Safety relay
OA / OW 5669

- according to EN 50 205, IEC/EN 60 255, IEC 60 664-1
- with positively driven contacts
- wash proof model as option
- **double and reinforced insultaion between contact sets according to EN 50 178**
- low rated power consumption
- high mechanical service life
- compact size, small height
- Approvals: UL, CSA, TÜV approval: R 9012316

Applications:
ZH1/457 press controls
Switchgear for safety technology

OA / OW 5669

Technical data

Relay type			OA 5669	
1. 0	**Relay coil**			
1. 1	Nominal voltage	DC V	5, 6, 12, 20, 24, 48, 60, 110	
1. 2	Nominal consumption	W	0,7	
2. 0	**Contacts**			
2. 1	Contact arrangement		1 NC / 1NO 2 changeover contacts, 1 No and 1 changeover contact	
2. 2	Contact material		AgCdO + 0,2 µm Au; AgNi 10 + 0,2 µm Au optionally + 5 µm Au	
2. 3	Rated insulation voltage	AC V	250	
	Switching voltage min./max.	V	AC/DC 10 / DC 250, AC 400 (AC/DC 100 mV / 60 V) [1]	
2. 4	Limiting continuous current	A	2 x 5 (see operating voltage limit curve)	
	Switching current min./max.	A	10mA[3] / 8 (1 mA / 0,3 A)[1]	
2. 5	Switching power min./max.	VA	3 / 2 000 (1 mVA / 7 VA)[1]	
	Switching power min./max.	W	3 / 200 (1 mW / 7 W) [1] (s. limit curve for arc-free operation)	
2. 6	Switching capacity			
	to IEC/EN 60 947-5-1 AC 15	AC V/A	NC: 230 / 1	NO: 230 / 3
	DC 13	DC V/A	NC: 24 / 2	NO: 24 / 2
2. 7	Electrical life [2]		at 1 s On, 1 s Off	(s. contacts service life)
	AC 230 V 6 A cos φ = 1	switching cycles	> 1 x 10^5 AgNi 10	> 2 x 10^5 AgCdO
2. 8	Switching frequency max.	switching cycles / s	10	
2. 9	Response time / Release time	ms	≤ 15 / ≤ 12	
2.10	Contact force NO / NC	cN	≥ 10 / ≥ 8	
3. 0	**Other**			
3. 1	Mechanical life	switching cycles	≥ 50 x 10^6	
3. 2	Temperature range	°C	- 40 ... + 60 mounted without distance (I_{th} = 2 x 5 A)	
3. 3	Degree of protection, housing		IP40 / IP67 IEC/EN 60 529 wash proof	
3. 4	Housing		Thermoplast GF, PA	
3. 5	Vibration resistance		10 ... 55 Hz; 0,35 mm amplitude; 5 g max. IEC/EN 60 068-2-6	
3. 6	Climate resistance		40 / 060 / 04 (climate category); A/B/D IEC/EN 60 068-1	
3. 8	Insolation according to IEC 60 664-1, EN 50 178		**double and reinforced insulation**	
	Rated insulation voltage	AC V	250	
	Contamination level		2	
	Overvoltage category		III	

[1] Values for AgNi 10-contacts + 5 µm Au

[2] 10 A total current at t = 20°C and coil voltage UN

[3] Typical values

Technical data

3. 8	Test voltage	contact-coil (1 min)	AC kV eff.	≥ 4
		contact-contact (1 min)	AC kV eff.	≥ 4
	Transient volt.	contact-coil (1,2 - 50 µs)	kV	≥ 6
	Clearance and creepage distances as per IEC/EN 60 730, IEC/EN 60 335			
		contact-coil	mm	≥ 8
		contact-contact:	mm	≥ 5,5
3. 9	Weight		g	15

Standard variants

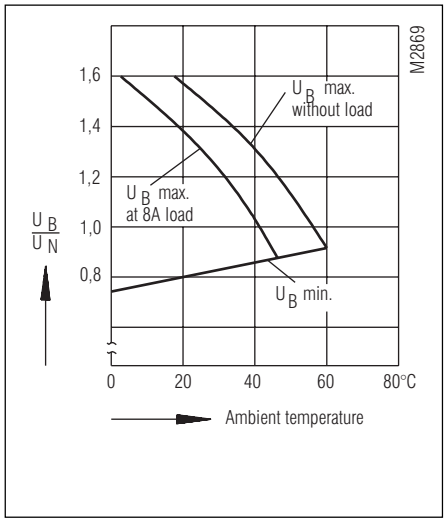
U_N DC	Voltage range	Resistance at 20°C	Design version OA / OW		
V	DC V	Ω	.16	.16	.12
5	4,0...8,0	36	461	991	980
6	4,8...9,6	50	462	992	981
12	9,6...19,2	210	463	993	982
20	16,0...32,0	580	468	998	987
24	19,2...38,4	820	464	994	983
48	38,4...76,8	3 200	465	995	984
60	48,0...96,0	5 200	466	996	985
110	88,0...176	18 000	467	997	986

Ordering example

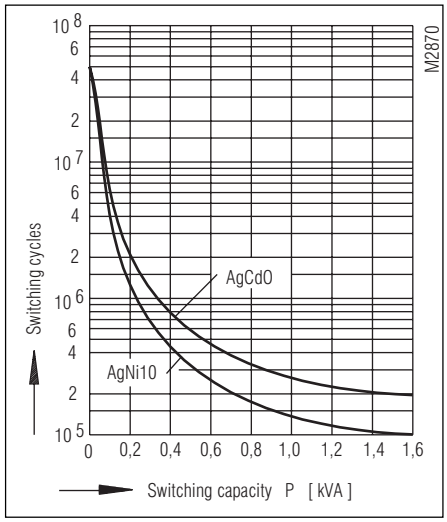
O 5669.16 /

- Design version
- Contact arrangement
  - .16 1 NC / 1 NO
  - .12 2 changeover contacts
  - .20 1 NO /1changeover contact
- Degree of protection
  - A = IP 40 (solder line proof)
  - W = IP 67 (wash proof)

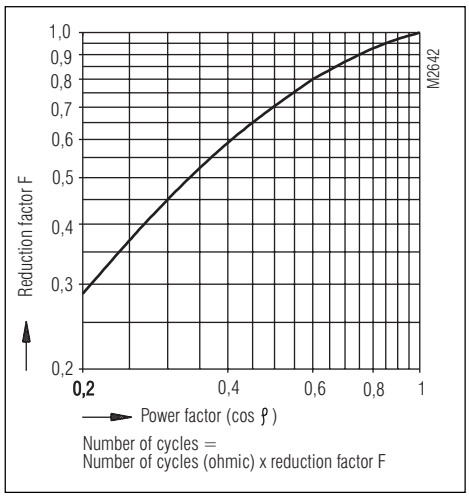
Characteristics



Operating voltage limit curve

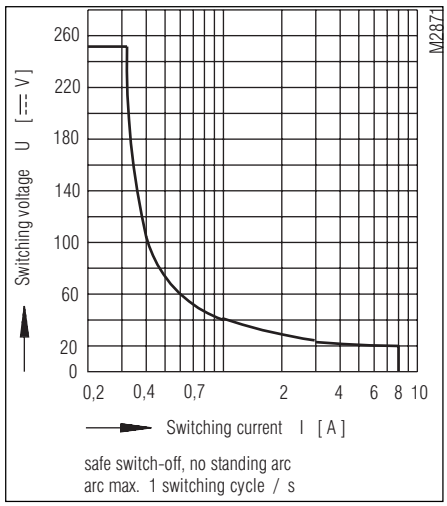


Contact service life (at t_u = 20°C)



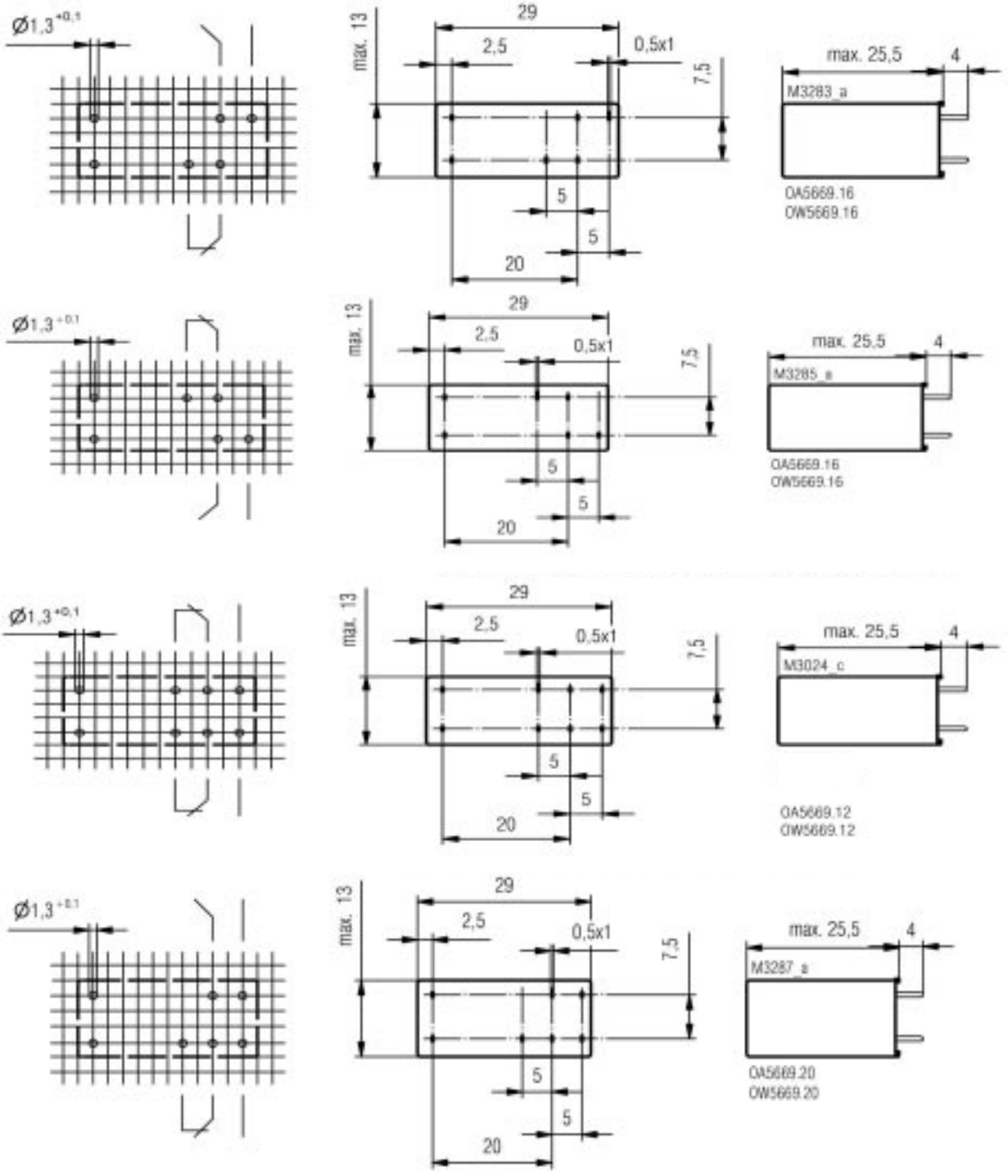
Reduction factor for inductive loads

Contact material
AgNi



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

Dimensions, pin configuration, connection diagrams



Connection for basic grid divensions 2,5 mm as well as 2,54 mm according to IEC/EN 60 097 and IEC 60 326 average

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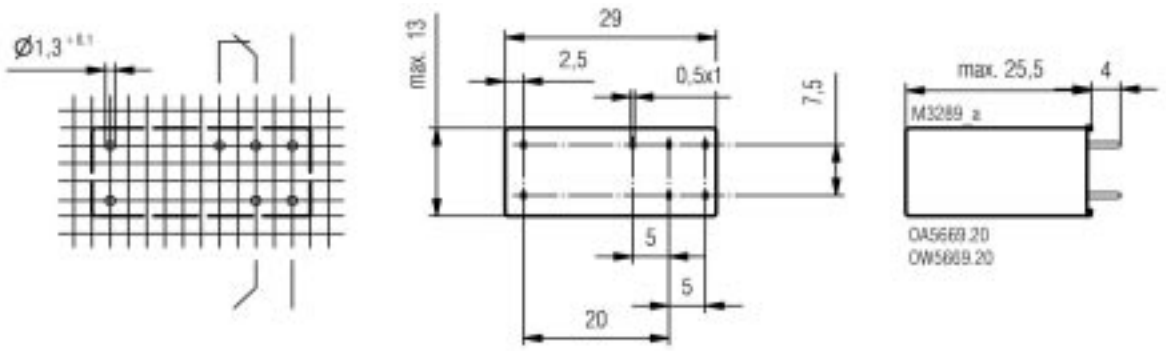

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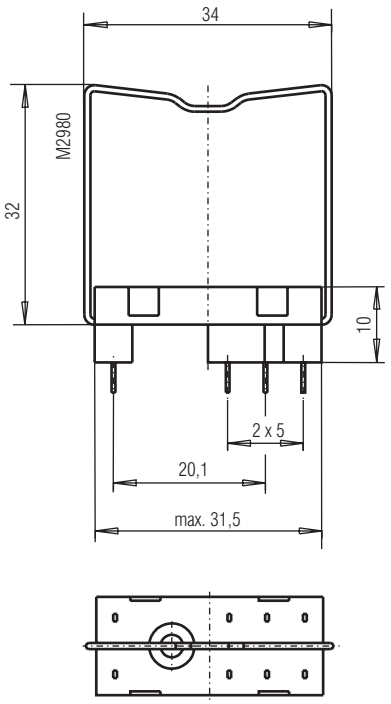
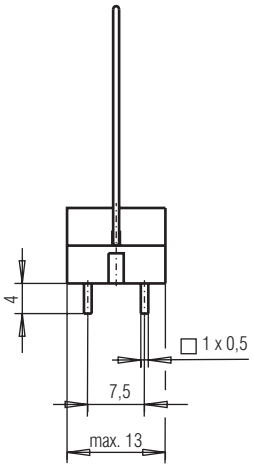
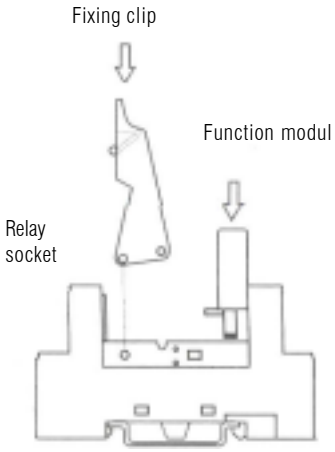
Accessories





Socket ET 1415.021 ANR 0034 769
Fixing clip ET 1415.025 ANR 0034 770 Wire
Fixing clip ET 1415.026 ANR 0047 726 Plastic



Relay socket ET 1415.041 ANR 0055571
with fixing clip WN 1415.902.790

Function modul ET 1415.911 ANR 0055909
- DC, with free-wheeling diode and red LED

Function modul ET 1415.912 ANR 0055910
- AC/DC with green LED

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