



PCB-relay with 1 NO or 1 changeover contact.
The contacts of the remanence relays stay in position after a current pulse until a pulse in reverse direction resets the contacts.

- According to DIN EN 61810-1, DIN EN 60664-1
- Clearance and creepage distances:
Contact - coil ≥ 5.5 mm
- High dielectric strength ≥ 4 kV
- High thermal continuous current $I_{th} = 5$ A
- High switching power AC 250 V / 5 A
- Compact size $V = 2.47$ cm³
- Very small volume **DIL model**, can be plugged into standard IC-socket
- Wash proof RT III

Applications

- Control technique
- Interface

Approvals and Markings



Technical Data

Relay type	OR 5691
1.0 Relay coil	
1.1 Nominal voltage	DC 4; 5; 6; 12; 20; 24; 48 V
1.2 Nominal consumption	0.7 W (1u)
1.3 Test voltage coil/chassis	\geq AC 2.5 kV
1.4 Pulse length	See diagram operate pulse length
1.5 Non operation voltage	$\leq 0.40 \times U_N$
1.6 Hold voltage	$\leq 0.025 \times U_N$ (opposite polarity of operating voltage)
1.7 Release voltage	See diagram reset time
1.8 Reset voltage	$\leq 0.18 \times U_N$ (opposite polarity of operating voltage)
1.9 Max. permitted coil temperature	120 °C
1.10 Coil data	See page 4
1.11 Voltage range	0.80 ... 1.3 x U_N
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
2.3 Rated insulation voltage	AC 250 V
Switching voltage min./max.	AC/DC 10 V / DC 120 V, AC 250 V
2.4 Limiting continuous current I_{th}	5 A
Switching current min./max.	0.01 A ¹⁾ / 5 A
2.5 Switching power min./max.	0.1 VA / 1250 VA
Switching power min./max.	0.1 W / 120 W
2.6 Switching capacity to IEC/EN 60947-5-1	
AC 15	NC: AC 230 V / 1 A NO: AC 230 V / 3 A
2.7 Electrical Life	At 1 s On, 1 s Off (see contacts service life)
at AC 230 V 1 A cos φ = 1	5 x 10 ⁵ switching cycles
at AC 230 V 5 A cos φ = 1	1.5 x 10 ⁵ switching cycles
2.8 Switching frequency max.	20 switching cycles/s
2.9 Response time / Release time	Typically ≤ 8 ms / (see diagram reset time)
2.10 Contact force NO / NC	8 cN
2.12 Contact model	Spring contact
2.13 Contact resistance	≤ 30 mΩ (measuring current 10 mA, measuring voltage 2 V DC)
2.14 Contact gap	0.3 ... 0.4 mm
2.15 Contact override	≥ 0.3 mm
2.16 Bouncing time	
(at U_N) NC	≤ 8 ms (typisch 5.5) at $U_{AB} = 0.3 \times U_N$
(at U_N) NO	≤ 4.2 ms (typisch 2,6) at $U_{AN} = U_N$
2.17 Impulse with stand voltage	2 kV; 1.2 kV/50 kV
2.18 Capacity	
between open contacts	≤ 2 pF (typically 1.5 pF)
between contact and coil	≤ 9 pF (typically 7 pF)

¹⁾ Typical values

Technical Data

3.0 Other

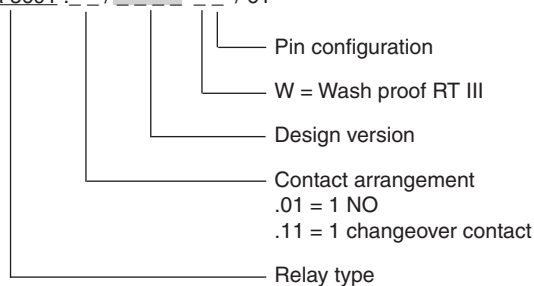
3.1	Mechanical life	≥ 10 ⁸ switching cycles
3.2	Temperature range	- 40 ... + 65 °C
3.3	Degree of protection	Wash proof RT III
3.5	Vibration resistance	10 ... 55 Hz; 1.2 mm amplitude; 10 g max. IEC/EN 60068-2-6
3.6	Climate resistance	20 / 065 / 04 (climate category); A/B/D IEC/EN 60068-1
3.8	Insulation according to IEC 60664-1	
	Rated insulation voltage	AC 250 V
	Pollution degree	3
	Overvoltage category	III
	Test voltage	
	contact-coil (1 min)	≥ AC 4 kV eff.
	Clearance and creepage distances	
	Contact- Coil	≥ 5.5 mm (safe separation acc. to EN 50178)
3.9	Weight	Approx. 5 g
3.10	Dimensions	See dimensions
3.13	Mounting direction	Free
3.14	Operating mode	100 % duty cycle
3.15	Sealing	Epoxy resin
4.0 Packing		
4.1	On cardboard in slipcase	100 pieces
4.2	In case package	1000 pieces
5.0 Solder method		
5.1	Solder method /-temperature /-duration	Wave soldering / 260 °C / 5 s

Design versions

U _N (DCV)	R _{Coil} Ω ± 10%	AgNi 0,15 + 0.3 μm Au	
		OR 5691.11/..	OR 5691.01/..
4.5	27	7521	7531
6	50	7522	7532
12	200	7523	7533
20	600	7524	7534
24	820	7525	7535
48	3300	7526	7536

Ordering Example

OR 5691 . . . / . . . / 61*)

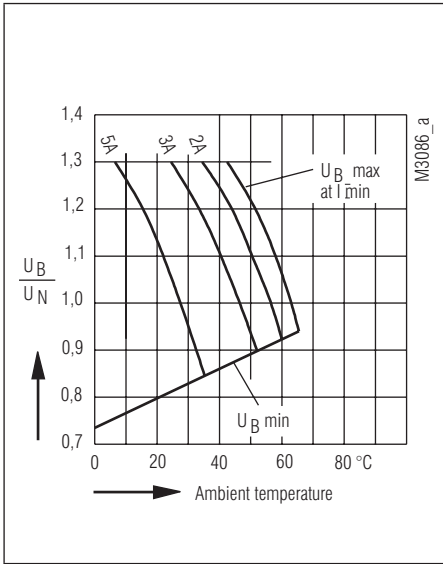


Notes

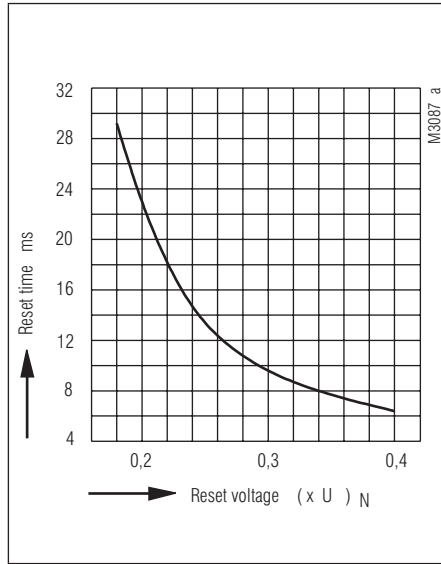
For the use and processing of our PCB relays, please refer to the **application and processing instructions** at www.dold.com

*) /61 cURus approval

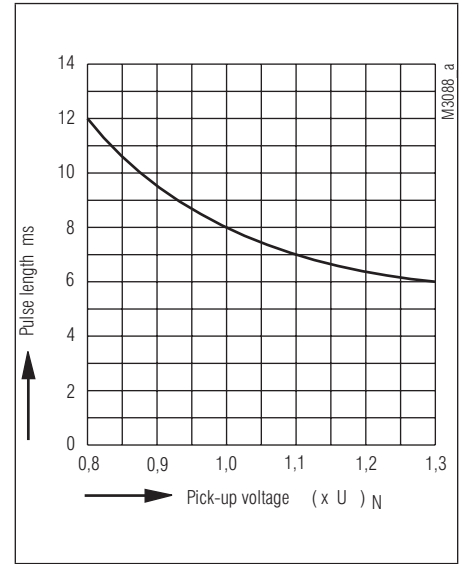
Characteristics



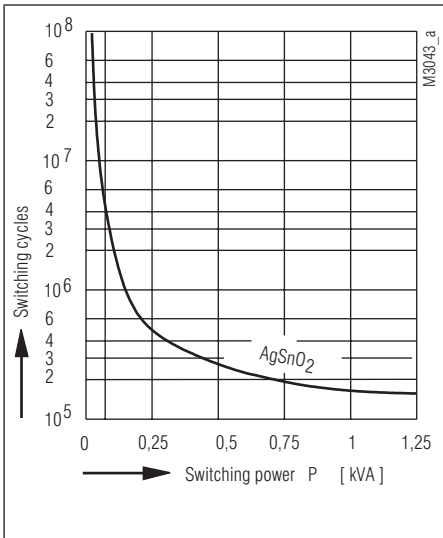
Operating voltage limit curve



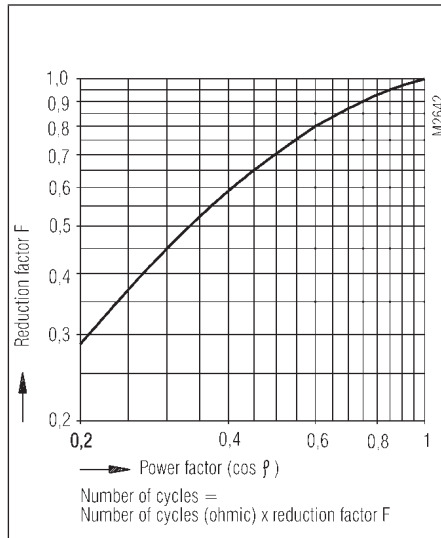
Reset time



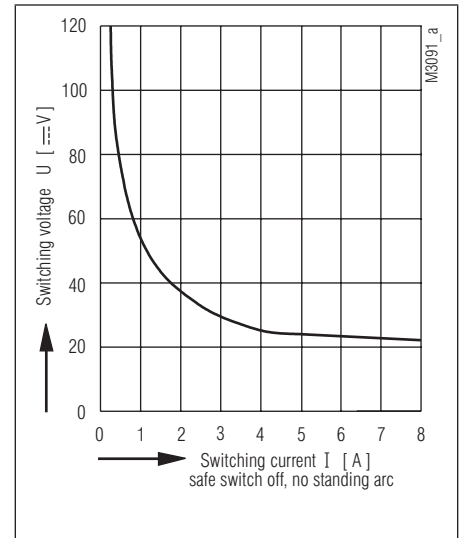
Response-Impulse length



Contact service life

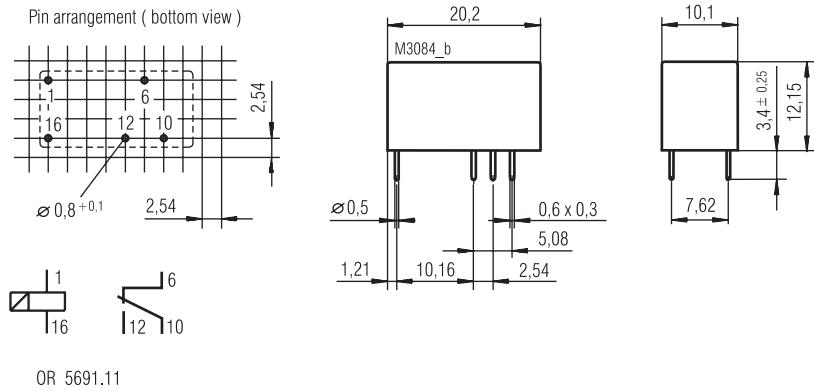
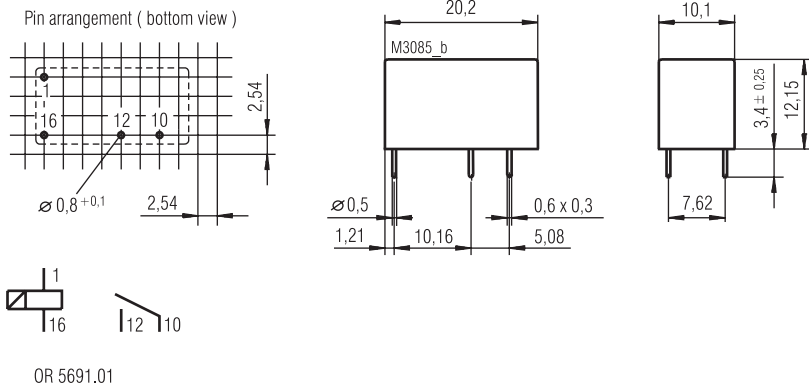


Reduction factor for inductive loads



Arc limit curve

Dimensions, Pin Configuration, Connection Diagrams



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.