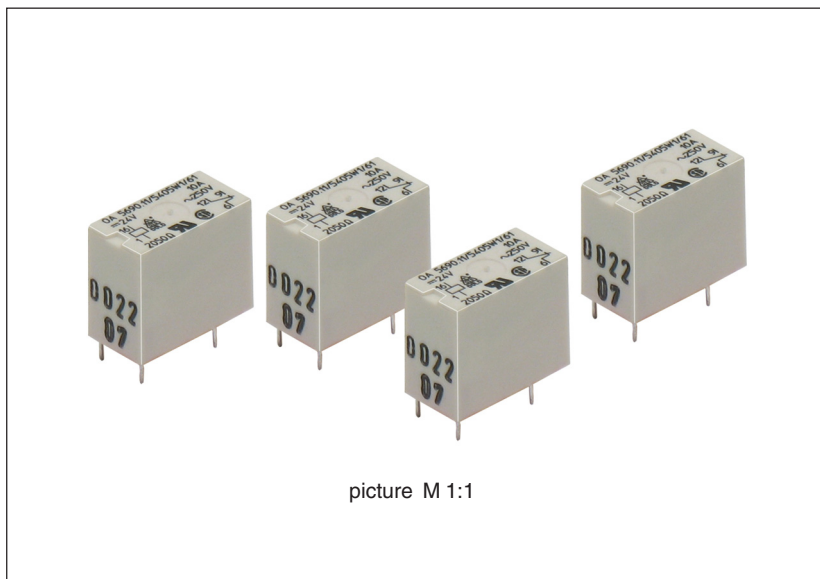


Power miniature relay, bistable

dilais® OB 5690

- poled
- for pulse operation, continuous operation permitted
- clearance and creepage distances between contact-coil ≥ 8 mm
- small volume **DIL model**, can be plugged into standard IC-sockets
- safe separation according to IEC/EN 60 730; IEC/EN 60 335
- high dielectric strength between contact and coil ≥ 4 kV
- very low mutual capacitance
- low rated power consumption
- large voltage range
- high switching power
- high thermal continuous current
- different contact materials
- different connection arrangements
- high life
- wash proof, degree of protection IP 67
- Patent on construction for safe separation



Technical data

Relay type		OB 5690
1. 0 Relay coil		
1. 1 Nominal voltage	DC V	4, 5, 6, 12, 20, 24, 48
1. 2 Nominal consumption 1 changeover contact	mW	250
2. 0 Conacts		
2. 1 Contact arrangement		1 NO, 1 changeover contact
2. 2 Contact material		AgSnO ₂ + 0,3 µm Au; AgNi 0,15 + 0,3 µm Au ¹⁾ ; 3µm Au on request
2. 3 Rated insulation voltage	AC V	250
Switching voltage min./max.	V	AC/DC 10 / DC 120, AC 400
2. 4 Limiting continuous current I _{th}	A	5
Switching current min./max.	A	0,01 ²⁾ / 5
2. 5 Switching power min./max.	VA	0,1 / 1250
Switching power min./max.	W	0,1 / 120
2. 6 Switching capacity to IEC/EN 60 947-5-1 AC 15	AC V/A	NC: 230 / 1 NO: 230 / 5
2. 7 Electrical life at AC 230 V 5 A cos φ=1	switching cycles	1 x 10 ⁵
2. 9 Response time / Release time	ms	≤ 5 (typically 3) / ≤ 4 (typically 2)
2.10 Contact force	cN	NC approx. 8 ; NO approx. 10
2.14 Contact gap	mm	≥ 0,3
3. 0 Other		
3. 1 Mechanical life	switching cycles	> 50 x 10 ⁶
3. 2 Temperature range	°C	- 40 ... + 80
3. 3 Degree of protection, housing/conn.		IP 67 / IP 00 IEC/EN 60 529, wash proof acc. to Qc 2 IEC/EN 60 068-2-17
3. 4 Housing		Thermoplast GF PBT
3. 5 Vibration resistance		10 ... 55 Hz; 1,2 mm amplit.; 10 g max. IEC/EN 60 068-2-6
3. 6 Climate resistance		20 / 080 / 04 (climate category); A/B/D IEC/EN 60 068-1
3. 8 Insulation according to IEC 60 664-1		
Rated insulation voltage	AC V	250
Contamination level		3
Overvoltage category		III
Test voltage contact/coil (1min)	AC kV eff.	≥ 4
3. 9 Weight	g	ca. 6

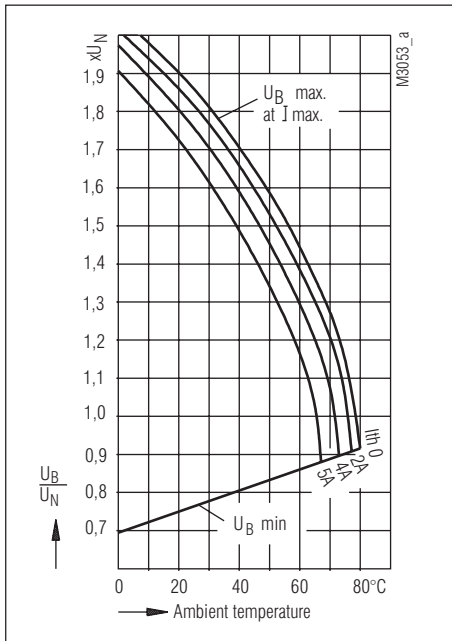
¹⁾ on request: AgSnO₂ + 0,3 µm Au

²⁾ Typical values

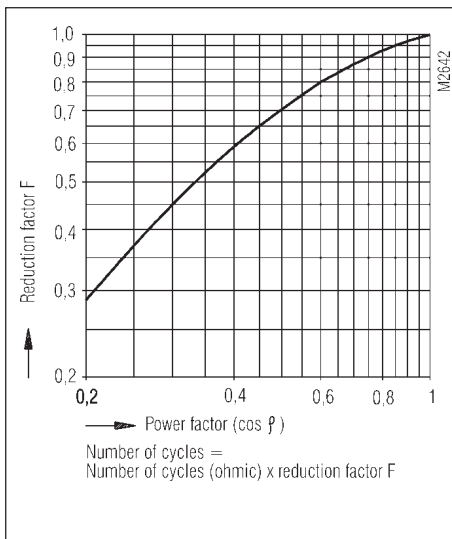
Standard variants

U _N	Voltage range	Resistance at 20°C	Design version			
			OB 5690.01/...		OB 5690.11/...	
			AgSnO ₂	AgNi 0,15	AgSnO ₂	AgNi 0,15
DC	DC V	Ω				
V	V	Ω	AgSnO ₂	AgNi 0,15	AgSnO ₂	AgNi 0,15
4,5	3,3 ... 9,9	80	7831	7851	7821	7841
6,0	4,5 ... 13,2	150	7832	7852	7822	7842
12	9,0 ... 26,4	585	7833	7853	7823	7843
20	15,0 ... 44,0	1 650	7834	7854	7824	7844
24	18,0 ... 52,8	2 400	7835	7855	7825	7845
48	36,0 ... 105,0	9 160	7836	7856	7826	7846

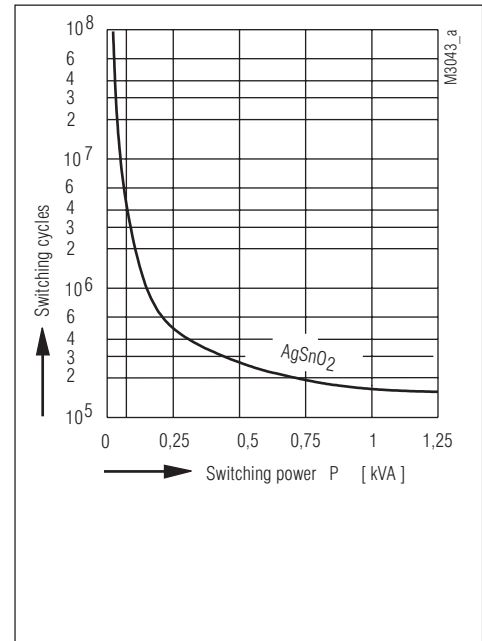
Characteristics



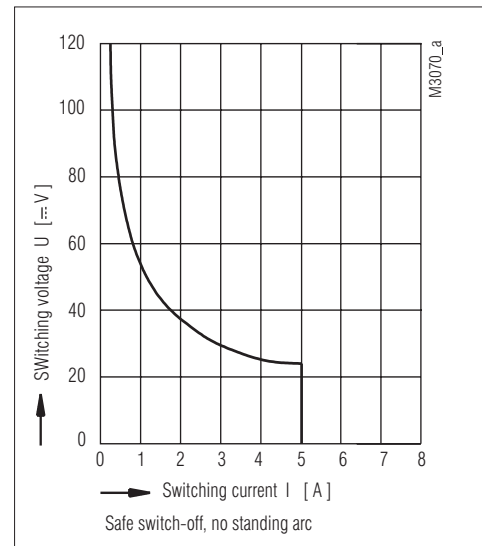
Operating voltage limit curve



Reduction factor for inductive loads

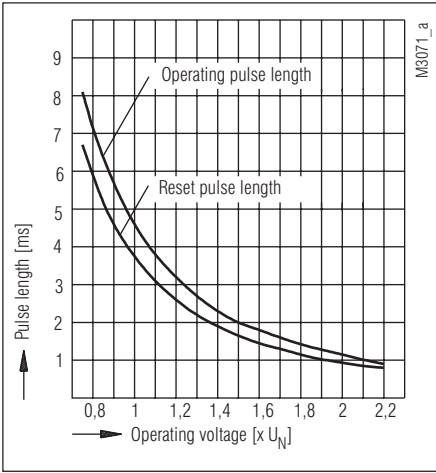


Contact service life (at $t_u = 20^\circ\text{C}$)

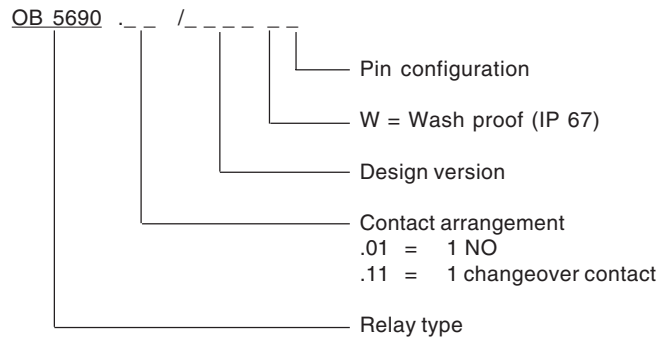


Limit curve for arc-free operation (load limit curve)

Characteristic



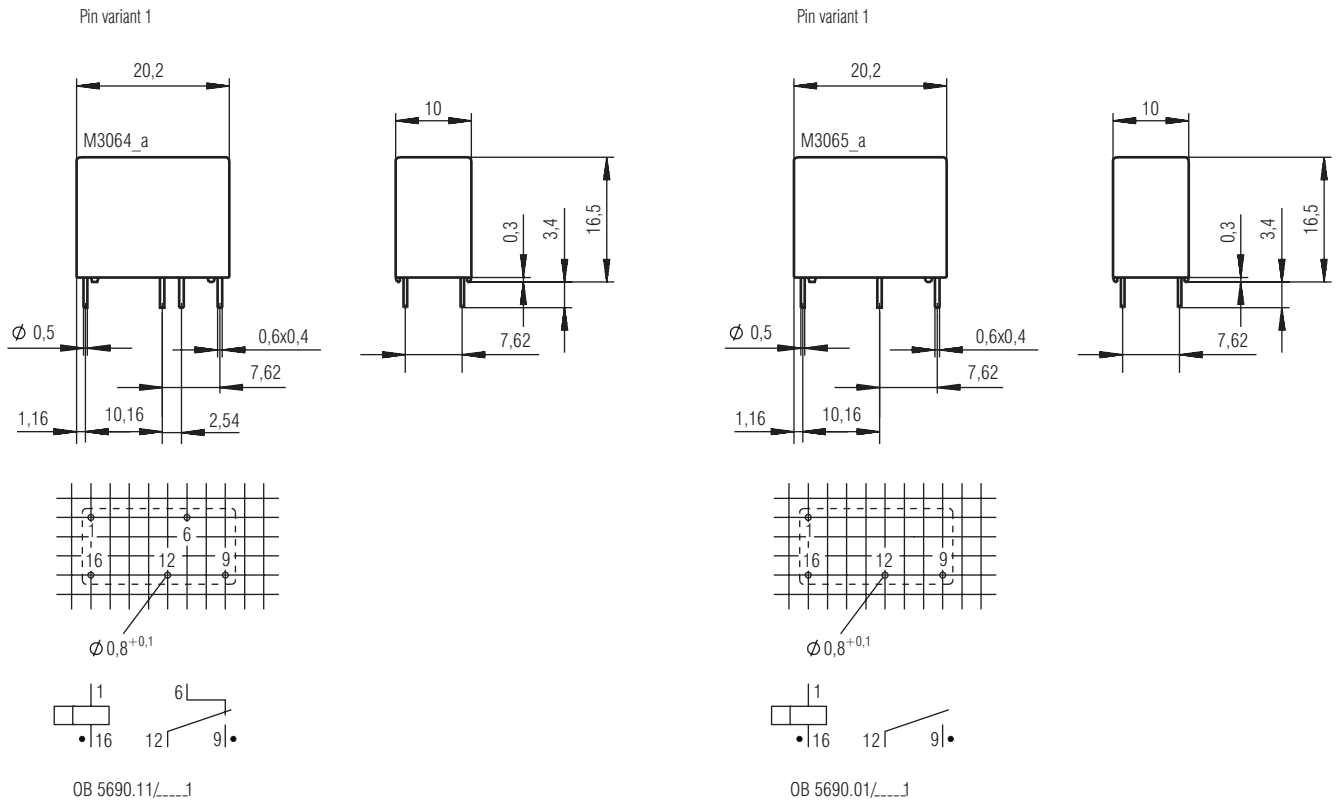
Ordering example



Operating / Reset pulse length

Dimensions, pin configuration, connection diagrams

Drilling plan (solder side)

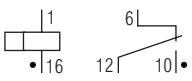
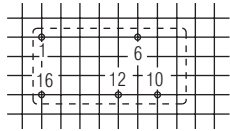
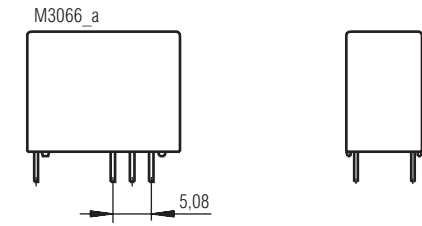


Connections for basic grid dimensions 2,5 mm as well as 2,54 mm according to IEC/EN 60 097 and IEC 60 326 average.
Pin distance tolerance measured at the pin ends $\pm 0,3$ mm. Dimensions are valid for untinned state.

Dimensions, pin configuration, connection diagrams

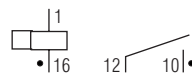
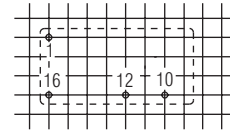
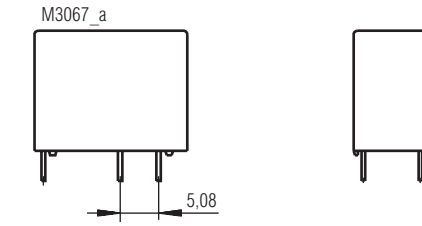
Drilling plan (solder side)

Pin variant 2



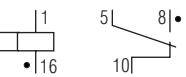
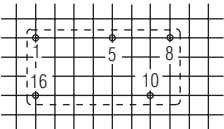
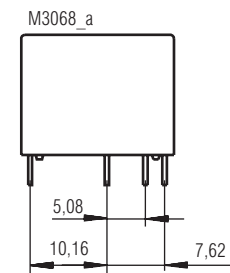
OB 5690.11/.....2

Pin variant 2



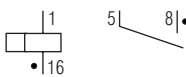
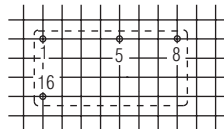
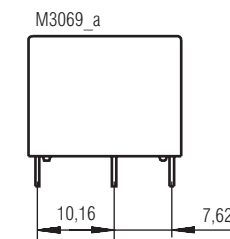
OB 5690.01/.....2

Pin variant 3



OB 5690.11/.....3

Pin variant 3



OB 5690.01/.....3

Connections for basic grid dimensions 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 $\pm 0,3$ mm. Dimensions are valid for untinned state.