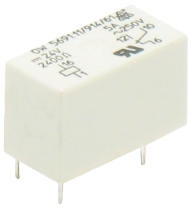
DILAIS
Power Miniature Relay, Remanence
OR 5691

Translation of the original instructions

DOLD

0277495



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

c UL us
Canada / USA

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	≥ AC 2.5 kV
1.4	Pulse length	See diagram operate pulse length
1.5	Non operation voltage	≤ 0.40 x U_N
1.6	Hold voltage	≤ 0.025 x U_N (oposite polarity of operating voltage)
1.7	Release voltage	See diagram reset time
1.8	Reset voltage	≤ 0.18 x U_N (oposite 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 continiuous 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 x 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

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

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*)

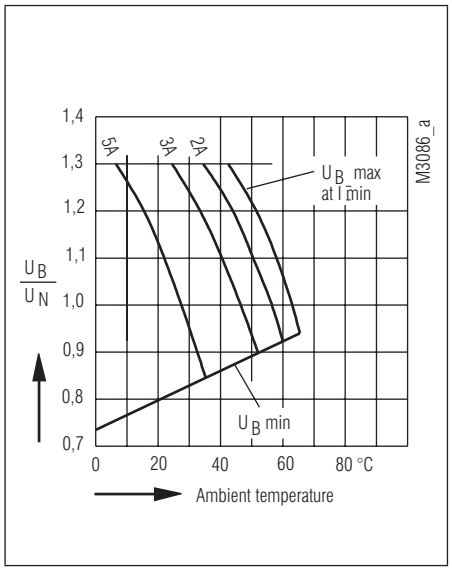
- Pin configuration
- W = Wash proof RT III
- Design version
- Contact arrangement
  .01 = 1 NO
  .11 = 1 changeover contact
- Relay type

*) /61 cURus approval

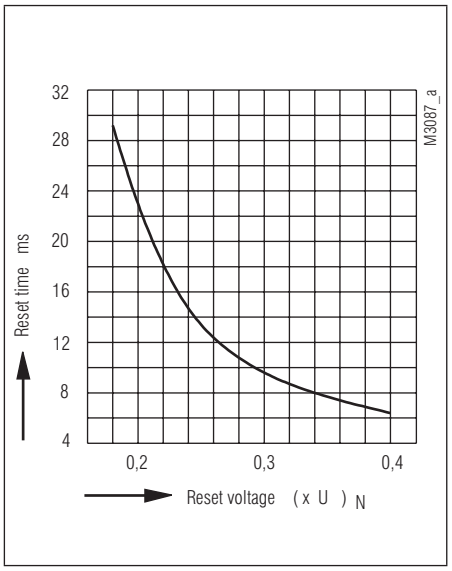
Notes

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

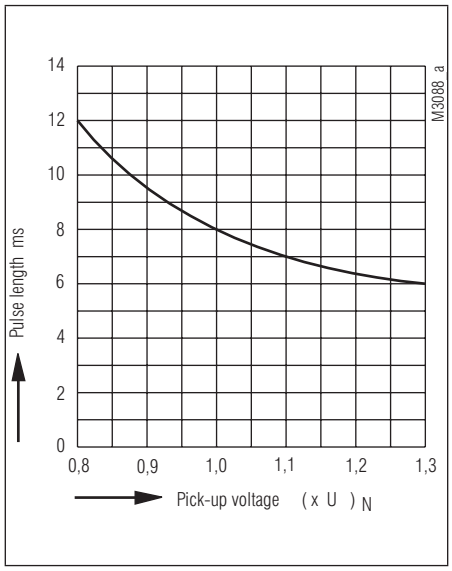
Characteristics



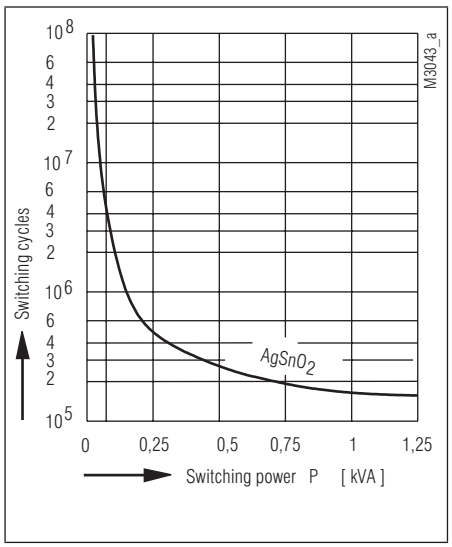
Operating voltage limit curve



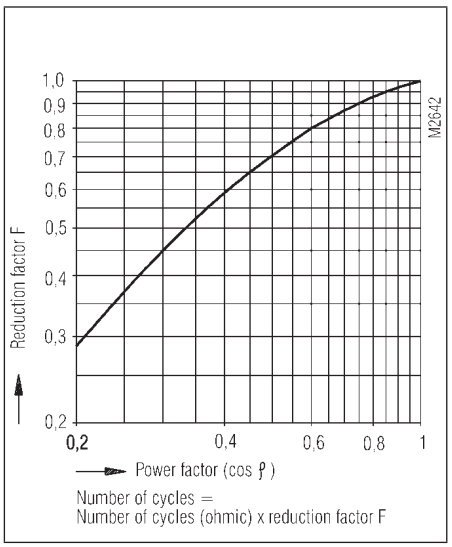
Reset time



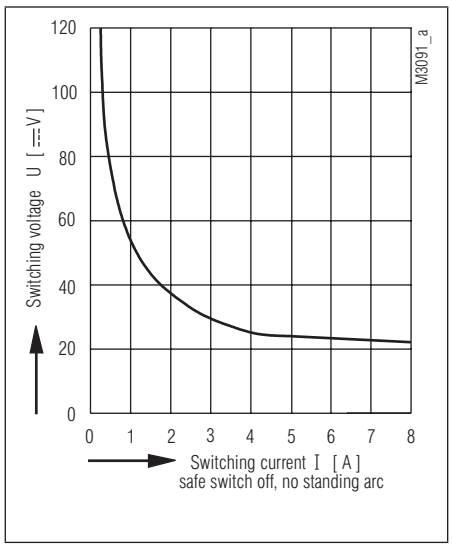
Response-Impulse length



Contact service life

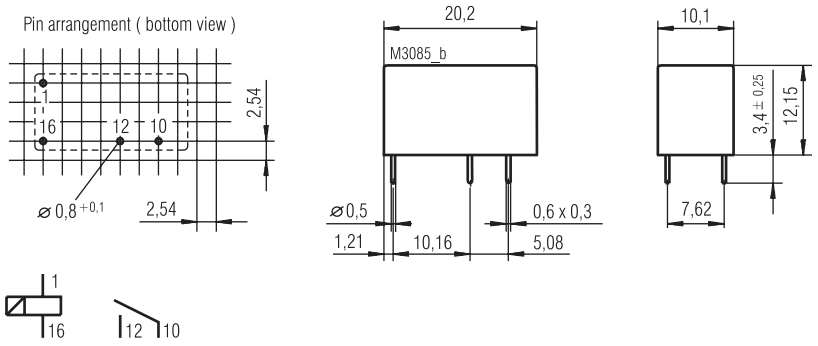


Reduction factor for inductive loads

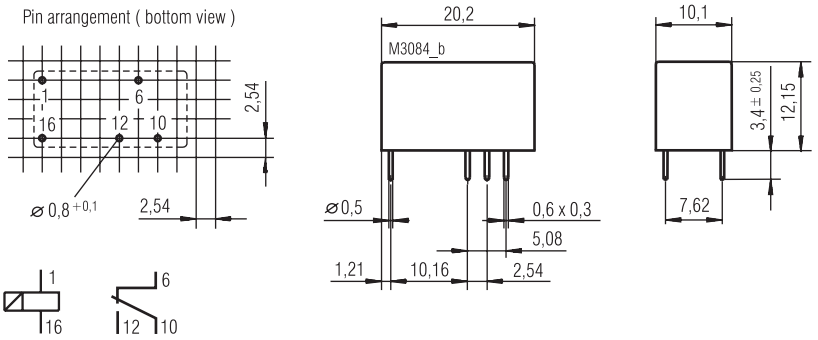


Arc limit curve

Dimensions, Pin Configuration, Connection Diagrams



OR 5691.01



OR 5691.11

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.