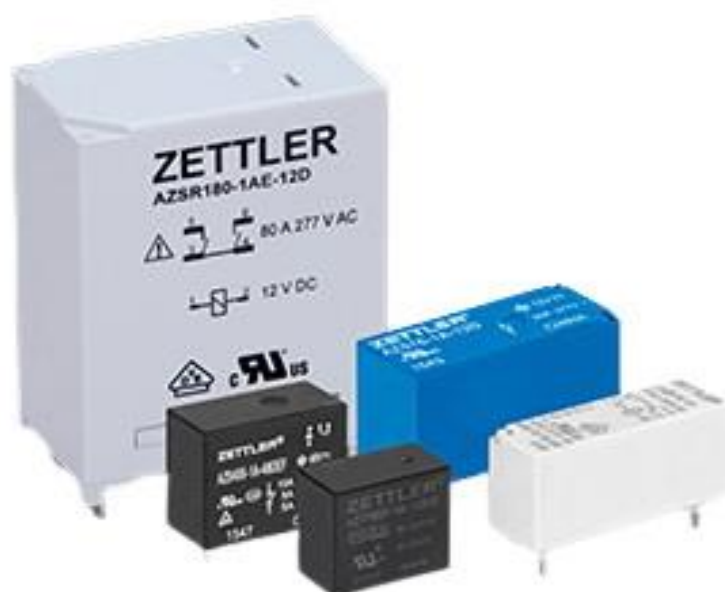


Katalog

Elektromechanische Relais

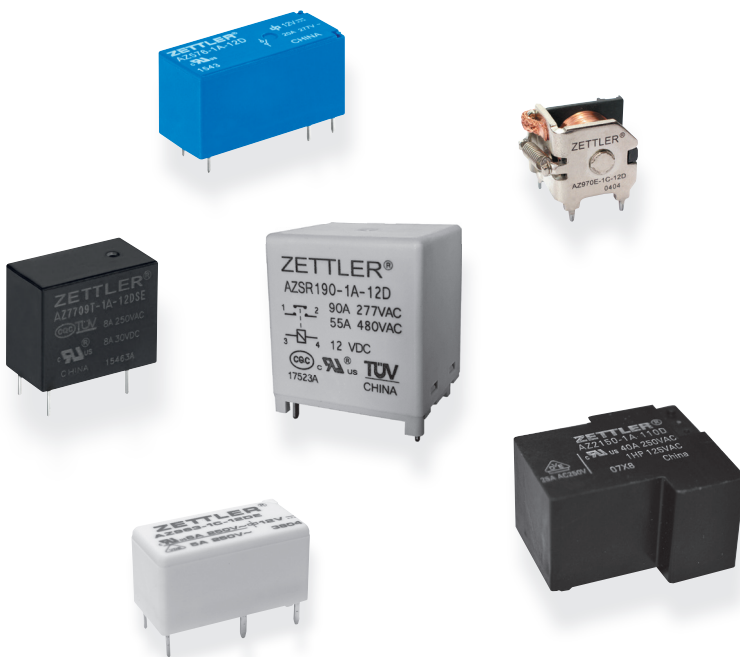
von **ZETTLER** electronics
A ZETTLER GROUP COMPANY



Short Form Catalog

Relays

Electromechanical Relays



A member of the ZETTLER Group

www.ZETTLERelectronics.com

www.zettler-group.com



worldwide. competence in components.

Electromechanical Relays from ZETTLER

The name stands for certified quality. The products are the result of the strict international standardization and our longterm experience in developing and manufacturing of relays. No matter what application, ZETTLER relays are the sophisticated solution.

Our range of products will fully come to your expectations in terms of variety and technology. The wide product range includes Signal Relays for telecommunication, Power Relays for general purpose, Solar Relays for solar inverter applications, E-Mobility Relays for electric car charging equipment, High Power Relays for heavy loads, Automotive Relays for automotive applications as well as DC Relays for medium DC loads.

In addition to established components you will find a series of technical innovations like DC Relays in common design for medium DC loads and extremely small relays on the next pages.

ZETTLER electronics is a member of the worldwide operating ZETTLER Group. In addition to relays the group is manufacturing transformers, bimetal thermostats and LCD displays.

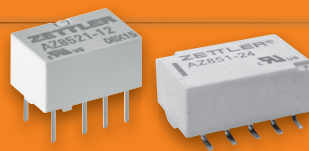
Not only components are our business. We offer competence in service and technology. Our engineers will always lead you to the best choice for your application. The ZETTLER engineering departments are working global to meet international standards.

A well assorted warehouse enables a fast and – upon request – delivery on a given day.

Signal Relays

Page 8

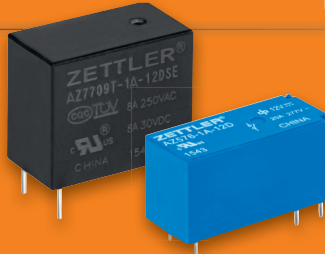
... for switching of small signals in communications, measurement and controls, automated test equipment (ATE). Signals will be connected with high precision.



Power Relays

Page 10

... for general purpose. Most of the typical applications in industry, HVAC (Heating, Ventilation, Air Condition), lighting, building control, as well as other control equipments can be solved by using these relays. The special standards for appliances (White Goods) are achieved by many of these relays. They guarantee a safety space (high insulation) between the control unit and the power load. Available with AC and DC coils.



Solar Relays

Page 18

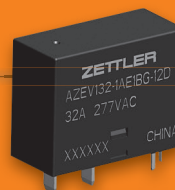
... are designed for the photovoltaic industry to fulfill the common requirements of applications like solar inverters.



E-Mobility Relays

Page 19

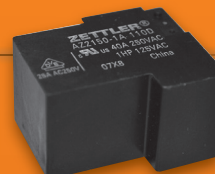
... are designed according common requirements for E-Mobility charging equipment.



High Power Relays

Page 20

... for switching of high loads. Mainly used in heating, lighting, motor controls and micro wave ovens.



Automotive Relays

Page 21

... for automotive applications. These relays can be used for a huge variety of typical motor applications in cars like central locking, sun roof and window control, seat memory, mirror movement, as well as lights and blinkers.



DC Relays

Page 23

... for medium DC loads.



Important information

Page 25

Signal Relays

Series	Contact Form	Umax (V)	Contact Ratings	
			I _{max} continuous (A)	P _{max} (VA / W)
AZ 8521 / 8521S	2C	250 AC	2	62,5 / 60
AZ 8462 / 8462S	2C	250 AC	2	62,5 / 60
AZ 850 / 851	2C	250 AC	2	62,5 / 30
AZ 951 / 952	1C	220 AC	5	62,5 / 150
AZ 9571	1C	125 AC	1	62,5 / 30
AZ 822	2C	250 AC	2	125 / 60
AZ 832	2C	250 AC	2	250 / 60

Power Relays

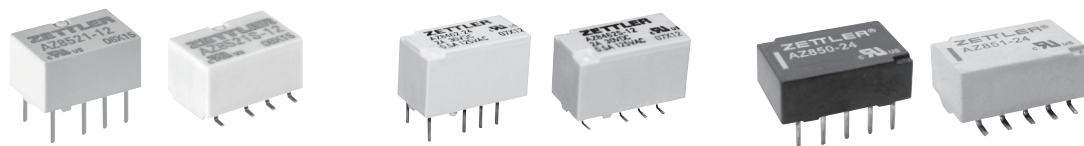
AZ 770	1A / 1C	400 AC	10	2500 / 150
AZ 7709	1A	250 AC	10	2500 / 300
AZ 770H	1A	400 AC	5	1250 / 150
AZ 963	1A / 1B / 1C	380 AC	6	1500 / 180
AZ 940	1A / 1C	400 AC	10	2770 / 150
AZ 9405	1A / 1C	277 AC	10	1400 / 150
AZ 921	1A	250 AC	5	1250 / 150
AZ 9371	1A	277 AC	10	2770 / 300
AZ 6951	1A	250 AC	5	1250 / 150
AZ 6991	1A / 1C	400 AC	8	2216 / 180
AZ 6960	1A / 1B / 1C	400 AC	8	2270 / 192
AZ 6962	1A / 1B / 1C	440 AC	10	2500 / 300
AZ 742	2A / 2C	400 AC	10	2500 / 240
AZ 743	2A / 2C	440 AC	10	2500 / 240
AZ 763	1A / 1C	400 AC	12	3000 / 360
AZ 761	1A / 1B / 1C	440 AC	12	3324 / 360
AZ 764	1A / 1C	400 AC	20	5000 / 480
AZ 762	1A / 1C	440 AC	16	5540 / 480
AZ 576	1A / 1C	480 AC	20	5540 / 510
AZ 764H	1A	400 AC	16	4000 / 480
AZ 762H	1A / 1C	440 AC	16	4000
AZ 762T	1A	440 AC	16	4000
AZ 762P	1A / 1C	350 AC	20	5000
AZ 7621P	1A / 1C	440 AC	16	4000
AZ 943	1A / 1C	300 AC	15	2770 / 300
AZ 943W	1A / 1C	277 AC	10	2770 / 300

DC coil	AC coil	DC Coil Power at Pickup (mW)	Dielectric Strength Coil / Contact (VAC)	Size L x W x H (mm)	Flux proof	Case Epoxy sealed	open	Page
●		56...113	1600	10,0 x 6,5 x 5,4		●		8
●		56...152	2000	15,2 x 7,7 x 9,2		●		8
●		56...169	1000	14,0 x 9,0 x 5,0		●		8
●		113...253	1000	15,75 x 10,75 x 11,81		●		9
●		96...128	1000	12,5 x 7,5 x 10,0		●		9
●		73...174	1000	20,0 x 9,8 x 12,0		●		9
●		42...159	1500	20,2 x 10,0 x 10,65		●		9
●		113...256	5000	17,85 x 10,35 x 12,95	●	●		10
●		113...223	4000	18,9 x 10,7 x 15,7	●	●		10
●		113...116	5000	17,85 x 10,35 x 12,95	●	●		10
●		113	4000	20,3 x 10,2 x 10,7	●	●		11
●		113...265	4000	20,5 x 10,2 x 15,7	●	●		11
●		113...297	4000	20,0 x 10,0 x 15,2	●	●		11
●		59...88	3000	20,3 x 5,3 x 12,8		●		12
●		113	4000	20,5 x 7,2 x 15,3	●	●		12
●		100	3000	18,5 x 6,5 x 12,4		●		12
●		96...129	4000	28,0 x 5,0 x 15,0	●	●		13
●		120...126	5000	28,5 x 10,1 x 12,5	●	●		13
●		108...141	5000	28,5 x 10,1 x 12,5	●	●		13
●	●	196...235	5000	29,0 x 12,7 x 15,7	●	●		14
●	●	196...235	5000	29,0 x 12,7 x 15,7	●	●		14
●	●	196...235	5000	29,0 x 12,7 x 15,7	●	●		14
●	●	141...235	5000	29,3 x 13,0 x 16,0	●	●		15
●	●	196...235	5000	29,0 x 12,7 x 15,7	●	●		15
●	●	141...235	5000	29,0 x 12,7 x 15,7	●	●		15
●		196...226	5000	29,3 x 12,7 x 15,3	●	●		15
●		138...141	5000	29,0 x 12,7 x 15,7	●			16
●		140...235	5000	29,0 x 12,7 x 15,7	●	●		16
●		196...235	5000	29,0 x 12,7 x 15,7	●	●		16
●		256...416	4000	29,4 x 12,7 x 16,0	●	●		17
●		192...319	5000	29,0 x 12,7 x 15,9	●	●		17
●		203...206	1500	19,0 x 15,3 x 15,7	●	●		17
●		300...312	1500	19,0 x 15,3 x 16,0	●	●		17

	Series	Contact Form	Umax (V)	Contact Ratings Imax continuous (A)	Pmax (VA / W)
Solar Relays	AZ SR131	1A	277 AC	35	9695
	AZ SR235 / 250	1A / 2A	440 AC	50	13850 / 1500
	AZ SR165	1A	690 AC	65	43200
	AZ SR190	1A	800 AC	100	48000
	AZ SR1160	1A	690 AC	160	110400
E-Mobility Relays	AZ EV116 / 132	1A + 1B	440 AC	32	8864 / 960
High Power Relays	AZ 2150	1A / 1B / 1C	300 AC	40	10000 / 900
	AZ 2150W	1A	440 AC	30	8310 / 900
	AZ 21501	1A / 1B / 1C	300 AC	50	12000 / 1500
Automotive Relays	AZ 947	1A / 1C / 1U	42 DC	20	1250 / 280
	AZ 987-1 / 987-2	1A / 1C / 2A / 2C	16 DC	30	- / 480
	AZ 970E / 971E	1A / 1C	150 DC	40	- / 560
	AZ 983	1A / 1B / 1C	28 DC	80	- / 1120
	AZ 979 / 980	1A / 1B / 1C	28 DC	80	- / 1120
	AZ 9731	1A / 1C / 1U	28 DC	40	- / 560
	AZ 977	1A / 1C	150 DC	20	- / 280
DC Relays	AZ DC110	1A	420 DC	16	4800 / 3000
	AZ DC105	1A	60 DC	150	- / 9000

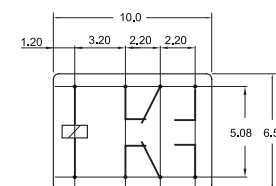
(1) Dust cover

DC coil	AC coil	DC Coil Power at Pickup (mW)	Dielectric Strength Coil / Contact (VAC)	Size L x W x H (mm)	Flux proof	Case Epoxy sealed	open	Page
●		681...792	4500	30,4 x 15,9 x 25,15	●			18
●		268...281	5000	40,0 x 25,0 x 49,2	●			18
●		1227...1246	4000	38,0 x 33,0 x 41,5	●			18
●		1077...1080	5000	38,0 x 33,0 x 43,0	●			19
●		1662...1687	4000	63,3 x 62,0 x 41,7	●			19
●		870	4000	35,0 x 16,0 x 27,9	●			19
●		470...523	2500	26,9 x 31,8 x 19,1	●	●		20
●		623...625	4000	26,9 x 31,8 x 19,1	●	●		20
●		842...843	4000	31,8 x 26,9 x 19,1	●	●		20
●		216...222	500	15,7 x 12,3 x 14,0	●	●		21
●		180...194	500	12,3 x 13,2 x 10,2	●			21
●		514...573	500 DC	18,8 x 23,0 x 18,0	●	●	●	21
●		761	500	29,0 x 29,0 x 26,0	● (1)	●		22
●	●	676...761	500	29,0 x 29,0 x 26,5	● (1)	●		22
●	●	676	750	26,5 x 26,5 x 24,5	● (1)	●		22
●	●	405...540	1000 DC	23,0 x 15,5 x 26,0	● (1)	●		23
●		224...225	5000	29,3 x 12,7 x 19,0	●			23
●		1800	4000	47,6 x 40,0 x 45,1	●			23

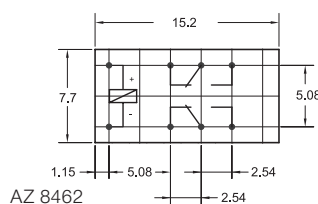


Relay Type	AZ 8521 / 8521S		AZ 8462 / 8462S		AZ 850 / 851	
	THT	SMT	THT	SMT	THT	SMT
Features	• Contact rating: 2 x 60 W / 2 x 62,5 VA • Microminiature size • Coil power at pickup 56...113 mW • Bifurcated cossbar contacts • Polarized coil • Epoxy sealed		• Contact rating: 2 x 60 W / 2 x 62,5 VA • Microminiature size • Coil power at pickup 56...152 mW • Bifurcated cossbar contacts • Polarized coil • High temperature 105°C • Epoxy sealed		• Contact rating: 2 x 30 W / 2 x 62,5 VA • Microminiature size • Coil power at pickup 56...169 mW • Bifurcated cossbar contacts • Polarized coil • Epoxy sealed	
Size L x W x H	10,0 x 6,5 x 5,4 (SMT: 5,65) mm		15,2 x 7,7 x 9,2 (SMT: 9,7) mm		14,0 x 9,0 x 5,0 (SMT: 6,2) mm	
Other Versions	Latching version AZ 8521P SMT version		Latching version AZ 8462P SMT version		Latching version AZ 850P SMT version	
Contact Forms A = N.O. B = N.C. C = C.O.	2C		2C		2C	
Contact Material	AgNi+Au		AgNi+Au		AgPd+Au	
Contact Ratings (at resistive load)	max. max. max. max. max.	2 A 250 VAC 220 VDC 62,5 VA 60 W	max. max. max. max. max.	2 A 250 VAC 220 VDC 62,5 VA 60 W	1 A switching / 2 A continuous 250 VAC 220 VDC 62,5 VA 30 W	
Electrical Life Expectancy (at rated load)	1 x 10 ⁵		5 x 10 ⁵		2 x 10 ⁵	
Mechanical Life Expectancy	1 x 10 ⁸		1 x 10 ⁸		1 x 10 ⁸	
Standard Types (nominal coil voltage coil resistance)	VDC 3 4,5 5 6 9 12 24	Ω 64,3 145 178 257 579 1080 2880	VDC 3 4,5 5 6 9 12 24 48	Ω 64,3 145 178 257 579 1080 4114 8533	VDC 3 5 6 12 24	Ω 64 178 257 1028 2880
Pickup / Dropout (% of V _{nom})	≤ 75% / ≥ 10%		≤ 75% / ≥ 10%		≤ 75% / ≥ 10%	
Ambient Temperature	-40°C...+85°C		-40°C...+105°C		THT: -40°C...+70°C SMT: -40°C...+85°C	
Dielectric Strength (coil to contacts)	1600 VAC		2000 VAC		1000 VAC	
Termination	PCB		PCB		PCB	
Operate / Release Time (typ. at V _{nom})	3 / 3 ms		4 / 4 ms		2 / 1 ms	
Approvals	UL, CUR		UL, CUR		UL, CUR	
Accessories	-		-		-	

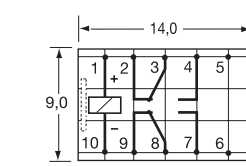
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 (viewed toward terminals)

 (dimensions in mm)
 (grid: 2,54 mm)


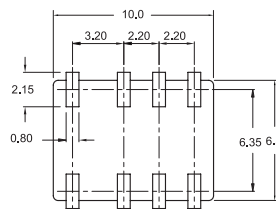
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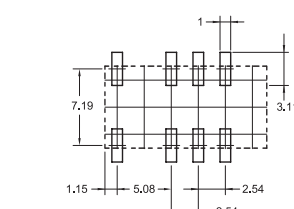
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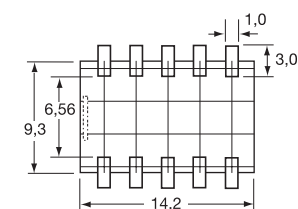
AZ 850



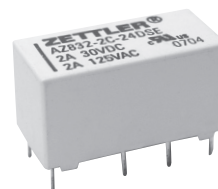
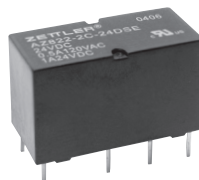
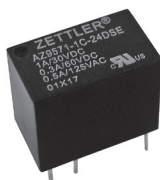
AZ 8521S



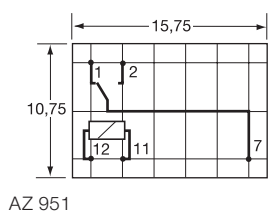
AZ 8462S



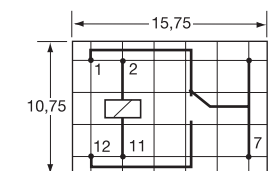
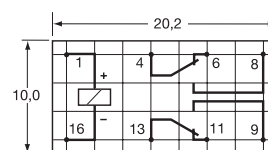
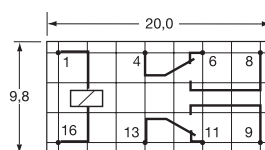
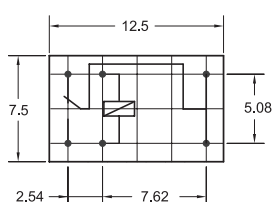
AZ 851



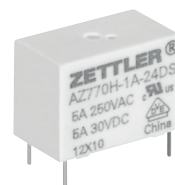
AZ 951 / 952	AZ 9571	AZ 822	AZ 832
• Contact rating: 150 W / 625 VA • Small size • Coil power at pickup 113...253 mW • Non polarized coil	• Contact rating: 30 W / 62,5 VA • Microminiature size • Coil power at pickup 96...128 mW • Non polarized coil • Epoxy sealed	• Contact rating: 2 x 60 W / 2 x 125 VA • Coil power at pickup 73...174 mW • Bifurcated cossbar contacts • Non polarized coil • Epoxy sealed	• Contact rating: 2 x 60 W / 2 x 250 VA • Max. switching 3 A • Coil power at pickup 42...159 mW • Bifurcated cossbar contacts • Polarized coil • Epoxy sealed
15,75 x 10,75 x 11,81 mm	12,5 x 7,5 x 10,0 mm	20,0 x 9,8 x 12,0 mm	20,2 x 10,0 x 10,65 mm
Epoxy sealed version 2 pin configurations	Sensitive coil version	–	Latching version AZ 832P
1C	1C	2C	2C
AgNi+Au or Ag+Au	AgNi+Au	AgPd+Au	PdAg+Au against PdAg or Ag+Au against PdAg
5 A 220 VAC 60 VDC 625 VA 150 W	1 A 125 VAC 60 VDC 62,5 VA 30 W	2 A 250 VAC 220 VDC 125 VA 60 W	3 A switching / 2 A continuous 250 VAC 220 VDC 250 VA 60 W
1 x 10 ⁵	1 x 10 ⁵	5 x 10 ⁵	1 x 10 ⁵
1 x 10 ⁷	5 x 10 ⁶	1 x 10 ⁸	2 x 10 ⁷
VDC Ω std./sens. 3 20/45 5 56/125 6 80/180 9 - /405 12 320/720 18 720/1620 24 1280/2880	VDC Ω std./sens. 3 45/60 5 125/167 6 180/240 9 405/540 12 720/960 24 2880/3840	VDC Ω 3 60 5 167 6 240 9 540 12 960 18 1620 24 2880 48 7680	VDC Ω std./sens. 3 45/- 5 125/167 6 180/240 9 405/540 12 720/960 24 2880/3840 48 11520/-
≤ 75% / ≥ 10%	≤ 80% / ≥ 10%	≤ 70% / ≥ 5%	std.: ≤ 80% / ≥ 10% sens.: ≤ 75% / ≥ 10%
std.: -25°C...+55°C sens.: -25°C...+70°C	+30°C...+70°C	-55°C...+90°C	-40°C...+85°C
1000 VAC	1000 VAC	1000 VAC	1500 VAC
PCB	PCB	PCB	PCB
5 / 1 ms	5 / 5 ms	5 / 2 ms	3 / 2 ms
UL, CUR	UL, CUR	UL, CUR	UL, CUR
–	–	–	–



AZ 951



AZ 952

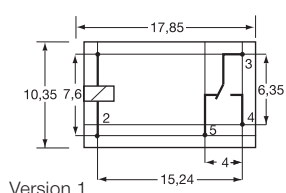


Relay Type	AZ 770	AZ 7709	AZ 770H
Features	• Contact rating: 5 A / 250 VAC • Low profile: 12,95 mm • Coil power at pickup 113...256 mW • Clearance / creepage ≥ 8 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700 • 10 A $\rightarrow$ AZ 770T • EN 60335-1 (GWT) version available	• Contact rating: 5 A / 250 VAC • Coil power at pickup 113...223 mW • Dielectric strength 4000 VAC • 10 A $\rightarrow$ AZ 7709T	• Contact rating: 5 A / 250 VAC • Low profile: 12,95 mm • Coil power at pickup 113...116 mW • Clearance / creepage ≥ 8 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700 • High temperature 105°C
Size L x W x H	17,85 x 10,35 x 12,95 mm	18,9 x 10,7 x 15,7 mm	17,85 x 10,35 x 12,95 mm
Other Versions	Epoxy sealed version Sensitive coil version, 2 pin configurations	Epoxy sealed version Sensitive coil version	Epoxy sealed version
Contact Forms A = N.O. B = N.C. C = C.O.	1A / 1C	1A	1A
Contact Material	AgNi, AgNi+Au or AgSnO ₂	AgCdO, AgSnO ₂ , AgSnO ₂ In ₂ O ₃ or AgSnO ₂ +Au	AgNi, AgNi+Au
Contact Ratings (at resistive load)	max. max. max. max. max.		
	10 A 400 VAC 30 VDC 2500 VA 150 W	10 A 250 VAC 30 VDC 2500 VA 300 W	5 A 400 VAC 30 VDC 1250 VA 150 W
Electrical Life Expectancy (at rated load)	1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵
Mechanical Life Expectancy	1 x 10 ⁶	1 x 10 ⁷	1 x 10 ⁶
Standard Types (nominal coil voltage coil resistance)			
	VDC Ω std./sens.	VDC Ω std./sens.	VDC Ω
	3 20/45	3 20/45	3 45
	5 55/25	5 55/125	5 125
	6 80/180	6 80/180	6 180
	9 180/400	9 180/400	9 400
	12 320/720	12 320/720	12 720
	18 720/1600	18 720/1600	18 1600
	24 1280/2800	24 1280/2800	24 2800
	48 5120/-	48 5120/-	
Pickup / Dropout (% of V _{nom})	$\leq 75\%$ / $\geq 5\%$	std.: $\leq 70\%$ / $\geq 5\%$ sens.: $\leq 75\%$ / $\geq 5\%$	$\leq 75\%$ / $\geq 5\%$
Ambient Temperature	-40°C...+85°C	-40°C...+85°C	-40°C...+105°C
Dielectric Strength (coil to contacts)	5000 VAC	4000 VAC	5000 VAC
Termination	PCB	PCB	PCB
Operate / Release Time (typ. at V _{nom})	8 / 4 ms	8 / 4 ms	8 / 4 ms
Approvals	VDE, UL, CUR	TÜV, UL, CUR	VDE, UL, CUR
Accessories	-	-	-

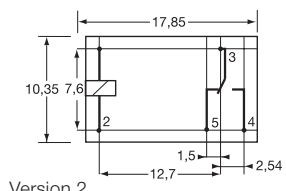
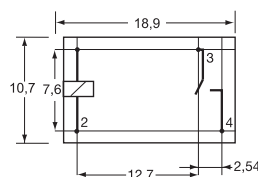
Layout

(viewed toward terminals)

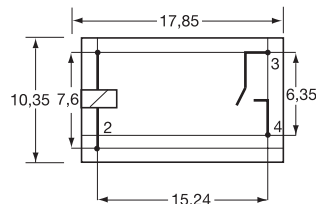
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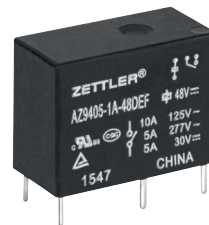


Version 1



Version 2





AZ 963

- Contact rating: 6 A / 250 VAC
- Small size
- Coil power at pickup 113 mW
- Clearance / creepage $\geq 4,5 / 5,5$ mm
- Dielectric strength 4000 VAC
- Epoxy sealed

20,3 x 10,2 x 10,7 mm

–

1A / 1B / 1C

AgNi or AgSnO₂

6 A
380 VAC
220 VDC
1500 VA
180 W

1×10^5

1×10^7

VDC	Ω
3	45
5	125
6	180
9	405
12	720
18	1620
24	2880
48	11520

$\leq 75\% / \geq 10\%$

-40°C...+85°C

4000 VAC

PCB

6 / 4 ms

VDE, UL, CUR

–

AZ 940

- Contact rating: 5 A / 250 VAC
- Small size
- Coil power at pickup 113...265 mW
- Dielectric strength 4000 VAC

20,5 x 10,2 x 15,7 mm

Epoxy sealed version

1A / 1C

AgCdO, AgNi, AgNi+Au or AgSnO₂

10 A
400 VAC
150 VDC
2770 VA
150 W

1×10^5

1×10^7

VDC	Ω std./sens.
3	20/45
5	55/125
6	80/180
9	180/400
12	320/720
18	720/1600
24	1280/2800

$\leq 75\% / \geq 5\%$

std.: -40°C...+70°C sens.: -40°C...+85°C

4000 VAC

PCB

8 / 5 ms

VDE, UL, CUR

–

AZ 9405

- Contact rating: 5 A / 277 VAC
- Small size
- Coil power at pickup 113...297 mW
- Clearance / creepage 1A: $\geq 4 / 6$ mm
- Clearance / creepage 1C: $\geq 3 / 5$ mm
- Dielectric strength 4000 VAC

20,0 x 10,0 x 15,2 mm

Epoxy sealed version

1A / 1C

AgSnO₂

10 A
277 VAC
30 VDC
1400 VA
150 W

1×10^5

1×10^7

VDC	Ω std./sens.
3	22,5/45
5	63/125
6	90/180
9	202,5/400
12	360/720
18	810/1620
24	1440/2800
48	5760/-

std.: $\leq 70\% / \geq 10\%$ sens.: $\leq 75\% / \geq 10\%$

-40°C...+85°C

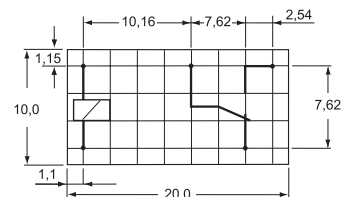
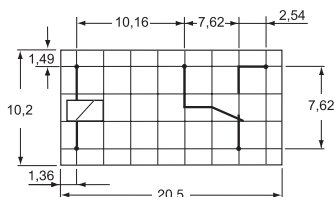
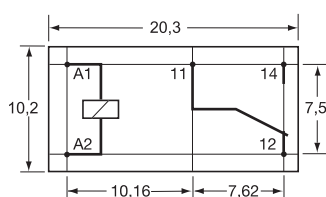
4000 VAC

PCB

std.: 10 / 5 ms sens.: 15 / 5 ms

TÜV, UL, CUR

–

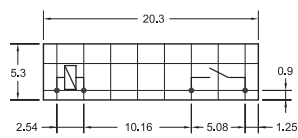




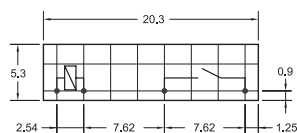
Relay Type	AZ 921	AZ 9371	AZ 6951
Features	• Contact rating: 5 A / 250 VAC • Extremely slim size: 5 mm • Coil power at pickup 59...88 mW • Clearance / creepage ≥ 3 mm • Dielectric strength 3000 VAC • Epoxy sealed version	• Contact rating: 5 A / 250 VAC • Extremely slim size: 7 mm • Coil power at pickup 113 mW • Clearance / creepage ≥ 5,5 mm • Dielectric strength 4000 VAC • 10 A → AZ 9371T	• Contact rating: 5 A / 250 VAC • Extremely slim size: 6,5 mm • Coil power at pickup 100 mW • Dielectric strength 3000 VAC • Epoxy sealed version
Size L x W x H	20,3 x 5,3 x 12,8 mm	20,5 x 7,2 x 15,3 mm	18,5 x 6,5 x 12,4 mm
Other Versions	2 pin configurations Horizontal version available	Epoxy sealed version 2 pin configurations	–
Contact Forms A = N.O. B = N.C. C = C.O.	1A	1A	1A
Contact Material	AgNi, AgNi+Au or AgSnO ₂	AgNi, AgNi+Au or AgSnO ₂	AgSnO ₂ or AgSnO ₂ +Au
Contact Ratings (at resistive load)	max. max. max. max. max. 5 A 250 VAC 150 VDC 1250 VA 150 W	max. max. max. max. max. 10 A 277 VAC 30 VDC 2770 VA 300 W	max. max. max. max. max. 5 A 250 VAC 30 VDC 1250 VA 150 W
Electrical Life Expectancy (at rated load)	1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵
Mechanical Life Expectancy	2 x 10 ⁷	5 x 10 ⁴	2 x 10 ⁷
Standard Types (nominal coil voltage coil resistance)	VDC Ω 5 208 6 300 9 675 12 1200 18 2700 24 3200	VDC Ω 3 45 5 125 6 180 9 405 12 720 18 1620 24 2880	VDC Ω 5 125 12 720 24 2880
Pickup / Dropout (% of V _{nom})	≤ 70% / ≥ 10%	≤ 75% / ≥ 5%	≤ 70% / ≥ 10%
Ambient Temperature	-40°C...+85°C	-40°C...+105°C	-25°C...+70°C
Dielectric Strength (coil to contacts)	3000 VAC	4000 VAC	3000 VAC
Termination	PCB	PCB	PCB
Operate / Release Time (typ. at V _{nom})	6 / 3 ms	6 / 3 ms	6 / 3 ms
Approvals	TÜV, UL, CUR	VDE, UL, CUR	TÜV, UL, CUR
Accessories	–	–	–

Layout
(viewed toward terminals)

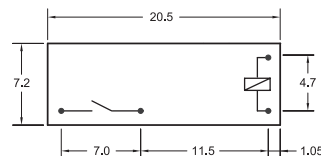
(dimensions in mm)
(grid: 2.54 mm)



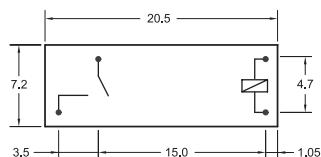
AZ 921



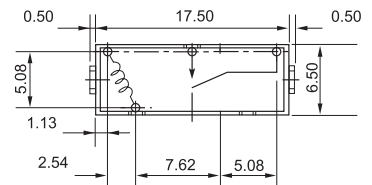
AZ 921 "K"-Version



AZ 9371

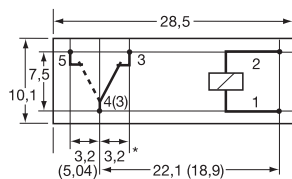
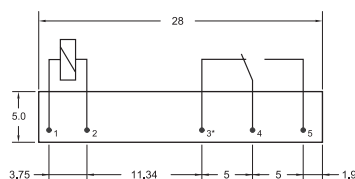


AZ 9371 "K"-Version

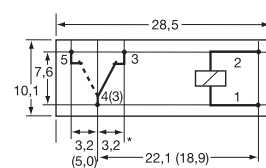




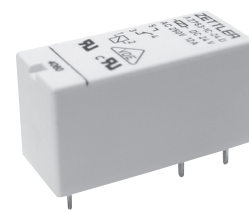
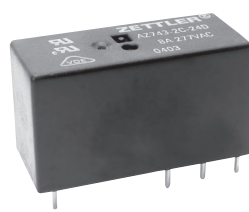
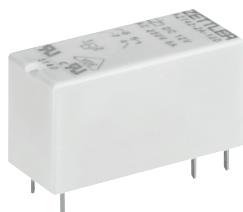
AZ 6991	AZ 6960	AZ 6962
• Contact rating: 8 A / 277 VAC • Extremely slim size: 5 mm • Coil power at pickup 96...129 mW • Clearance / creepage ≥ 6 / 8 mm • Dielectric strength 4000 VAC • Reinforced insulation VDE 0631 / 0700	• Contact rating: 10 A / 250 VAC • Low profile: 12,5 mm • Coil power at pickup 120...126 mW • Clearance / creepage ≥ 8 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700 • Materials according IEC 60335-1	• Contact rating: 10 A / 250 VAC • Low profile: 12,5 mm • Coil power at pickup 108...141 mW • Clearance / creepage ≥ 10 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700
28,0 x 5,0 x 15,0 mm	28,5 x 10,1 x 12,5 mm	28,5 x 10,1 x 12,5 mm
Epoxy sealed version Horizontal version available	Epoxy sealed version	Epoxy sealed version
1A / 1C	1A / 1B / 1C	1A / 1B / 1C
AgNi, AgNi+Au or AgSnO ₂	AgNi, AgNi+Au, AgSnO ₂ , AgSnO ₂ +Au	AgNi, AgNi+Au or AgSnO ₂
8 A 400 VAC 125 VDC 2216 VA 180 W	8 A 400 VAC 24 VDC 2000 VA 192 W	10 A 440 VAC 240 VDC 2500 VA 300 W
1 x 10 ⁵ 1 x 10 ⁷	1 x 10 ⁶ 1 x 10 ⁷	1 x 10 ⁵ 1 x 10 ⁷
VDC 5 12 24 48 60	VDC 5 6 9 12 18 24 48 60	VDC 5 6 9 12 18 24 48 60
Ω 147 848 3390 10600 16600	Ω 102 144 330 580 1300 2300 9340 14000	Ω 113 164 360 620 1295 2350 8000 12500
≤ 75% / ≥ 5%	≤ 70% / ≥ 10%	≤ 70% / ≥ 10%
-40°C...+85°C	-40°C...+85°C	-40°C...+85°C
4000 VAC	5000 VAC	5000 VAC
PCB	PCB	PCB
5 / 3 ms	10 / 5 ms	7 / 3 ms
VDE, UL, CUR	VDE, UL, CUR	VDE, UL, CUR
-	-	-



* not used on Form A and Form B



* not used on Form A and Form B

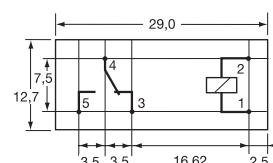
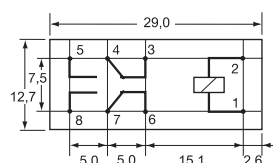
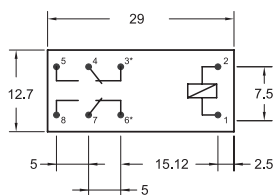


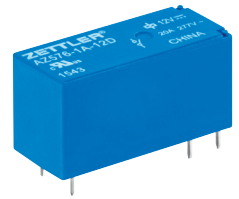
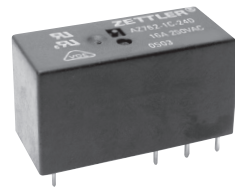
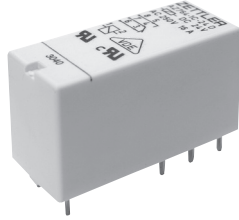
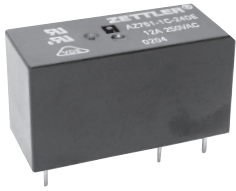
Relay Type	AZ 742				AZ 743				AZ 763			
Features	• Contact rating: 2 x 10 A / 250 VAC • Low profile: 15,7 mm • Coil power at pickup 196...235 mW • Clearance / creepage ≥ 10 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700 • AC and DC coils				• Contact rating: 2 x 10 A / 250 VAC • Low profile: 15,7 mm • Coil power at pickup 196...235 mW • Clearance / creepage ≥ 10 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700 • AC and DC coils				• Contact rating: 12 A / 250 VAC • Low profile: 15,7 mm • Coil power at pickup 196...235 mW • Clearance / creepage ≥ 10 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700 • AC and DC coils			
Size L x W x H	29,0 x 12,7 x 15,7 mm				29,0 x 12,7 x 15,7 mm				29,0 x 12,7 x 15,7 mm			
Other Versions	Epoxy sealed version				Epoxy sealed version				Epoxy sealed version other Layouts AZ 763L, AZ763R			
Contact Forms A = N.O. B = N.C. C = C.O.	2A / 2C				2A / 2C				1A / 1C			
Contact Material	AgNi, AgNi+Au or AgSnO ₂				AgCdO, AgNi, AgNi+Au or AgSnO ₂				AgNi, AgNi+Au or AgSnO ₂			
Contact Ratings (at resistive load)	max. 10 A max. 400 VAC max. 300 VDC max. 2500 VA max. 240 W				max. 10 A max. 440 VAC max. 125 VDC max. 2500 VA max. 240 W				max. 12A max. 400 VAC max. 300 VDC max. 3000 VA max. 360 W			
Electrical Life Expectancy (at rated load)	1 x 10 ⁵				1 x 10 ⁵				1 x 10 ⁵			
Mechanical Life Expectancy	3 x 10 ⁷				1 x 10 ⁷				3 x 10 ⁷			
Standard Types (nominal coil voltage coil resistance)	VDC	Ω	VAC	Ω /mA	VDC	Ω	VAC	Ω /mA	VDC	Ω	VAC	Ω /mA
	5	60	12	100/63,0	5	60	24	350/31,6	5	60	12	100/63,0
	6	90	24	400/31,3	6	90	115	8100/6,6	6	90	24	400/31,3
	9	200	48	1150/15,6	9	200	230	32500/3,2	9	200	48	1150/15,6
	12	360	60	2600/12,5	12	360			12	360	60	2600/12,5
	24	1440	110	8900/6,8	24	1440			24	1440	110	8900/6,8
	48	5700	120	10200/6,3	48	5700			48	5700	120	10200/6,3
	60	7500	230	38500/3,3	60	7500			60	7500	230	38500/3,3
	110	25200	240	42500/3,1	110	25200			110	25200	240	42500/3,1
Pickup / Dropout (% of V _{nom})	DC: $\leq 70\%$ / $\geq 10\%$ AC: $\leq 75\%$ / $\geq 15\%$				DC: $\leq 70\%$ / $\geq 10\%$ AC: $\leq 75\%$ / $\geq 15\%$				DC: $\leq 70\%$ / $\geq 10\%$ AC: $\leq 75\%$ / $\geq 15\%$			
Ambient Temperature	DC: -40°C...+85°C AC: -40°C...+70°C				DC: -40°C...+85°C AC: -40°C...+70°C				DC: -40°C...+85°C AC: -40°C...+70°C			
Dielectric Strength (coil to contacts)	5000 VAC				5000 VAC				5000 VAC			
Termination	PCB				PCB				PCB			
Operate / Release Time (typ. at V _{nom})	DC: 7 / 3 ms AC: 8 / 7 ms				DC: 7 / 4 ms AC: 10 / 4 ms				DC: 7 / 3 ms AC: 8 / 7 ms			
Approvals	VDE, UL, CUR				VDE, UL, CUR				VDE, UL, CUR			
Accessories	PCB-Socket: EC50 + MP16-2 / MH16-2 DIN rail: GZT80 + GZT80-0040				PCB-Socket: EC50 + MP16-2 / MH16-2 DIN rail: GZT80 + GZT80-0040				PCB-Socket: EC35 + MP16-2 / MH16-2 DIN rail: GZT92 + GZT80-0040			

Layout

(viewed toward terminals)

(dimensions in mm)
(grid: 2.54 mm)





AZ 761

- Contact rating: 12 A / 250 VAC
- Low profile: 16,0 mm
- Coil power at pickup 141...235 mW
- Clearance / creepage ≥ 10 mm
- Dielectric strength 5000 VAC
- Reinforced insulation VDE 0631 / 0700
- AC and DC coils

29,3 x 13,0 x 16,0 mm

Epoxy sealed version
Sensitive coil version

1A / 1B / 1C

AgCdO, AgNi, AgNi+Au or AgSnO₂

12 A
440 VAC
125 VDC
3324 VA
360 W

1×10^5

1×10^7

VDC	Ω std./sens.
5	62/100
6	90/144
9	200/576
12	360/1296
24	1440/2304
48	5760/9216
60	7500/12867
110	25200/-

std.: $\leq 70\%$ / $\geq 10\%$ sens.: $\leq 75\%$ / $\geq 10\%$

std.: -40°C...+85°C sens.: -40°C...+105°C

5000 VAC

PCB

7 / 3 ms

VDE, UL, CUR

PCB-Socket: EC35 + MP16-2 / MH16-2
DIN rail: GZT92 + GZT80-0040

AZ 764

- Contact rating: 16 A / 250 VAC
- Low profile: 15,7 mm
- Coil power at pickup 196...235 mW
- Clearance / creepage ≥ 10 mm
- Dielectric strength 5000 VAC
- Reinforced insulation VDE 0631 / 0700
- AC and DC coils

29,0 x 12,7 x 15,7 mm

Epoxy sealed version
High inrush version 80 A (1 Form A only)

1A / 1C

AgNi or AgSnO₂

20 A
400 VAC
300 VDC
5000 VA
480 W

7×10^4

3×10^7

VDC	Ω	VAC	Ω /mA
5	60	12	100/63,0
6	90	24	400/31,3
9	200	48	1150/15,6
12	360	60	2600/12,5
24	1440	110	8900/6,8
48	5700	120	10200/6,3
60	7500	230	38500/3,3
110	25200	240	42500/3,1

DC: $\leq 70\%$ / $\geq 10\%$ AC: $\leq 75\%$ / $\geq 15\%$

DC: -40°C...+85°C AC: -40°C...+70°C

5000 VAC

PCB

DC: 7 / 3 ms AC: 8 / 7 ms

VDE, UL, CUR

PCB-Socket: EC50 + MP16-2 / MH16-2
DIN rail: GZT80 + GZT80-0040

AZ 762

- Contact rating: 16 A / 250 VAC
- Low profile: 15,7 mm
- Coil power at pickup 141...235 mW
- Clearance / creepage ≥ 10 mm
- Dielectric strength 5000 VAC
- Reinforced insulation VDE 0631 / 0700
- AC and DC coils

29,0 x 12,7 x 15,7 mm

Epoxy sealed version
High inrush version 80 A (1 Form A only)

1A / 1C

AgCdO, AgNi, AgNi+Au or AgSnO₂

16 A
440 VAC
125 VDC
5540 VA
480 W

1×10^5

1×10^7

VDC	Ω	VAC	Ω /mA
5	62	24	350/31,6
6	90	115	8100/6,6
9	200	230	32500/3,2
12	360		
24	1440		
48	5760		
60	7500		
110	25200		

$\leq 70\%$ / $\geq 10\%$

DC: -40°C...+85°C AC: -40°C...+70°C

5000 VAC

PCB

7 / 3 ms

VDE, UL, CUR

PCB-Socket: EC50 + MP16-2 / MH16-2
DIN rail: GZT80 + GZT80-0040

AZ 576

- Contact rating: 20 A / 277 VAC
- Low profile: 15,3 mm
- Coil power at pickup 196...226 mW
- Dielectric strength 5000 VAC
- High temperature 105°C

29,3 x 12,7 x 15,3 mm

Epoxy sealed version

1A / 1C

AgSnO₂

20 A
480 VAC
30 VDC
5540 VAC
510 W

1×10^5

1×10^7

VDC	Ω
5	62,5
6	90
9	202,5
12	360
24	1440
48	5760
60	9000
110	30250

$\leq 75\%$ / $\geq 10\%$

-40°C...+105°C

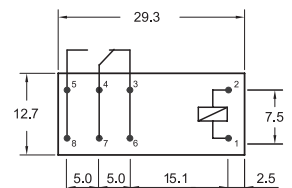
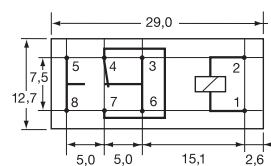
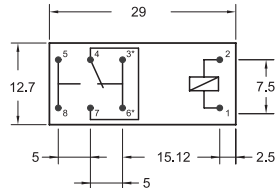
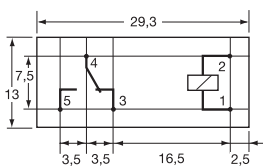
5000 VAC

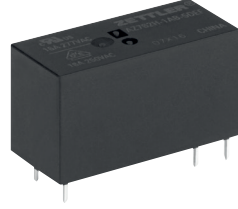
PCB

8 / 4 ms

TÜV, UL, CUR

PCB-Socket: EC50 + MP16-2 / MH16-2
DIN rail: GZT80 + GZT80-0040



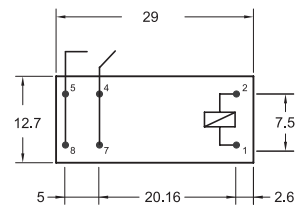
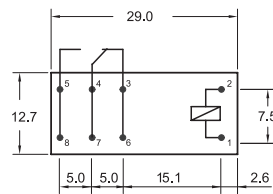
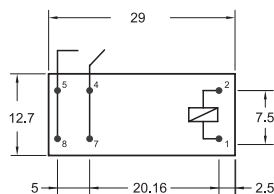


Relay Type	AZ 764H		AZ 762H		AZ 762T	
Features	• Contact rating: 16 A / 250 VAC • Low profile: 15,7 mm • Coil power at pickup 138...141 mW • Clearance / creepage ≥ 10 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700 • High temperature 105°C • Flux proof		• Contact rating: 16 A / 277 VAC • Low profile: 15,7 mm • Coil power at pickup 140...235 mW • Clearance / creepage ≥ 10 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700 • High temperature 105°C		• Contact rating: 16 A / 250 VAC • Inrush: 165 A, 20 ms / 800 A, 200 μs • Tungsten premake contact • Low profile: 15,7 mm • Coil power at pickup 196...235 mW • Clearance / creepage > 10 mm • Dielectric strength 5000 VAC	
Size L x W x H	29,0 x 12,7 x 15,7 mm		29,0 x 12,7 x 15,7 mm		29,0 x 12,7 x 15,7 mm	
Other Versions	–		Epoxy sealed version Sensitive coil version		Epoxy sealed version	
Contact Forms A = N.O. B = N.C. C = C.O.	1A / 1C		1A / 1C		1A	
Contact Material	AgNi or AgSnO ₂		AgCdO, AgCdO+Au, AgNi or AgNi+Au		AgSnO ₂ + W	
Contact Ratings (at resistive load)	max. max. max. max. max.	16 A 400 VAC 300 VDC 4432 VA 480 W		16 A 440 VAC 125 VDC 4432 VA 480 W		16 A 440 VAC 125 VDC 4432 VA 480 W
Electrical Life Expectancy (at rated load)	1,7 x 10 ⁵		1 x 10 ⁵		1 x 10 ⁵	
Mechanical Life Expectancy	3 x 10 ⁷		1 x 10 ⁷		5 x 10 ⁶	
Standard Types (nominal coil voltage coil resistance)		VDC Ω		VDC Ω std./sens.		VDC Ω
		5 102		5 62/100		5 62
		6 144		6 90/145		6 90
		9 330		9 200/325		9 202
		10 400		12 360/580		12 360
		12 580		18 810/1300		24 1440
		18 1300		24 1440/2300		48 5760
		24 2300		48 5760/9220		60 7500
		48 9340		60 7500/12860		110 25200
Pickup / Dropout (% of V _{nom})	≤ 75% / ≥ 10%		≤ 75% / ≥ 10%		≤ 70% / ≥ 10%	
Ambient Temperature	-40°C...+105°C		-40°C...+105°C		-40°C...+85°C	
Dielectric Strength (coil to contacts)	5000 VAC		5000 VAC		5000 VAC	
Termination	PCB		PCB		PCB	
Operate / Release Time (typ. at V _{nom})	8 / 3 ms		7 / 3 ms		7 / 3 ms	
Approvals	VDE, UL, CUR		VDE, UL, CUR		VDE, UL, CUR	
Accessories	–		–		–	

Layout

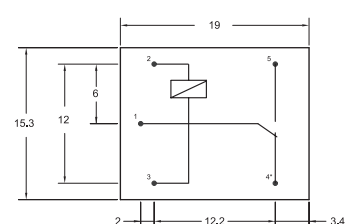
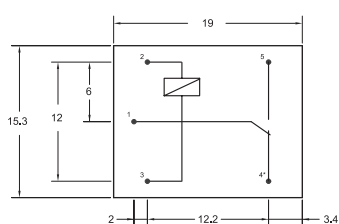
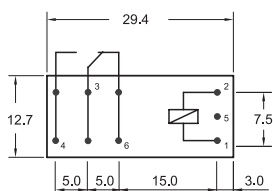
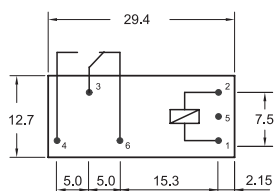
(viewed toward terminals)

(dimensions in mm)
(grid: 2.54 mm)





AZ 762P	AZ 7621P	AZ 943	AZ 943W
• Contact rating: 20 A / 250 VAC • Single and dual coil latching • Inrush: 165 A, 20 ms / 800 A, 200 μs • Low profile: 15,7 mm • Coil power at pickup 256...416 mW • Dielectric strength 4000 VAC	• Contact rating: 16 A / 250 VAC • Single and dual coil latching • Low profile: 15,7 mm • Coil power at pickup 192...319 mW • Dielectric strength 5000 VAC	• Contact rating: 10 A / 277 VAC • Small size • Coil power at pickup 203...206 mW • Dielectric strength 1500 VAC	• Contact rating: 10 A / 277 VAC • Small size • Coil power at pickup 300...312 mW • Dielectric strength 1500 VAC • Wide contact gap ≥ 0,8 mm
29,4 x 12,7 x 15,7 mm	29,0 x 12,7 x 15,9 mm	19,0 x 15,3 x 15,7 mm	19,0 x 15,3 x 16,0 mm
Epoxy sealed version High inrush version 165 A (1 Form A only)	Epoxy sealed version	Epoxy sealed version	Epoxy sealed version
1A / 1C	1A / 1C	1A / 1C	1A / 1C
AgSnO ₂ or AgSnO ₂ +W	AgSnO ₂ or AgSnO ₂ +Au	AgSnO ₂	AgSnO ₂
20 A 350 VAC 125 VDC 5000 VA 600 W	16 A 440 VAC 30 VDC 4000 VA 480 W	15 A 300 VAC 30 VDC 2770 VA 300 W	10 A 277 VAC 30 VDC 2770 VA 300 W
1 x 10 ⁵ 1 x 10 ⁶	5 x 10 ⁴ 5 x 10 ⁶	1 x 10 ⁵ 1 x 10 ⁶	2 x 10 ⁴ 1 x 10 ⁶
VDC Ω 3 22,5 5 62,5 6 90 9 202 12 360 24 1440	VDC Ω 5 63 6 90 9 203 12 360 24 1440	VDC Ω 5 70 6 100 9 225 12 400 18 900 24 1600 36 3600 48 6400	VDC Ω 6 65 12 270 18 600 24 1070
≤ 80% / ≥ 80%	≤ 70% / ≥ 70%	≤ 75% / ≥ 10%	≤ 75% / ≥ 10%
-40°C...+85°C	-40°C...+85°C	-40°C...+85°C	-40°C...+70°C
4000 VAC	5000 VAC	1500 VAC	1500 VAC
PCB	PCB	PCB	PCB
10 / 10 ms	10 / 10 ms	10 / 5 ms	10 / 5 ms
UL, CUR	UL, CUR	VDE, TÜV, UL, CUR	-
-	-	-	-





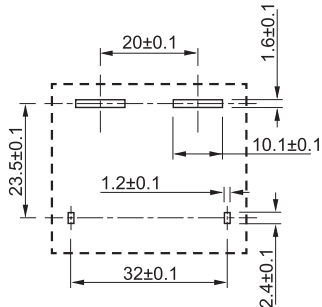
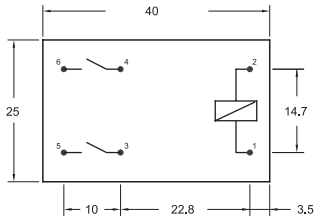
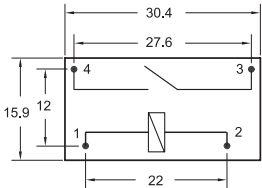
Relay Type	AZ SR131		AZ SR235 / 250		AZ SR165	
Features	• Contact rating: 35 A / 277 VAC • Contact gap: $\geq 1,8$ mm • Coil power at holding 170... ≥ 172 mW • Dielectric strength 4500 VAC • Flux proof		• Contact rating: 2 x 50 A / 250 VAC • Contact gap: AZ SR235 $\rightarrow 2 \times 2,05$ mm • Contact gap: AZ SR250 $\rightarrow 2 \times 1,85$ mm • Coil power at holding 54...95 mW • Clearance / creepage ≥ 10 mm • Dielectric strength 5000 VAC • Flux proof		• Contact rating: 80 A / 540 VAC • Contact gap: $\geq 3,0$ mm • Coil power at holding 351...355 mW • Dielectric strength 4000 VAC • Flux proof	
Size L x W x H	30,4 x 15,9 x 25,15 mm		40,0 x 25,0 x 49,2 mm		38,0 x 33,0 x 41,5 mm	
Other Versions	Contact gap (200) version: $\geq 2,3$ mm		AZ SR235 / AZ SR250: 2 x 35 A / 50 A AZ SR250 1-pole version available		-	
Contact Forms A = N.O. B = N.C. C = C.O.	1A		1A / 2A		1A	
Contact Material	AgSnO ₂		AgSnO ₂		AgNi	
Contact Ratings (at resistive load)	max. 35 A max. 277 VAC max. 9695 VA max.		50 A 440 VAC 150 VDC 13850 VA 1500 W		80 A 690 VAC 43200 VA	
Electrical Life Expectancy (at rated load)	3×10^4		5×10^4		1×10^3	
Mechanical Life Expectancy	3×10^5		1×10^6		1×10^6	
Standard Types (nominal coil voltage coil resistance)	VDC 5 9 12 18 24 48 Ω 18 58 103 230 410 1650		VDC 5 9 12 18 24 Ω 50 170 300 675 1200		VDC 6 9 12 24 Ω 16,2 36,8 65 262	
Pickup / Dropout (% of V_{nom})	$\leq 70\% / \geq 5\%$		$\leq 75\% / \geq 5\%$		$\leq 75\% / \geq 5\%$	
Ambient Temperature	-40°C...+85°C		-40°C...+85°C		-40°C...+85°C	
Dielectric Strength (coil to contacts)	4500 VAC		5000 VAC		4000 VAC	
Termination	PCB		PCB		PCB	
Operate / Release Time (typ. at V_{nom})	20 / 10 ms		40 / 5 ms		40 / 10 ms	
Approvals	TÜV, UL, CUR		VDE, UL, CUR		TÜV, UL, CUR	
Accessories	-		-		-	

Layout

(viewed toward terminals)

(dimensions in mm)

(grid: 2.54 mm)





AZ SR190

- Contact rating: 90 A / 480 VAC
- Contact gap: $\geq 3,6$ mm
- Coil power at holding 306...307 mW
- Dielectric strength 5000 VAC
- Flux proof

38,0 x 33,0 x 43,0 mm

AZ SR190T: 100 A
Low profile version available 41,5 mm height

1A

AgNi

100 A
800 VAC
44000 VA

1×10^3

1×10^6

VDC	Ω
5	18,8
9	42,2
12	75
24	300

$\leq 75\% / \geq 10\%$

-40°C...+85°C

5000 VAC

PCB

40 / 10 ms

TÜV, UL, CUR

-

AZ SR1160

- Contact rating: 160 A / 690 VAC
- Contact gap: $\geq 3,15$ mm
- Coil power at holding 480 mW
- Dielectric strength 4000 VAC
- Flux proof

63,3 x 62,0 x 41,7 mm

Contact gap (200) version: $\geq 3,6$ mm

1A

AgNi, AgSnO₂

160 A
690 VAC
110400 VA

1×10^3

1×10^6

VDC	Ω
6	12
9	27
12	48
24	192

$\leq 75\% / \geq 5\%$

-40°C...+85°C

4000 VAC

PCB

40 / 15 ms

-

-

AZ EV116 / 132

- Contact rating: 32 A / 440 VAC
- Contact gap: $\geq 2,25$ mm
- Coil power at pickup 190 mW
- Dielectric strength 4000 VAC
- Short circuit carrying capability 1500 A
- Flux proof

35,0 x 16,0 x 27,9 mm

AZ EV116: 16 A version

1A + 1B

AgSnO₂+AgSnO₂+Au

32 A
440 VAC
30 VDC
8864 VA
960 W

3×10^4

1×10^5

VDC	Ω
12	93

$\leq 75\% / \geq 5\%$

-40°C...+85°C

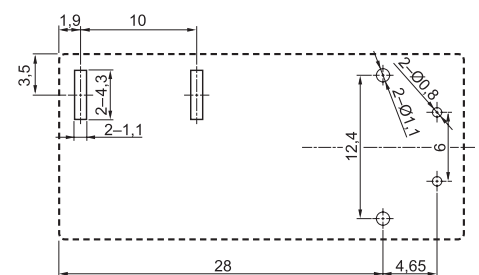
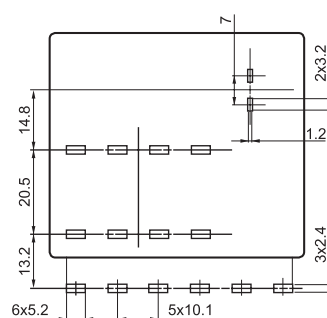
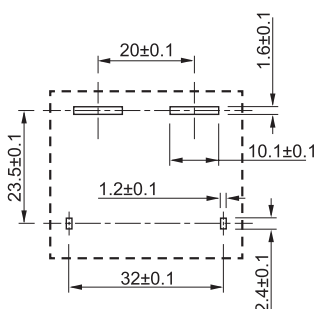
4000 VAC

PCB

30 / 10 ms

-

-

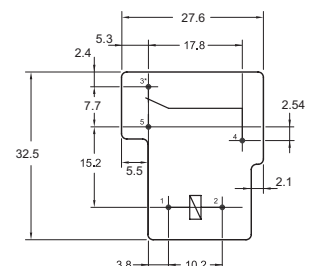
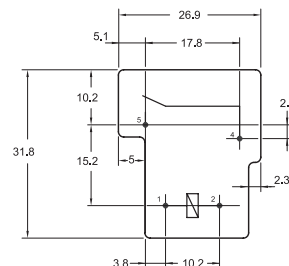
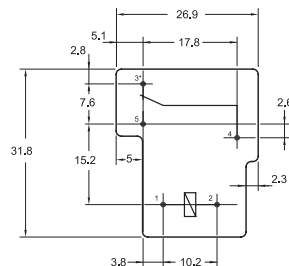


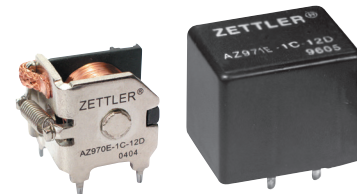
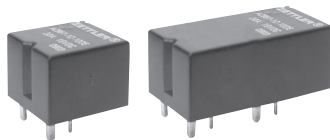


Relay Type	AZ 2150	AZ 2150W	AZ 21501
Features	• Contact rating: 30 A / 240 VAC • Coil power at holding 470...523 mW • Dielectric strength 2500 VAC	• Contact rating: 30 A / 277 VAC • Contact gap $\geq 1,75$ mm • Coil power at holding 277 mW • Clearance / creepage ≥ 3 mm • Dielectric strength 4000 VAC	• Contact rating: 50 A / 250 VAC • Coil power at holding 842...843 mW • Dielectric strength 4000 VAC
Size L x W x H	31,8 x 26,9 x 19,1 mm	31,8 x 26,9 x 19,1 mm	31,8 x 26,9 x 19,1 mm
Other Versions	Epoxy sealed version	Epoxy sealed version	Epoxy sealed version
Contact Forms A = N.O. B = N.C. C = C.O.	1A / 1B / 1C	1A	1A / 1B / 1C
Contact Material	AgCdO	AgSnO ₂	AgSnO ₂
Contact Ratings (at resistive load)	max. 40 A (N.O.), 30 A (N.C.) max. 300 VAC max. 30 VDC max. 10000 VA max. 900 W	30 A 440 VAC 250 VDC 8310 VA 900 W	50 A 300 VAC 30 VDC 12000 VA 1500 W
Electrical Life Expectancy (at rated load)	1 x 10 ⁵	3 x 10 ⁴	1 x 10 ⁴
Mechanical Life Expectancy	1 x 10 ⁷	2 x 10 ⁵	1 x 10 ⁷
Standard Types (nominal coil voltage coil resistance)	VDC Ω 5 27 6 40 9 97 12 155 18 380 24 660 48 2560 110 13450	VDC Ω 5 22,5 6 32,5 9 73 12 130 24 520 48 2080	VDC Ω 5 16,7 6 24 9 54 12 96 18 216 24 384 48 1536 110 8067
Pickup / Dropout (% of V _{nom})	$\leq 75\% / \geq 10\%$	$\leq 75\% / \geq 10\%$	$\leq 75\% / \geq 10\%$
Ambient Temperature	-55°C...+85°C	-40°C...+85°C	-55°C...+85°C
Dielectric Strength (coil to contacts)	2500 VAC	4000 VAC	4000 VAC
Termination	PCB	PCB	PCB
Operate / Release Time (typ. at V _{nom})	8 / 3,5 ms	15 / 10 ms	15 / 10 ms
Approvals	VDE, UL, CUR	VDE, UL, CUR	UL, CUR
Accessories	—	—	—

Layout
(viewed toward terminals)

(dimensions in mm)
(grid: 2.54 mm)





AZ 947

- Contact rating: 20 A / 14 VDC
- Subminiature size
- Coil power at pickup 216...222 mW

15,7 x 12,3 x 14,0 mm

Epoxy sealed version

1A / 1C / 1U

AgSnO₂

20 A (N.O.) / 6 A (N.C.)
250 VAC
42 VDC
1250 VA
280 W

1 x 10⁵

1 x 10⁷

VDC	Ω
6	60
9	135
12	240
24	960

AZ 987-1 / 987-2

single relay double relay

- Contact rating: 30 A / 14 VDC
- Coil power at pickup 180...194 mW
- Single or double relay
- Epoxy sealed

13,2 x 12,3 x 10,2 / 13,2 x 24,0 x 10,2 mm

Single relay AZ 987-1
Double relay AZ 987-2

1A / 1C / 2A / 2C

AgSnO₂

30 A
16 VDC
480 W

3 x 10⁵

1 x 10⁶

VDC	Ω
6	63
10	181
12	254

AZ 970E / 971E

open version covered version

- Contact rating: 40 A / 14 VDC
- Coil power at pickup 514...573 mW
- Open, covered or sealed
- European footprint

23,0 x 18,8 x 18,0 / 26,2 x 21,1 x 21,1 mm

AZ 970E: open, AZ 971E: covered
Epoxy sealed version

1A / 1C

AgSnO₂

40 A (1 Form A)
30 A (1 Form C / B)
150 VDC
560 W (1 Form A)
420 W (1 Form C / B)

1 x 10⁵

5 x 10⁶

VDC	Ω
6	19
9	50
12	90
24	362

≤ 60% / ≥ 5%

-40°C...+85°C

500 VAC

PCB

10 / 5 ms

-

-

≤ 57% / ≥ 12%

-40°C...+105°C

500 VAC

PCB

3 / 1,5 ms

-

-

≤ 57% / ≥ 6%

-40°C...+105°C

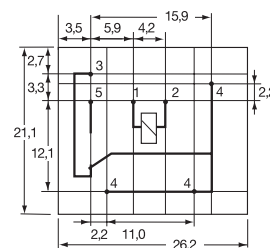
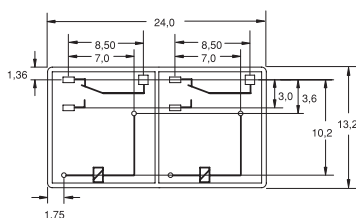
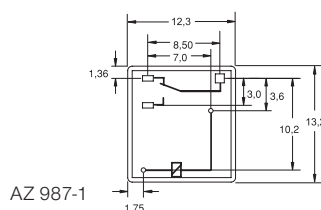
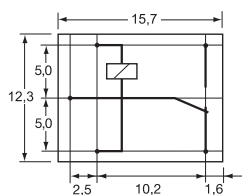
500 VDC

PCB

5 / 3 ms

-

-



AZ 971E

AZ 987-2

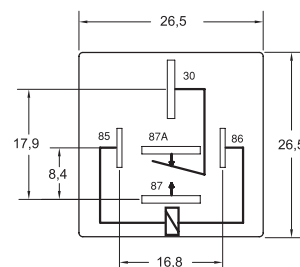
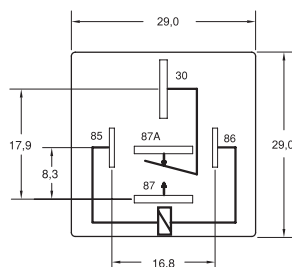
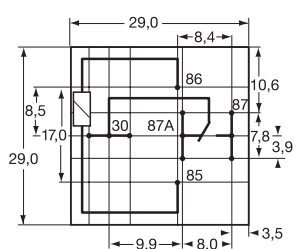


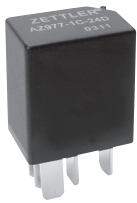
Relay Type	AZ 983	AZ 979 / 980 flange mounting plug in	AZ 9731
Features	- Contact rating: 80 A / 14 VDC - PCB version - Coil power at pickup 761 mW	- Contact rating: 80 A / 14 VDC - Quick connect or plug in version - Coil power at pickup 676...761 mW	- Contact rating: 40 A / 14 VDC - Quick connect or plug in version - Coil power at pickup 676 mW
Size L x W x H	29,0 x 29,0 x 26,5 mm	29,0 x 29,0 x 26,5 mm	26,5 x 26,5 x 36,0 mm
Other Versions	Diode or resistor across coil Epoxy sealed version	Diode or resistor across coil Epoxy sealed version	Diode or resistor across coil Epoxy sealed version (shrouded cover)
Contact Forms A = N.O. B = N.C. C = C.O.	1A / 1B / 1C	1A / 1B / C	1A / 1B / 1C / 1U
Contact Material	AgSnO ₂	AgSnO ₂	AgSnO ₂
Contact Ratings (at resistive load)	max. 80 A (1 Form A) max. 60 A (1 Form C / B) max. 28 VDC max. 1120 W (1 Form A) max. 840 W (1 Form C / B)	max. 80 A (1 Form A) max. 60 A (1 Form C / B) max. 28 VDC max. 1120 W (1 Form A) max. 840 W (1 Form C / B)	max. 40 A max. 28 VDC max. 560 W
Electrical Life Expectancy (at rated load)	1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵
Mechanical Life Expectancy	1 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷
Standard Types (nominal coil voltage coil resistance)	VDC Ω 6 20 12 80 24 320	VDC Ω 6 20 12 90 24 360	VDC Ω 6 22,5 12 90 24 360
Pickup / Dropout (% of V _{nom})	≤ 65% / ≥ 10%	≤ 65% / ≥ 10%	≤ 65% / ≥ 10%
Ambient Temperature	-40°C...+85°C	-40°C...+85°C	-40°C...+125°C
Dielectric Strength (coil to contacts)	500 VAC	500 VAC	750 VAC
Termination	PCB	Quick connect or plug in	Quick connect or plug in
Operate / Release Time (typ. at V _{nom})	7 / 5 ms	7 / 5 ms	7 / 5 ms
Approvals	-	-	-
Accessories	-	-	-

Layout

(viewed toward terminals)

(dimensions in mm)
(grid: 2.54 mm)





AZ 977

- Contact rating: 20 A
- Small size
- Coil power at pickup 430...530 mW
- Plug in relay
- Dust cover

23,0 x 15,5 x 26,0 mm

Diode or resistor across coil
Sensitive coil version

1A / 1C

AgSnO₂

20 A
150 VDC
280 W

1 x 10⁵

1 x 10⁶

VDC	Ω std./sens.
6	25/32
12	97/123
24	384/483

≤ 60% / ≥ 8%

-40°C...+85°C

1000 VDC

Plug in

10 / 7 ms

–

–

AZ DC110

- Contact rating: 16 A / 180 VDC
10 A / 300 VDC
5 A / 420 VDC
16 A / 300 VAC
- Coil power at pickup 224...225 mW
- Dielectric strength 5000 VAC
- Flux proof

29,3 x 12,7 x 19,0 mm

–

1A

AgSnO₂

16 A
300 VAC
420 VDC
4800 VA
3000 W

3 x 10⁴

3 x 10⁷

VDC	Ω
5	62,5
6	90
9	203
12	360
18	810
24	1440

≤ 70% / ≥ 5%

-40°C...+105°C

5000 VAC

PCB

10 / 5 ms

TÜV, UL, CUR

–

AZ DC105

- Contact rating: 150 A / 60 VDC
- Contact gap: ≥ 3,0 mm
- Coil power at pickup 224...225 mW
- Dielectric strength 4000 VAC
- Flux proof

38,0 x 33,0 x 43,0 mm

–

1A

AgSnO₂

150 A
60 VDC
9000 W

1 x 10³

1 x 10⁶

VDC	Ω
12	45
24	180
48	720

≤ 75% / ≥ 5%

-40°C...+85°C

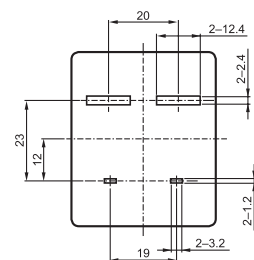
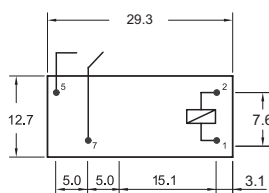
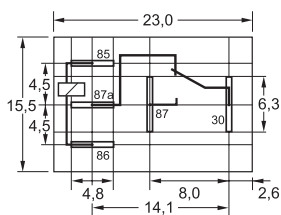
4000 VAC

PCB

30 / 10 ms

TÜV, UL, CUR

–



ZETTLER GROUP

ZETTLER GROUP's diversified product lines are designed to provide complete solutions for component applications across a broad spectrum of industries.

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ZETTLER Relays are used in a wide spectrum of applications, including Power, HVAC/R, Energy Management, Lighting, Metering, Automotive, Industrial, Tele-Communications, Security, Home Appliances, Medical, Solar, Electric Vehicle Charging and many other types of electric and electronic equipment. For decades, customers in these industries have embraced ZETTLER Relays for their quality and agree that "It's a better Relay".



ZETTLER MAGNETICS



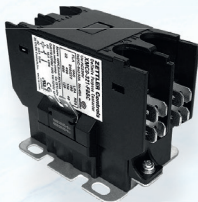
A diversified range of MAGNETICS products has long been an integral part of ZETTLER Group's engineering and production competence. **ZETTLER Magnetics** offers a complete line of PCB and chassis-mounted Transformers, Toroids and Chokes as well as current sensors.

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