</sup> (see limit curve for arc-free operation)	
2.6 Switching capacity to IEC/EN 60947-5-1			
AC 15 <sup>4)</sup>	AC V/A	NO: 250 / 3	NC: 250 / 1
AC 15 <sup>5)</sup>	AC V/A	NO: 250 / 3	NC: 250 / 1
DC 13 <sup>4)</sup>	DC V/A	NO: 24 / 2	NC: 24 / 1
DC 13 <sup>4)</sup> at 0.1 Hz to UL 508	DC V/A	NO: 24 / 4	NC: 24 / 3
		R300	
2.7 Electrical life	switching cycles	at 1 s On, 1 s Off (see contacts service life)	
at AC 250 V, 6 A, $\cos\phi = 1$	switching cycles	> 10 <sup>5</sup> AgNi 10	> 1.25 x 10 <sup>5</sup> AgSnO <sub>2</sub>
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	$\geq 20$ / $\geq 8$	
2.14 Contact gap	mm	> 0,5 <sup>2)</sup>	
<b>3.0 Other</b>			
3.1 Mechanical life	switching cycles	$\geq 10^7$	
3.2 Temperature range	°C	- 40 ... + 85	
3.3 Degree of protection, housing	Solder line proof RT II		
3.4 Test procedure	A (group mounting)		
3.5 Vibration resistance	10 ... 100 Hz; 0.35 mm Amplitude; 4 g max. IEC/EN 60068-2-6		
3.6 Climate resistance	40 / 085 / 04; A/B/D IEC/EN 60068-1		
3.7 Short circuit strength 1 kA / AC 250 V	AgNi or AgSnO <sub>2</sub>	6 AgL	IEC/EN 60947-5-1

<sup>1)</sup> Values for AgNi 10-contacts + 5  $\mu$ m Au

<sup>2)</sup> over entire service life, even when under fault and at 1,3 x  $U_N$

<sup>3)</sup> Typical values

<sup>4)</sup> Values for AgNi-contacts

<sup>5)</sup> Values for AgSnO<sub>2</sub>-contacts

## Technical Data

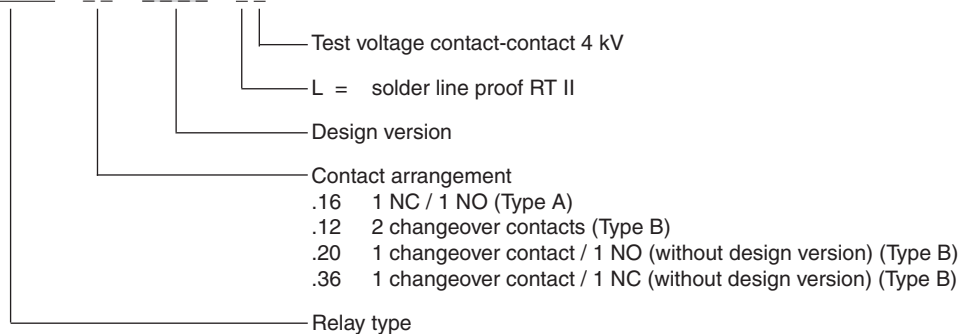
3.8	Insulation acc. to IEC 60664-1, EN 50178		<b>double and reinforced insulation</b>
	Rated insulation voltage	AC V	250
	Pollution degree		2
	Overtoltage category		III
	Test voltage		
	Contact-coil (1 min)	AC kV eff.	≥ 4
	Contact-contact (1min)	AC kV eff.	≥ 4
	Open contact acc. to DIN EN 61810-1	AC kV eff.	1.5
	Transient voltage		
	Contact-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
<b>4.0 Packing</b>			
4.1	on cardboard	piece	24
4.2	in case package	piece	240
<b>5.0 Solder method</b>			
5.1	Solder method /-temperature /-duration	°C / s	Wave soldering / 260 / 5

## Design Versions

U <sub>N</sub> (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

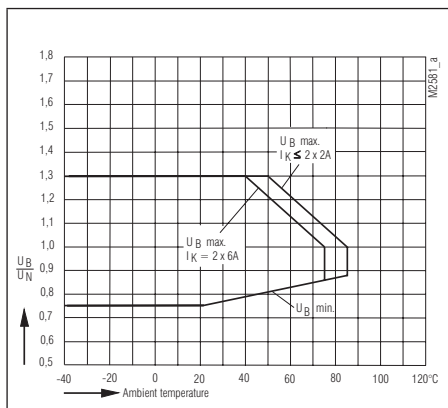
## Ordering Example

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

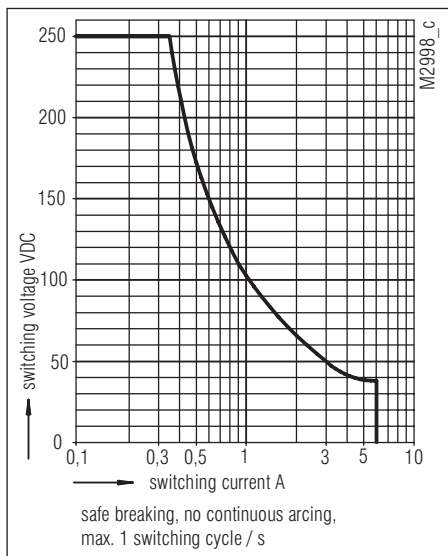


\*) /61 cURus approval

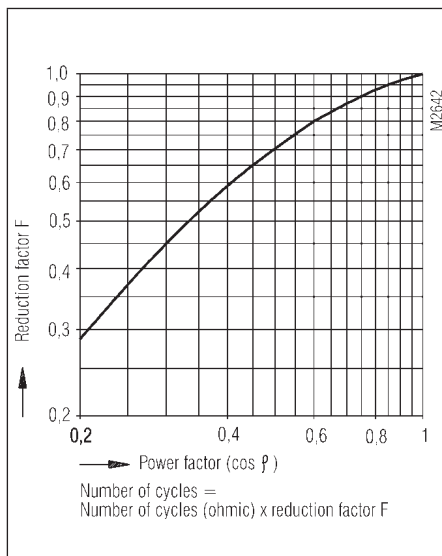
Characteristics



Operating voltage limit curve



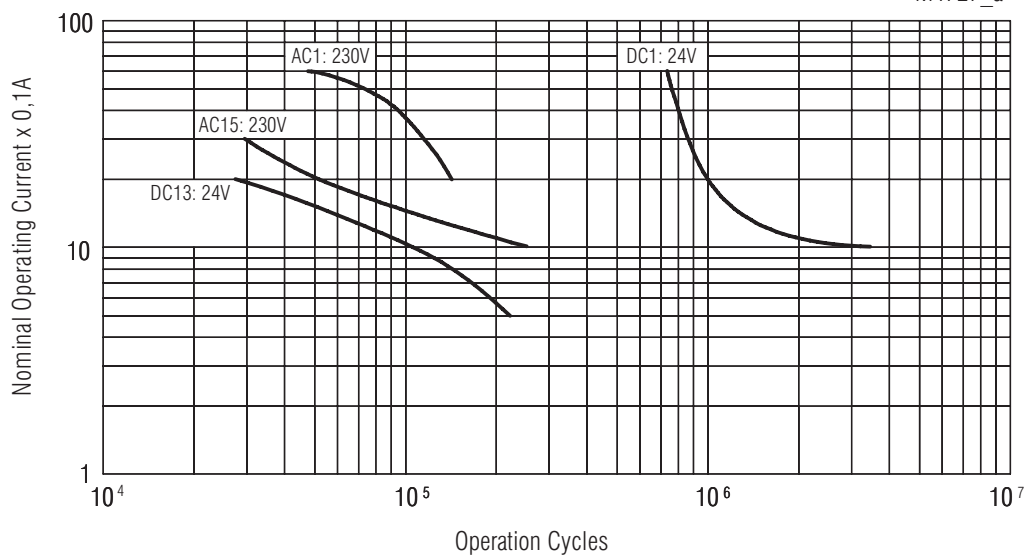
Arc limit curve



Reduction factor for inductive loads

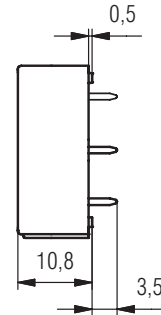
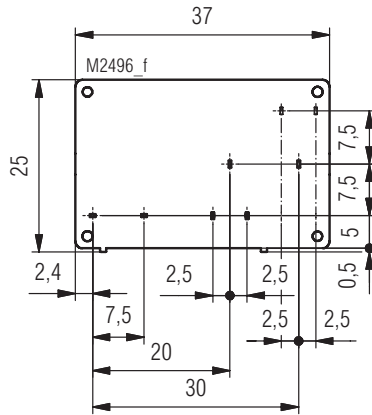
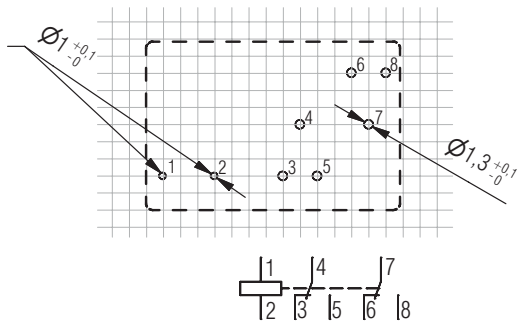
Electrical life of the output contacts determined by  
DIN EN 60947-5-1 / Annex C.3

M4727\_a

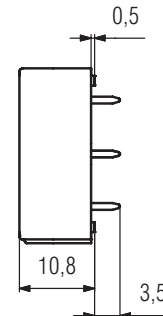
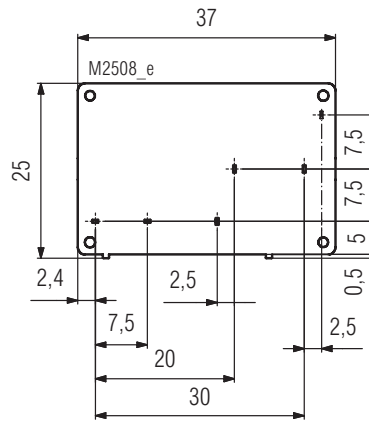
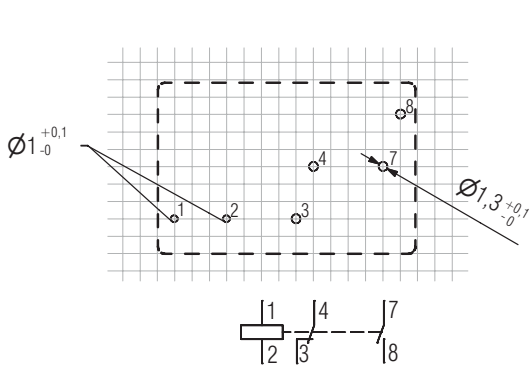


Electrical life

Drilling plan (solder side)



OA 5667.12/...L4  
 OA 5667.20/...L4 contact 6 not fitted



OA 5667.16/...L4

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