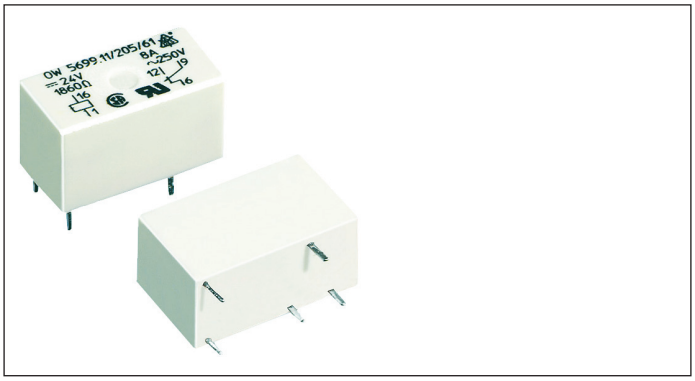
Power Miniature Relays dilais®
monostable
OW 5691, OW 5699

DOLD



- According to DIN EN 61810-1, DIN EN 60664-1
- Very small volume **DIL model**, can be plugged into standard IC-Sockets
- Safe separation L + K ≥ 5.5 mm, EN 50178
- High dielectric strength between coil and contact ≥ 4 kV
- Low rated power consumption
- Large voltage range
- High switching power
- High thermal continuous current
- Different contact materials
- Different connection arrangements, also for SMD
- High life
- Wash proof RT III

Applications

- Control technique
- White goods

Approvals and Marking

Canada / USA

Canada

Technical Data

Relay type			OW 5691 / OW5699	OW 5699
1.0	**Relay coil**			
1.1	Nominal voltage	DC V	4, 5, 6, 12, 20, 24, 48	
1.2	Nominal consumption	mW	see table Technical Data	
1.11	Voltage range	U_N	0.75 ... 2.2	
1.13	Holding power	mW	see table Technical Data	
2.0	**Contacts**			
2.1	Contact arrangement		1 NO, 1 changeover contact	
2.2	Contact material		$AgSnO_2$ + 0.3 µm Au; AgNi + 0.3 µm Au[1]; optionally 3 µm Au	
2.3	Rated insulation voltage	AC V	250	
	Switching voltage min./max.	V	AC/DC 10 / DC 120, AC 250	
2.4	Limiting continuous current I_{th}	A	5	8
	Switching current min./max.	A	0.01[2] / 5	
2.5	Switching power min./max.	VA	0.1 / 1 250	0.1 / 2 000
	Switching power min./max.	W	0.1 / 120	0.1 / 120
2.6	Switching capacity to IEC/EN 60947-5-1 AC 15	AC V/A	NC: 230 / 1, NO: 230 / 3	
2.7	Electrical life at AC 230 V 5 A cos φ=1	switching cycles	at 1 s On, 1 s Off (see contacts service life) see characteristics of contact service life	
2. 9	Response time	ms	(I_{th}=5 A) max. 8 (typically 5)	(I_{th}=8 A) max 5. (typically 2.2)
	Release time	ms	max. 4 (typisch 2)	
	Bouncing time (NC)		max. 10 (typically 6)	max. 8 (typically 3.5)
	Bouncing time (NO)		(I_{th}=5 A) max. 4 (typically 1.5)	(I_{th}=8 A) max. 2 (typically 1)
2.10	Contact force	cN	approx. 8	approx. 10
3.0	**Other**			
3.1	Mechanical life	switching cycles	≥ 10^8	
3.2	Temperature range	°C	- 40 ... + 80	
3.3	Degree of protection		Wash proof RT III	
3.5	Vibration resistance		10 ... 55 Hz; 1.2 mm amplitude; 10 g max. IEC/EN 60068-2-6	
3.6	Climate resistance		20 / 080 / 04 (climate category); A / B / D IEC/EN 60068-1	

[1] on request: $AgSnO_2$ + 0.3 µm Au

[2] Typical values

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

Technical Data

3.8	Insulation according to IEC 60664-1		
	Rated insulation voltage	AC V	250
	Contamination level		3
	Overvoltage category		III
	Test voltage		
	Contact-coil (1 min)	AC kV eff.	≥ 4
3.9	Weight	g	approx. 5

4.0	**Packing**		
4.1	on cardboard in slipcase	piece	100
4.2	in case package	piece	1000

5.0	**Solder method**		
5.1	Solder method /-temperature /-duration	°C / s	Wafe soldering / 260 / 5

Design Versions

1 changeover contact

I_{th} = 5 A	Nominal volatage U_N	V DC	4.5	6	12	20	24	48
	Design version Type OW 5691.11	AgNi 0.15	911	912	913	916	914	915
		Au-Contact	081	082	083	086	084	085
	Design version Type OW 5699.11	AgNi 0.15	171	172	173	176	174	175
		Au-Contact	191	192	193	196	194	195
	Resistance at 20°C	Ω	78	155	600	1 600	2 400	9 216
	Nominal consumption	mW	260	233	240	250	240	250
	Holding power	mW	65	58	60	62.5	60	62.5
	Response voltage	V DC	3.3	4.5	9	14.5	17.5	36
I_{th} = 8 A	Design version Type OW 5699.11	$AgSnO_2$	201	202	203	204	205	206
	Resistance at 20°C	Ω	65	115	465	1 250	1 860	6 310
	Nominal consumption	mW	311	313	310	320	310	365
	Holding power	mW	77.75	78.25	77.5	80	77.5	91.25
	Response voltage	V DC	3.3	4.5	9	15	18	36

1 NO contact

I_{th} = 5 A	Nominal volatage U_N	V DC	4.5	6	12	20	24	48
	Design version Type OW 5691.01	AgNi 0.15	921	922	923	926	924	
		Au-Contact	091	092	093	096	094	
	Design version Type OW 5699.01	AgNi 0.15	181	182	183	186	184	
		Au-Contact	231	232	233	236	234	
	Resistance at 20°C	Ω	155	315	1 070	2 960	4 350	
	Nominal consumption	mW	131	114	135	135	132	
	Holding power	mW	32.75	28.5	33.75	33.75	33	
	Response voltage	V DC	3	4.3	8	13	16	
I_{th} = 8 A	Design version Type OW 5699.01	$AgSnO_2$	221	222	223	224	225	226
	Resistance at 20°C	Ω	78	155	600	1 600	2 400	9 200
	Nominal consumption	mW	260	233	240	250	240	250
	Holding power	mW	65	58.25	60	62.5	60	62.5
	Response voltage	V DC	3.3	4.5	9	14	17	32

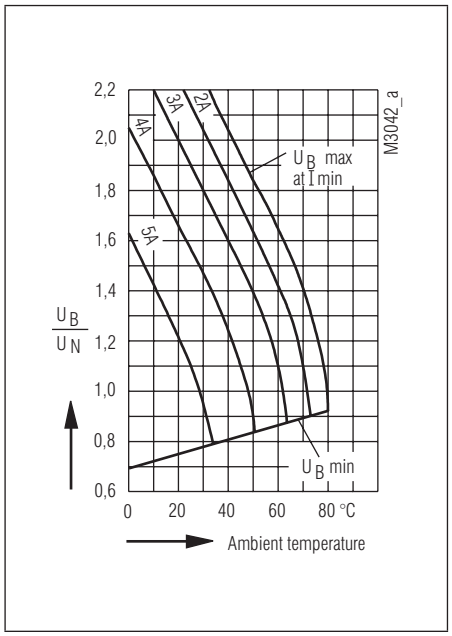
Ordering Example

OW 5691 ._ _ /_ _ _ / 61*)

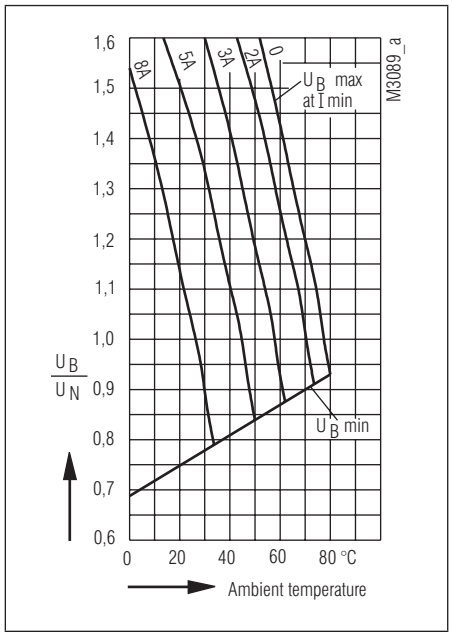
- /_ _ _ — Design version
- ._ _ — Contact arrangement
  - .01 = 1 NO
  - .11 = 1 changeover contact
- OW 5691 — Relay type

*) /61 cURus approval

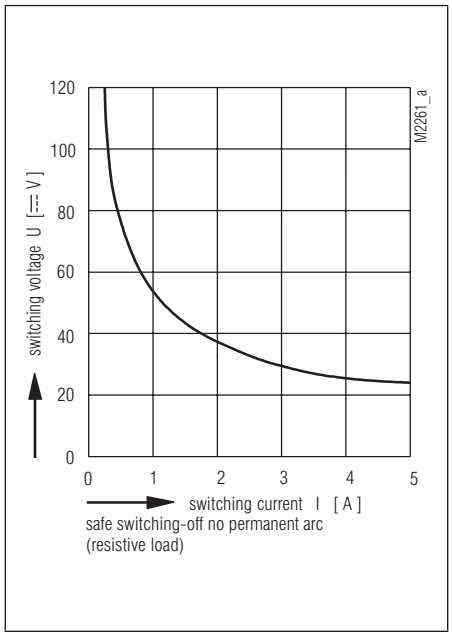
Characteristics



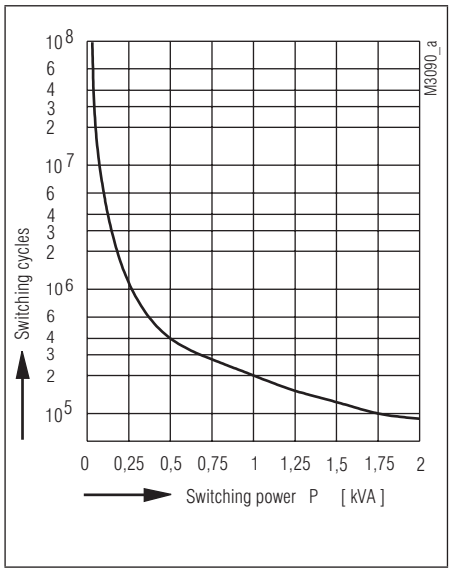
Operating voltage limit curve
for OW 5691 and OW 5699 with $I_{th} \leq 5$ A



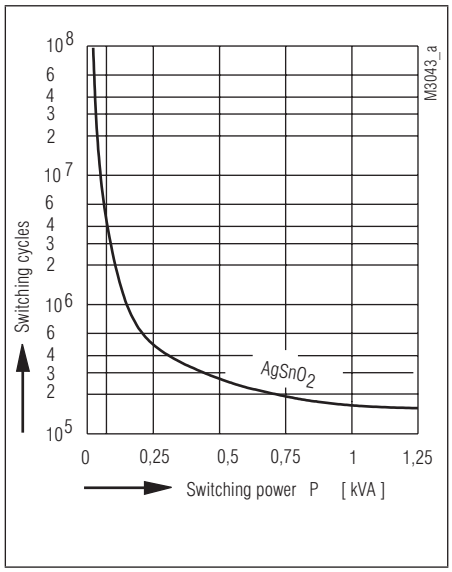
Operating voltage limit curve
for OW 5699 with $I_{th} \leq 8$ A



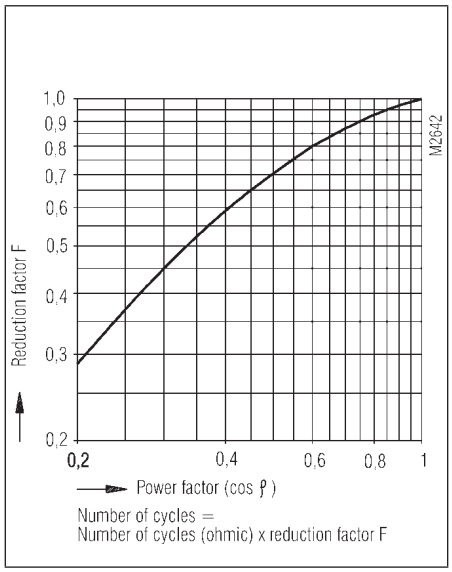
Limit curve for arc-free operation
at t_u = 20°C) for OW 5691 and OW 5699



Contact service life
for OW 5699 with $I_{th} \leq 8$ A (NO contact)

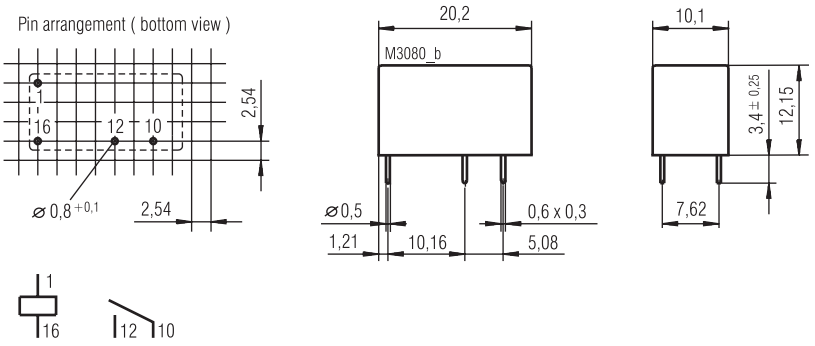


Contact service life
for OW 5691 and OW 5699 with $I_{th} \leq 5$ A
(NO contact)

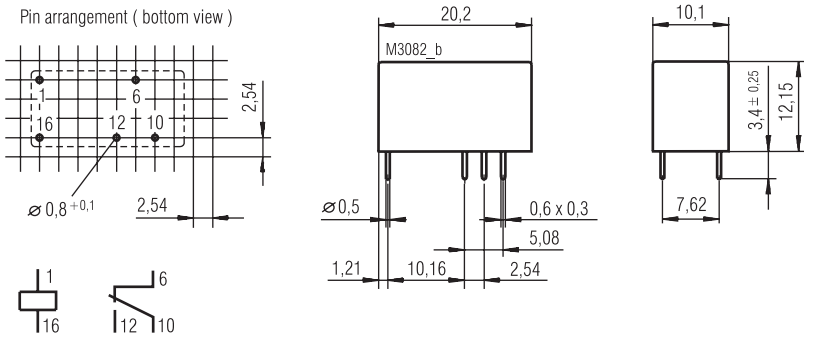


Reduction factor for inductive loads

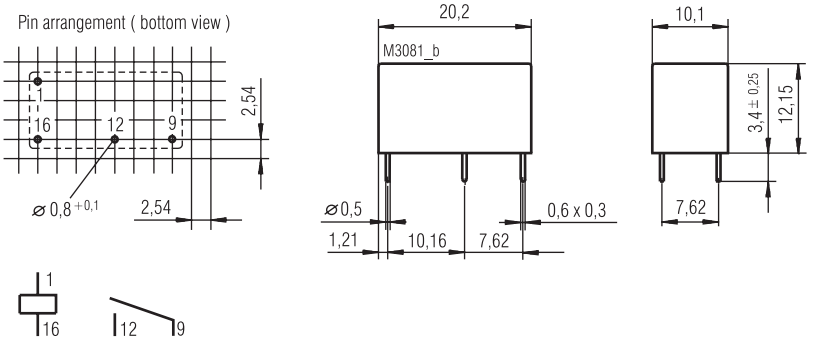
Dimensions, Pin Configuration, Connection Diagrams



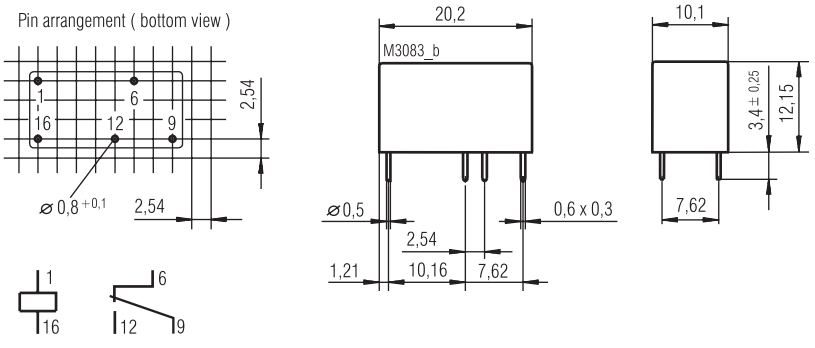
OW 5691.01



OW 5691.11



OW 5699.01



OW 5699.11

Connections for basic grid divensions 2.5 mm as well as 2.54 mm according to IEC/EN 60 097 and IEC 60 326 average.
Pin distance tolerance measured at the pin ends ± 0.3 mm. Dimensions are valid for untinned state.