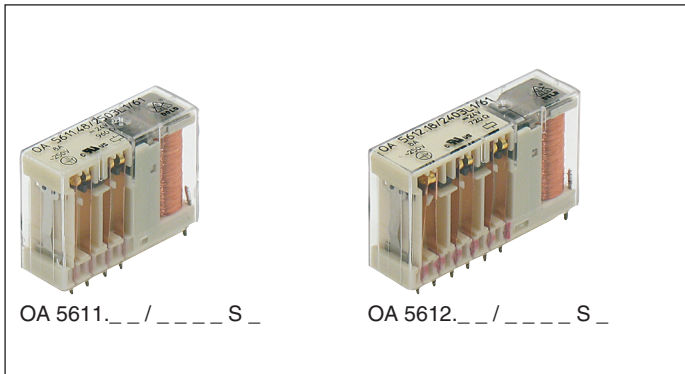


PCB relays

Safety relays, sensitive monostable

OA 5611._ _ / _ _ _ _ S _ ; OA 5612._ _ / _ _ _ _ S _



- Acc. to DIN EN 50205, DIN EN 61810-1, DIN EN 60664-1
- With forcibly guided contacts
- Very low rated power consumption
OA 5611: 0.36 W with 4 contacts
OA 5612: 0.5 W with 6 contacts
- High mechanical service life
- High switching reliability due to crown contacts with large relative movement
- Compact size

Applications

- To be used in electrical circuits for safety applications.
- Escalators and walkways
- Elevators for men and load
- For railway signalling circuits according to UIC 736 R: 2004

Approvals and Markings



Technical Data

Relay type		OA 5611._ _ / _ _ _ _ S _	OA 5612._ _ / _ _ _ _ S _
1.0 Relay coil			
1.1 Nominal voltage	DC V	6, 12, 24, 48, 60, 110 (others on request) polarised	
1.2 Nominal consumption	W	0.36	0.5 / 0.8 ³⁾
1.11 Voltage range	U _N	0.75 ... 1.8	
1.13 Holding power (at 0,5 U _N)	W	0.1	0.13 / 0.2 ³⁾
2.0 Contacts			
2.1 Contact arrangement		2 NO / 2 NC 3 NO / 1 NC	2 NO / 4 NC 3 NO / 3 NC 4 NO / 2 NC 5 NO / 1 NC
2.2 Contact material		AgSnO ₂ + 0.2 µm Au; AgNi + 0.2 µm Au, AgNi + 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 Limit. contin. current I _{th} max.	A	3 e.g. 5 x 6 (see operating voltage limit curve)	
Switching current min./max	A	> 10 mA ⁴⁾ / 6 (1 mA / 0.3 A) ¹⁾	
2.5 Switching power min./max.	VA	3 / 1500 (1 mVA / 7 VA) ¹⁾	
Switching power min./max	W	0.1 ⁴⁾ / 200 (1 mW / 7 W) ¹⁾ (see limit curve for arc-free operation)	
2.6 Switching capacity		B300	
to IEC/EN 60947-5-1 AC 15 ⁵⁾	AC V/A	NO: 250 / 2	NC: 250 / 1
to IEC/EN 60947-5-1 AC 15 ⁶⁾	AC V/A	NO: 250 / 3	NC: 250 / 2
to IEC/EN 60947-5-1 DC 13 ⁵⁾	DC V/A	NO: 24 / 1	NC: 24 / 1
at 0.1 Hz DC 13 ⁵⁾	DC V/A	NO: 24 / 4	NC: 24 / 4
to UL 508			
2.7 Electrical life		at 1 s On, 1 s Off (see contact service life)	
at AC 230 V, 6 A, cosφ = 1	switching cycles	> 3 x 10 ⁵ AgSnO ₂	> 2 x 10 ⁵ AgNi 10
2.8 Switching frequency max.	switching cycles/s	10	
2.9 Response time / Release time	ms	typically 20 / typically 6	
2.10 Contact force	cN	≥ 8	
2.14 Contact gap	mm	> 1 (normal operation) / > 0.5 ²⁾ (under fault)	
3.0 Other			
3.1 Mechanical life	switching cycles	≥ 50 x 10 ⁶	
3.2 Temperature range	°C	- 40 ... + 85	- 40 ... + 85
3.3 Degree of protection		Solder line proof RT II	
3.5 Vibration resistance		10 ... 200 Hz; 0.35 mm amplitude; 3 g max. IEC/EN 60068-2-6	
3.6 Climate resistance		Humid heat IEC/EN 60068-2-30	
3.7 Short circuit strength 1 kA / AC 250 V	AgSnO ₂	NO: 10 A gL / NC: 10 A gL	EN 60947-5-1
	AgNi	NO: 10 A gL / NC: 6 A gL	EN 60947-5-1

¹⁾ Values for AgNi10-contacts + 5 µm Au

³⁾ OA 5612.50 (2 NO contacts / 4 NC contacts)

⁵⁾ Values for AgNi-Contacts

²⁾ over entire service life, even under fault and at 1.5 x U_N

⁴⁾ Typical values

⁶⁾ Values for AgSnO₂-Contacts

Technical Data

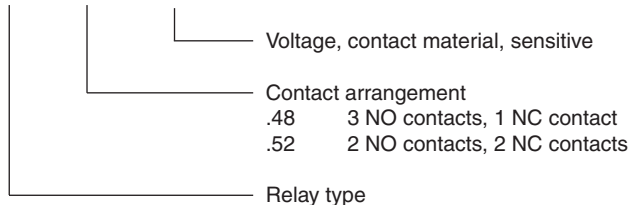
3.8	Insulation acc. to IEC 60664-1, EN 50178			
	Rated insulation voltage	AC V		250
	pollution degree			3
	Overvoltage category			III
	Test voltage			
	Contact - Coil (1 min)	AC kV eff.		≥ 4
	Contact - Contact (1 min)	AC kV eff.		≥ 2.5
	Open contact acc. to DIN EN 61810-1	AC kV eff.		1.5
	Transient voltage			
	Contact - Coil (1,2 - 50 μs)	kV		≥ 6
	Clearance and creepage distances			
	Contact - Coil	mm		≥ 8
	Contact side-Contact side	mm		≥ 4.5
	Contact - Contact	mm		≥ 4.5
3.9	Weight	g	approx. 35	approx. 38
4.0 Packing				
4.1	on cardboard	piece	30	20
4.2	in case package	piece	150	100
5.0 Solder method				
5.1	Solder method /-temperature /-duration	°C / s	Wafer soldering / 260 / 5	

Design Versions

OA 5611					OA 5612							
U _N (DC V)	Voltage range (DC V)	R _{Coil} at 20 °C Ω	.48	.52	U _N (DC V)	Voltage range (DC V)	R _{Coil} at 20 °C Ω	.18	.54	.60	R _{Coil} at 20 °C Ω	.50
			3S / 1Ö	2S / 2Ö				3S / 3Ö	4S / 2Ö	5S / 1Ö		
6	4,5 ... 9,0	100			6	4,5 ... 9,0	70				45	
12	9,0 ... 18,0	400			12	9,0 ... 18,0	290				180	
24	18,0 ... 36,0	1600			24	18,0 ... 36,0	1150				720	
48	36,0 ... 72,0	6400	on request		48	36,0 ... 72,0	4600	on request			2880	on request
60	45,0 ... 90,0	10000			60	45,0 ... 90,0	7200				4500	
110	82,5 ... 165,0	33600			110	82,5 ... 165,0	24200				15125	

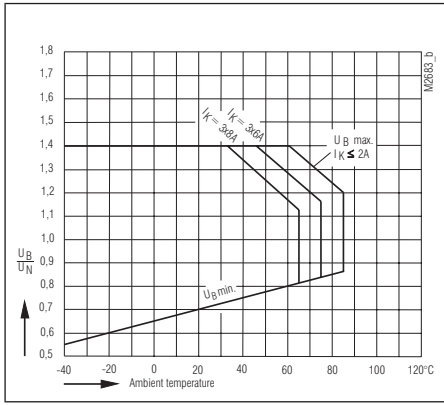
Ordering example

OA 5611 _ _ _ / _ _ _ S _ / 61*)

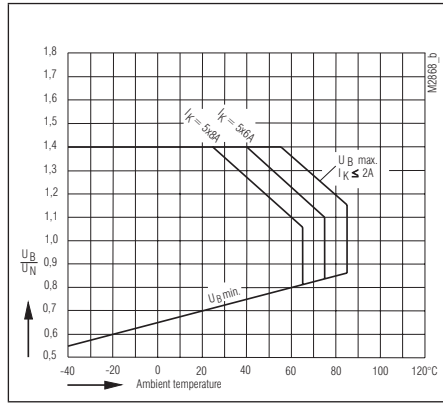


*) / 61 cURus approval

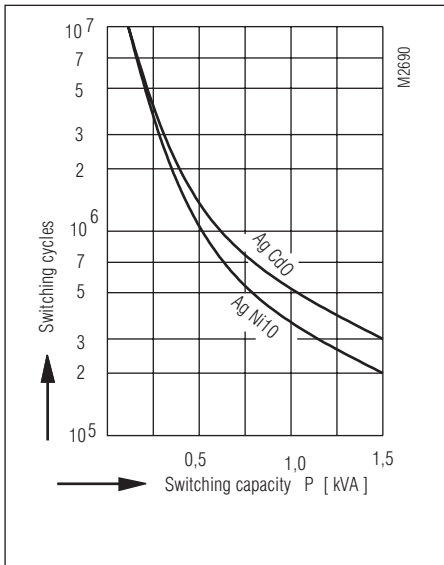
Characteristics



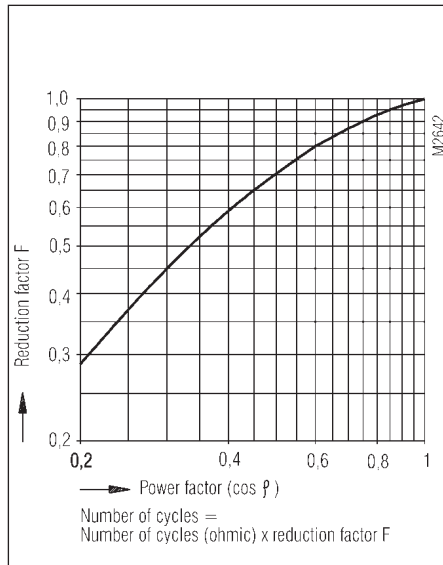
Operating voltage limit curve OA 5611



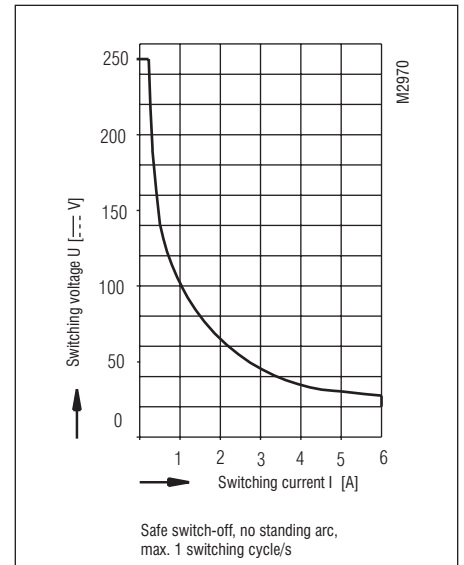
Operating voltage limit curve OA 5612



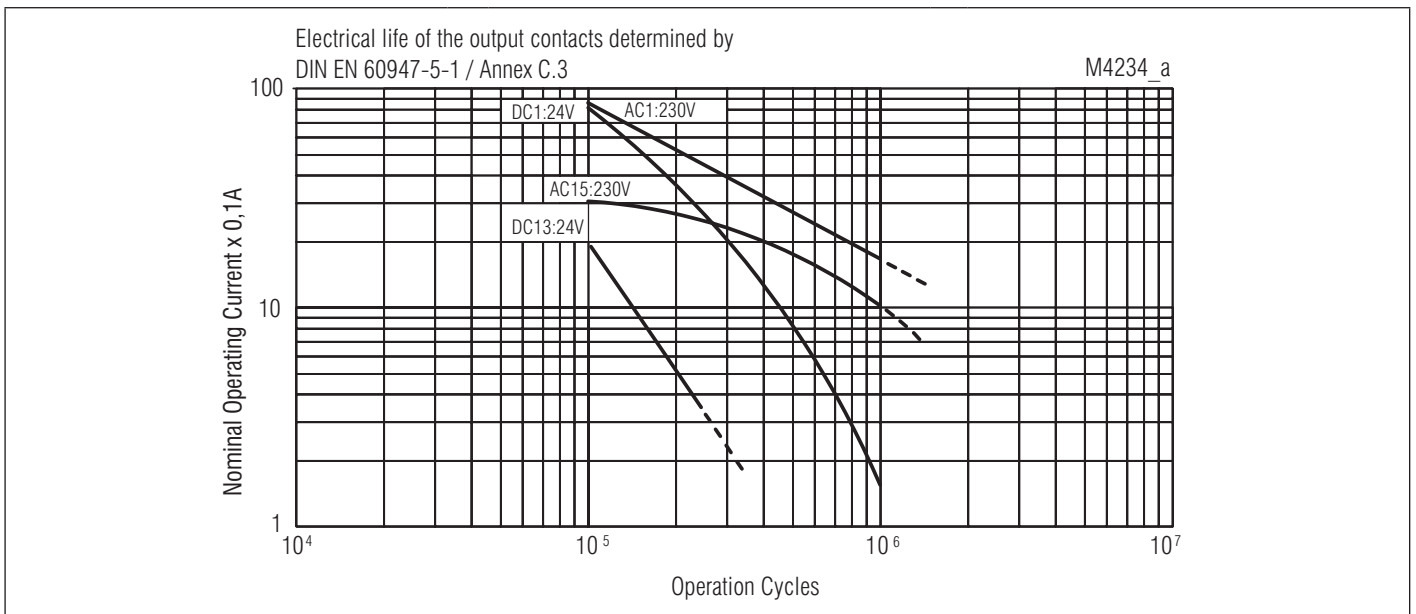
Contact service life



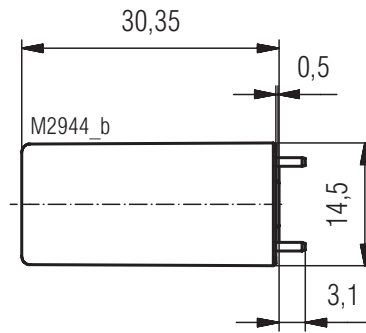
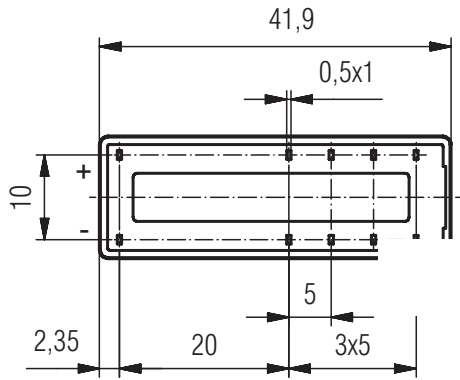
Reduction factor for inductive loads



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

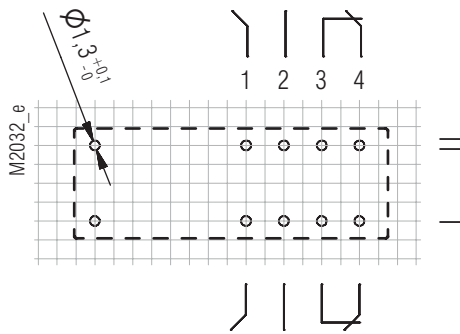


Electrical life

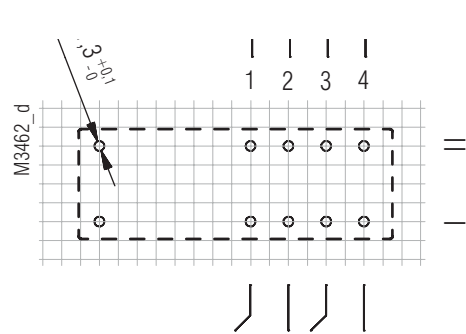


Drilling plan (solder side)

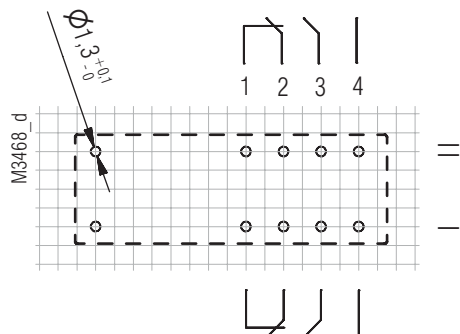
Pin arrangement OA 5611.52/...S1 2NO / 2NC



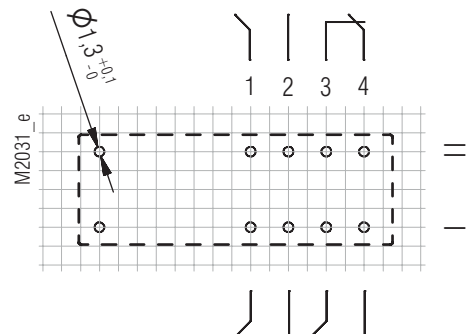
Pin arrangement OA 5611.52/...S4 2NO / 2NC



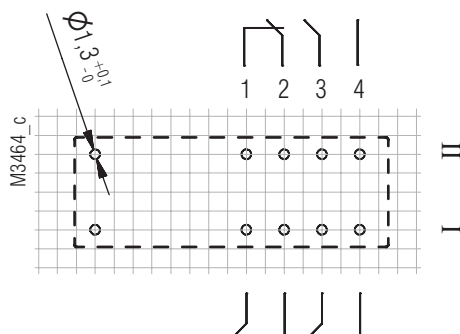
Pin arrangement OA 5611.52/...S5 2NO / 2NC



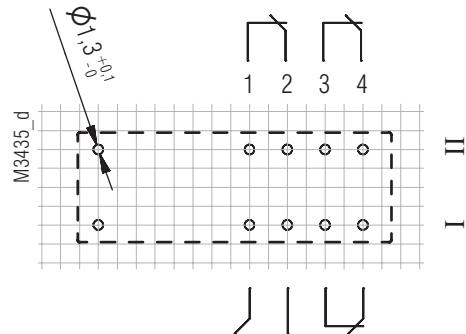
Pin arrangement OA 5611.48/...S1 3NO / 1NC



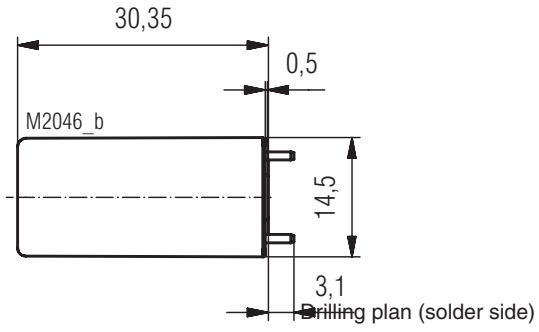
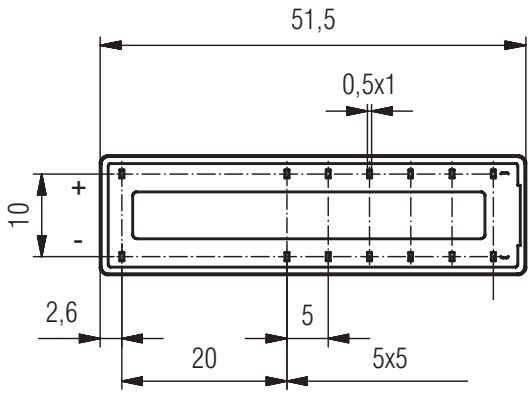
Pin arrangement OA 5611.48/...S4 3NO / 1NC



Pin arrangement OA 5611.28 1NO / 3NC

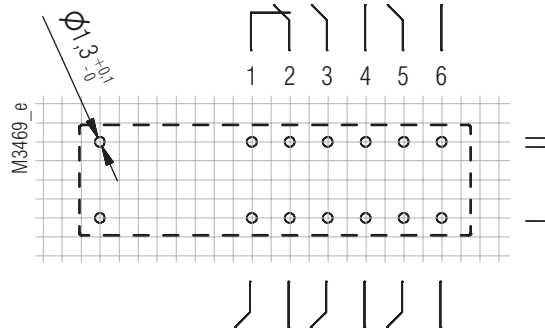


Connection for basic grid dimensions 2.5 mm as well as 2.54 mm according to IEC/EN 60097 and IEC 60326 average



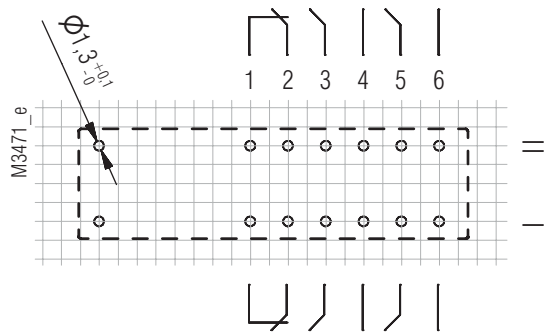
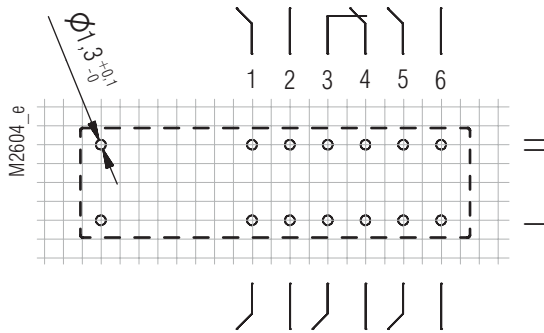
Drilling plan (solder side)

Pin arrangement OA 5612.60/...S4 5NO / 1NC



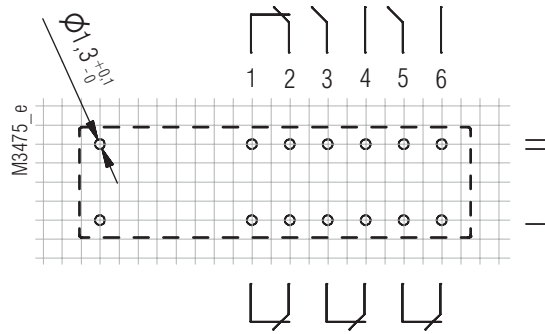
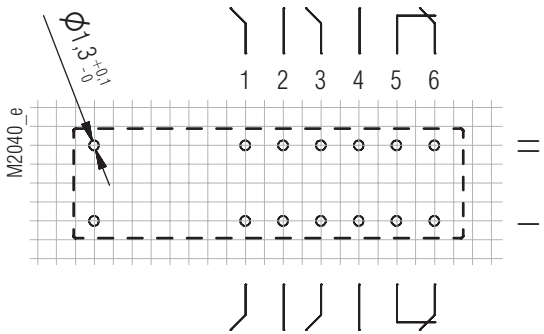
Pin arrangement OA 5612.54/...S4 4NO / 2NC

Pin arrangement OA 5612.60/...S1 5NO / 1NC



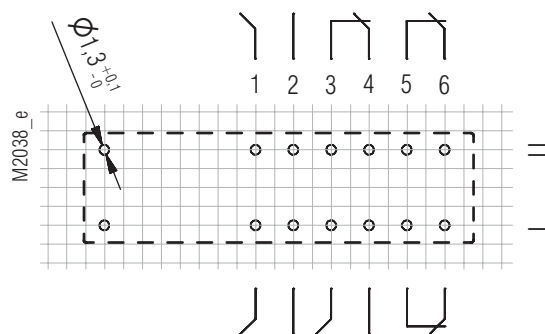
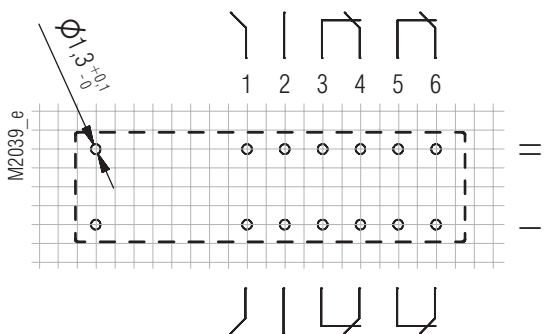
Pin arrangement OA 5612.54/...S1 4NO / 2NC

Pin arrangement OA 5612.50/...S4 2NO / 4NC



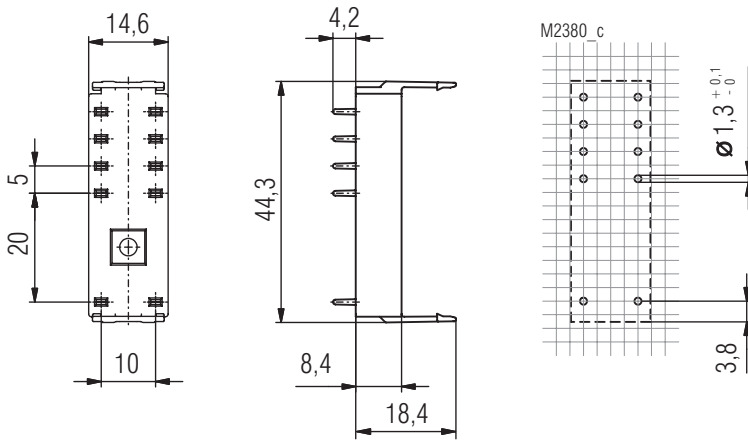
Pin arrangement OA 5612.50/...S1 2NO / 4NC

Pin arrangement OA 5612.18/...S1 3NO / 3NC



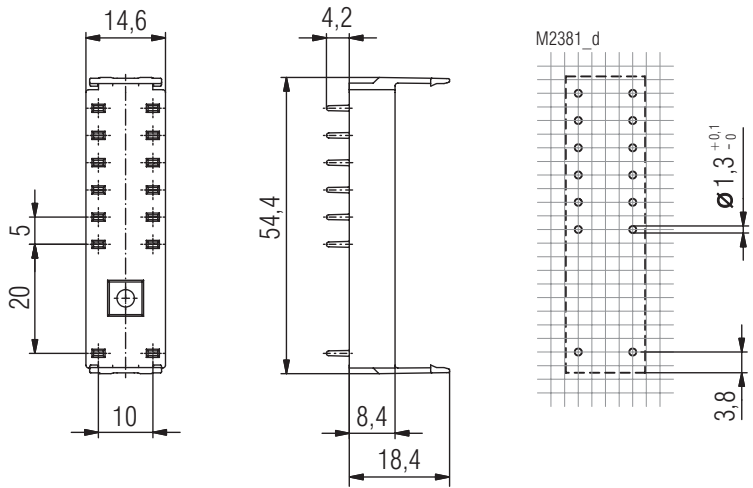
Connection for basic grid dimensions 2.5 mm as well as 2.54 mm according to IEC/EN 60097 and IEC 60326 average

Socket ET 1415.031



Article number: 0049512

Socket ET 1415.032



Article number: 0049513