Printed Circuit Board Relays
monostable
OA 5651, OA 5652, OA 5661, OA 5662, OA 5692

OA 5651
OA 5661

OA 5652
OA 5662
OA 5692

- Acc. to DIN EN 61810-1, DIN EN 60664-1
- Compact size, small height (horizontal model)
- OA 5651, 5661 horizontal models
- OA 5652, 5662, 5692 vertical models
- Different pin configurations and pin arrangements
- Clearance and creepage distances contact-coil ≥ 8 mm
- Solder line proof

Applications

- Control technique
- Interface

Approvals and Marking

Canada / USA

Canada

Technical Data

Relay type			OA 5651, OA 5652, OA 5661, OA 5662, OA 5692
1.0	**Relay coil**		
1.1	Nominal voltage	DC V	6, 12, 15, 20, 24, 48, 60 (others on request)
1.2	Nominal consumption	W	0.48
1.11	Voltage range	U_N	0.7 ... 1.8
1.13	Holding power (at 0.5 x U_N)	W	0.12
2.0	**Contacts**		
2.1	Contact arrangement		1 changeover contact [1]
2.2	Contact material		$AgSnO_2$ + 0.2 µm Au; AgNi + 0.2 µm Au
2.3	Rated insulation voltage	AC V	250
	Switching voltage min./max.	V	10 / 400
2.4	Limiting continuous current I_{th}	A	8 (see operating voltage limit curve)
	Switching current min./max.	A	10 mA[4] / 10[2]
2.5	Switching power min./max.	VA	4 / 2000
	Switching power min./max.	W	30 ... 250 (see limit curve for arc-free operation)
2.6	Switching capacity		
	to IEC/EN 60947-5-1 AC 15	AC V/A	NC: 230 / 1; NO: 230 / 3
	to IEC/EN 60947-5-1 DC 13	DC V/A	NC: 24 / 1; NO: 24 / 1
	to UL 508		B150
2.7	Electrical life		at 1 s On, 1 s Off (see contacts service life)
	at AC 250 V, 8 A, cosφ = 1	switching cycles	> 2 x 10^5 AgNi 10 > 3 x 10^5 $AgSnO_2$
2.8	Switching frequency max.	switching cycles/s	20
2.9	Response time / Release time	ms	typically 5 / typically 7
2.10	Contact force	cN	> 25 / >10; > 10^3 / >8[3]
2.14	Contact gap	mm	> 0,5[2]
3.0	**Other**		
3.1	Mechanical life	switching cycles	30 x 10^6
3.2	Temperature range	°C	- 40 ... + 80
3.3	Degree of protection		Solder line proof RT II
3.5	Vibration resistance		≥ 4 g, to max. 100 Hz, IEC/EN 60068-2-6
3.6	Climate resistance		40 / 080 / 04 (climate category); A/B/D IEC/EN 60068-1

[1] NO and NC on request

[2] max. 4 s or 10 % ED

[3] at OA 5651, OA 5652

[4] Typical values

Technical Data

3.8	Insulation acc. to IEC 60664-1, EN 50178		
	Rated insulation voltage	AC V	250
	pollution degree		3
	Overvoltage category		III
	Test voltage		
	Contact- Coil (1 min)	AC kV eff.	≥ 4
	Transient voltage		
	Contact- Coil (1,2 - 50 µs)	kV	≥ 6
	Clearance and creepage distances	mm	≥ 8
3.9	Weight	g	13

4.0	**Packing**		
4.1	in blister	piece	20
4.2	in case package	piece	200

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 Ω	AgNi10-contacts + 0.2 µm Au					$AgSnO_2$-contacts + 0.2 µm Au				
			OA 5651	OA 5652	OA 5661	OA 5662	OA 5692	OA 5651	OA 5652	OA 5661	OA 5662	OA 5692
6	4,2 ... 10,8	80	621	635	285	270	411	651	665	323	328	432
12	8,4 ... 21,6	330	622	636	286	271	412	652	666	324	329	433
15	10,5 ... 27,0	475	623	637	291	272	413	653	667	321	330	434
20	14,0 ... 36,0	880	624	638	287	273	414	654	668	325	331	435
24	16,8 ... 43,2	1 200	625	639	288	274	415	655	669	326	332	436
48	33,6 ... 86,4	4 700	626	640	289	275	416	656	670	327	333	437
60	42,0 ... 108,0	7 250	627	641	293	276	417	657	671	322	334	438

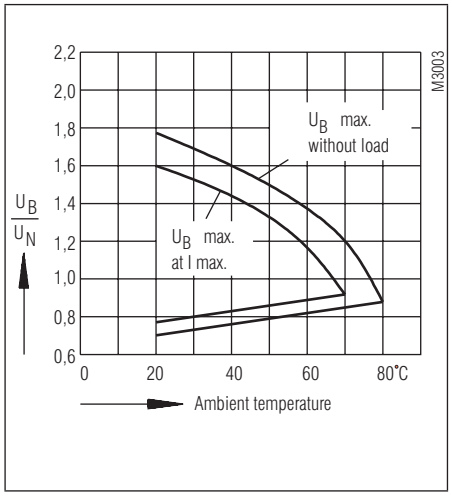
Ordering Example

OA 56_ _ .11 / _ _ _ /61*)

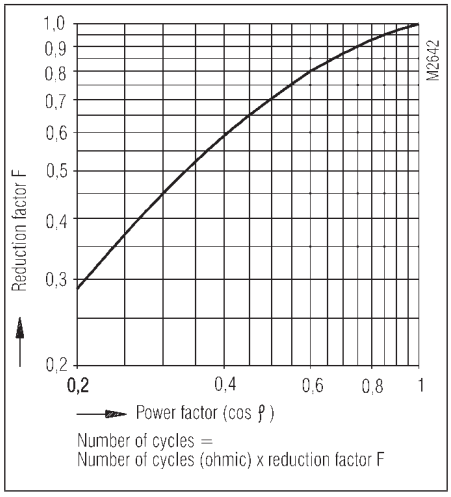
- Design version
- Contact arrangement
  1 changeover contact
- Mounting position
  1 = horizontal
  2 = vertical
- Pin arrangement

*) /61 cURus approval

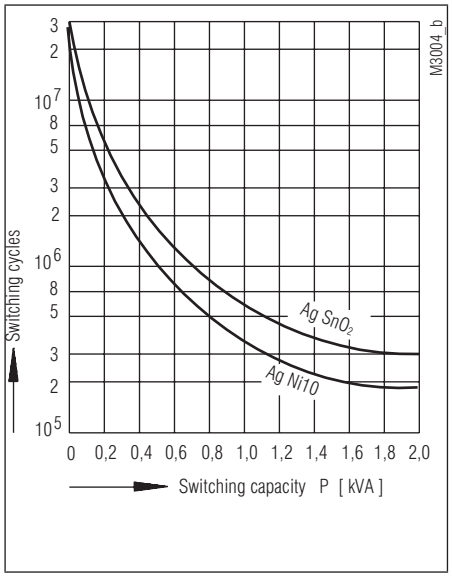
Characteristics



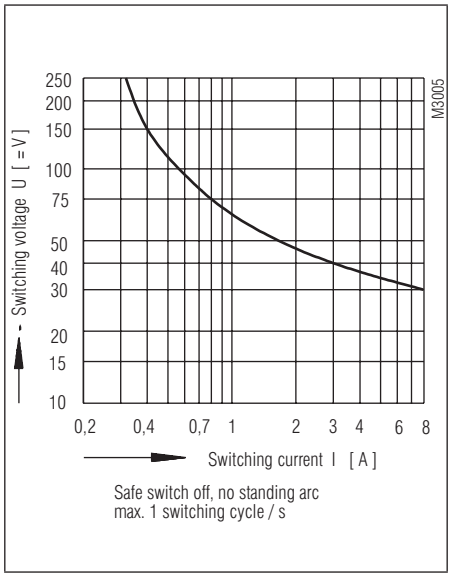
Operating voltage limit curve



Reduction factor for inductive loads



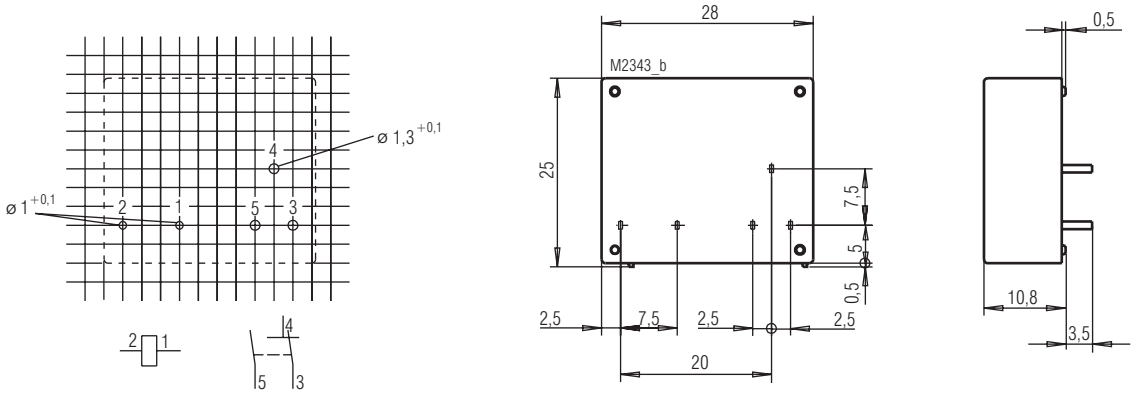
Contact service life (at t_u = 20°C)



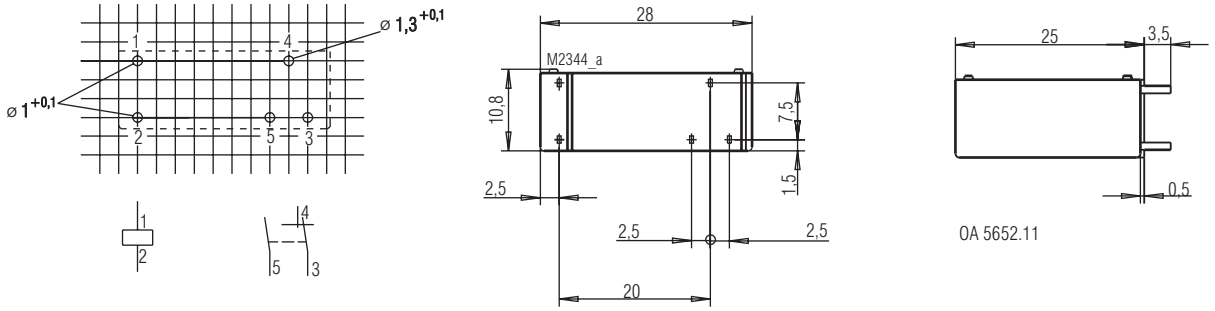
Limit curve for arc-free operation
(at t_u = 20°C)

Drilling plan (solder side)

OA 5651

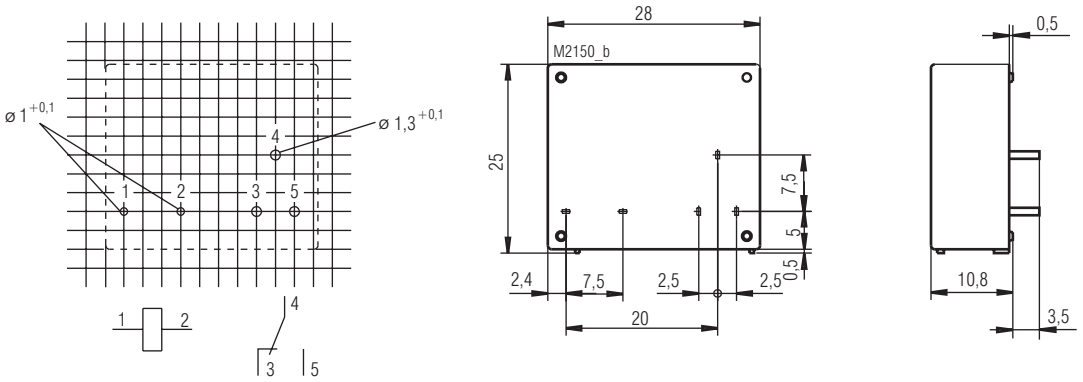


OA 5652

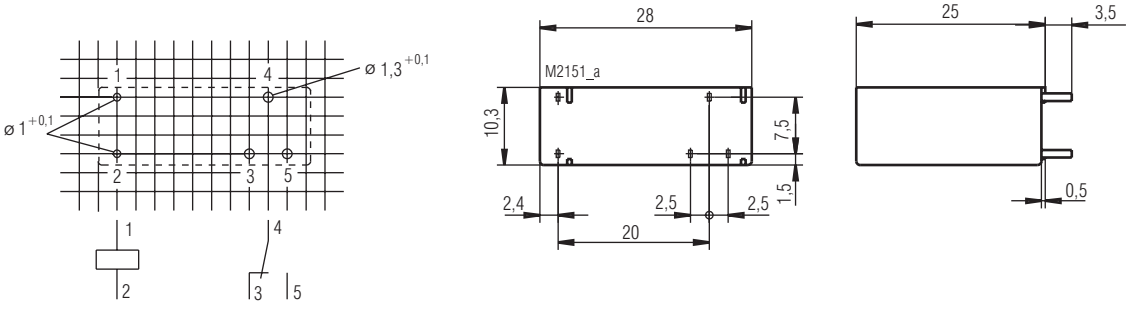


OA 5652.11

OA 5661



OA 5662

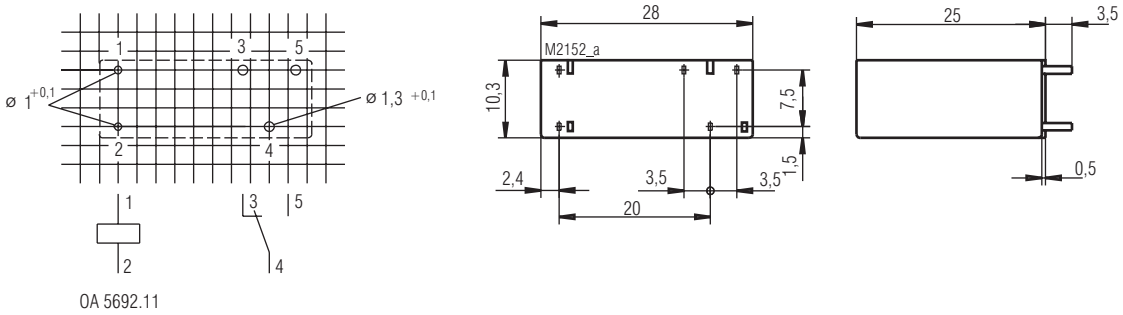


OA 5662.11

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

Drilling plan (solder side)

OA 5692



OA 5692.11

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