

Реле ZETTLER Минск т.80447584780

www.fotorele.net www.tiristor.by радиодетали, электронные компоненты

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Реле ZETTLER, каталог, описание, технические, характеристики, datasheet, параметры, маркировка, габариты, фото, даташит,



AMERICAN ZETTLER, INC.
IT'S A BETTER RELAY

ЕLECTROMECHANICAL RELAYS
AUTOMOTIVE RELAYS
LATCHING RELAYS
SOLAR RELAYS
DP CONTACTORS

Минск www.fotorele.net www.tiristor.by
email minsk17@tut.by тел. +375 44 758 47 80
и другие, радиодетали, электронные компоненты
каталог, описание, технические, характеристики, datasheet
параметры, маркировка, габариты, фото, аналог, замена

RELAY SELECTOR GUIDE

QR код



реле zettler az2100-1a-24de
реле zettler az6962-1ce-24d купить
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реле zettler каталог
реле zettler aze31-08-100
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Short Form Catalog

Relays

Electromechanical Relays



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 PCB Power and Miniature Relays as well as Signal Relays for telecommunication and High Power Relays for heavy loads. The relay program is completed by Automotive Relays and further Accessories for PCB Relays.

In addition to established components you will find a series of technical innovations like PCB Power Relays for SMT mounting 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, contactors 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

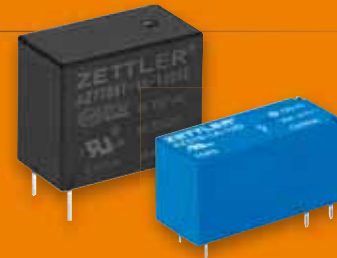
... for switching of small signals in communications, measurement and controls, automated test equipment (ATE). Signals will be connected with high precision.



Power Relays

Page 11

... 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 20

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



E-Mobility Relays

Page 22

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



High Power Relays

Page 23

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



Automotive Relays

Page 24

... 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.



Industrial Relays

Page 27

... for switch cabinets or applications on DIN-Rails.



Accessories

Page 28

Definitions and Application Notes

Page 30



Series	Contact Form	Contact Ratings		
		Umax (V)	I _{max} continuous (A)	P _{max} (VA / W)
AZ 956 / 956S	1C	125 AC	1	60 / 30
AZ 8521 / 8521S	2C	250 VAC	2	62,5 / 60
AZ 8462 / 8462S	2C	250 VAC	2	62,5 / 60
AZ 850 / 851	2C	250 VAC	2	62,5 / 30
AZ 954	1C	300 VAC	2	250 / 30
AZ 957	1C	125 VAC	2	62,5 / 30
AZ 822	2C	250 VAC	2	125 / 60
AZ 832	2C	250 VAC	2	250 / 60
AZ 770	1A / 1C	400 VAC	10	2500 / 150
AZ 7709	1A	250 VAC	10	2500 / 300
AZ 770H	1A	400 VAC	5	1250 / 150
AZ 963	1A / 1B / 1C	380 VAC	6	1500 / 180
AZ 940	1A / 1C	400 VAC	10	2770 / 150
AZ 9405	1A / 1C	277 VAC	10	1400 / 150
AZ 921	1A	250 VAC	5	1250 / 150
AZ 9371	1A	277 VAC	10	2770 / 300
AZ 6991	1A / 1C	400 VAC	8	2216 / 180
AZ 8	1A / 1C	250 VAC	6	1500 / 180
AZ 8P	1A / 1C	300 VAC	10	2500 / 240
AZ 696	1A / 1B / 1C	440 VAC	10	2500 / 240
AZ 6960	1A / 1B / 1C	400 VAC	10	2270 / 192
AZ 6962	1A / 1B / 1C	440 VAC	10	2500 / 300
AZ 742 / 742S	2A / 2C	400 VAC	10	2500 / 240
AZ 743	2A / 2C	440 VAC	10	2500 / 240
AZ 763	1A / 1C	400 VAC	12	3000 / 360
AZ 761	1A / 1B / 1C	440 VAC	12	3324 / 360
AZ 764 / 764S	1A / 1C	400 VAC	20	5000 / 480
AZ 762	1A / 1C	440 VAC	16	5540 / 480
AZ 576	1A / 1C	480 VAC	20	5540 / 510
AZ 764H	1A / 1C	400 VAC	16	4000 / 480
AZ 762H	1A / 1C	440 VAC	16	4000 / 480
AZ 762T	1A	440 VAC	16	4000 / 480
AZ 762P	1A / 1C	350 VAC	20	5000 / 600
AZ 725	1A / 1B / 1C	400 VAC	20	5000 / 480
AZ 9481	1A / 1C	250 VAC	16	4000 / 300
AZ 943	1A / 1C	300 VAC	15	2770 / 300
AZ 942H	1A / 1C	300 VAC	16	4000 / 280

Signal Relays

Power Relays

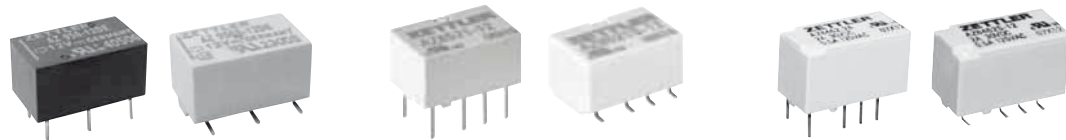
DC coil	AC coil	Coil Power at Pickup (mW / VA)	Dielectric Strength Coil / Contact (VAC)	Size L x W x H (mm)	Case			Page
					Flux proof	Epoxy sealed	open	
●		35...70	1500	13,0 x 7,62 x 6,9		●		8
●		80...155	1600	10,0 x 6,5 x 5,4		●		8
●		80...155	2000	15,2 x 7,7 x 9,2		●		8
●		55...170	1000	14,0 x 9,0 x 5,2		●		9
●		115...250	1250	15,75 x 10,75 x 11,81	●	●		9
●		35...130	1250	12,8 x 7,8 x 10,3		●		9
●		75...150	1000	20,0 x 9,8 x 12,0		●		10
●		95...130	1500	20,2 x 10,0 x 10,65		●		10
●		110...255	5000	17,85 x 10,35 x 12,95	●	●		11
●		112...223	4000	18,9 x 10,7 x 15,7	●	●		11
●		112...116	5000	17,85 x 10,35 x 12,95	●	●		11
●		110	4000	20,3 x 10,2 x 10,7		●		11
●		115...265	4000	20,5 x 10,2 x 15,7	●	●		12
●		113...196	4000	20,3 x 10,3 x 15,5	●	●		12
●		60...90	3000	20,3 x 5,3 x 12,8		●		12
●		115	4000	20,5 x 7,2 x 15,3	●	●		13
●		95...125	4000	28,0 x 5,0 x 15,0	●	●		13
●		135...220	2000	21,6 x 16,5 x 15,0	●	●		13
●		700	4000	21,2 x 16,2 x 14,7		●		13
●		105...140	4000	30,0 x 10,0 x 16,2	●	●		14
●		120...126	5000	28,5 x 10,1 x 12,5	●	●		14
●		110...140	5000	28,5 x 10,1 x 12,5	●	●		14
●	●	200...235	5000	29,0 x 12,7 x 15,7	●	●		15
●	●	200...235	5000	29,0 x 12,7 x 15,7	●	●		15
●	●	200...235	5000	29,0 x 12,7 x 15,7	●	●		15
●	●	140...235	5000	29,3 x 13,0 x 16,0	●	●		15
●	●	200...235	5000	29,0 x 12,7 x 15,7	●	●		16
●	●	140...235	5000	29,0 x 12,7 x 15,7	●	●		16
●		196...226	5000	29,5 x 13,2 x 16,2	●	●		16
●		140	5000	29,0 x 12,7 x 15,7	●			17
●		140...235	5000	29,0 x 12,7 x 15,7	●	●		17
●		196...235	5000	29,0 x 12,7 x 15,7	●	●		17
●		256	4000	29,4 x 12,7 x 15,7	●	●		17
●		250...290	5000	29,5 x 13,1 x 25,6	●			18
●		130...260	2500	22,5 x 16,2 x 11,4	●	●		18
●		200...205	1500	19,0 x 15,3 x 15,7	●	●		18
●		230...240	3000	22,0 x 16,3 x 16,5	●	●		19



	Series	Contact Form	Contact Ratings		
			U _{max} (V)	I _{max continuous} (A)	P _{max} (VA / W)
Solar Relays	AZ 733W	2A	400 VAC	12	3324 / 300
	AZ SR126	1A	277 VAC	31	8587 / -
	AZ 2150W	1A	440 VAC	30	8310 / 900
	AZ 2704	1A / 2A	400 VAC	30	8310 / 840
	AZ SR235 / 250	1A / 2A	440 VAC	50	13850 / 1500
	AZ SR180	1A	440 VAC	80	22160 / 2400
	AZ SR1120	1A	440 VAC	120	33240 / 3600
E-Mobility Relays	AZ SR116 / 132 / 140	1A / 1A + 1B	440 VAC	40	11080 / 1200
High Power Relays	AZ 2150	1A / 1B / 1C	300 VAC	30	7200 / 900
	AZ 2250	1A / 1B / 1C	277 VAC	30	8310 / 840
	AZ 2280	1A / 1B / 1C	277 VAC	30	8310 / 840
	AZ 2850	2A / 2C	600 VAC	30	8310 / 560
Automotive Relays	AZ 947	1A / 1C / 1U	42 VDC	20	1250 / 280
	AZ 987-1 / 987-2	1A / 1C / 2A / 2C	16 VDC	30	- / 480
	AZ 934 / 935	1C / 2C	28 VDC	20	- / 280
	AZ 970E / 971E	1A / 1C	150 VDC	40	- / 560
	AZ 983	1A / 1B / 1C	28 VDC	80	- / 1120
	AZ 979 / 980	1A / 1B / 1C	28 VDC	80	- / 1120
	AZ 9731	1A / 1B / 1C / 1U	28 VDC	40	- / 560
Industrial Relays	AZ 977	1A / 1C	150 VDC	20	- / 280
	R2N	2C	440 VAC	12	3000 / 288
	R3N	3C	440 VAC	10	2500 / 240
	R4N	4C	250 VAC	7	2500 / 144
	R15	2C / 3C	440 VAC	10	2500 / 240

(1) Dust cover

DC coil	AC coil	Coil Power at Pickup (mW / VA)	Dielectric Strength Coil / Contact (VAC)	Size L x W x H (mm)	Flux proof	Case Epoxy sealed	open	Page
●		405...470	5000	29,0 x 13,0 x 25,9	●	●		20
●		685...691	4500	30,4 x 15,9 x 23,3	●			20
●		624...625	4000	31,8 x 26,9 x 19,1	●	●		20
●	●	1058...1066	4000	50,5 x 33,5 x 36,0	●			21
●		269...282	5000	40,0 x 25,0 x 49,2	●			21
●		270	5000	40,0 x 25,0 x 49,2	●			21
●		1080	5000	51,8 x 46,1 x 39,8	●			21
●		624	4000	35,0 x 13,0 x 27,9	●			22
●		470...520	2500	31,8 x 26,9 x 19,1	●	●		23
●	●	470...520	4000	32,2 x 27,0 x 20,1	●	●		23
●	●	470...520	2500	50,2 x 27,5 x 27,8	●	●		23
●	●	470...520	4000	52,6 x 34,8 x 30,7	●	●		23
●		280	500	15,7 x 12,3 x 14,0	●	●		24
●		185...190	500	13,2 x 12,3 x 10,2		●		24
●		280	500	17,8 x 17,1 x 13,5	●	●		24
●		560	500 DC	23,0 x 18,8 x 18,4	●	●	●	25
●		675...760	500	29,0 x 29,0 x 26,5	● (1)	●		25
●		675...760	500	29,0 x 29,0 x 26,5	● (1)	●		25
●		676	750	26,5 x 26,5 x 36,0	● (1)	●		26
●		430...530	1000 DC	23,0 x 15,5 x 26,0	● (1)			26
●	●	900	2500	27,4 x 21,0 x 35,5	● (1)			27
●	●	900	2500	27,4 x 21,0 x 35,5	● (1)			27
●	●	900	2500	27,4 x 21,0 x 35,5	● (1)			27
●	●	1500	2500	35,0 x 35,0 x 54,4	● (1)			27

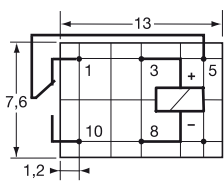


Relay Type	AZ 956 / 956S		AZ 8521 / 8521S		AZ 8462 / 8462S	
	THT	SMT	THT	SMT	THT	SMT
Features	<ul style="list-style-type: none"> • Contact rating: 30 W / 60 VA • Microminiature size • Coil power at pickup 35...70 mW • Bifurcated cossbar contacts • Polarized coil • Epoxy sealed 		<ul style="list-style-type: none"> • Contact rating: 2 x 60 W / 2 x 62,5 VA • Microminiature size • Coil power at pickup 80...155 mW • Bifurcated cossbar contacts • Polarized coil • Epoxy sealed 		<ul style="list-style-type: none"> • Contact rating: 2 x 60 W / 2 x 62,5 VA • Microminiature size • Coil power at pickup 80...155 mW • Bifurcated cossbar contacts • Polarized coil • High temperature 105°C • Epoxy sealed 	
Size L x W x H	13,0 x 7,62 x 6,9 (SMT: 8,0) mm		10,0 x 6,5 x 5,4 (SMT: 5,65) mm		15,2 x 7,7 x 9,2 (SMT: 9,7) mm	
Other Versions	Latching version AZ 956P SMT version		Latching version AZ 8521P SMT version		Latching version AZ 8462P SMT version	
Contact Forms A = N.O. B = N.C. C = C.O.	1C		2C		2C	
Contact Material	PdNi+AuRh		AgNi+Au		AgNi+Au	
Contact Ratings (at resistive load)	max. max. max. max. max.	1 A 125 VAC 150 VDC 60 VA 30 W	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
Electrical Life Expectancy (at rated load)	3 x 10 ⁵		1 x 10 ⁵		5 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	Ω THT/SMT	VDC	Ω	VDC	Ω
	1,5	36/28	3	64,3	3	64,3
	3	137/113	4,5	145	4,5	145
	5	370/313	5	178	5	178
	9	1165/1013	6	257	6	257
	12	2250/1800	9	579	9	579
	15	3100/2813	12	1080	12	1080
	24	4500/4500	24	2880	24	4114
					48	8533
Pickup / Dropout (% of V _{nom})	≤ 75% / ≥ 10%		≤ 75% / ≥ 10%		≤ 75% / ≥ 10%	
Ambient Temperature	-40...+70 °C		-40...+105°C		-40...+105°C	
Dielectric Strength (coil to contacts)	1500 VAC		1600 VAC		2000 VAC	
Termination	PCB		PCB		PCB	
Operate / Release Time (typ. at V _{nom})	AZ 956: 1 / 0,4 ms AZ 956P: 1 / 0,9 ms		3 / 3 ms		4 / 4 ms	
Approvals	UL, CUR		UL, CUR		UL, CUR	
Accessories	-		-		-	

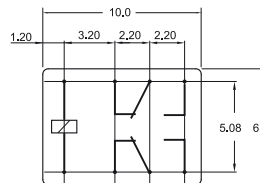
Layout

(viewed toward terminals)

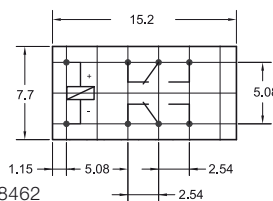
(dimensions in mm)
(grid: 2,54 mm)



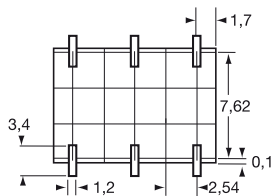
AZ 956



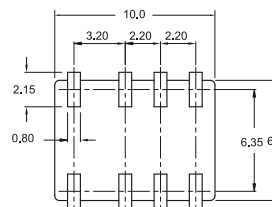
AZ 8521



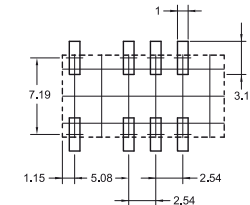
AZ 8462



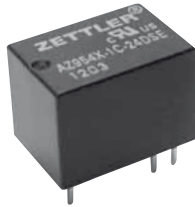
AZ 956S



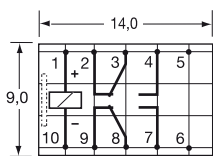
AZ 8521S



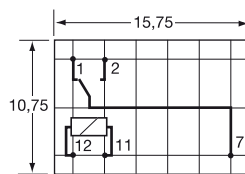
AZ 8462S



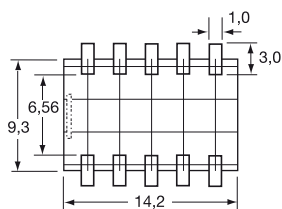
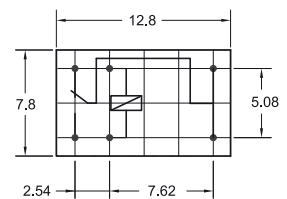
AZ 850 / 851 THT SMT		AZ 954	AZ 957
<ul style="list-style-type: none"> Contact rating: 2 x 30 W / 2 x 62,5 VA Microminiature size Coil power at pickup 55...170 mW Bifurcated cossbar contacts Polarized coil Epoxy sealed 		<ul style="list-style-type: none"> Contact rating: 30 W / 250 VA Small size Coil power at pickup 115...250 mW Non polarized coil 	<ul style="list-style-type: none"> Contact rating: 30 W / 62,5 VA Microminiature size Coil power at pickup 35...130 mW Non polarized coil Epoxy sealed
14,0 x 9,0 x 5,2 (SMT: 6,2) mm		15,75 x 10,75 x 11,81 mm	12,8 x 7,8 x 10,3 mm
Latching version AZ 850P SMT version		Epoxy sealed version 2 pin configurations	Sensitive coil version
2C		1C	1C
AgPd+Au		AgNi+Au	AgPd+Au
1 A switching / 2 A continuous 250 VAC 220 VDC 62,5 VA 30 W		2 A 300 VAC 150 VDC 250 VA 30 W	2 A switching / 1 A continuous 125 VAC 60 VDC 62,5 VA 30 W
2 x 10 ⁵ 1 x 10 ⁹		1 x 10 ⁵ 1 x 10 ⁷	1 x 10 ⁵ 1 x 10 ⁷
VDC	Ω	VDC	Ω std./sens.
5	178	5	56/120
6	257	6	80/180
12	1028	12	320/700
24	2880	24	1280/2800
≤ 75% / ≥ 10%		≤ 70% / ≥ 10%	≤ 80% / ≥ 10%
THT: -40...+70°C	SMT: -40...+85°C	std.: -25...+55°C	sens.: -25...+75°C
1000 VAC		1250 VAC	1250 VAC
PCB		PCB	PCB
2 / 1 ms		5 / 1 ms	std.: 3 / 1 ms sens.: 5 / 1 ms
UL, CUR		UL, CUR	UL, CUR
-		-	-



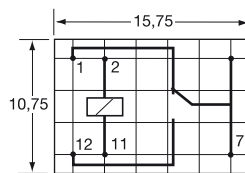
AZ 850



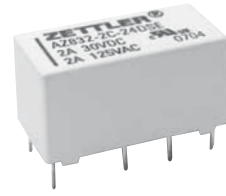
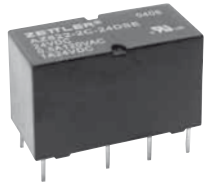
AZ 954X



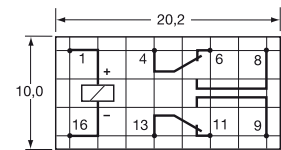
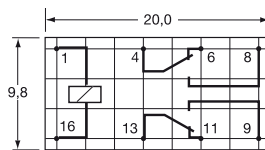
AZ 851



AZ 954Y



Relay Type	AZ 822	AZ 832																																		
Features	<ul style="list-style-type: none"> • Contact rating: 2 x 60 W / 2 x 125 VA • Coil power at pickup 75...150 mW • Bifurcated cossbar contacts • Non polarized coil • Epoxy sealed 	<ul style="list-style-type: none"> • Contact rating: 2 x 60 W / 2 x 250 VA • Max. switching 3 A • Coil power at pickup 95...130 mW • Bifurcated cossbar contacts • Polarized coil • Epoxy sealed 																																		
Size L x W x H	20,0 x 9,8 x 12,0 mm	20,2 x 10,0 x 10,65 mm																																		
Other Versions	-	Latching version AZ 832P																																		
Contact Forms A = N.O. B = N.C. C = C.O.	2C	2C																																		
Contact Material	AgPd+Au	PdAg+Au against PdAg or Ag+Au against PdAg																																		
Contact Ratings (at resistive load) max. max. max. max. max.	2 A 250 VAC 220 VDC 125 VA 60 W	3 A switching / 2 A continuous 250 VAC 220 VDC 250 VA 60 W																																		
Electrical Life Expectancy (at rated load)	5 x 10 ⁵	1 x 10 ⁵																																		
Mechanical Life Expectancy	1 x 10 ⁸	2 x 10 ⁷																																		
Standard Types (nominal coil voltage coil resistance)	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> </tr> </thead> <tbody> <tr><td>3</td><td>60</td></tr> <tr><td>5</td><td>167</td></tr> <tr><td>6</td><td>240</td></tr> <tr><td>9</td><td>540</td></tr> <tr><td>12</td><td>960</td></tr> <tr><td>18</td><td>1620</td></tr> <tr><td>24</td><td>2880</td></tr> <tr><td>48</td><td>7680</td></tr> </tbody> </table>	VDC	Ω	3	60	5	167	6	240	9	540	12	960	18	1620	24	2880	48	7680	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω std./sens.</th> </tr> </thead> <tbody> <tr><td>3</td><td>45/-</td></tr> <tr><td>5</td><td>125/167</td></tr> <tr><td>6</td><td>180/240</td></tr> <tr><td>9</td><td>405/540</td></tr> <tr><td>12</td><td>720/960</td></tr> <tr><td>24</td><td>2880/3840</td></tr> <tr><td>48</td><td>11520/-</td></tr> </tbody> </table>	VDC	Ω std./sens.	3	45/-	5	125/167	6	180/240	9	405/540	12	720/960	24	2880/3840	48	11520/-
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/-																																			
Pickup / Dropout (% of V _{nom})	≤ 70% / ≥ 5%	std.: ≤ 80% / ≥ 10% sens.: ≤ 75% / ≥ 10%																																		
Ambient Temperature	-55...+90°C	-40...+85°C																																		
Dielectric Strength (coil to contacts)	1000 VAC	1500 VAC																																		
Termination	PCB	PCB																																		
Operate / Release Time (typ. at V _{nom})	5 / 2 ms	3 / 2 ms																																		
Approvals	UL, CUR	UL, CUR																																		
Accessories	-	-																																		

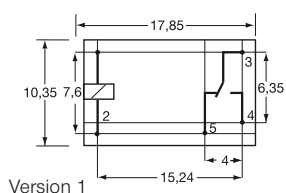


Layout
(viewed toward terminals)

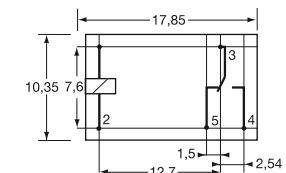
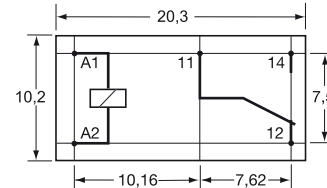
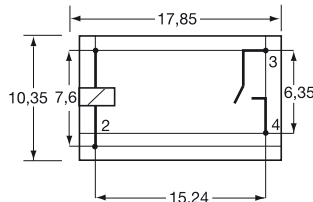
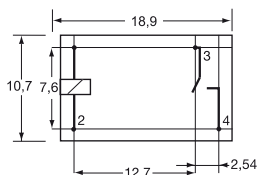
(dimensions in mm)
(grid: 2.54 mm)



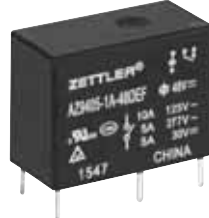
AZ 770		AZ 7709		AZ 770H		AZ 963	
<ul style="list-style-type: none"> Contact rating: 5 A / 250 VAC Low profile: 12,95 mm Coil power at pickup 110...255 mW Clearance / creepage ≥ 8 mm Dielectric strength 5000 VAC Reinforced insulation VDE 0631 / 0700 10 A \rightarrow AZ 770T 		<ul style="list-style-type: none"> Contact rating: 5 A / 250 VAC Coil power at pickup 112...223 mW Dielectric strength 4000 VAC 10 A \rightarrow AZ 7709T 		<ul style="list-style-type: none"> Contact rating: 5 A / 250 VAC Low profile: 12,95 mm Coil power at pickup 112...116 mW Clearance / creepage ≥ 8 mm Dielectric strength 5000 VAC Reinforced insulation VDE 0631 / 0700 High temperature 105°C 		<ul style="list-style-type: none"> Contact rating: 6 A / 250 VAC Small size Coil power at pickup 110 mW Clearance / creepage $\geq 4,5 / 5,5$ mm Dielectric strength 4000 VAC Epoxy sealed 	
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		20,3 x 10,2 x 10,7 mm	
Epoxy sealed version Sensitive coil version, 2 pin configurations		Epoxy sealed version Sensitive coil version		Epoxy sealed version		-	
1A / 1C		1A		1A		1A / 1B / 1C	
AgNi, AgNi+Au or AgSnO ₂		AgCdO, AgSnO ₂ , AgSnO ₂ In ₂ O ₃ or AgSnO ₂ +Au		AgNi, AgNi+Au		AgNi or AgSnO ₂	
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 1250VA 150 W		6 A 380 VAC 220 VDC 1500 VA 180 W	
1 x 10 ⁵ 1 x 10 ⁶		1 x 10 ⁵ 1 x 10 ⁷		1 x 10 ⁵ 1 x 10 ⁶		1 x 10 ⁵ 1 x 10 ⁷	
VDC	Ω std./sens.	VDC	Ω std./sens.	VDC	Ω	VDC	Ω
3	20/45	3	20/45	3	45	3	45
5	55/25	5	55/125	5	125	5	125
6	80/180	6	80/180	6	180	6	180
9	180/400	9	180/400	9	400	9	405
12	320/720	12	320/720	12	720	12	720
18	720/1600	18	720/1600	18	1600	18	1620
24	1280/2800	24	1280/2800	24	2800	24	2880
48	5120/-	48	5120/-			48	11520
$\leq 75\% / \geq 5\%$		std.: $\leq 70\% / \geq 5\%$ sens.: $\leq 75\% / \geq 5\%$		$\leq 75\% / \geq 5\%$		$\leq 75\% / \geq 10\%$	
-40...+85°C		-40...+85°C		-40...+105°C		-40...+85°C	
5000 VAC		4000 VAC		5000 VAC		4000 VAC	
PCB		PCB		PCB		PCB	
8 / 4 ms		8 / 4 ms		8 / 4 ms		6 / 4 ms	
VDE, UL, CUR		VDE, UL, CUR		VDE, UL, CUR		VDE, UL, CUR	
-		-		-		-	



Version 1



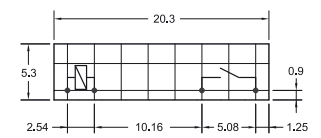
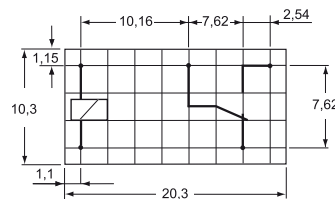
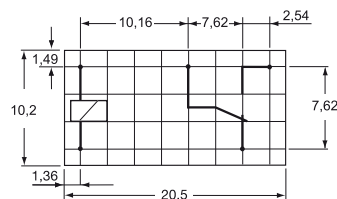
Version 2



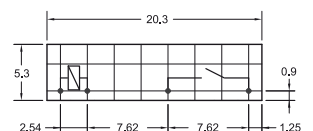
Relay Type	AZ 940	AZ 9405	AZ 921																																																
Features	<ul style="list-style-type: none"> Contact rating: 5 A / 250 VAC Small size Coil power at pickup 115...265 mW Dielectric strength 4000 VAC 	<ul style="list-style-type: none"> Contact rating: 5 A / 277 VAC Small size Coil power at pickup 113...196 mW Clearance / creepage 1A: $\geq 4 / 6$ mm Clearance / creepage 1C: $\geq 3 / 5$ mm Dielectric strength 4000 VAC 	<ul style="list-style-type: none"> Contact rating: 5 A / 250 VAC Extremely slim size: 5 mm Coil power at pickup 60...90 mW Clearance / creepage ≥ 3 mm Dielectric strength 3000 VAC Epoxy sealed version 																																																
Size L x W x H	20,5 x 10,2 x 15,7 mm	20,3 x 10,3 x 15,5 mm	20,3 x 5,3 x 12,8 mm																																																
Other Versions	Epoxy sealed version	Epoxy sealed version	2 pin configurations Horizontal version available																																																
Contact Forms A = N.O. B = N.C. C = C.O.	1A / 1C	1A / 1C	1A																																																
Contact Material	AgCdO, AgNi, AgNi+Au or AgSnO ₂	AgSnO ₂	AgNi, AgNi+Au or AgSnO ₂																																																
Contact Ratings (at resistive load)	max. 10 A max. 400 VAC max. 150 VDC max. 2770 VA max. 150 W	10 A 277 VAC 30 VDC 1400 VA 150 W	5 A 250 VAC 150 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 ⁷	1 x 10 ⁷	2 x 10 ⁷																																																
Standard Types (nominal coil voltage coil resistance)	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω std./sens.</th> </tr> </thead> <tbody> <tr><td>3</td><td>20/45</td></tr> <tr><td>5</td><td>55/125</td></tr> <tr><td>6</td><td>80/180</td></tr> <tr><td>9</td><td>180/400</td></tr> <tr><td>12</td><td>320/720</td></tr> <tr><td>18</td><td>720/1600</td></tr> <tr><td>24</td><td>1280/2800</td></tr> </tbody> </table>	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	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω std./sens.</th> </tr> </thead> <tbody> <tr><td>3</td><td>22,5/45</td></tr> <tr><td>5</td><td>63/125</td></tr> <tr><td>6</td><td>90/180</td></tr> <tr><td>9</td><td>202,5/400</td></tr> <tr><td>12</td><td>360/720</td></tr> <tr><td>18</td><td>810/1620</td></tr> <tr><td>24</td><td>1440/2800</td></tr> <tr><td>48</td><td>5760/-</td></tr> </tbody> </table>	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/-	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> </tr> </thead> <tbody> <tr><td>5</td><td>208</td></tr> <tr><td>6</td><td>300</td></tr> <tr><td>9</td><td>675</td></tr> <tr><td>12</td><td>1200</td></tr> <tr><td>18</td><td>2700</td></tr> <tr><td>24</td><td>3200</td></tr> </tbody> </table>	VDC	Ω	5	208	6	300	9	675	12	1200	18	2700	24	3200
VDC	Ω std./sens.																																																		
3	20/45																																																		
5	55/125																																																		
6	80/180																																																		
9	180/400																																																		
12	320/720																																																		
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VDC	Ω std./sens.																																																		
3	22,5/45																																																		
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12	1200																																																		
18	2700																																																		
24	3200																																																		
Pickup / Dropout (% of V _{nom})	$\leq 75\% / \geq 5\%$	std.: $\leq 70\% / \geq 10\%$ sens.: $\leq 75\% / \geq 10\%$	$\leq 70\% / \geq 10\%$																																																
Ambient Temperature	std.: -40...+70°C sens.: -40...+85°C	-40...+85°C	-40...+85°C																																																
Dielectric Strength (coil to contacts)	4000 VAC	4000 VAC	3000 VAC																																																
Termination	PCB	PCB	PCB																																																
Operate / Release Time (typ. at V _{nom})	8 / 5 ms	std.: 10 / 5 ms sens.: 15 / 5 ms	6 / 3 ms																																																
Approvals	VDE, UL, CUR	TÜV, UL, CUR	TÜV, UL, CUR																																																
Accessories	-	-	-																																																

Layout
(viewed toward terminals)

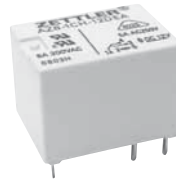
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(grid: 2.54 mm)



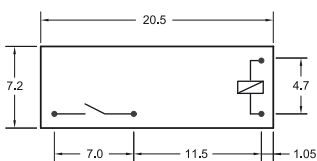
AZ 921



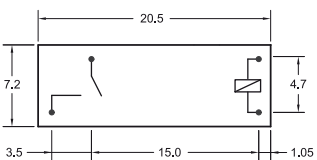
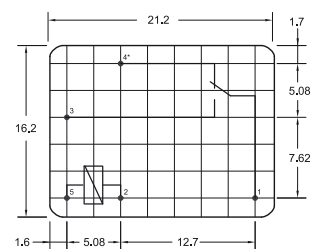
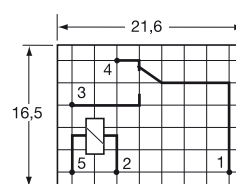
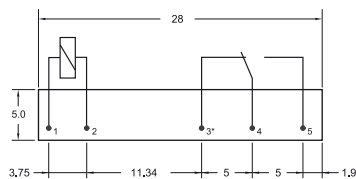
AZ 921 "K"-Version



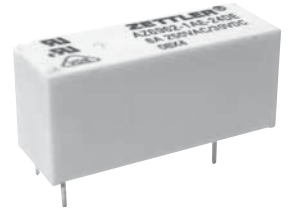
AZ 9371		AZ 6991		AZ 8		AZ 8P	
<ul style="list-style-type: none"> Contact rating: 5 A / 250 VAC Extremely slim size: 7 mm Coil power at pickup 115 mW Clearance / creepage $\geq 5,5$ mm Dielectric strength 4000 VAC 10 A \rightarrow AZ 9371T 		<ul style="list-style-type: none"> Contact rating: 8 A / 277 VAC Extremely slim size: 5 mm Coil power at pickup 95...125 mW Clearance / creepage $\geq 6 / 8$ mm Dielectric strength 4000 VAC Reinforced insulation VDE 0631 / 0700 		<ul style="list-style-type: none"> Contact rating: 6 A / 250 VAC Small size Coil power at pickup 135...220 mW Dielectric strength 2000 VAC Flux proof 		<ul style="list-style-type: none"> Contact rating: 10 A / 250 VAC Small size Single coil latching Coil power at pickup 700 mW Dielectric strength 4000 VAC Epoxy sealed 	
20,5 x 7,2 x 15,3 mm		28,0 x 5,0 x 15,0 mm		21,6 x 16,5 x 15,0 mm		21,2 x 16,2 x 14,7 mm	
Epoxy sealed version 2 pin configurations		Epoxy sealed version Horizontal version available		Epoxy sealed version		-	
1A		1A / 1C		1A / 1C		1A / 1C	
AgNi, AgNi+Au or AgSnO ₂		AgNi, AgNi+Au or AgSnO ₂		AgNi		AgNi or AgSnO ₂	
10 A 277 VAC 30 VDC 2770 VA 300 W		8 A 400 VAC 125 VDC 2216 VA 180 W		6 A 250 VAC 125 VDC 1500 VA 180 W		10 A (N.O.), 7 A (N.C.) 300 VAC 220 VDC 2500 VA 240 W	
1 x 10 ⁵ 5 x 10 ⁴		1 x 10 ⁵ 1 x 10 ⁷		1 x 10 ⁵ 1 x 10 ⁸		1 x 10 ⁵ 2 x 10 ⁷	
VDC	Ω	VDC	Ω	VDC	Ω std./sens.	VDC	Ω
3	45	5	147	5	56/80	3	8
5	125	12	848	6	80/110	5	22
6	180	24	3390	12	320/440	6	33
9	405	48	10600	24	1280/1780	9	74
12	720	60	16600	48	3800/-	12	119
18	1620					24	475
24	2880					48	1750
						60	2750
$\leq 75\% / \geq 5\%$		$\leq 75\% / \geq 5\%$		$\leq 66\% / \geq 10\%$		$\leq 75\% / \geq 25\%$	
-40...+105°C		-40...+85°C		-40...+70°C		-40...+70°C	
4000 VAC		4000 VAC		2000 VAC		4000 VAC	
PCB		PCB		PCB		PCB	
6 / 3 ms		5 / 3 ms		5 / 2 ms		5 / 6 ms	
VDE, UL, CUR		VDE, UL, CUR		VDE, UL, CUR		UL, CUR	
-		-		-		-	



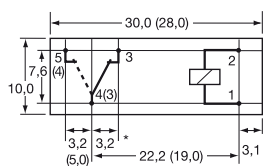
AZ 9371



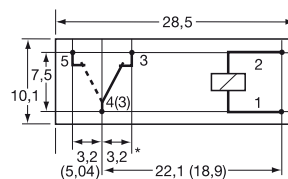
AZ 9371 "K"-Version



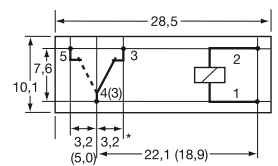
Relay Type	AZ 696	AZ 6960	AZ 6962																																																				
Features	<ul style="list-style-type: none"> • Contact rating: 10 A / 250 VAC • Low profile: 16,2 mm • Coil power at pickup 105...140 mW • Clearance / creepage ≥ 8 mm • Dielectric strength 4000 VAC • Reinforced insulation VDE 0631 / 0700 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Contact rating: 10 A / 250 VAC • Low profile: 12,5 mm • Coil power at pickup 110...140 mW • Clearance / creepage ≥ 10 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700 																																																				
Size L x W x H	30,0 (28,0) x 10,0 x 16,2 mm	28,5 x 10,1 x 12,5 mm	28,5 x 10,1 x 12,5 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 / 1B / 1C	1A / 1B / 1C																																																				
Contact Material	AgSnO ₂	AgNi, AgNi+AU, AgSnO ₂ , AgSnO ₂ +AU	AgNi, AgNi+AU or AgSnO ₂																																																				
Contact Ratings (at resistive load)	max. 10 A max. 440 VAC max. 240 VDC max. 2500 VA max. 240 W	10 A 400 VAC 300 VDC 2770 VA 192 W	10 A 440 VAC 240 VDC 2500 VA 300 W																																																				
Electrical Life Expectancy (at rated load)	1 x 10 ⁵	4 x 10 ⁴	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)	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> </tr> </thead> <tbody> <tr><td>5</td><td>110</td></tr> <tr><td>6</td><td>160</td></tr> <tr><td>9</td><td>360</td></tr> <tr><td>12</td><td>660</td></tr> <tr><td>18</td><td>1500</td></tr> <tr><td>24</td><td>2200</td></tr> <tr><td>48</td><td>8000</td></tr> </tbody> </table>	VDC	Ω	5	110	6	160	9	360	12	660	18	1500	24	2200	48	8000	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> </tr> </thead> <tbody> <tr><td>5</td><td>102</td></tr> <tr><td>6</td><td>144</td></tr> <tr><td>9</td><td>330</td></tr> <tr><td>12</td><td>580</td></tr> <tr><td>18</td><td>1300</td></tr> <tr><td>24</td><td>2300</td></tr> <tr><td>48</td><td>9340</td></tr> <tr><td>60</td><td>14000</td></tr> </tbody> </table>	VDC	Ω	5	102	6	144	9	330	12	580	18	1300	24	2300	48	9340	60	14000	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> </tr> </thead> <tbody> <tr><td>5</td><td>113</td></tr> <tr><td>6</td><td>164</td></tr> <tr><td>9</td><td>360</td></tr> <tr><td>12</td><td>620</td></tr> <tr><td>18</td><td>1295</td></tr> <tr><td>24</td><td>2350</td></tr> <tr><td>48</td><td>8000</td></tr> <tr><td>60</td><td>12500</td></tr> </tbody> </table>	VDC	Ω	5	113	6	164	9	360	12	620	18	1295	24	2350	48	8000	60	12500
VDC	Ω																																																						
5	110																																																						
6	160																																																						
9	360																																																						
12	660																																																						
18	1500																																																						
24	2200																																																						
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Pickup / Dropout (% of V _{nom})	$\leq 70\%$ / $\geq 10\%$	$\leq 70\%$ / $\geq 10\%$	$\leq 70\%$ / $\geq 10\%$																																																				
Ambient Temperature	-40...+85°C	-40...+85°C	-40...+85°C																																																				
Dielectric Strength (coil to contacts)	4000 VAC	5000 VAC	5000 VAC																																																				
Termination	PCB	PCB	PCB																																																				
Operate / Release Time (typ. at V _{nom})	10 / 5 ms	10 / 5 ms	7 / 3 ms																																																				
Approvals	VDE, UL, CUR	-	VDE, UL, CUR																																																				
Accessories	-	-	-																																																				



* not used on Form A and Form B



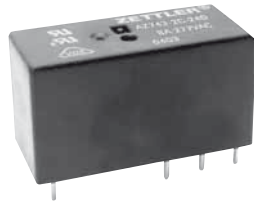
* not used on Form A and Form B



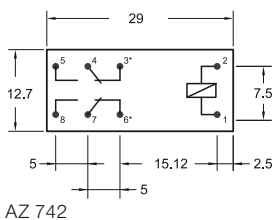
* not used on Form A and Form B

Layout
(viewed toward terminals)

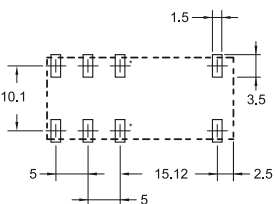
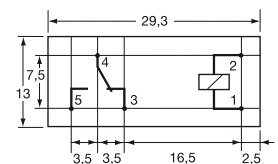
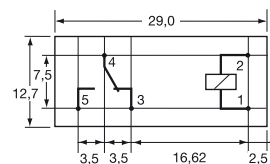
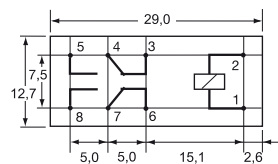
(dimensions in mm)
(grid: 2.54 mm)



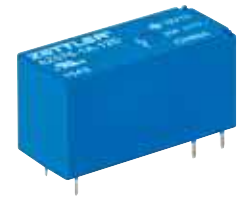
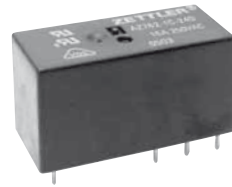
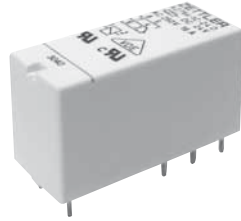
AZ 742 / 742S THT SMT				AZ 743				AZ 763				AZ 761	
<ul style="list-style-type: none"> Contact rating: 2 x 10 A / 250 VAC Low profile: 15,7 mm Coil power at pickup 200...235 mW Clearance / creepage \geq 10 mm Dielectric strength 5000 VAC Reinforced insulation VDE 0631 / 0700 AC and DC coils 				<ul style="list-style-type: none"> Contact rating: 2 x 10 A / 250 VAC Low profile: 15,7 mm Coil power at pickup 200...235 mW Clearance / creepage \geq 10 mm Dielectric strength 5000 VAC Reinforced insulation VDE 0631 / 0700 AC and DC coils 				<ul style="list-style-type: none"> Contact rating: 12 A / 250 VAC Low profile: 15,7 mm Coil power at pickup 200...235 mW Clearance / creepage \geq 10 mm Dielectric strength 5000 VAC Reinforced insulation VDE 0631 / 0700 AC and DC coils 				<ul style="list-style-type: none"> Contact rating: 12 A / 250 VAC Low profile: 16,0 mm Coil power at pickup 140...235 mW Clearance / creepage \geq 10 mm Dielectric strength 5000 VAC Reinforced insulation VDE 0631 / 0700 AC and DC coils 	
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				29,3 x 13,0 x 16,0 mm	
Epoxy sealed version				Epoxy sealed version				Epoxy sealed version other Layouts AZ 763L, AZ763R				Epoxy sealed version Sensitive coil version	
2A / 2C				2A / 2C				1A / 1C				1A / 1B / 1C	
AgNi, AgNi+AU or AgSnO ₂				AgCdO, AgNi, AgNi+AU or AgSnO ₂				AgNi, AgNi+AU or AgSnO ₂				AgCdO, AgNi, AgNi+AU or AgSnO ₂	
10 A 400 VAC 300 VDC 2500 VA 240 W				10 A 440 VAC 125 VDC 2500 VA 240 W				12 A 400 VAC 300 VDC 3000 VA 360 W				12 A 440 VAC 125 VDC 3324 VA 360 W	
1 x 10 ⁵ 3 x 10 ⁷				1 x 10 ⁵ 1 x 10 ⁷				1 x 10 ⁵ 3 x 10 ⁷				1 x 10 ⁵ 1 x 10 ⁷	
VDC	Ω	VAC	Ω /mA	VDC	Ω	VAC	Ω /mA	VDC	Ω	VAC	Ω /mA	VDC	Ω std./sens.
5	60	12	100/63,0	5	60	24	350/31,6	5	60	12	100/63,0	5	60/100
6	90	24	400/31,3	6	90	115	8100/6,6	6	90	24	400/31,3	6	90/144
9	200	48	1150/15,6	9	200	230	32500/3,2	9	200	48	1150/15,6	9	200/576
12	360	60	2600/12,5	12	360			12	360	60	2600/12,5	12	360/1296
24	1440	110	8900/6,8	24	1440			24	1440	110	8900/6,8	24	1440/2304
48	5700	120	10200/6,3	48	5700			48	5700	120	10200/6,3	48	5760/9216
60	7500	230	38500/3,3	60	7500			60	7500	230	38500/3,3	60	7500/1286
110	25200	240	42500/3,1	110	25200			110	25200	240	42500/3,1	110	25200/-
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%				std.: \leq 70% / \geq 10% sens.: \leq 75% / \geq 10%	
DC: -40...+85°C AC: -40...+70°C				DC: -40...+85°C AC: -40...+70°C				DC: -40...+85°C AC: -40...+70°C				std.: -40...+85°C sens.: -40...+105°C	
5000 VAC				5000 VAC				5000 VAC				5000 VAC	
PCB				PCB				PCB				PCB	
DC: 7 / 3 ms AC: 8 / 7 ms				DC: 7 / 4 ms AC: 10 / 4 ms				DC: 7 / 3 ms AC: 8 / 7 ms				7 / 3 ms	
VDE, UL, CUR				VDE, UL, CUR				VDE, UL, CUR				VDE, UL, CUR	
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				PCB-Socket: EC35 + MP16-2 / MH16-2 DIN rail: GZT92 + GZT80-0040	



AZ 742



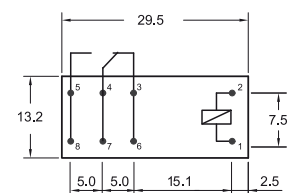
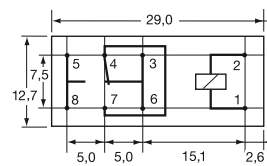
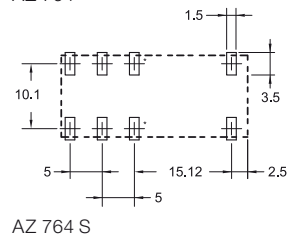
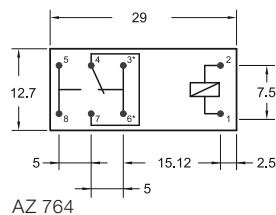
AZ 742S



Relay Type	AZ 764 / 764S THT SMT	AZ 762	AZ 576																																																																																										
Features	<ul style="list-style-type: none"> Contact rating: 16 A / 250 VAC Low profile: 15,7 mm Coil power at pickup 200...235 mW Clearance / creepage ≥ 10 mm Dielectric strength 5000 VAC Reinforced insulation VDE 0631 / 0700 AC and DC coils 	<ul style="list-style-type: none"> Contact rating: 16 A / 250 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 AC and DC coils 	<ul style="list-style-type: none"> Contact rating: 20 A / 277 VAC Low profile: 16,2 mm Coil power at pickup 196...226 mW Dielectric strength 5000 VAC High temperature 105°C 																																																																																										
Size L x W x H	29,0 x 12,7 x 15,7 mm	29,0 x 12,7 x 15,7 mm	29,5 x 13,2 x 16,2 mm																																																																																										
Other Versions	Epoxy sealed version High inrush version 80 A (1 Form A only)	Epoxy sealed version High inrush version 80 A (1 Form A only)	Epoxy sealed version																																																																																										
Contact Forms A = N.O. B = N.C. C = C.O.	1A / 1C	1A / 1C	1A / 1C																																																																																										
Contact Material	AgNi or AgSnO ₂	AgCdO, AgNi, AgNi+AU or AgSnO ₂	AgSnO ₂																																																																																										
Contact Ratings (at resistive load)	max. 20 A max. 400 VAC max. 300 VDC max. 5000 VA max. 480 W	16 A 440 VAC 125 VDC 5540 VA 480 W	20 A 480 VAC 30 VDC 5540 VAC 510 W																																																																																										
Electrical Life Expectancy (at rated load)	7 x 10 ⁴	1 x 10 ⁵	1 x 10 ⁵																																																																																										
Mechanical Life Expectancy	3 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷																																																																																										
Standard Types (nominal coil voltage coil resistance)	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> <th>VAC</th> <th>Ω/mA</th> </tr> </thead> <tbody> <tr><td>5</td><td>60</td><td>12</td><td>100/63,0</td></tr> <tr><td>6</td><td>90</td><td>24</td><td>400/31,3</td></tr> <tr><td>9</td><td>200</td><td>48</td><td>1150/15,6</td></tr> <tr><td>12</td><td>360</td><td>60</td><td>2600/12,5</td></tr> <tr><td>24</td><td>1440</td><td>110</td><td>8900/6,8</td></tr> <tr><td>48</td><td>5700</td><td>120</td><td>10200/6,3</td></tr> <tr><td>60</td><td>7500</td><td>230</td><td>38500/3,3</td></tr> <tr><td>110</td><td>25200</td><td>240</td><td>42500/3,1</td></tr> </tbody> </table>	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	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> <th>VAC</th> <th>Ω/mA</th> </tr> </thead> <tbody> <tr><td>5</td><td>62</td><td>24</td><td>350/31,6</td></tr> <tr><td>6</td><td>90</td><td>115</td><td>8100/6,6</td></tr> <tr><td>9</td><td>200</td><td>230</td><td>32500/3,2</td></tr> <tr><td>12</td><td>360</td><td></td><td></td></tr> <tr><td>24</td><td>1440</td><td></td><td></td></tr> <tr><td>48</td><td>5760</td><td></td><td></td></tr> <tr><td>60</td><td>7500</td><td></td><td></td></tr> <tr><td>110</td><td>25200</td><td></td><td></td></tr> </tbody> </table>	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			<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> </tr> </thead> <tbody> <tr><td>5</td><td>62,5</td></tr> <tr><td>6</td><td>90</td></tr> <tr><td>9</td><td>202,5</td></tr> <tr><td>12</td><td>360</td></tr> <tr><td>24</td><td>1440</td></tr> <tr><td>48</td><td>5760</td></tr> <tr><td>60</td><td>9000</td></tr> <tr><td>110</td><td>30250</td></tr> </tbody> </table>	VDC	Ω	5	62,5	6	90	9	202,5	12	360	24	1440	48	5760	60	9000	110	30250
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Pickup / Dropout (% of V _{nom})	DC: $\leq 70\%$ / $\geq 10\%$ AC: $\leq 75\%$ / $\geq 15\%$	$\leq 70\%$ / $\geq 10\%$	$\leq 75\%$ / $\geq 10\%$																																																																																										
Ambient Temperature	DC: -40...+85°C AC: -40...+70°C	DC: -40...+85°C AC: -40...+70°C	-40...+105°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	7 / 3 ms	8 / 4 ms																																																																																										
Approvals	VDE, UL, CUR	VDE, UL, CUR	TÜV, 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: EC50 + MP16-2 / MH16-2 DIN rail: GZT80 + GZT80-0040																																																																																										

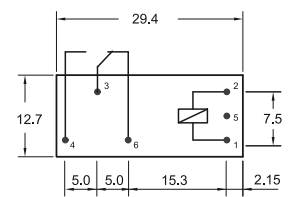
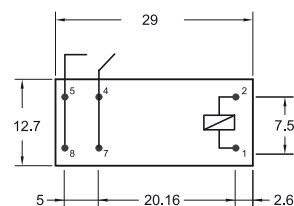
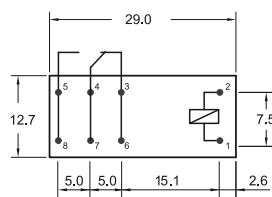
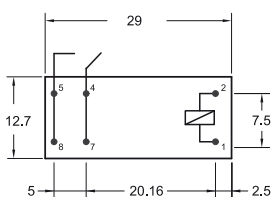
Layout
(viewed toward terminals)

(dimensions in mm)
(grid: 2.54 mm)



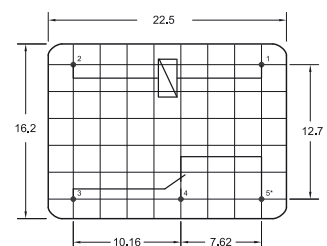
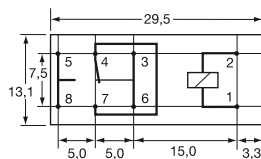


AZ 764H		AZ 762H		AZ 762T		AZ 762P	
<ul style="list-style-type: none"> • Contact rating: 16 A / 250 VAC • Low profile: 15,7 mm • Coil power at pickup 140 mW • Clearance / creepage ≥ 10 mm • Dielectric strength 5000 VAC • Reinforced insulation VDE 0631 / 0700 • High temperature 105°C • Flux proof 		<ul style="list-style-type: none"> • 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 		<ul style="list-style-type: none"> • 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 		<ul style="list-style-type: none"> • 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 mW • Dielectric strength 4000 VAC 	
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		29,4 x 12,7 x 15,7 mm	
-		Epoxy sealed version Sensitive coil version		Epoxy sealed version		Epoxy sealed version High inrush version 165 A (1 Form A only)	
1A / 1C		1A / 1C		1A		1A / 1C	
AgNi or AgSnO ₂		AgCdO or AgNi		AgSnO ₂ + W		AgSnO ₂ or AgSnO ₂ + W	
16 A 400 VAC 300 VDC 4000 VA 480 W		16 A 440 VAC 125 VDC 4000 VA 480 W		16 A 440 VAC 125 VDC 4000 VA 480 W		20 A 350 VAC 125 VDC 5000 VA 600 W	
1 x 10 ⁵ 3 x 10 ⁷		1 x 10 ⁵ 1 x 10 ⁷		1 x 10 ⁵ 5 x 10 ⁶		1 x 10 ⁵ 1 x 10 ⁶	
VDC	Ω	VDC	Ω std./sens.	VDC	Ω	VDC	Ω
5	102	5	62/100	5	62	3	22,5
6	144	6	90/145	6	90	5	62,5
9	330	9	200/325	9	202	6	90
10	400	12	360/580	12	360	9	202
12	580	18	810/1300	24	1440	12	360
18	1300	24	1440/2300	48	5760	24	1440
24	2300	48	5760/9220	60	7500		
48	9340	60	7500/12860	110	25200		
$\leq 75\% / \geq 10\%$		$\leq 75\% / \geq 10\%$		$\leq 70\% / \geq 10\%$		$\leq 80\% / \geq 80\%$	
-40...+105°C		-40...+105°C		-40...+85°C		-40...+85°C	
5000 VAC		5000 VAC		5000 VAC		4000 VAC	
PCB		PCB		PCB		PCB	
7 / 3 ms		7 / 3 ms		6 / 3 ms		10 / 10 ms	
VDE, UL, CUR		VDE, UL, CUR		VDE, UL, CUR		UL, CUR	
-		-		-		-	





Relay Type	AZ 725	AZ 9481																																
Features	<ul style="list-style-type: none"> • Contact rating: 20 A / 250 VAC • Coil power at pickup 250...290 mW • Clearance / creepage \geq 8 mm • Dielectric strength 5000 VAC • Flux proof • Reinforced insulation VDE 0631 / 0700 	<ul style="list-style-type: none"> • Contact rating: 16 A / 250 VAC • Low profile: 11,4 mm • Coil power at pickup 130...260 mW • Dielectric strength 2500 VAC 																																
Size L x W x H	29,5 x 13,1 x 25,6 mm	22,5 x 16,2 x 11,4 mm																																
Other Versions	High inrush version 120 A (1 Form A only)	Epoxy sealed version																																
Contact Forms A = N.O. B = N.C. C = C.O.	1A / 1B / 1C	1A / 1C																																
Contact Material	AgSnO ₂	AgCdO, AgNi, AgNi+Au or AgSnO ₂																																
Contact Ratings (at resistive load)	max. 20 A max. 400 VAC max. 300 VDC max. 5000 VA max. 480 W	16 A 250 VAC 30 VDC 4000 VA 300 W																																
Electrical Life Expectancy (at rated load)	1 x 10 ⁵	1 x 10 ⁵																																
Mechanical Life Expectancy	3 x 10 ⁷	1 x 10 ⁷																																
Standard Types (nominal coil voltage coil resistance)	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> </tr> </thead> <tbody> <tr><td>5</td><td>49</td></tr> <tr><td>6</td><td>68</td></tr> <tr><td>12</td><td>260</td></tr> <tr><td>24</td><td>1100</td></tr> <tr><td>48</td><td>4400</td></tr> <tr><td>60</td><td>7000</td></tr> <tr><td>110</td><td>20500</td></tr> </tbody> </table>	VDC	Ω	5	49	6	68	12	260	24	1100	48	4400	60	7000	110	20500	<table border="1"> <thead> <tr> <th>VDC</th> <th>Ω</th> </tr> </thead> <tbody> <tr><td>5</td><td>62,5</td></tr> <tr><td>6</td><td>90</td></tr> <tr><td>9</td><td>202,5</td></tr> <tr><td>12</td><td>360</td></tr> <tr><td>18</td><td>810</td></tr> <tr><td>24</td><td>1440</td></tr> <tr><td>48</td><td>5760</td></tr> </tbody> </table>	VDC	Ω	5	62,5	6	90	9	202,5	12	360	18	810	24	1440	48	5760
VDC	Ω																																	
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48	5760																																	
Pickup / Dropout (% of V _{nom})	\leq 70% / \geq 10%	\leq 80% / \geq 10%																																
Ambient Temperature	-40...+70°C	1A: -40...+85°C 1C: -40...+70°C																																
Dielectric Strength (coil to contacts)	5000 VAC	2500 VAC																																
Termination	PCB	PCB																																
Operate / Release Time (typ. at V _{nom})	7 / 3 ms	10 / 5 ms																																
Approvals	UL, CUR	TÜV, UL, CUR																																
Accessories	PCB-Socket: EC50 + MP25-2 / MH25-2 DIN rail: ES50 + MS25	-																																



Layout
(viewed toward terminals)

(dimensions in mm)
(grid: 2.54 mm)



AZ 943

- Contact rating: 15 A / 300 VAC
- Small size
- Coil power at pickup 200...205 mW
- Dielectric strength 1500 VAC

19,0 x 15,3 x 15,7 mm

Epoxy sealed version

1A / 1C

AgSnO₂

15 A
300 VAC
30 VDC
2770 VA
300 W

1 x 10⁵

1 x 10⁶

VDC	Ω
5	70
6	100
9	225
12	400
18	900
24	1600
36	3600
48	6400

≤ 75% / ≥ 10%

-40...+85°C

1500 VAC

PCB

10 / 5 ms

TÜV, UL, CUR

-

AZ 942H

- Contact rating: 16 A / 250 VAC
- Small size
- Coil power at pickup 230...240 mW
- Clearance / creepage ≥ 2,5 mm
- Dielectric strength 3000 VAC

22,0 x 16,3 x 16,5 mm

Epoxy sealed version

1A / 1C

AgSnO₂

16 A
300 VAC
150 VDC
4000 VA
280 W

1 x 10⁵

1 x 10⁷

VDC	Ω
3	25
5	70
6	100
9	225
12	400
18	900
24	1600
48	6200

≤ 80% / ≥ 10%

-40...+85°C

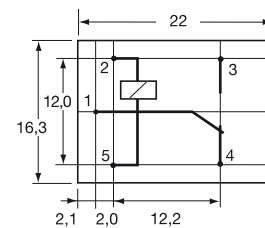
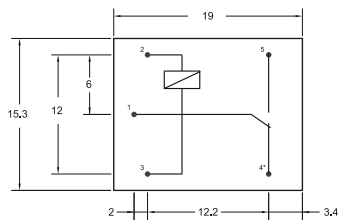
3000 VAC

PCB

10 / 5 ms

VDE, UL, CUR

-

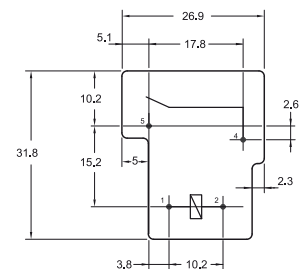
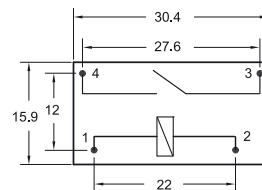
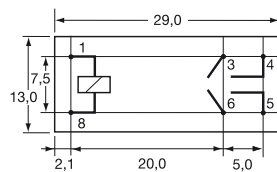




Relay Type	AZ 733W	AZ SR126	AZ 2150W
Features	<ul style="list-style-type: none"> Contact rating: 2 x 12 A / 250 VAC Contact gap 2 x 1,5 mm Coil power at pickup 405...470 mW Clearance / creepage ≥ 8 mm Dielectric strength 5000 VAC 	<ul style="list-style-type: none"> Contact rating: 26 A / 277 VAC Contact gap > 1,8 mm Coil power at holding 170...180 mW Clearance / creepage ≥ 6,4 / 7,5 mm Dielectric strength 4500 VAC Flux proof 	<ul style="list-style-type: none"> Contact rating: 30 A / 277 VAC Contact gap > 1,75 mm Coil power at holding 277 mW Clearance / creepage ≥ 3 mm Dielectric strength 4000 VAC
Size L x W x H	29,0 x 13,0 x 25,9 mm	30,4 x 15,9 x 23,3 mm	31,8 x 26,9 x 19,1 mm
Other Versions	Epoxy sealed version	-	Epoxy sealed version
Contact Forms A = N.O. B = N.C. C = C.O.	2A	1A	1A
Contact Material	AgCdO, AgNi or AgSnO ₂	AgSnO ₂	AgSnO ₂
Contact Ratings (at resistive load)	max. 12 A max. 400 VAC max. 250 VDC max. 3324 VA max. 300 W	31 A 277 VAC 8587 VA	30 A 440 VAC 250 VDC 8310 VA 900 W
Electrical Life Expectancy (at rated load)	1 x 10 ⁵	5 x 10 ⁴	3 x 10 ⁴
Mechanical Life Expectancy	5 x 10 ⁵	2 x 10 ⁵	2 x 10 ⁵
Standard Types (nominal coil voltage coil resistance)	VDC Ω 5 31 6 45 12 180 24 720 48 2880 60 4500 110 16800	VDC Ω 9 58 12 103 18 230 24 410	VDC Ω 5 22,5 6 32,5 9 73 12 130 24 520 48 2080
Pickup / Dropout (% of V _{nom})	≤ 75% / ≥ 10%	≤ 70% / ≥ 10%	≤ 75% / ≥ 10%
Ambient Temperature	-40...+70°C	-40...+85°C	-40...+85°C
Dielectric Strength (coil to contacts)	5000 VAC	4500 VAC	4000 VAC
Termination	PCB	PCB	PCB
Operate / Release Time (typ. at V _{nom})	10 / 4 ms	20 / 10 ms	15 / 10 ms
Approvals	TÜV, UL, CUR	VDE, UL, CUR	VDE, UL, CUR
Accessories	-	-	-

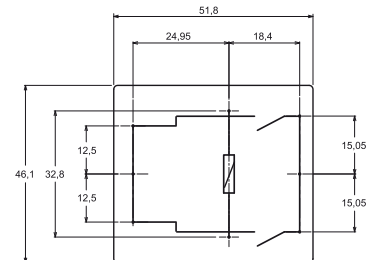
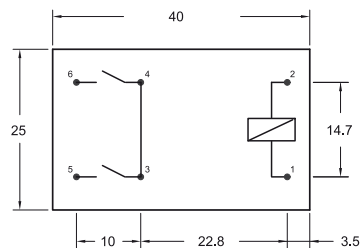
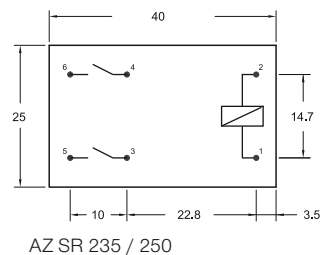
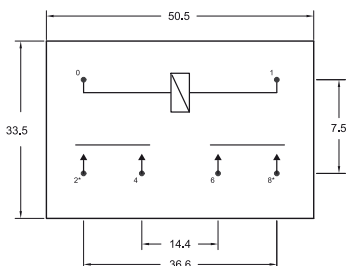
Layout
(viewed toward terminals)

(dimensions in mm)
(grid: 2.54 mm)





AZ 2704		AZ SR235 / 250		AZ SR180		AZ SR1120	
<ul style="list-style-type: none"> Contact rating: 2 x 30 A / 250 VAC Contact gap 2 x 2,4 mm Coil power at holding 330 mW Clearance / creepage $\geq 3,5 / 5,0$ mm Dielectric strength 4000 VAC Flux proof 		<ul style="list-style-type: none"> Contact rating: 2 x 50 A / 250 VAC Contact gap: AZ SR235 \rightarrow 2 x 2,05 mm Contact gap: AZ SR250 \rightarrow 2 x 1,85 mm Coil power at holding 100 mW Clearance / creepage ≥ 10 mm Dielectric strength 5000 VAC Flux proof 		<ul style="list-style-type: none"> Contact rating: 80 A / 277 VAC Contact gap: 2,05 mm Coil power at holding 100 mW Clearance / creepage ≥ 10 mm Dielectric strength 5000 VAC Reinforced insulation VDE 0700 Double insulation VDE 0631 Flux proof 		<ul style="list-style-type: none"> Contact rating: 120 A / 277 VAC Contact gap: 2,3 mm Coil power at holding 200 mW Dielectric strength 5000 VAC Flux proof 	
50,5 x 33,5 x 36,0 mm		40,0 x 25,0 x 49,2 mm		40,0 x 25,0 x 49,2 mm		51,8 x 46,1 x 39,8 mm	
Wide contact gap 2 x 3,0 mm AC coils on request		AZ SR235 / AZ SR250: 2 x 35 A / 50 A AZ SR250 1-pole version available		-		-	
1A / 2A		1A / 2A		1A		1A	
AgCdO or AgSnO ₂		AgSnO ₂		AgSnO ₂		AgSnO ₂	
30 A 400 VAC 150 VDC 8310 VA 840 W		50 A 440 VAC 150 VDC 13850 VA 1500 W		80 A 440 VAC 150 VDC 22160 VA 2400 W		120 A 440 VAC 150 VDC 33240 VA 3600 W	
1 x 10 ⁵ 1 x 10 ⁶		5 x 10 ⁴ 2 x 10 ⁶		1 x 10 ⁵ 3 x 10 ⁴		1 x 10 ⁵ 3 x 10 ⁴	
VDC	Ω	VDC	Ω	VDC	Ω	VDC	Ω
3	5	5	50	12	300	12	75
6	19	9	170	24	1200		
12	75	12	300				
24	300	18	675				
		24	1200				
$\leq 75\% / \geq 5\%$		$\leq 75\% / \geq 5\%$		$\leq 75\% / \geq 5\%$		$\leq 75\% / \geq 5\%$	
-40...+85°C		-40...+85°C		-40...+85°C		-40...+85°C	
4000 VAC		5000 VAC		5000 VAC		5000 VAC	
PCB		PCB		PCB		PCB	
30 / 30 ms		40 / 5 ms		40 / 5 ms		40 / 5 ms	
TÜV, UL, CUR		VDE, UL, CUR		VDE, UL, CUR		-	
-		-		-		-	

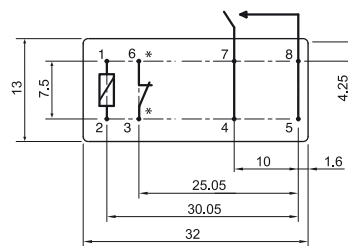




Relay Type	AZ SR116 / 132 / 140	
Features	<ul style="list-style-type: none"> • Contact rating: 40 A / 277 VAC • 1500 A short circuit current (carrying) • Contact gap: 2,25 mm • Coil power at holding 200 mW • Dielectric strength 4000 VAC • Flux proof 	
Size L x W x H	35,0 x 13,0 x 27,9 mm	
Other Versions	AZ SR116 / AZ SR132 / AZ SR140: 16 A / 32 A / 40 A Potential free N.C. signal contact	
Contact Forms A = N.O. B = N.C. C = C.O.	1A / 1A + 1B	
Contact Material	AgSnO ₂	
Contact Ratings (at resistive load)	max. max. max. max. max.	40 A 440 VAC 30 VDC 4432 VA 480 W
Electrical Life Expectancy (at rated load)	1 x 10 ⁵	
Mechanical Life Expectancy	3 x 10 ⁴	
Standard Types (nominal coil voltage coil resistance)	VDC 12 24	Ω 130 570
Pickup / Dropout (% of V _{nom})	≤ 75% / ≥ 5%	
Ambient Temperature	-40...+85°C	
Dielectric Strength (coil to contacts)	4000 VAC	
Termination	PCB	
Operate / Release Time (typ. at V _{nom})	30 / 10 ms	
Approvals	-	
Accessories	-	

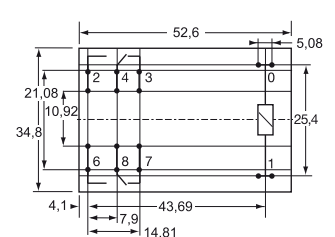
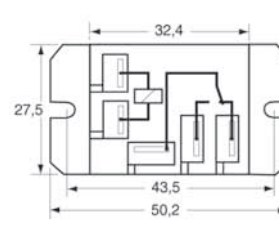
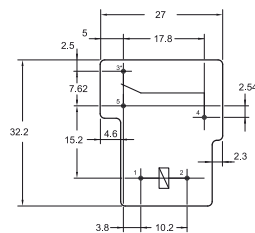
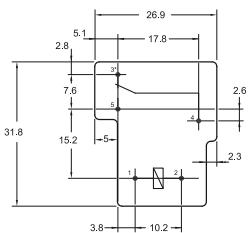
Layout
(viewed toward terminals)

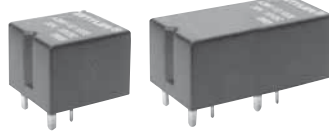
(dimensions in mm)
(grid: 2.54 mm)





AZ 2150		AZ 2250				AZ 2280				AZ 2850			
<ul style="list-style-type: none"> • Contact rating: 30 A / 277 VAC • Coil power at holding 470...520 mW • Dielectric strength 2500 VAC 		<ul style="list-style-type: none"> • Contact rating: 30 A / 277 VAC • Coil power at holding 470...520 mW / 1,4 VA • Dielectric strength 4000 VAC • AC and DC coils 				<ul style="list-style-type: none"> • Contact rating: 30 A / 277 VAC • Coil power at holding 470...520 mW / 1,4 VA • Dielectric strength 2500 VAC • AC and DC coils 				<ul style="list-style-type: none"> • Contact rating: 2 x 30 A / 277 VAC • Coil power at holding 470...520 mW / 2,6 VA • Dielectric strength 4000 VAC • AC and DC coils 			
31,8 x 26,9 x 19,1 mm		32,2 x 27,0 x 20,1 mm				50,2 x 27,5 x 27,8 mm				52,6 x 34,8 x 30,7 mm			
Epoxy sealed version		Epoxy sealed version				Epoxy sealed version				Epoxy sealed version Quick connect version AZ 2800			
1A / 1B / 1C		1A / 1B / 1C				1A / 1B / 1C				2A / 2C			
AgCdO		AgCdO or AgSnO ₂				AgCdO or AgSnO ₂				AgCdO or AgSnO ₂			
30 A (N.O.), 15 A (N.C.) 300 VAC 30 VDC 7200 VA 900 W		30 A (N.O.), 15 A (N.C.) 277 VAC 28 VDC 8310 VA 840 W				30 A (N.O.), 15 A (N.C.) 277 VAC 28 VDC 8310 VA 840 W				30 A (N.O.), 3 A (N.C.) 600 VAC 30 VDC 8310 VA 560 W			
1 x 10 ⁵ 1 x 10 ⁷		1 x 10 ⁵ 1 x 10 ⁷				1 x 10 ⁵ 1 x 10 ⁷				1 x 10 ⁵ 5 x 10 ⁷			
VDC	Ω	VDC	Ω	VAC	Ω/mA	VDC	Ω	VAC	Ω/mA	VDC	Ω	VAC	Ω/mA
5	27	5	27	12	25/192	5	27	12	25/192	6	22	12	8/340
6	40	6	40	24	100/87,5	6	40	24	100/87,5	12	86	24	45/166
9	97	9	97	120	2500/19,2	9	97	120	2500/19,2	24	350	120	1125/33,3
12	155	12	155	208	11000/10,6	12	155	208	11000/10,6	48	1390	220	3800/18,2
18	380	18	380	220	13490/10	18	380	220	13490/10	110	7255	240	4500/16,7
24	660	24	660	240	13490/10,8	24	660	240	13490/10,8			277	6000/14,4
48	2560	48	2560	277	15000/7,9	48	2560	277	15000/7,9				
110	13450	110	13450			110	13450						
≤ 75% / ≥ 10%		DC: ≤ 70% / ≥ 10% AC: ≤ 80% / ≥ 20%				DC: ≤ 70% / ≥ 10% AC: ≤ 80% / ≥ 20%				DC: ≤ 75% / ≥ 10% AC: ≤ 80% / ≥ 20%			
-40...+85°C		DC: -40...+85°C AC: -40...+70°C				DC: -40...+85°C AC: -40...+70°C				DC: -40...+85°C AC: -40...+65°C			
2500 VAC		4000 VAC				2500 VAC				4000 VAC			
PCB		PCB				PCB				PCB			
8 / 3,5 ms		15 / 10 ms				15 / 10 ms				15 / 10 ms			
VDE, UL, CUR		VDE, UL, CUR				VDE, UL, CUR				VDE, UL, CUR			
-		-				-				-			



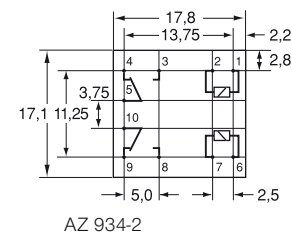
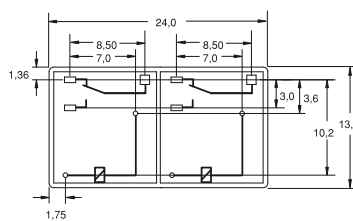
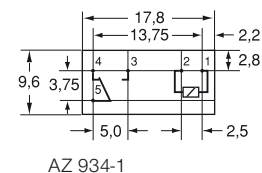
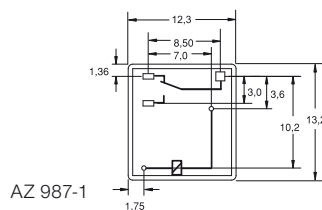
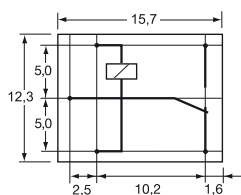


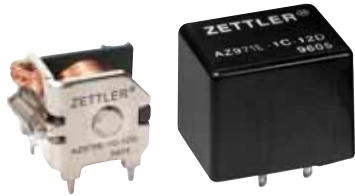
Relay Type	AZ 947	AZ 987-1 / 987-2 single relay double relay	AZ 934 / 935 standard version silent version
Features	<ul style="list-style-type: none"> Contact rating: 20 A Subminiature size Coil power at pickup 280 mW 	<ul style="list-style-type: none"> Contact rating: 30 A Coil power at pickup 185...190 mW Single or double relay Epoxy sealed 	<ul style="list-style-type: none"> Contact rating: 20 A Miniature size Coil power at pickup 280 mW Double relay, two relays in one case Epoxy sealed
Size L x W x H	15,7 x 12,3 x 14,0 mm	13,2 x 12,3 x 10,2 / 13,2 x 24,0 x 10,2 mm	17,8 x 17,1 x 13,5 / 23,0 x 22,5 x 21,0 mm
Other Versions	Epoxy sealed version	Single relay AZ 987-1 Double relay AZ 987-2	Single relay version AZ 934-1C Silent version AZ 935
Contact Forms A = N.O. B = N.C. C = C.O.	1A / 1C / 1U	1A / 1C / 2A / 2C	1C / 2C
Contact Material	AgSnO ₂	-	AgSnO ₂
Contact Ratings (at resistive load)	max. 20 A (N.O.) / 6 A (N.C.) max. 125 VAC max. 42 VDC max. 1250 VA max. 280 W	30 A 16 VDC 480 W	20 A 28 VDC 280 W
Electrical Life Expectancy (at rated load)	1 x 10 ⁵	3 x 10 ⁵	2 x 10 ⁵
Mechanical Life Expectancy	1 x 10 ⁷	1 x 10 ⁶	1 x 10 ⁷
Standard Types (nominal coil voltage coil resistance)	VDC Ω 6 60 9 135 12 240 24 960	VDC Ω 6 63 10 181 12 254	VDC Ω 12 255
Pickup / Dropout (% of V _{nom})	≤ 60% / ≥ 5%	≤ 57% / ≥ 12%	≤ 60% / ≥ 8%
Ambient Temperature	-40...+85°C	-40...+105°C	-40...+85°C
Dielectric Strength (coil to contacts)	500 VAC	500 VAC	500 VAC
Termination	PCB	PCB	PCB
Operate / Release Time (typ. at V _{nom})	10 / 5 ms	3 / 1,5 ms	3 / 1,5 ms
Approvals	-	-	-
Accessories	-	-	-

Layout

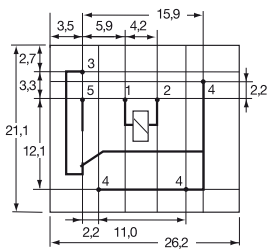
(viewed toward terminals)

(dimensions in mm)
(grid: 2.54 mm)

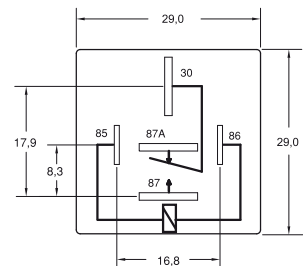
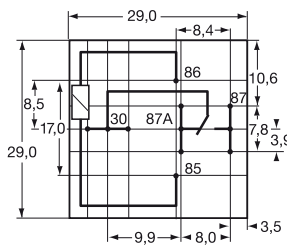




AZ 970E / 971E open version covered version		AZ 983	AZ 979 / 980 flange mounting plug in		
<ul style="list-style-type: none"> • Contact rating: 40 A • Coil power at pickup 560 mW • Open, covered or sealed • European footprint 		<ul style="list-style-type: none"> • Contact rating: 80 A • PCB version • Coil power at pickup 675...760 mW 	<ul style="list-style-type: none"> • Contact rating: 80 A • Quick connect or plug in version • Coil power at pickup 675...760 mW 		
23,0 x 18,8 x 18,4 / 26,2 x 21,1 x 21,4 mm		29,0 x 29,0 x 26,5 mm	29,0 x 29,0 x 26,5 mm		
AZ 970E: open, AZ 971E: covered Epoxy sealed version		Diode or resistor across coil Epoxy sealed version	Diode or resistor across coil Epoxy sealed version		
1A / 1C		1A / 1B / 1C	1A / 1B / C		
AgSnO ₂		AgSnO ₂	AgSnO ₂		
40 A (1 Form A) 30 A (1 Form C / B) 150 VDC 560 W (1 Form A) 420 W (1 Form C / B)		80 A (1 Form A) 60 A (1 Form C / B) 28 VDC 1120 W (1 Form A) 840 W (1 Form C / B)	80 A (1 Form A) 60 A (1 Form C / B) 28 VDC 1120 W (1 Form A) 840 W (1 Form C / B)		
1 x 10 ⁵ 5 x 10 ⁶		1 x 10 ⁵ 1 x 10 ⁷	1 x 10 ⁵ 1 x 10 ⁷		
VDC	Ω	VDC	Ω	VDC	Ω
6	19	6	20	6	20
9	50	12	80	12	90
12	90	24	320	24	360
24	362				
≤ 57% / ≥ 6%		≤ 65% / ≥ 10%	≤ 65% / ≥ 10%		
-40...+105°C		-40...+85°C	-40...+85°C		
500 VDC		500 VAC	500 VAC		
PCB		PCB	Quick connect or plug in		
5 / 3 ms		7 / 5 ms	7 / 5 ms		
-		-	-		
-		-	-		



AZ 971E

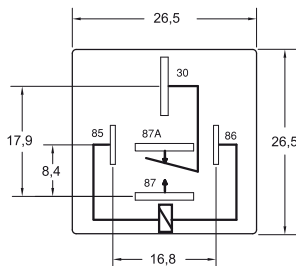




Relay Type	AZ 9731	AZ 977																
Features	<ul style="list-style-type: none"> Contact rating: 40 A Quick connect or plug in version Coil power at pickup 676 mW 	<ul style="list-style-type: none"> Contact rating: 20 A Small size Coil power at pickup 430...530 mW Plug in relay Dust cover 																
Size L x W x H	26,5 x 26,5 x 36,0 mm	23,0 x 15,5 x 26,0 mm																
Other Versions	Diode or resistor across coil Epoxy sealed version (shrouded cover)	Diode or resistor across coil Sensitive coil version																
Contact Forms A = N.O. B = N.C. C = C.O.	1A / 1B / 1C / 1U	1A / 1C																
Contact Material	AgSnO ₂	AgSnO ₂																
Contact Ratings (at resistive load)	max. 40 A max. 28 VDC max. 560 W max.	20 A 150 VDC 280 W																
Electrical Life Expectancy (at rated load)	1 x 10 ⁵	1 x 10 ⁵																
Mechanical Life Expectancy	1 x 10 ⁷	1 x 10 ⁶																
Standard Types (nominal coil voltage coil resistance)	<table border="1"> <tr> <td>VDC</td> <td>Ω</td> </tr> <tr> <td>6</td> <td>22,5</td> </tr> <tr> <td>12</td> <td>90</td> </tr> <tr> <td>24</td> <td>360</td> </tr> </table>	VDC	Ω	6	22,5	12	90	24	360	<table border="1"> <tr> <td>VDC</td> <td>Ω std./sens.</td> </tr> <tr> <td>6</td> <td>25/32</td> </tr> <tr> <td>12</td> <td>97/123</td> </tr> <tr> <td>24</td> <td>384/483</td> </tr> </table>	VDC	Ω std./sens.	6	25/32	12	97/123	24	384/483
VDC	Ω																	
6	22,5																	
12	90																	
24	360																	
VDC	Ω std./sens.																	
6	25/32																	
12	97/123																	
24	384/483																	
Pickup / Dropout (% of V _{nom})	≤ 65% / ≥ 10%	≤ 60% / ≥ 8%																
Ambient Temperature	-40...+125°C	-40...+85°C																
Dielectric Strength (coil to contacts)	750 VAC	1000 VDC																
Termination	Quick connect or plug in	Plug in																
Operate / Release Time (typ. at V _{nom})	7 / 5 ms	10 / 7 ms																
Approvals	-	-																
Accessories	-	-																

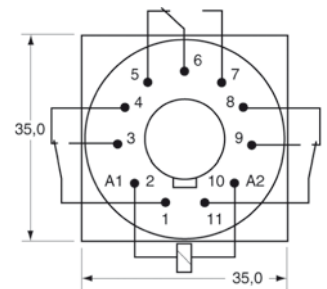
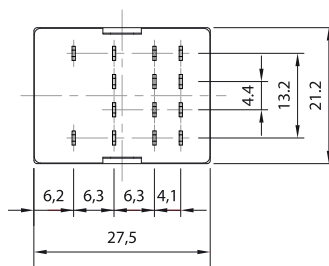
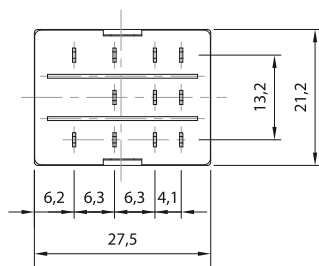
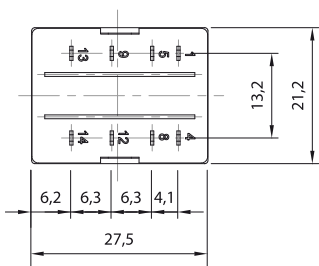
Layout
(viewed toward terminals)

(dimensions in mm)
(grid: 2.54 mm)

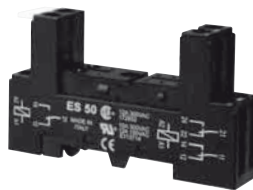
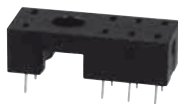




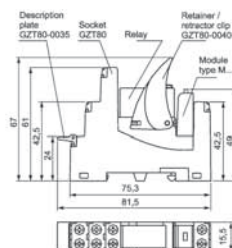
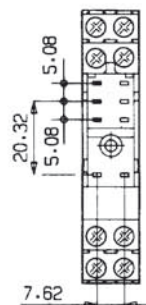
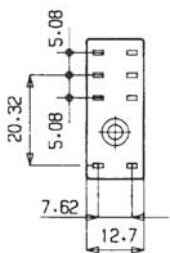
R2N				R3N				R4N				R15			
<ul style="list-style-type: none"> • Contact rating: 2 x 12 A / 250 VAC • Plug in version • Push to test button • Clearance / creepage $\geq 2,5 / 4$ mm • Dielectric strength 2500 VAC • Dust cover • AC and DC coils 				<ul style="list-style-type: none"> • Contact rating: 3 x 10 A / 250 VAC • Plug in version • Push to test button • Clearance / creepage $\geq 2,5 / 4$ mm • Dielectric strength 2500 VAC • Dust cover • AC and DC coils 				<ul style="list-style-type: none"> • Contact rating: 4 x 7 A / 250 VAC • Plug in version • Push to test button • Clearance / creepage $\geq 1,6 / 3$ mm • Dielectric strength 2500 VAC • Dust cover • AC and DC coils 				<ul style="list-style-type: none"> • Contact rating: 3 x 10 A (2 x 10 A) / 250 VAC • Plug in version • Push to test button • Clearance / creepage $\geq 3 / 4,2$ mm • Dielectric strength 2500 VAC • Dust cover • AC and DC coils 			
27,4 x 21,0 x 35,5 mm				27,4 x 21,0 x 35,5 mm				27,4 x 21,0 x 35,5 mm				35,0 x 35,0 x 54,4 mm			
with LED with suppressor diode (DC coils only)				with LED with suppressor diode (DC coils only)				with LED with suppressor diode (DC coils only)				with LED with suppressor diode (DC coils only)			
2C				3C				4C				2C / 3C			
AgNi or AgNi+Au				AgNi or AgNi+Au				AgNi or AgNi+Au				AgNi or AgNi+Au			
12 A 440 VAC 250 VDC 3000 VA 288 W				10 A 440 VAC 250 VDC 2500 VA 240 W				7 A 250 VAC 250 VDC 2500 VA 144 W				10 A 440 VAC 250 VDC 2500 VA 240 W			
1×10^5				1×10^5				1×10^5				2×10^5			
2×10^7				2×10^7				2×10^7				2×10^7			
VDC	Ω	VAC	Ω	VDC	Ω	VAC	Ω	VDC	Ω	VAC	Ω	VDC	Ω	VAC	Ω
5	28	12	39,5	5	28	12	39,5	5	28	12	39,5	6	28	6	4,3
6	40	24	158	6	40	24	158	6	40	24	158	12	110	12	18,5
12	160	48	640	12	160	48	640	12	160	48	640	24	430	24	75
24	640	60	930	24	640	60	930	24	640	60	930	48	1750	48	305
48	2600	110	3450	48	2600	110	3450	48	2600	110	3450	62	2700	60	475
60	4000	115	3610	60	4000	115	3610	60	4000	115	3610	110	9200	115	1840
110	13600	230	16100	110	13600	230	16100	110	13600	230	16100	120	11000	230	7080
220	54000	240	16800	220	54000	240	16800	220	54000	240	16800	220	37000	240	7760
DC: $\leq 80\% / \geq 10\%$ AC: $\leq 80\% / \geq 20\%$				DC: $\leq 80\% / \geq 10\%$ AC: $\leq 80\% / \geq 20\%$				DC: $\leq 80\% / \geq 10\%$ AC: $\leq 80\% / \geq 20\%$				DC: $\leq 80\% / \geq 10\%$ AC: $\leq 80\% / \geq 15\%$			
DC: -40...+70°C AC: -40...+55°C				DC: -40...+70°C AC: -40...+55°C				DC: -40...+70°C AC: -40...+55°C				DC: -40...+70°C AC: -40...+55°C			
2500 VAC				2500 VAC				2500 VAC				2500 VAC			
Plug in				Plug in				Plug in				Plug in			
DC: 13 / 3 ms AC: 10 / 8 ms				DC: 13 / 3 ms AC: 10 / 8 ms				DC: 13 / 3 ms AC: 10 / 8 ms				DC: 18 / 7 ms AC: 12 / 10 ms			
VDE, UL, CUR				VDE, UL, CUR				VDE, UL, CUR				VDE, UL, CUR			
PCB-Socket: SU4D DIN rail: GZT2				DIN rail: GZT3				PCB-Socket: SU4D DIN rail: GZT4				DIN rail: ES8 (2 Form C) DIN rail: ES11 (3 Form C)			



Version 3C



Socket Types	EC 25 (Grid 2,54 mm) EC 35 (Grid 3,5 mm) EC 50 (Grid 5,08 mm)	ES 25 (Grid 2,54 mm) ES 35 (Grid 3,5 mm) ES 50 (Grid 5,08 mm)	GZT 92 (Grid 3,5 mm) GZT 80 (Grid 5,0 mm)
Dielectric Strength	5000 VAC	4000 VAC	5000 VAC
Nominal Voltage / Current	400 VAC / 12 A	300 VAC / 12 A	300 VAC / 12 A
Approvals	UL, CSA	UL, CSA	UL, CUL, CSA, Gost



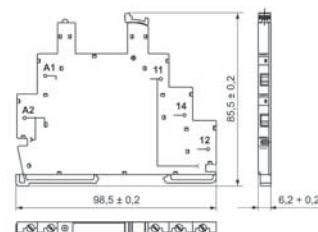
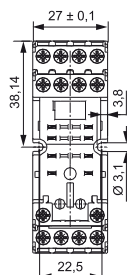
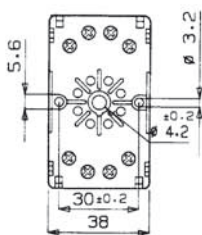
EC 50
Other grids: 2,5 / 3,5 mm
Plastic clip: Type MP ...
Metal clip: Type MH ...
... 12 for h = 12 mm
... 16 for h = 15 ... 16,5 mm
... 25 for h = 25 ... 25,5 mm

ES 50
Other grids: 2,5 / 3,5 mm
Retainer: Type MS ...
... 12 for h = 12 mm
... 16 for h = 15 ... 16,5 mm
... 25 for h = 25 ... 25,5 mm

GZT 80
Retainer: Type GZT80-0040



Socket Types	ES 8 (8 pole) ES 11 (11 pole)	GZT2 (2 pole) GZT3 (3 pole) GZT4 (4 pole)	PI6W Relay-Module
Dielectric Strength	3000 VAC	3000 VAC	4000 VAC
Nominal Voltage / Current	400 VAC / 10 A	300 VAC / 12 / 10 / 6A	400 VAC / 6 A
Approvals	UL, CSA	UL, CUL, CSA, Gost	UL, CUL, VDE



Metal clip: Type PZ11 0031

Retainer: Type GZT4-0400

Definitions and Application Notes

Air distance

→ Clearance

All-or-nothing relay

Electrical relay whose → input energizing quantity is either within the operative range or zero; → wave form of coil energization.

Ambient temperature (in use)

Temperature, measured directly near the relay. The maximum allowed value may not be exceeded, otherwise there is the danger of lasting damage (e.g. reduced contact force or overheating of the energized coil).

Ambient temperature (storage and transport)

The maximum allowed value may not be exceeded, otherwise there is the danger of lasting damage.

Application guidelines

Very different loads (e.g. high load and measuring signal) shall not be switched by the same relay. → Contact erosion from switching high loads may pollute the low level switching contacts.

The actual contact load shall not be lower than the specified → minimum contact load.

Some adhesive pastes, insulating tubes, conformal coatings, heat conducting pastes, rubber contacts, greases or oils contain silicone based compounds. Due to outgassing or creepage of the silicones they may accumulate on the contacts, these residues are burnt by the → arc and form high-resistive layers on the contact surface. We strongly recommend avoiding any kind of silicon near the relays.

The → input energizing quantity has to be applied to the coil in rectangular wave form; → wave form of signal.

Open relays (relays without any cover; → case sealing) have no protection against touch, corrosive influence or foreign particles. Thus they should be used in a housing, which guarantees the necessary protection.

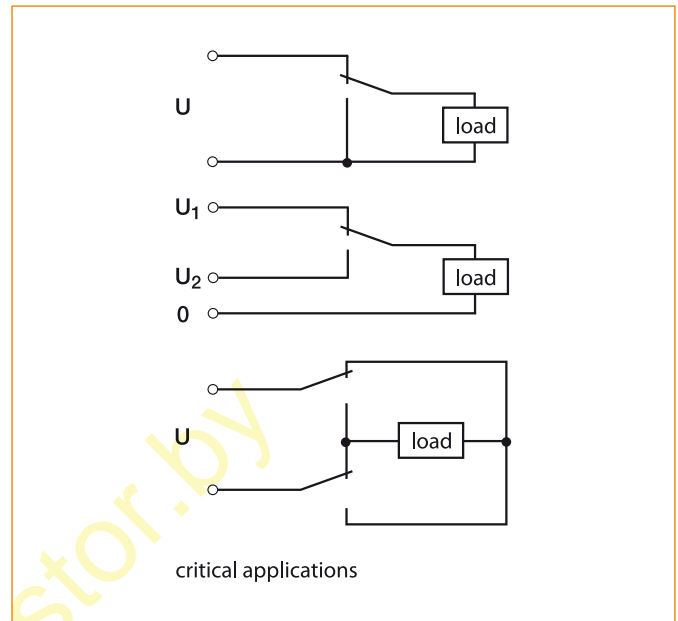
The → input energizing quantity has to be applied to the coil in random mode with respect to the point on the AC-wave → phase synchronization.

Use of the relay at very high ambient humidity may cause corrosion of the metal parts.

Very low ambient atmospheric pressure (high altitude) reduces the applicable dielectric test voltage.

If sealed relays switch heavy loads at high switching rates, increased → electrical endurance can be achieved by → venting the relay. However, corrosive gases from the ambient atmosphere may penetrate into a vented relay; this can negatively influence the reliability of a relay.

Switching high loads creates arcs; these arcs may not extinguish before the movable contact of a → change-over relay touches the opposite contact. The intrinsically insulated outer contacts are then connected by the arc; this leads to short circuits (e.g. in the applications shown below). This problem can be avoided by using a separate relay which interrupts the circuit before the change-over relay switches and which closes the circuit afterwards.



Inflammable gases in the ambient atmosphere may be ignited by the arc at the relay contacts. Even with sealed relays, the case seal does not prevent the penetration of combustible gases into the relay.

Strong external magnetic fields (e.g. from other neighbouring polarized relays or permanent magnets) may influence the → operate and release values.

For all PCB we strongly recommend a suitable cross section of the tracks to avoid overheating.

Before using relays in environments with shocks and vibrations we recommend to contact the supplier to get information for the optimal mounting direction.

Before approve any component for a mass-production, we strongly recommend to test these products under a situation close to the final production situation to ensure a trouble-free production process and subsequent product function. The decision on the suitability of the product is the solely liability of the customer. The operation beyond the specification of our products carries the risk of dangerous conditions.

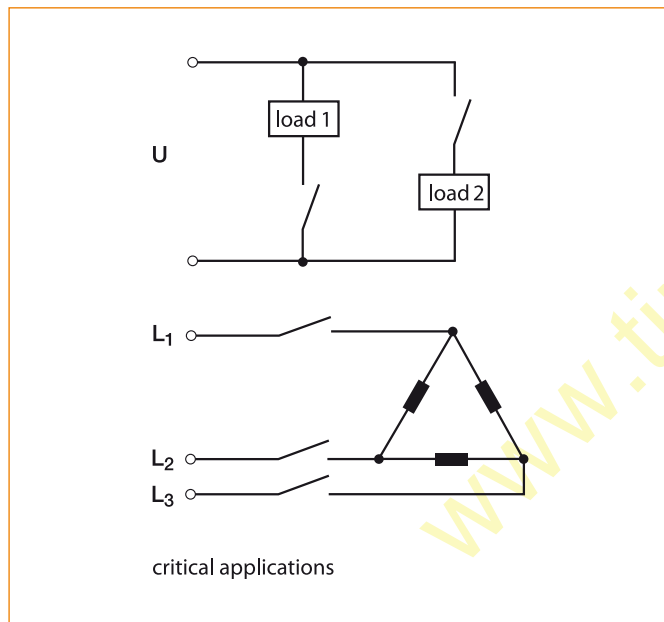
To prevent such dangerous conditions the customer has to perform reasonable measures. All our product data are shown in the specifications are designated for users with expertise and experience in implementation of these technical data.

The customer has to make sure that the product is in compliance with existing regulations and relevant standards which valid for the application.

If neighbouring contact sets within the same relay switch essentially different voltages and arcs at the contacts occur, a short circuit between the sets by the arc cannot be excluded. A clarifying discussion with the relay supplier is recommended. Countermeasures are:

- Another circuit layout which avoids very different voltages between the contact sets.
- To provide for a non-used contact set between the vital contacts.
- The use of a relay which offers a very good insulation between the contact sets.
- The use of two or more single relays.

Examples of critical applications are shown below.



Approvals

Several different test and approval authorities test relays according to national or international standards. Approved parameters, such as contact load (voltage, current, load type), ambient temperature or life expectancy are probably lower than the limits of the relay. When the tests are passed, the manufacturer is allowed to mark the relay or the packing with an approval mark. Important approvals are:

VDE	Germany
UL	USA
CUR	USA, approval valid also in Canada
CSA	Canada
SEV	Switzerland
DEMKO	Denmark

NEMKO	Norway
SEMKO	Sweden
SETI	Finland
TÜV	Germany

Arc

Even at low voltages and currents of less than 100 mA, electrical discharge effects occur at opening and closing of contacts. At higher values (e.g. from 12 V / 0.4 A at Ag contacts) thermal arcs may occur; a current is still flowing although the contact has already opened. If the contact gap is big enough, the arc extinguishes.

The maximum allowed DC values at which the arc still extinguishes, are often published in relay data sheets as a load limit curve or a table of voltage against current. If those values are exceeded, a long burning arc will occur which then rapidly leads to a relay defect or destruction.

When AC loads are switched off, the arc extinguishes at the next zero crossing of the sine wave of the switching voltage or current. Thus a much higher power can be switched than with DC loads.

Bifurcated contact

Each contact spring carries two contacts which work in parallel, but which are mechanically almost independent. The contact reliability at low contact load is increased. At high loads a → single contact is usually an advantage.

Bistable relay

An electrical relay which stays in a predetermined contact position after removal of the coil energization. For return to initial condition another suitable energizing pulse is necessary (e.g. pulse to the reset coil). Due to mechanical shocks or vibration during shipping the relay may change its switching position. Therefore we can't guarantee a defined switching position at delivery. We recommend a defined RESET before starting the application.

Bounce time

Time interval between the first and the final closing (or opening) of a contact, caused by a mechanical shock process in contact movement. These shock processes are called contact bounce. Values shown in datasheets are measured at rated voltage and reference temperature.

Break contact

The contact is closed when the relay is in the off condition and open when the relay is in the on condition; → contact assembly.

Bridge contact

Special → contact assembly; two stationary contacts are connected by a movable bridge. In open contact condition the bridge is separated on both its sides from the stationary contacts. Due to this double interruption a bigger → contact gap can be achieved; this is of advantage especially at very high contact loads or when there are safety requirements.

Capacitance

Insulated metal parts of the relay form a capacitor; its capacitance is measured in pF. It is an important value for high frequency applications.

Categories of protection (IEC 61810)

- RT 0:** Unenclosed relay
Relay not provided with a protective case.
- RT I:** Dust protected relay
Relay provided with a case which protects its mechanism from dust.
- RT II:** Flux proof relay
Relay capable of being automatically soldered without allowing the migration of solder fluxes beyond the intended areas.
- RT III:** Wash tight relay
Relay capable of being automatically soldered and subsequently undergoing a washings process to remove flux residues without allowing the ingress of flux or washing solvents.

Note: In service, this type of relay is sometimes vented to the atmosphere after soldering or washing process; in this case the requirements with respect to clearances and cree page distances can change.
- RT IV:** Sealed relay
Relay provided with a case which has no venting to the outside atmosphere, and having a time constant better than 2×10^4 s in accordance with IEC60068-2-17.
- RT V:** Hermetically sealed relay
Sealed relay having an enhanced level of sealing, assuring a time constant better than 2×10^6 s in accordance with IEC60068-2-17.

Change-over contact

Combination of the two contact forms, break- and make contact, using one common contact spring. When one contact circuit is open, the other one is closed; → contact assembly

In case of an arc, N.O. and N.C. contact can temporarily be connected.

Cleaning of PCBs

→ Handling guidelines

Clearance (air distance)

Closest distance through air between two conductive parts.

Coil configuration

→ Driver protection circuit

Coil current

DC coils: Calculation from the applied voltage and actual coil resistance according to Ohm's law.

AC coils: The coil current is much lower than expected from the resistive DC resistance, thus the current is often specified in the data sheets. At the moment of switching the coil on, the current is higher than in continuous use.

Coil resistance

DC resistance of a relay coil at reference temperature (+20 °C). Higher coil temperatures increase the resistance value by 0.4 % per Kelvin (0.4 % per °C); e.g. at 40 °C the coil resistance is increased by 8 %. Thus the coil voltage has to be adapted accordingly (→ operate value). With AC coils, the impedance is much higher than the DC resistance, so, often the coil current at nominal coil energization is published additionally.

Coil temperature (maximum)

The temperature of the relay coil depends on the → ambient temperature, the power in the coil (→ temperature rise) and warming due to contact current. The coil temperature may not exceed the maximum allowed value. If relays are placed side by side they may warm each other up.

Contact application class

According to their switching load, in standards IEC 225-23, DIN IEC 225 part 7 and VDE 0435 contacts are divided in 4 classes; → contact resistance

Contact arrangement

→ Contact assembly

Contact assembly (contact form)

The three most important versions are → make contact, → break contact and → change-over contact. Often they are abbreviated as follows:

English	American	German
make	Form A SPST-NO (normally open)	1
break	Form B SPST-NC (normally closed)	2
change over	Form C SPDT	21

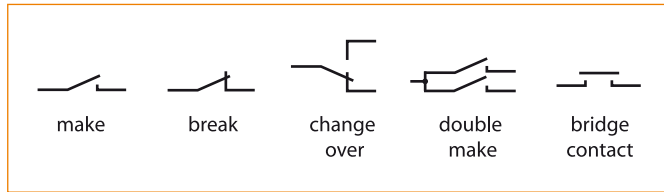
double make Form U SPST NO DM

double break Form V SPST NC DB

double break,

double make Form W SPST NC-NO DB-DM

The following circuit diagrams show important contact assemblies in a deenergized relay (initial position):



Contact erosion

During the switching of intermediate and high loads contact material evaporates in the → arc and forms powdery layers on contact surfaces and neighbouring surroundings. The resulting material loss limits the → electrical endurance.

Contact force

The force with which two contacts press against each other during a closed contact circuit. With → break contacts of non-polarized relays the contact force is achieved by the spring tension of the contact springs. → Make contacts are pressed against each other by the force of the magnetic circuit; contact forces and thus → vibration resistance and → shock resistance are usually higher.

Contact gap

Distance between the contacts in the open contact circuit condition.

Contact material

The choice of the optimum contact material is of the utmost importance for reliable contact function, whereby the possible application range is also dependant on the type of relay. The following list is just a selection of widely used contact materials; it can only show a rough indication. More precise information is contained in the data sheet for the respective relay type; in case of doubt, a discussion with the relay supplier is recommended.

Gold (Au)

- highly corrosion resistant, most important material for reliable switching of low contact loads
- due to high cost gold is often used in the form of a layer on the contact surface
- a layer free of pores, useful for low loads, should have a thickness of at least 3 μm
- gold flash (typ. 0.2 μm thickness) is mainly used for storage purpose only

- due to a danger of contact welding, unfavourable at high loads.

Silver-Palladium (AgPd), typically 30...60 % Pd

- for medium loads; if gold plated, for low loads also
- corrosion resistant especially against sulphur gases
- low → net metal transfer
- often used in telecom applications.

Silver (Ag) in pure condition or with a low amount of additives (e.g. 0.15 % Ni)

- good for medium loads
- less useful for high AC-loads and high inrush currents.

Hardsilver (AgCu), typically 3 % Cu

- good for medium loads
- less useful for high AC-loads and high inrush currents
- less → contact erosion than Ag.

Silver-Nickel (AgNi), typically 10 % Ni

- for medium and higher switching loads
- better resistance against → contact erosion and welding than AgCu.

Silver Cadmium Oxide (AgCdO), typically 10 % CdO

- for high switching loads, especially for mains applications
- low tendency for contact welding, good resistance against contact erosion
- less useful for lower loads.

Silver Tin Oxide (AgSnO₂), typically 10 % SnO₂

- for high switching loads, especially for mains applications, also at high inrush currents
- very low tendency for contact welding, good resistance against → contact erosion
- at resistive loads lower → electrical endurance than AgCdO
- less useful for lower loads.

Tungsten (W)

- especially for high inrush currents
- mainly used as pre-make contact

Contact protection circuit

Electrical device to reduce inductive voltage at switching off of inductive loads like magnets, conductors or relays; → driver protection circuit.

Contact resistance

Electrical resistance of a closed contact circuit, measured at the terminals of the relay. Depending on contact application class (standard IEC 255, part 7) different values of measuring voltage and current are defined:

Application class	Contact load in application	Typical load for CR measurement
0	0...30 mV / 0...10 mA	30 mV / 10 mA
1	30 mV...60 V / 10...100 mA	100 mV / 10 mA
2	5...250 V / 0,1...1 A	24 V / 100 mA
3	5...600 V / 0,1...100 A	24 V / 1 A

Continuous current (contacts)

Maximum value of current (RMS-value at AC), which a previously closed contact can continuously carry under defined conditions.

Continuous duty

Application mode, in which the relay is at least energized for such a long time that thermal equilibrium is reached.

Creepage distance

Closest distance between two conductive parts, measured along the surface of insulated parts.

Degree of protection, IP-code

The first number characterizes the protection against foreign particles and touch, the second the protection against penetrating water.

With most relays the connecting terminals are not protected, the complete relay has IP 00. With regard to the case sealing the following is valid:

- open relay: IP 00, no protection against touch or water
- dust proof relay: IP 40, protected against coarse dust and touch by a test wire, no water protection
- sealed relay: IP 67, totally sealed against dust and touch by a test wire, protection for part time immersion in water.

Dielectric test voltage (dielectric strength)

RMS value of the AC voltage, which is applied for test purpose between insulated metal parts of a relay. The higher the applicable test voltage, the better the separation e.g. between input circuit and contact circuit. Other test method: → impulse voltage test.

Double break contact

Compound contact which consists of two simultaneously working → break contacts; they have a common contact spring. This contact form is used in some automotive relays. Designation in the U.S.: Form V.

Double make contact

Compound contact which consists of two simultaneously working → make contacts; they have a common contact spring. This contact form is used in some automotive relays. Designation in the U.S.: Form U.

Double break, double make contact

Compound contact which consists of two simultaneously working → change over contacts; they have a common contact spring. This contact form is used in some automotive relays. Designation in the U.S.: Form W.

Driver protection circuit

When the coil energization is switched off, a very high negative peak voltage is produced by the coil and it may reach more than 10... 20 times the nominal coil voltage. Possible destruction of the switching semiconductor (driver) in the coil circuit is the result. A solution is provided by a so called driver protection circuit, that is a damping component which is connected in parallel to the coil. It protects the driver but does slow the release time of the relay.

Commonly used driver protection circuits are shown in table Coil Driver Protection Circuits.

(to) Drop out

→ Release

Duty factor (duty cycle)

The ratio (in %) between on-time and sum of on- plus off-time at periodic energization of the relay coil.

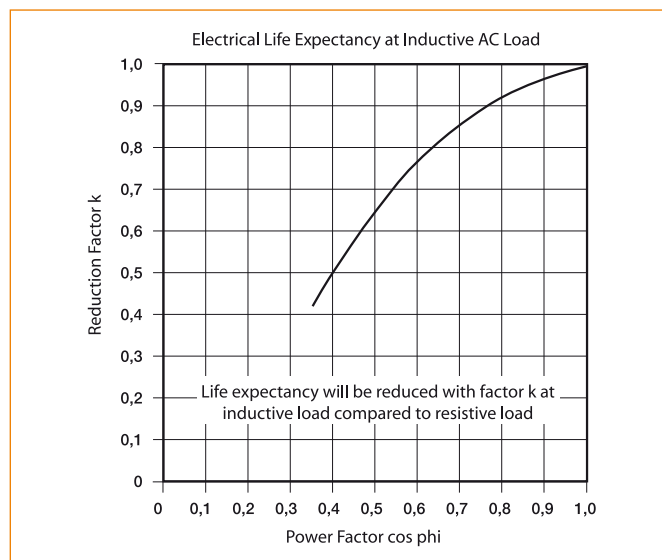
Electrical endurance (contact performance)

Number of operations until switching failure of a relay under defined conditions of load and of ambient influences. The life figures are mostly valid for the maximum specified resistive load.

At lower contact loads a substantially longer electrical life is achieved.

At higher loads the electrical life is reduced substantially.

If inductive AC-load has to be switched, the life depends on power factor $\cos \phi$.



	Resistor	Diode	Zener Diode	Varistor	CR Circuit
Selecting advice	$2...6 \times R_{\text{coil}}$	reverse breakdown voltage much higher than coil voltage of relay, forward current at least equal coil current	zener voltage: $2...3 \times V_{\text{coil}}$	characteristic voltage higher than max. voltage at relay coil	resistor R about coil resistance of relay, capacitor to be investigated by experiment, about 1...100 nF
Peak voltage at relay	$2...6 \times V_{\text{coil}}$	about 0.7 V	zener voltage	depending on characteristic line of varistor	depending on chosen R and C value (measure with storage scope)
Change of release time	high	very high	low	low	depending on chosen R and C value
Application	DC and AC	DC only	DC, if two zener diodes are connected reversely in series, for AC also	DC and AC	DC and AC
Remark	steady current flowing when relay is operated	due to a very slow release, enlarged burning time of arcs at high contact load; reduced electrical endurance; not recommended at high loads and high life requirements	additional diode necessary (in series to zener diode) most recommended coil configuration	relatively expensive	optimum values of R and C have to be investigated by experiment

Coil Driver Protection Circuits

Unless otherwise noted the specified electrical endurance refers to:

- NO contact
- Resistive load
- Rated coil voltage
- Ambient temperature 20 °C
- Category of protection flux proof – RT II

As most applications are not resistive but complex, it is highly recommended to measure the detailed load conditions and to run an additional life test under original conditions.

Electrical relay

Component which creates sudden predetermined changes in one or several output circuits if determined conditions in the electrical input circuit are fulfilled.

Electromechanical relay

An → electrical relay in which the designed response in the output circuit is created by the relative movement of mechanical elements under the action of a current in the input circuit.

Flammability (UL 94)

A flammability class (V-0 / V-1 / V-2 / HB) for plastics is defined in the American specification UL 94; V-0 is the best class. Duration of burning, duration of glowing and burning drops are the parameters for judgement.

Gold plating, gold clad

→ Contact material

Handling guidelines

Electromechanical relays are components which have to be handled with some care:

- To touch the terminals with fingers may lead to poor solderability, especially if the solder process occurs at a later date.
- The PCB layout and the diameters of drilling holes have to be considered; the relay pins may not be bent; serious mechanical side forces may for instance reduce the adjustment values of the contact springs.
- Extreme mechanical shocks, e.g. caused by dropping of a relay, may not only bend the pins, but can result in lasting damage of the relay, e.g. breaking of plastic parts or reduction of → contact force. Such a mechanical strain has to be absolutely avoided. Please note: even when a relay falls onto a hard floor from a height of 'only' 50 cm, decelerations of some hundred g's (e.g. 300 times the gravitational acceleration) are exerted on the relay!

The amount of flux for the soldering process should be as small as possible. The flux may not flow over the top side of the PCB unless sealed relays are used.

Solder temperature and time have to be kept within the limit specified in the data sheet. Common limits are max 270 °C and maximum of 5 seconds. The compatibility of the cleaning liquid and the washing process has to be checked by the user. Cleaning of soldered PCBs in a liquid medium is allowed only, if sealed relays are used. The corresponding information on the data sheet must be met.

To avoid failures or damaging of relays due to ultrasonic clearing, it is necessary to test the clearing process under original cleaning conditions. Under certain conditions ultrasonic clearing can damage the relays.

During ultrasonic cleaning of soldered PCBs, a so called 'cold welding' of gold plated → break contacts (adhesion of the gold layers due to intensive friction movements) may happen. Such relays should not be ultrasonically cleaned.

Soldered PCBs may be conformally coated only if sealed relays are used. In case coating is necessary we recommend to contact the relay supplier. We strongly recommend avoiding any kind of silicon near the relays.

Hold value

→ Non-release value

Impulse voltage test

Between insulated metal parts a short voltage pulse is applied which may not cause a flash over. Example for such a pulse: peak voltage 2500 V; rise time 1.2 μs, decay time 50 μs.

Input energizing quantity

Electrical quantity, usually voltage, which has to be applied to the coil of an electrical relay under determined conditions to attain the expected function.

Inrush current

→ Limiting making current

Insulation group

Definition according to older standard VDE 0110; the classification is made according to influence of ambient, of overvoltage, and of nominal voltage of insulation. 5 groups from A0 (no influence) to D (very strong influence) are specified. Declaration: e.g. insulation group C at 250 VAC / 300 VDC. In the actual standard IEC 664-1 / VDE 0110 → pollution degrees are defined.

Insulation resistance

Electrical resistance, measured between insulated relay parts at a test voltage of 500 VDC.

Latching relay

→ Bistable relay

LED indicator parallel to the coil

LED in a relay (often in industrial relays) which indicates that a voltage is applied to the coil. Contrary to the → mechanical indicator, the LED does not always show the switching status of the contacts, e.g. when the voltage at the coil is lower

than the → operate voltage. The polarity of the coil has to be considered.

Lightning surge test

→ Impulse voltage test

Limiting continuous thermal withstand value

Highest value of the → input energizing quantity (mostly coil voltage) which may be applied at → continuous duty depending on → ambient temperature without exceeding the maximum → coil temperature.

Limiting make current

This value specifies the inrush current that may flow under defined conditions (voltage, power factor, duration) when the contact closes. The relay must work faultlessly afterwards.

The inrush current may often be much higher than the continuous current in an application. The inside resistance of the power source is also of important influence. Typical values are:

Load	Typical inrush current (Factor Inrush/Nominal)	Typical decay time $I_{in} \rightarrow I_{nom}$
Resistive (ohmic)	1,0	-
Tungsten light bulb	10...15	0,3 s
Flourescent lamp	5...10	10 s
Power saving lamp	20...40	5...20 ms
Hg or Na vapour lamp	1...3	2 min
Magnet coil (AC)	3...20	0,1 s
Motor (AC)	5...10	0,2...0,5 s
Transformer	5...15	0,1 s
Capacitor	20...40	5...20 ms

The inrush current is also dependant whether or not an additional device or ignition device is installed, such as a mercury ballast at mercury vapour lamps, which causes an inrush current of 20...40 times the nominal current over 10 ...30 ms. It is highly recommended to take note of and to measure the detailed relation between current and time (at AC also depending on the phase angle at the moment of switching) when choosing a relay.

A reduction of inrush currents can be achieved by current limiting components, e.g. inductors or NTC resistors.

Load limit curve at DC

→ Arc

Make contact

The contact is closed when the relay is in on position and open when the relay is in off position; → contact assembly.

Material transfer

→ Net metal transfer

Mechanical endurance (mechanical life)

Number of → operations which the relay survives when the contacts do not switch a load.

Mechanical indicator of contact position

Mechanical indicator in relays (mostly industrial relays) which is linked to the contacts and shows their position.

Metal transfer

→ Net metal transfer

Minimum contact load

Limit of load voltage, current and power below which a reliable switching function is no longer guaranteed due to contact material and relay construction. Below this limit inadmissible high contact resistance may occur. When judging this, it has to be considered how much voltage drop at the closed contact condition can be accepted in practical application.

Monostable relay

Electrical relay whose contact returns to initial condition after removal of coil energization.

Must operate value

→ Operate value

Must release value

→ Release value

Net metal transfer

During the switching procedure the → arc heats up the two contacts differently, depending on load and polarity. This results in a material transfer from the hotter to the cooler electrode. With higher DC loads on the contact, a pip is built up, the other contact loses material and it creates a crater. Thus the contacts may get hooked to each other. Also the danger of welding at the pip is increased. In addition the → dielectric strength of the opened contact is lowered. With AC and a random switching mode (no → phase synchronization) the polarities at the contacts are distributed statistically equal, no material transfer occurs. When the switching is synchronized to the AC load voltage (that means always at the same point on the sine wave) even at AC load a material transfer may occur; → phase synchronization.

Nominal coil power

Power in a coil at +20 °C when nominal voltage is applied to a coil having nominal resistance.

Nominal voltage (at coil)

Useful rounded value of the energizing quantity, it is used to classify standard versions and is mostly used as a reference value for other measurements.

Nominal voltage (at contact)

Useful rounded value of load voltage which classifies a relay contact with regard to its use.

Non-polarized relay

The polarity of coil energization does not matter.

Non-release value (non-release voltage)

Voltage (rarely current) at the relay coil, at which a relay (after short pre-energization with nominal value) still stays in operate condition (at no shock and no vibration). Usually this value is not guaranteed for → all-or nothing relays. If an application relies on a non-release value (e.g. reduced voltage or pulsed voltage) a discussion with the relay supplier is recommended.

(to) Operate

Change of contact position from initial condition (e.g. → make contact open) to operated condition (e.g. make contact closed), achieved by applying the → input energizing quantity to the relay coil.

Operate class

Classification of the operate value according to IEC 255 / EN 60255 / VDE 0435.

Operate power

Electrical power when the operate value is applied to a relay coil (having nominal coil resistance) at reference temperature (+20 °C).

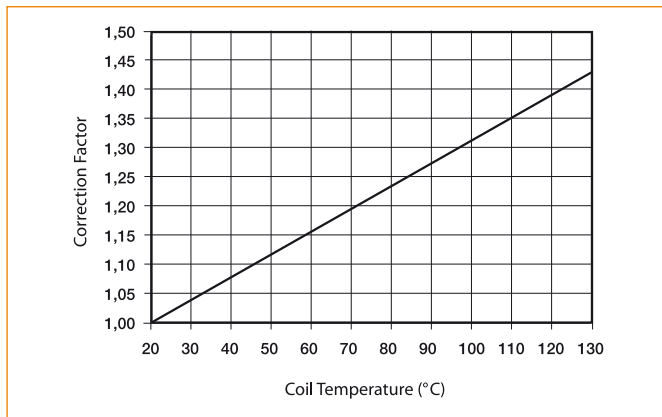
Operate time

Time between application of nominal energizing quantity (e.g. nominal voltage) to the relay coil at a temperature of +20 °C and the first opening of the break contact or the first closing of the make contact. → Bounce time is not included. At increased coil energization the operate time is reduced substantially.

Operate value, mostly operate voltage

Minimum allowed value at the coil which guarantees that the relay → operates at reference temperature (temperature of the coil: +20 °C).

The actual value for a relay may be below this specified value. At this specified value each relay must have operated. At coil temperatures which are different from +20 °C the operate voltage of relays with DC coils has to be multiplied by a correction factor according to this diagram:



If due to a pre-energization the relay coil has not yet cooled down to ambient temperature, the calculation has to be made based on the actual coil temperature. When the data sheet for a particular relay does not show correction factors, a rough calculation can be made: coil temperature = ambient temperature + temperature increase according to the → temperature rise value. The correction factor to get the necessary operate voltage can be taken from the diagram. With relays having AC coils the temperature dependant deviation of the operate voltage is much lower because the heat-related resistive part of the → coil resistance is clearly lower than the inductive part (which is not dependant on the temperature).

AC coils require higher operate power.

Operation

One → operate and afterwards → release event of a relay, caused by switching on and off of the → input energizing quantity.

Operative range of coil voltage

It depends on the → ambient temperature. With some relays the values and correction factors can be found on the detailed data sheet. An evaluation regarding minimum necessary coil voltage can be made based on the advice given at → operate value. The maximum allowed voltage has to be chosen in such a way, that the sum of ambient temperature in use and self-heating of the coil (→ temperature rise of coil and heating due to contact load) does not exceed the maximum allowed → coil temperature. If relays are placed directly side by side they may have an influence on each other.

Overvoltage category

Definition according to IEC 664-1 / DIN VDE 0110; 4 categories from I (no overvoltage) to IV (use in equipment which is exposed to lightning overvoltage).

Phase synchronization

If contacts always open and / or close with respect to the same point on the sine wave of the AC load (e.g. always at

maximum of the positive phase), → net metal transfer may occur – including the described risks of reduced → electrical endurance. Possible reasons for phasesynchronized switching are e.g.:

- insufficient smoothed voltage at the relay coil
- induction of 50 Hz distortion in cables of sensors
- triggering of the coil signal by a 50 Hz time base.

Phosphorus

Some plastic materials include phosphorus as flame retardant. Due to outgassing of the phosphorus, parts of it may accumulate on the contacts. This may lead to a malfunction of the relay. We strongly recommend avoiding such plastics near the relays.

(to) Pick up

→ Operate

Polarized relay

Its magnetic system contains a permanent magnet, thus the specified coil polarity must be observed; otherwise the relay will not work. If a relay is equipped with additional features like a diode switched in parallel to the coil (→ coil configuration) or an LED indicator, the coil polarity must be observed as well.

Pollution degree

Judgement according to IEC 664-1 / DIN VDE 0110:4 degrees from 1 (no pollution or dry, non conductive pollution only) to 4 (pollution causes steady, lasting conductivity).

Preheating at soldering process

The maximum temperature should not exceed 120 °C on the upper surface of the PCB, while preheating procedure for common wave soldering processes.

Rated voltage, rated power

→ Nominal voltage, nominal power

Reduction factor for electrical endurance at an inductive AC load

→ Electrical endurance

Relay

→ Electrical relay

(to) Release

Change of contact position from operated condition (e.g. → make contact closed) to initial condition (e.g. make contact open), achieved by removing the → input energizing quantity from the coil.

Release time

Time between switching off the coil input quantity (e.g. nominal voltage) at a temperature of +20 °C and the first opening of the make contact respectively the first closing of the break contact. If not otherwise specified, the time is valid for applications not using a → coil configuration. There is no essential dependence on the previously applied coil energization. → Bounce time is not included.

Release value, mostly release voltage

Maximum allowed value at the coil at which it is guaranteed that the relay → releases at reference temperature (temperature of coil: +20 °C). The actual value for a relay may be beyond this specified value. At the specified value each relay must have released. The dependence on temperature is the same as with the → operate value.

(to) Reset

Change of contact position of a → bistable relay from the on state to the off state, caused by applying the input energizing quantity to the reset coil.

Reset voltage

→ Operate voltage at a → bistable relay; when this value is applied to the

Sealing

→ Categories of protection (IEC 61810)

Sensitive version (regarding coil resistance)

With some relay types it is possible to choose between two coils with a different resistance, but with the same nominal voltage. The lower resistance type is called the standard version, the higher resistance type is called the sensitive version. In some cases the sensitive version has a higher → operate value.

Set voltage

→ Operate voltage at a → bistable relay

Shock resistance (mechanical)

It specifies at which mechanical shock (multiple of gravitational acceleration 'g' at half sine wave form shape and duration 11 ms) the closed contact has still not opened (failure criteria: contact interrupted for > 10 μs) or no damage occurs; → handling guidelines → application guidelines.

Silicone based substances

→ Application guidelines
→ Handling guidelines

Single contact (single button)

Contrary to the → bifurcated contact, each contact circuit uses one contact only. It is useful for all load ranges, at low loads a bifurcated contact may be of benefit.

Snubber

→ Driver protection circuit

Spark quench device

→ Driver protection circuit

Standard version (regarding to coil resistance)

With some relay types it is possible to choose between two coils with a different resistance, but with the same nominal voltage. The lower resistance type is called the standard version, the higher resistance type is called the sensitive version.

Switching current (maximum)

Current (AC or DC) which can be switched on and off by a relay contact. Somewhat higher values are usually allowed at reduced → ambient temperature and reduced → electrical endurance.

Switching power (maximum)

Electrical power which can be switched on and off by a relay contact for a specified → electrical endurance. At higher loads the electrical life is reduced substantially. Due to the → arc, the DC power (published in unit 'W') is often lower than the AC power (published in unit 'VA'). It has to be observed that the value of maximum power is valid for a certain voltage; it may be lower e.g. at DC or higher voltages.

Switching rate (maximum)

Highest switching frequency (number of → operations per time) which is allowed for a relay. Due to considerable warming by the → arc at intermediate and high loads a maximum switching rate of e.g. 10 operations per minute is allowed; at very low loads however e.g. 20 operations per second may be allowed.

Switching voltage (maximum)

Voltage (AC or DC) which can be switched on and off by a relay contact. Somewhat higher values usually do not harm the relay. Due to the → arc, the DC value is often lower than the AC value.

Temperature rise

Ratio between temperature increase of the coil winding and coil input power (referred to coil temperature +20 °C, declared in K/W). Sometimes also specified as temperature increase at nominal coil energization.

Termination

Print terminals: Relays are to be soldered to a PCB; mechanical fastening and electrical connection are made by the PCB.

Print terminals plus quick connect termination: Relays are to be soldered to a PCB; the electrical connection for high currents is made via the quick connects, small currents (e.g. for monitoring purpose) are conducted via the PCB.

Quick connect termination: Electrical connection via quick connect terminals only, either by single connectors or by sockets.

Test push button

Push button (usually in industrial relays) which is accessible from the outside; if it is pressed by hand or with a tool, it switches the contact circuit of a deenergized relay from off to on condition. Sometimes it can be locked mechanically. The test push button helps to trace the current paths in a switch board.

Thermal behaviour

→ Operate value, → limiting continuous thermal withstand value; → coil temperature; → temperature rise; → ambient temperature

Thermal resistance of the coil

→ Temperature rise

Tracking resistance

Measuring unit for forming of conductive tracks on insulating materials. An aqueous solution drops on a test sample and leads to electrolytic conduction and to conducting tracks when voltage is applied. The result is presented as PTI or CTI value, depending whether the test has been made at one voltage only or whether a test series has been made. For certain applications the applicable standards specify minimum values.

Transit time (transfer time)

Time during which both circuits of a → change-over contact (→ contact assembly) are open.

Ultrasonic cleaning

→ Handling guidelines

Utilization category

The standard EN 60947 / DIN VDE 0660 classifies the contact loads into categories (e.g. AC-1, AC-15, DC-1, DC-13). These categories are basically valid for contactors, but sometimes also applied on relays.

(to) Vent a relay

To open a vent hole on a sealed relay after soldering it to the PCB (which has possibly been cleaned or varnished). The relay may only be opened by cutting off the vent nib; → application guidelines

Vibration resistance

It specifies the amplitude or the acceleration in a defined frequency range at which the closed contact should still not open (failure criteria: contact interrupted for $> 10 \mu\text{s}$). Increased values of vibration parameters may specify the limit at which damage should still not occur. → application guidelines

Wave form of coil energization

Voltage or current should be applied in rectangular wave form. If the coil energization is slowly ramped up or down, the → operate, release and transit times are enlarged; this may result in lower → electrical endurance. Relays with AC coils would run through a range in which the relay contacts buzz; at higher loads they would be subject to extreme wear with the high risk of destruction.

It is recommended to apply at least the nominal energizing quantity. At DC coil energization the ripple should not exceed 5%; if transformer and rectifier are used to operate the relay, an adequate smoothing capacitor has to be provided.

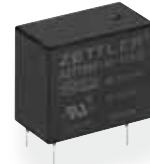
The use of a high frequently pulsed DC voltage has to be investigated carefully in the relevant practical application.

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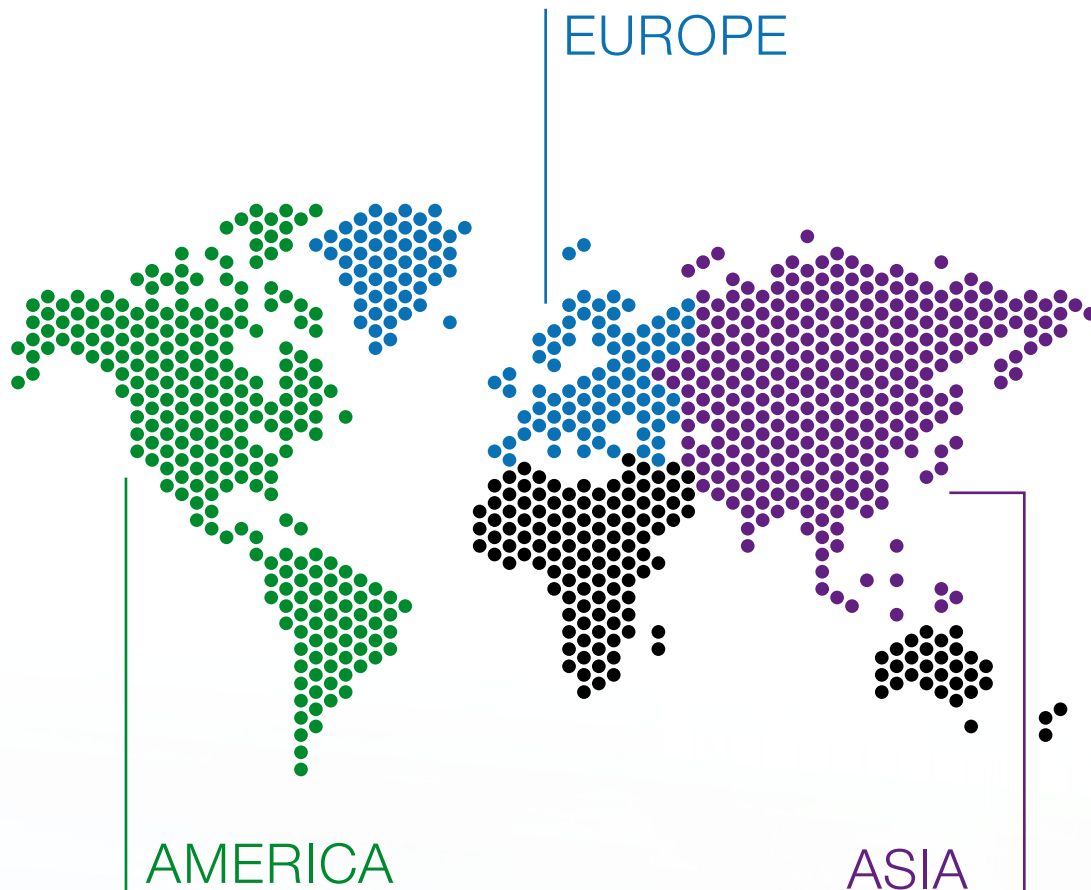
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RELAY SELECTION GUIDE

American Zettler, Inc.

Find complete specifications at www.azettler.com

Revised: 11/12/2015

Selection Guide

Terminal			Coil			Switching Current																
P C B	S M T	Q C	D C	A C	Latch	Relay Series	Contact	Page	5	10	15	20	25	30	40	50		80	100			
						AZ9571	1C	2											1A	S I G N A L		
						AZ957	1C	2											1A			
						AZ850	2C	2											2A			
						AZ851	2C	3											2A			
						AZ8512	2C	3											2A			
						AZ830	2C	3											2A			
						AZ954X/Y	2C	3											2A			
						AZ822	2C	4											2A			
						AZ8222	2C	4											2A			
						AZ826	2C	4											2A			
						AZ8521	2C	5											2A			
						AZ8462	2C	5											2A			
						AZ832	2C	5											3A			
						AZ921	1A	6											5A		R E L A Y S	
						AZ9201	1A	6											5A			
						AZ6951	1A	6											5A			
						AZ6991	1A, 1C	7											6A			
						AZ946	2C	7											6A			
						AZ881	1A,2A,1A+1B	7											8A			
						AZ888	1A,2A,1A+1B	7											8A			
						AZ673	1A, 1C	8											10A			
						AZ767	1C	8											10A			
						AZ6975	1A, 1C	8											10A			
						AZ742	2A, 2C	9											10A	M I D - R A N G E		
						AZ743	2A, 2B, 2C	9											10A			
						AZ9405	1A, 1C	9											10A			
						AZ6962	1C	9											10A			
						AZ7671	1A, 1C	10											10A			
						AZ7705	1A	10											10A			
						AZ7709	1A	10											10A			
						AZ770	1A, 1C	11											10A			
						AZ880	1A, 2A, 1A+1B	11											10A			
						AZ8A	1A, 1C	11											10A			
						AZ9375	1A	11											10A			
						AZ733	2A, 2C	12											12A		P O W E R	
						AZ733W/WC	2A, 2C	12											10A			
						AZ7335	2A, 2C	12											8A			
						AZ761	1A, 1B, 1C	13											12A			
						AZ763	1A, 1C	13											12A			
						AZ943	1A, 1C	13											15A			
						AZ943S	1A, 1C	13											15A			
						AZ576	1A,1B,1C	14											16A			
						AZ762	1A,1B,1C	14											16A			
						AZ762H	1A,1B,1C	14											16A			
						AZ742H	1A, 1C	15											16A			
						AZ932	1A, 1C	15											15A			
						AZ755	1A,1B,1C	15											20A	R E L A Y S		
						AZ7555	1A, 1C	15											20A			
						AZ756	1A	16											20A			
						AZ757	1A	16											20A			
						AZ762F	1A, 1B	16											20A			
						AZ9321	1A, 1C	17											20A			
						GP10	1A,1B,1C	17											20A			







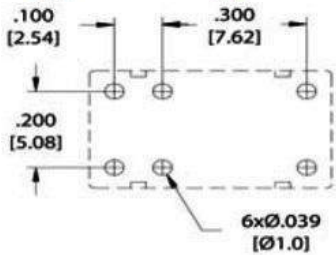
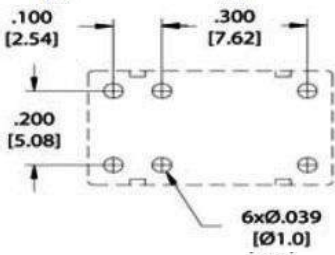
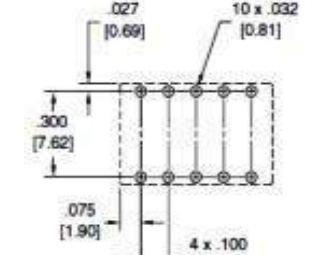
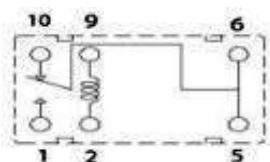
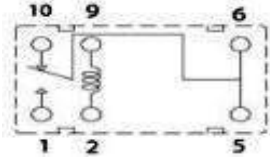
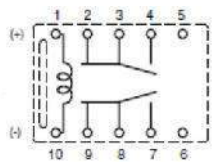
Selection Guide


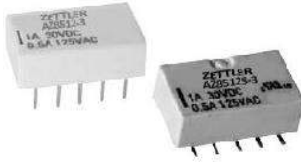






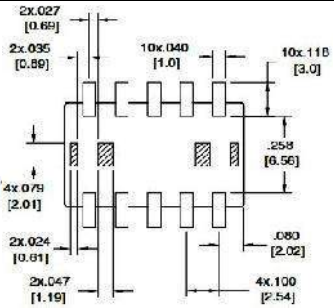
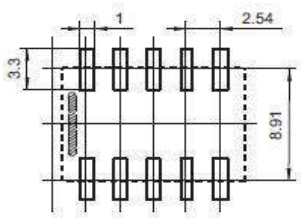
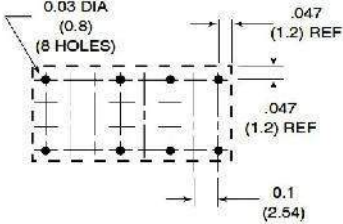
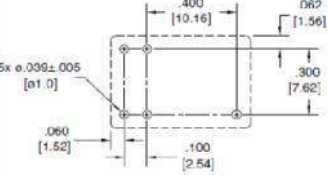
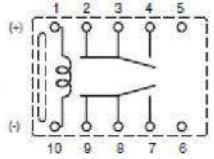
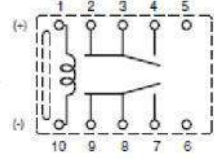
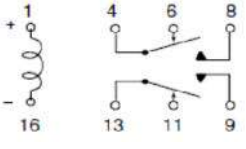
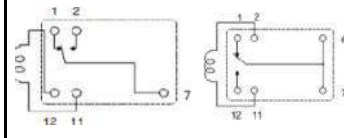
Terminal			Coil			Switching Current														
P C B	S M T	Q C	D C	A C	Latch	Relay Series	Contact	Page	5	10	15	20	25	30	40	50		80	100	
						AZ7695	1A	17						25A						H
						AZ2200	1A,1B,1C	17							30A					I
						AZ2270	1A,1B,1C	18							30A					G
						AZ2280	1A,1B,1C	18							30A					H
						AZ2310	1A	18							30A					P
						AZ2700	1X, 2X	19							30A					O
						AZ2701	1X, 2X	19							30A					W
						AZ2702	1X, 2X	19							30A					E
						AZ2703	1X, 2X	19							30A					R
						AZ2704	1X, 2X	20							30A					R
						AZ2705	1X, 2X	20							30A					E
						AZ2800	2A, 2C	20							30A					L
						AZ2850	2A, 2C	21							30A					A
						AZ2150	1A,1B,1C	21								40A				Y
						AZ2100	1A,1B,1C	21								40A				S
						AZ2110/AZ2120	1A,1B,1C	21								40A				
						AZ850/AZ851	2C	22	1A											
						AZ8521	2C	22	2A											
						AZ852	2C	22	2A											
						AZ880	1A,2A,1A+1B	23			10A									
						AZ832P	2C	23	3A											
						AZ881	1A,2A,1A+1B	23			8A									
						AZ888	1A,1C,1A+1B	24			8A									
						AZ762P	1A, 1B, 1C	24					20A							
						AZ21501P	1A, 1B, 1C	24								50A				
						AZ2500	1A	25								60A				
						AZ2501	1A, 1C	25								50A				
						AZ2505	1A, 1B	25									120A			
						AZ420	2C,4C,6C	26		5A										
						AZ164	1C,2C,3C,4C	26				15A								
						AZ1641	1C,2C,3C,4C	26					20A							
						AZ165	1C,2C,3C,4C	27					15A							
						AZ1651	1C,2C,3C,4C	27						20A						
						AZ166	1C,2C,3C,4C	27					15A							
						AZ1661	1C,2C,3C,4C	27						20A						
						AZKUP	1C,2C,3C	28									31A			
						AZ733W/WC	2A, 2C	28			10A									
						AZSR126	1A	28					13A							
						AZ2150W	1A	29							30A					
						AZ2704	1X, 2X	29							30A					
						AZDC	1A, 1X	29												
						AZSR235/AZ250	1A	29												
																	50A			







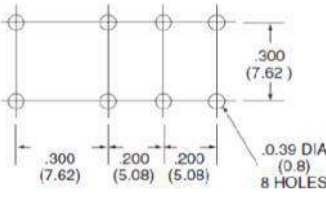
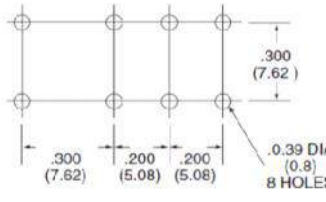
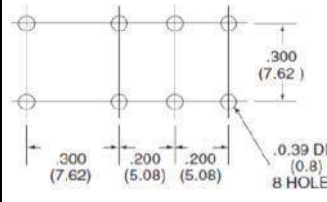
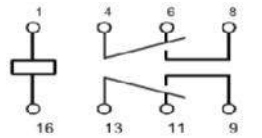
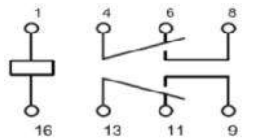
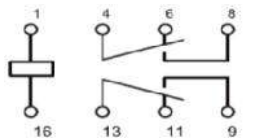
Selection Guide

Terminal			Coil			Switching Current														
P C B	S M T	Q C	D C	A C	Latch	Relay Series	Contact	Page	5	10	15	20	25	30	40	50		80	100	
						AZ934	1C, 2C	30							25A					A U T O M O T I V E R E L A Y S
						AZ935	1C, 2C	30							25A					
						AZ9471	1C	30							25A					
						AZ975/AZ976	1A,1B,1C	31									60A			
						AZ989	1A, 2C	31						25A						
						AZ987	1A,1C,2A,2C	31								30A				
						AZ992	1A, 1C	31										100A		
						AZ977	1A, 1C	32						20A						
						AZ984	1A, 1C	32						20A						
						AZ9841	1A, 1C	32								40A				
						AZ988	1A, 1C	33								30A				
						AZ973	1A,1C	33								40A				
						AZ974	1A, 1C	33								40A				
						AZ9731F	1A, 1C	33								30A				
						AZ9731T	1A, 1C	34									50A			
						AZ986	1A, 1C	34								40A				
						AZ970/AZ971	1A,1B,1C	34									45A			
						AZ9801	1A	35									70A			
						AZ979	1A,1B,1C	35										80A		
						AZ980	1A,1B,1C	35										80A		
						AZ983	1A,1B,1C	35										80A		
						AZPRD	1A,1C,1X,1Y, 2A,2C	36									50A			C O N T A C T O R S
						XMCO	1-3 Poles N.O.	36											90 FLA	

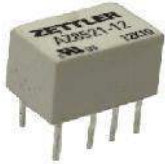





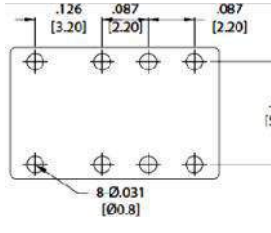
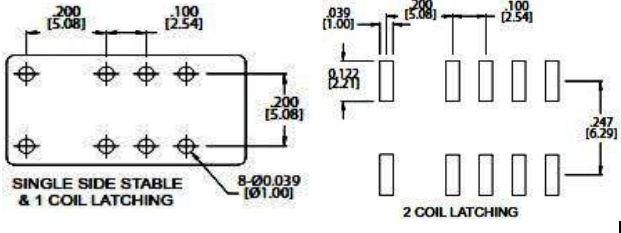
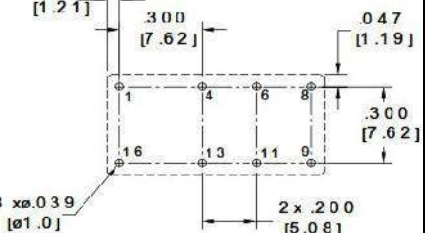
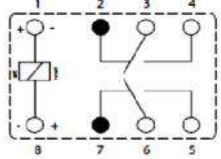
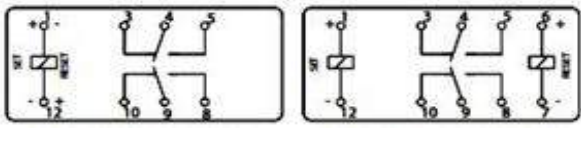
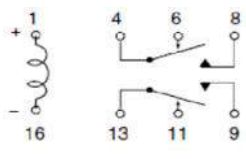
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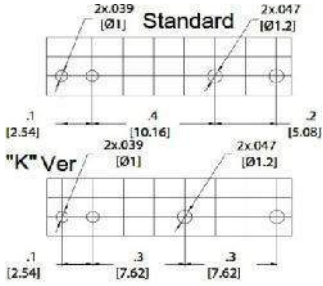
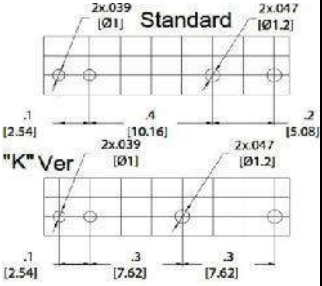
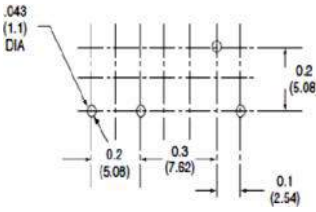
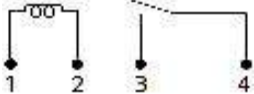
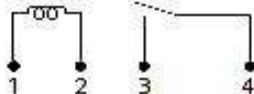
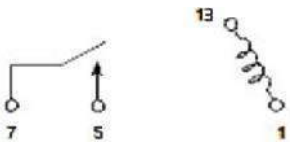
Signal Printed Circuit Board Relays				
SERIES	AZ9571	AZ957	AZ850	
				
Dimensions LxWxH mm	12.5 x 7.5 x 10	12.8 x 7.8 x 10.3	14 x 9 x 5	
FEATURES	Subminiature size High sensitivity 150mW Meets FCC part 68.302 Meets FCC part 68.304	Subminiature size High sensitivity 150mW Meets FCC part 68.302 Meets FCC part 68.304	Fits 10 pin IC socket Meets FCC part 68.302 Monostable or bistable	
Approvals				
Contact Arrangement	SPDT	SPDT	DPDT bifurcated	
Contact Material	Ag (Au clad)	Ag with Au plating	AgPd (Au clad) AgNi (Au clad)	
Max Switching Power	30W / 62.5VA	30W / 62.5VA	60W / 62.5VA	
Max Switching Voltage	60 VDC / 125VAC	60 VDC / 125VAC	220VDC / 250VAC	
Max Switching Current	1A	1A	2A	
Safety Approved Contact Ratings	0.5A@125VAC 1A@30VDC 0.3A@60VDC	0.5A@125VAC 1A@30VDC 0.3A@60VDC	0.5A@125VAC 2A@30VDC	
Coil Voltages	DC: 3 ~ 24	DC: 1.5 ~ 24	DC: 3 ~ 24	
Nominal Coil Power	0.15W, 0.2W	0.15W, 0.2W	0.1W, 0.14W	
Insulation Resistance	100M (at 500VDC)	100M (at 500VDC)	1000M (at 500VDC)	
Dielectric Strength	Contact to Coil	1000VAC 1 min	1250VAC 1 min	1000VAC 1 min
	Open Contacts	400VAC 1 min	400VAC 1 min	1000VAC 1 min
Ambient Temperature	-40°C ~ 70°C	-40°C ~ 70°C	-40°C ~ 70°C	
Mounting Layout (Bottom View) (mm)				
Wiring Diagram (Bottom View)				

Signal Printed Circuit Board Relays			
AZ851	AZ8512	AZ830	AZ954X/Y
			
14.2 x 9.3 x 6.2	14 x 9 x 5.4	20 x 9.9 x 9.9	15.8 x 10.8 x 11.8
SMT with "L" terminal Meets FCC part 68.302 Monostable or bistable	THT or SMT ("L" terminal) Meets FCC part 68.302 Monostable or bistable	Polarized coil Meets FCC part 68.302 Meets FCC part 68.304 Monostable or bistable	Subminiature size Extremely low cost Sensitivite coil options
			
DPDT bifurcated	DPDT	DPDT bifurcated	SPDT
AgPd (Au clad) AgNi (Au clad)	AgNi with Au plating	Ag Alloy, Au clad	AgNi with Au plating
60W / 62.5VA	30W / 62.5VA	60W / 125VA	30W / 250VA
220VDC / 250VAC	110VDC / 125VAC	250VDC / 300VAC	150VDC / 300VAC
2A	2A	2A	2A
0.5A@125VAC 2A@30VDC	0.5A@125VAC 2A@30VDC	1A@120VAC 2A@30VDC	2A@125VAC 1A@240VAC 1A@30VDC
DC: 3 ~ 48	DC: 1.5 ~ 24	DC: 3 ~ 48	DC: 3 ~ 24
0.14W	0.1W, 0.14W, 0.2W	0.2W, 0.4W	0.2W, 0.45W
1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)	100M (at 500VDC)
1000VAC 1 min	1000VAC 1 min	1500VAC 1 min	1250VAC 1 min
1000VAC 1 min	750VAC 1 min	1000VAC 1 min	750VAC 1 min
-40°C ~ 85°C	-40°C ~ 70°C	-40°C ~ 85°C	-25°C ~ 95°C
			
			









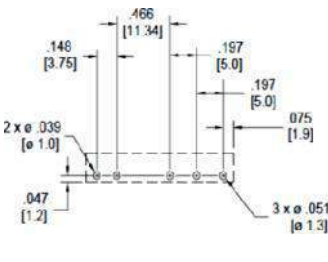
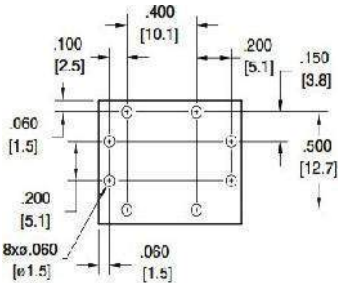
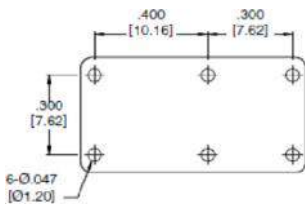
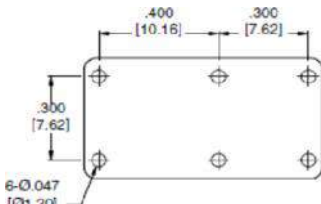
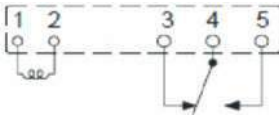
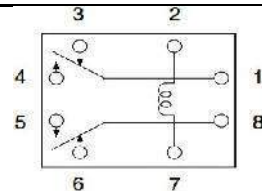
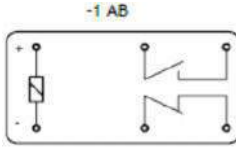
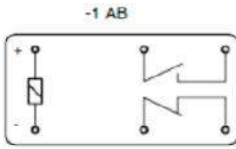
Signal Printed Circuit Board Relays				
SERIES	AZ822	AZ8222	AZ826	
				
Dimensions LxWxH mm	20 x 9.8 x 12	20.2 x 10 x 11.5	20.2 x 9.9 x 12	
FEATURES	Fits 16 pin IC socket Meets FCC part 68.302 Meets FCC part 68.304	Fits 16 pin IC socket Meets FCC part 68.302 Meets FCC part 68.304 Monostable or bistable	Bifurcated crossbar contacts Ultra-sensitive coil	
Approvals				
Contact Arrangement	DPDT bifurcated	DPDT bifurcated	DPDT	
Contact Material	AgPd (Au clad) AgNi (Au clad)	AgNi with Au plating	Ag (Au clad)	
Max Switching Power	60W / 125VA	60W / 125VA	60W / 125VA	
Max Switching Voltage	220VDC / 250VAC	120VDC / 240VAC	150VDC / 220VAC	
Max Switching Current	2A	2A	2A	
Safety Approved Contact Ratings	0.5A@120VAC 1A@24VDC	1A@125VAC 2A@30VDC	0.5A@125VAC 2A@30VDC	
Coil Voltages	DC: 3 ~ 48	DC: 3 ~ 48	DC: 3 ~ 48	
Nominal Coil Power	0.15W, 0.2W	0.15W, 0.3W	0.15W, 0.2W, 0.36W	
Insulation Resistance	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)	
Dielectric Strength	Contact to Coil	1000VAC 1 min	1500VAC 1 min	1500VAC 1 min
	Open Contacts	1000VAC 1 min	1000VAC 1 min	500VAC 1 min
Ambient Temperature	-55°C ~ 90°C	-40°C ~ 85°C	-40°C ~ 85°C	
Mounting Layout (Bottom View) (mm)				
Wiring Diagram (Bottom View)				







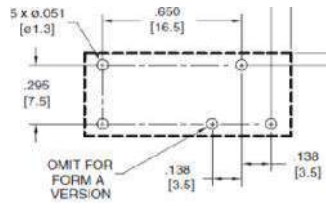
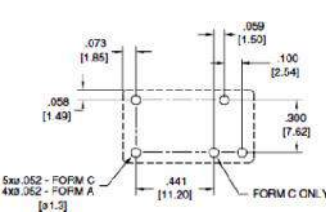
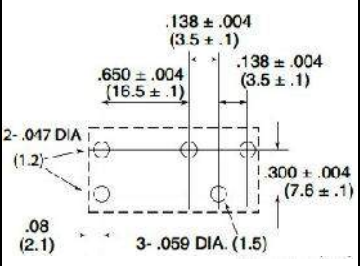
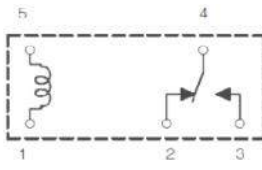
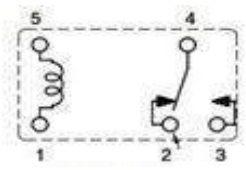
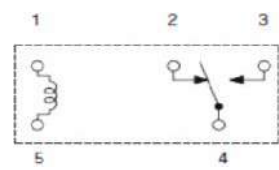
Signal Printed Circuit Board Relays

AZ8521	AZ8462	AZ832
		
10 x 6.5 x 5.4	15.2 x 7.7 x 9.2	20.2 x 10.2 x 10.7
Surge voltage up to 2.5kV SMT and DIP types available Low power consumption Monostable or bistable	Meets EN60950/EN41003 Surge voltage to 2.5kV Meets FCC Part 68 and Telecordia Thru-hole or SMT	Fits 16 pin IC socket Meets FCC part 68.302 Meets FCC part 68.304 Monostable or bistable
		
DPDT	DPDT bifurcated	DPDT bifurcated
Ag alloy (Au clad)	AgNi with Au plating	Ag with Au plating
60W / 62.5VA	60W / 62.5VA	60W / 250VA
220VDC / 250VAC	220VDC / 250VAC	250VDC / 250VAC
2A	2A	3A
0.5A@125VAC 2A@30VDC 0.5A@125VDC	0.5A@125VAC 2A@30VDC	2A@125VAC 2A@30VDC
DC: 1.5 ~ 24	DC: 1.5 ~ 48	DC: 3 ~ 48
0.1W, 0.14W	0.1W, 0.14W, 0.2W	0.15W - 0.7W
1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
1600VAC 1 min	1500VAC 1 min	1500VAC 1 min
1000VAC 1 min	1000VAC 1 min	1000VAC 1 min
-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C
		
		









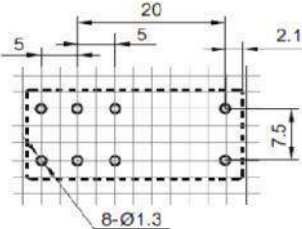
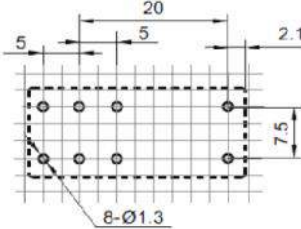
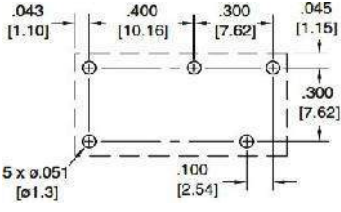
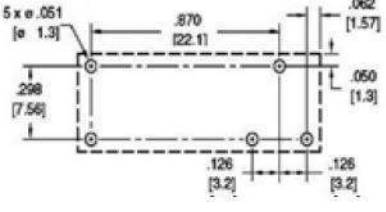
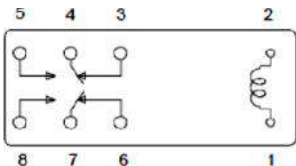
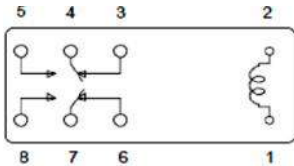
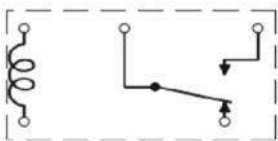

Mid Power relays				
SERIES	AZ921	AZ9201	AZ6951	
				
Dimensions LxWxH mm	20.3 x 5.3 x 12.8	20.3 x 5.3 x 12.8	17.5 x 6.4 x 12.4	
FEATURES	0.16 sq inch of PCB area 5.3mm wide SIP package 3kVrms contact / coil	High sensitivity Slim SIP package 2kVrms contact / coil	0.18 sq. in of PCB Only 6.40mm wide Dielectric strength 3kVrms	
Approvals				
Contact Arrangement	SPST-NO	SPST-NO	SPST-NO	
Contact Material	AgNi, AgSnO ₂ , Au available	Ag alloy with Au clad	AgSnO ₂ with Au plating	
Max Switching Power	150W / 1250VA	150W / 1250VA	150W / 1250VA	
Max Switching Voltage	150VDC / 250VAC	110VDC / 250VAC	30VDC / 250VAC	
Max Switching Current	5A	5A	5A	
Safety Approved Contact Ratings	5A@250VAC 5A@30VDC	5A@250VAC 5A@30VDC	5A@250VAC 5A@30VDC	
Coil Voltages	DC: 5 ~ 24	DC: 5 ~ 24	DC: 5 ~ 24	
Nominal Coil Power	0.12W	0.12W	0.2W	
Insulation Resistance	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)	
Dielectric Strength	Contact to Coil	3000VAC 1 min	2000VAC 1 min	3000VAC 1 min
	Open Contacts	1000VAC 1 min	1000VAC 1 min	750VAC 1 min
Ambient Temperature	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 70°C	
Mounting Layout (Bottom View) (mm)				
Wiring Diagram (Bottom View)				







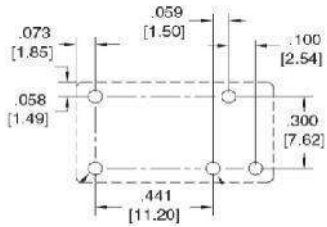
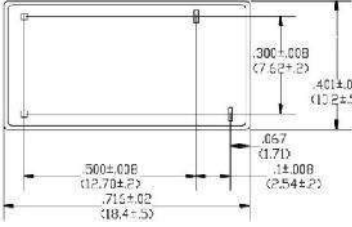
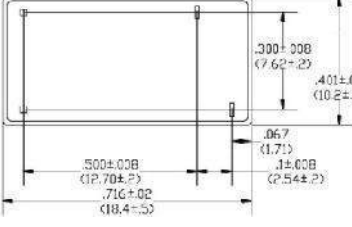
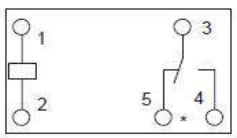


Mid Power relays









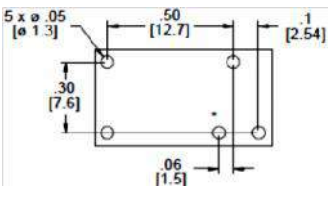
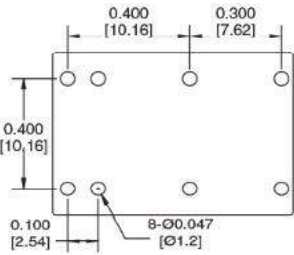
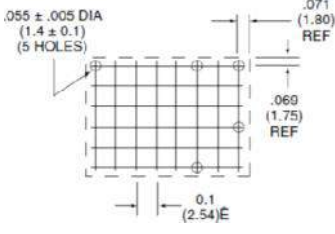
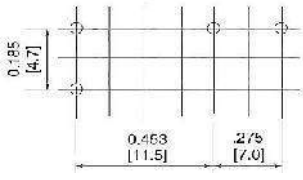
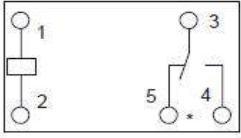
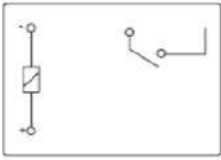
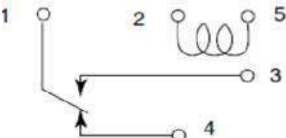

AZ6991	AZ946	AZ881	AZ888
			
28 x 5 x 15	21.7 x 16 x 16.5	20.2 x 11 x 10	20.2 x 11.3 x 11.5
0.22 sq inch of PCB area Only 5mm wide High sensitivity 4kVrms dielectric Isolation >8mm	Sub miniature size 2 form C arrangement Contacts rated 6A	Dielectric strength 3kVrms Single / dual coil latching Class F insulation avail.	Dielectric strength 3kVrms Single / dual coil latching Class F coil avail.
 VDE			
SPST-NO, SPDT	DPDT	SPST-NO, DPST-NO or NC	SPST-NO, DPST-NO or NC
AgNi, AgSn, Au plating available	AgCdO ₂ with Au plating	AgNi, Au plating available	AgSnO (Au plating optional)
180W / 1662VA	180W / 1385VA	150W / 2000VA	150W / 2000VA
150VDC / 400VAC	150VDC / 300VAC	150VDC / 380VAC	240VDC / 380VAC
6A	6A	8A	8A
8A@277VAC 6A@30VDC R300, B300 Pilot duty	5A@277VAC 6A@125VAC 5A@30VDC	8A@250VAC 5A@30VDC 1/6HP@250VAC	SPST: 8A@125/250VAC/30VDC DPST: 5A@125/250VAC/30VDC DPST (1A+1B): 5A@125/250VAC/30VDC All: B300; R150 Pilot Duty
DC: 3 ~ 60	DC: 3 ~ 48	DC: 3 ~ 24	DC: 3 ~ 24
0.17W	0.6W	0.15W, 0.3W	0.15W, 0.3W
100M (at 500VDC)	100M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
4000VAC 1 min	1000VAC 1 min	3000VAC 1 min	3000VAC 1 min
1000VAC 1 min	750VAC 1 min	1000VAC 1 min	1000VAC 1 min
-40°C ~ 85°C	-40°C ~ 70°C	-40°C ~ 70°C	-40°C ~ 85°C
			
			

Mid Power relays				
SERIES	AZ673	AZ767	AZ6975	
				
Dimensions LxWxH mm	24.5 x 10.5 x 25	18.8 x 10.6 x 15.6	29 x 13 x 25.9	
FEATURES	Dense PCB layout Withstands surges 10kV	Small footprint Low cost 10A switching	Dielectric strength 5kVrms Isolation spacing >8mm Class F insulation avail.	
Approvals	 TUV		 TUV	
Contact Arrangement	SPST-NO, SPDT	SPDT	SPST-NO, SPDT	
Contact Material	AgCdO ₂ , AgSnO ₂	AgCdO ₂ , AgNi	AgSnO ₂ , Au plating available	
Max Switching Power	300W / 2500VA	150W / 1250VA	300W / 2500VAC	
Max Switching Voltage	150VDC / 250VAC	150VDC / 380VAC	30VDC / 250VAC	
Max Switching Current	10A	10A	10A	
Safety Approved Contact Ratings	10A@250VAC 10A@30VDC 1/8HP@125VAC 1/4HP@250VAC TV-5@125VAC (SPST-NO)	10A@125VAC 5A@30VDC 300W@120VAC Tungsten 1/10HP@125VAC 1/16HP@250VAC	10A@250VAC 10A@30VDC	
Coil Voltages	DC: 5 ~ 48	DC: 3 ~ 48	DC: 3 ~ 48	
Nominal Coil Power	0.25W, 0.53W	0.2W, 0.45W	0.53W, 0.7W	
Insulation Resistance	100M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)	
Dielectric Strength	Contact to Coil	4000VAC 1 min	2500VAC 1 min	5000VAC 1 min
	Open Contacts	1000VAC 1 min	1000VAC 1 min	1000VAC 1 min
Ambient Temperature	-40°C ~ 80°C	-40°C ~ 105°C	-40°C ~ 110°C	
Mounting Layout (Bottom View) (mm)				
Wiring Diagram (Bottom View)				

Mid Power relays









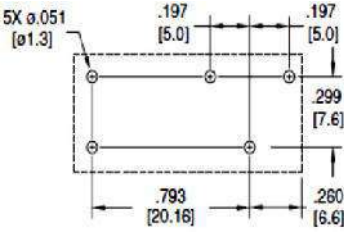
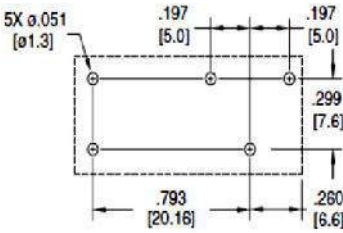
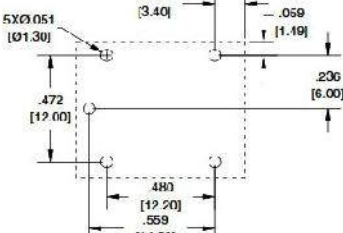
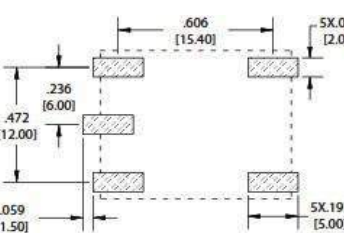
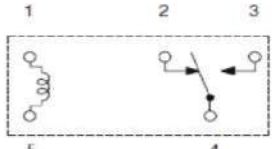
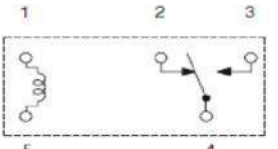
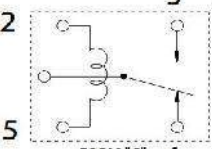
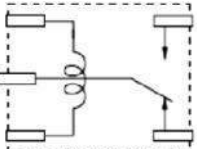
AZ742	AZ743	AZ9405	AZ6962
			
29 x 12.7 x 15.7	29.5 x 13.2 x 16.2	19.8 x 9.9 x 15.2	28.5 x 10.1 x 12.5
(PTI/CTI) 250 Dielectric strength 5kVrms Low height: 15.7mm AC and DC coils Isolation spacing >10mm	Dielectric strength 5kVrms 10A switching each pole Isolation spacing >10mm AC and DC coils Class F insulation avail.	Dielectric strength 4kVrms 10A switching Class F insulation avail.	High sensitivity, 0.23W Dielectric strength 5kVrms Proof tracking index (PTI/CTI) 250
 VDE	 VDE	 TUV	 VDE
DPST-NO, DPDT	DPST-NO or NC, DPDT	SPST-NO, SPDT	SPDT
AgNi, AgSnO ₂ , Au plating available	AgCdO ₂ , AgSnO ₂ , AgNi	AgSnO ₂	AgSnO ₂ , Au plating available
2 x 240W / 2000VA	240W / 2500VA	150W / 1400VA	240W / 2500VA
300VDC / 400VAC	150VDC / 400VAC	30VDC / 277VAC	240VDC / 440VAC
2 x 10A	10A	10A	10A
10A@250VAC 8A@250VAC	10A@250VAC 8A@277VAC 1/2HP@250VAC (NO) 1/4HP@125VAC	10A@125VAC 5A@277VAC 5A@30VDC 1/10HP@125/250VAC	10A@250VAC 10A@30VDC
DC: 3 ~ 110, AC: 12 ~ 240	DC: 5 ~ 110, AC: 24 ~ 230	DC: 3 ~ 48	DC: 5 ~ 60
0.4W, 0.75VA	0.4W, 0.43VA	0.20W, 0.40W	0.23W
10 M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
5000VAC 1 min	5000VAC 1 min	4000VAC 1 min	5000VAC 1 min
1000VAC 1 min	1000VAC 1 min	1000VAC 1 min	1000VAC 1 min
-40°C ~ 85°C	-40°C ~ 100°C	-40°C ~ 85°C	-40°C ~ 85°C
			
			







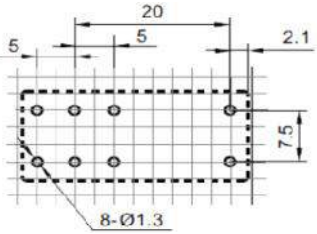
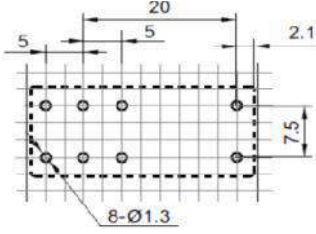
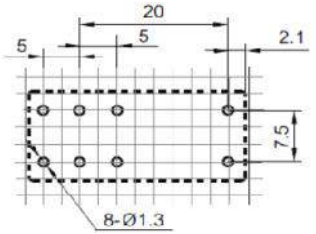
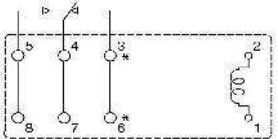
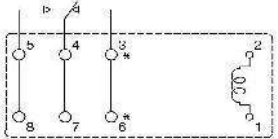
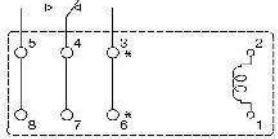
Mid Power relays			
SERIES	AZ7671	AZ7705	AZ7709
			
Dimensions LxWxH mm	18.8 x 10.6 x 15.6	18.2 x 10.2 x 14.7	18.4 x 10.2 x 15.2
FEATURES	Small footprint Low cost 10A switching	Dielectric strength 4kVrms 10kVrms surge withstand Small footprint 10A switching Class F insulation avail.	Dielectric strength 4kVrms Multiple contact types Standard and sensitive coils Small footprint 10A switching
Approvals			
Contact Arrangement	SPST-NO, SPDT	SPST-NO	SPST-NO
Contact Material	AgCdO ₂	Ag alloy, AgCdO ₂	AgCdO, AgSnO ₂ , Ag alloy
Max Switching Power	150W / 1250VA	150W / 1250VA	150W / 1250VA, 300W / 2500VA
Max Switching Voltage	30VDC / 277VAC	30VDC / 265VAC	30VDC / 250VAC
Max Switching Current	10A	10A	10A
Safety Approved Contact Ratings	10A@125VAC 5A@28VDC 1/4HP@120/240/277VAC TV-5@120VAC C150@120VAC	10A@250VAC 10A@30VDC 1/6HP@125/250VAC	Std: 5A@250VAC/30VDC 1/6HP@125/250VAC T: 10A@250VAC/30VDC 1/6HP@125/250VAC
Coil Voltages	DC: 3 ~ 24	DC: 3 ~ 48	DC: 3 ~ 24
Nominal Coil Power	0.45W	0.20W, 0.45W	0.20W, 0.45W
Insulation Resistance	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
Dielectric	Contact to Coil 4000VAC 1 min	4000VAC 1 min	4000VAC 1 min
Strength	Open Contacts 1000VAC 1 min	750VAC 1 min	1000VAC 1 min
Ambient Temperature	-40°C ~ 70°C	-30°C ~ 105°C	-30°C ~ 80°C
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			

Mid Power relays			
AZ770	AZ880	AZ8A	AZ9375
			
17.9 x 10.4 x 12.6	20 x 15 x 10.2	21.3 x 16.2 x 14.4	20.4 x 7 x 15
Dielectric strength 5kVrms 8mm creepage / clearance 10A switching / 20A inrush Class F insulation standard	Dielectric strength 4kVrms Single and dual latching 10A switching	Subminiature size Epoxy sealed High sensitivity	Dielectric strength 4kVrms Extremely small footprint Thin profile (7mm) Class F Insulation avail.
 VDE			 TUV
SPST-NO, SPDT	SPST-NO, DPST-NO or NC	SPST-NO, SPDT	SPST-NO
AgNi, AgSnO ₂ , Au available	AgNi, AgSnO ₂ , Au available	Ag alloy	AgNi
150W / 1250VA	300W / 2500VA	300W / 2400VA	150W / 1250VA
30VDC / 250VAC	150VDC / 380VAC	150VDC / 300VAC	30VDC / 277VAC
10A	10A	10A	10A
10A@250VAC 15A@120VAC 1/8HP@125/250VAC TV-2@120VAC	10A@250VAC 8A@30VDC 1/3HP@250VAC 1/4HP@125VAC B300 Pilot duty	10A@240VAC 6A@300VAC 6A@30VDC	10A@125VAC 10A@30VDC 5A@250VAC 1/10HP@250VAC
DC: 3 ~ 48	DC: 3 ~ 24	DC: 5 ~ 48	DC: 3 ~ 24
0.20W, 0.24W, 0.45W	0.20W, 0.28W	0.33W, 0.45W	0.20W
1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
5000VAC 1 min	4000VAC 1 min	2500VAC 1 min	4000VAC 1 min
1000VAC 1 min	1000VAC 1 min	750VAC 1 min	750VAC 1 min
-40°C ~ 85°C	-40°C ~ 70°C	-55°C ~ 115°C	-40°C ~ 90°C
			
			









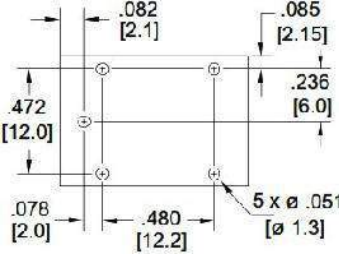
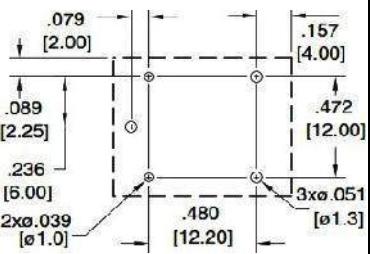
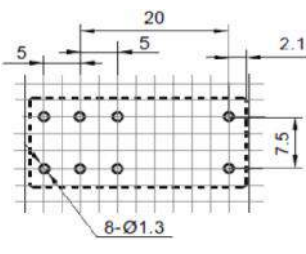
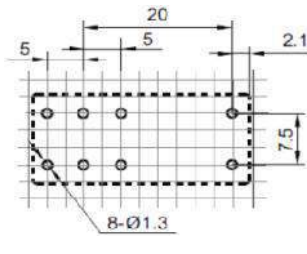
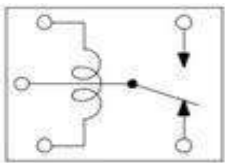
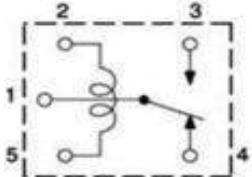
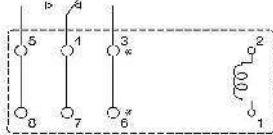
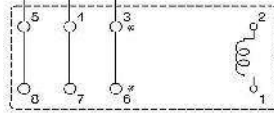
Mid Power relays			
SERIES	AZ733	AZ733W/AZ733WC	AZ7335
			
Dimensions LxWxH mm	29 x 13 x 25.9	29.0 x 13 x 25.9	29.2 x 12.8 x 20.6
FEATURES	Dielectric strength 5kVrms 12A switching Isolation spacing >8mm	Dielectric strength 5kVrms Wide gap: 1.5mm or 2mm 10A switching Class F insulation avail.	Low cost Dielectric strength 5kVrms Standard / sensitive coils 10kVrms surge withstand Class F insulation avail.
Approvals	 TUV	 TUV	 TUV
Contact Arrangement	DPST-NO, DPDT	DPST-NO, DPDT	DPST-NO, DPDT
Contact Material	AgCdO, AgSnO ₂ , AgNi, Au plating available	AgCdO, AgSnO ₂ , AgNi, Au available	AgSnO ₂
Max Switching Power	300W / 2500VA	300W / 2500VA	240W / 2400VA
Max Switching Voltage	150VDC / 380VAC	150VDC / 400VAC	30VDC / 250VAC
Max Switching Current	12A	10A	8A
Safety Approved Contact Ratings	12A@277VAC 10A@30VDC 1/4HP@240VAC 1/8HP@120VAC TV-3@125VAC	10A@250VAC/30VDC 10A@250VAC gen use TV-3@125VAC	8A@250VAC/30VDC (NO) 4A@250VAC/30VDC (NC) TUV: 16A (NO) / 8A (NC) 250VAC / 30VDC
Coil Voltages	DC: 3 ~ 110	DC: 3 ~ 60	DC: 3 ~ 48
Nominal Coil Power	0.53W	0.80W	0.53W, 0.7W
Insulation Resistance	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
Dielectric Strength	Contact to Coil	5000VAC 1 min	5000VAC 1 min
	Open Contacts	1000VAC 1 min	1000VAC 1 min
Ambient Temperature	-40°C ~ 90°C	-40°C ~ 80°C	-40°C ~ 85°C
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			







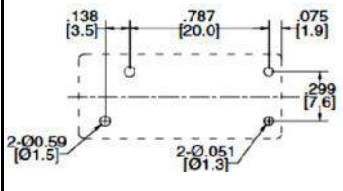
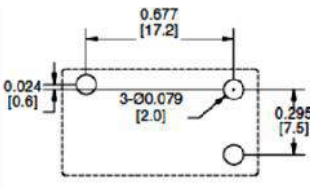
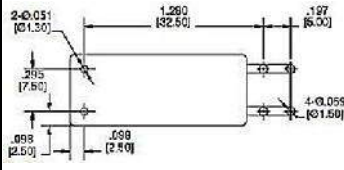
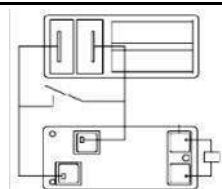
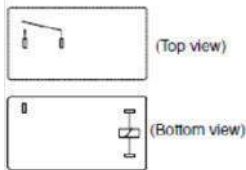

Mid Power relays



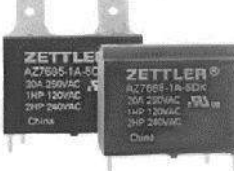





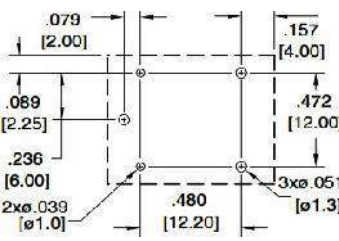
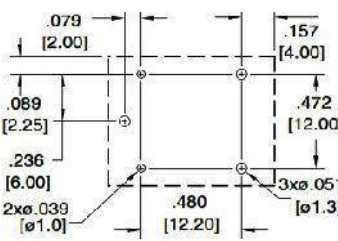
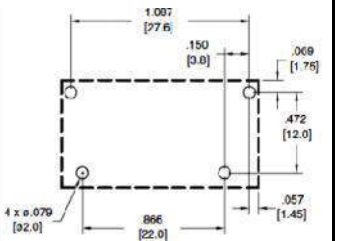
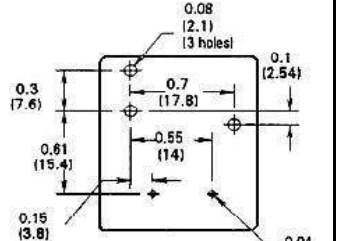
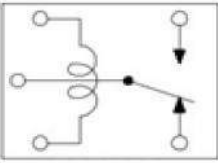
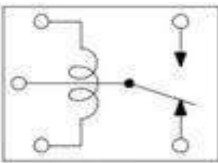
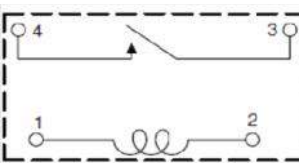
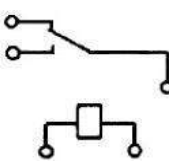
AZ761	AZ763	AZ943	AZ943S
			
29.5 x 13.2 x 16.2	29 x 15.7 x 12.7	19.3 x 15.5 x 16	19.3 x 15.8 x 15.3
Dielectric strength 5kVrms Standard / sensitive coils 12A switching Class F insulation avail. 3.5mm or 5.0mm pins	Dielectric strength 5kVrms 12A switching AC and DC coils	Low profile package 15A switching Class F insulation avail.	SMT package 15A switching Class F insulation avail.
 VDE	 VDE	 TUV	 TUV
SPST-NO or NC, SPDT	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, SPDT
AgCdO, AgSnO ₂ , AgNi, Au plating available	AgNi, Au plating available	AgSnO ₂ , Au available	AgSnO ₂ , Au available
360W / 3324VA	360W / 3000VA	210W / 2770VA	210W / 2770VA
150VDC / 400VAC	300VDC / 400VAC	30VDC / 300VAC	30VDC / 300VAC
12A	12A	15A	15A
12A@277VAC 1/2HP@250VAC 1/2HP@120VAC 1/3HP@125VAC R300, B300 Pilot duty	12A@250VAC	15A@125VAC 10A@277VAC TV-5 1/2HP@125VAC	15A@125VAC 10A@277VAC TV-5 1/2HP@125VAC
DC: 5 ~ 110, AC: 24 ~ 240	DC: 3 ~ 110, AC: 12 ~ 240	DC: 5 ~ 48	DC: 5 ~ 48
0.25W, 0.40W / 0.75VA	0.40W / 0.75VA	0.36W	0.36W
1000M (at 500VDC)	1000M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)
5000VAC 1 min	5000VAC 1 min	1500VAC 1 min	1500VAC 1 min
1000VAC 1 min	1000VAC 1 min	1000VAC 1 min	1000VAC 1 min
-40°C ~ 105°C	-40°C ~ 90°C	-40°C ~ 110°C	-40°C ~ 110°C
			
			







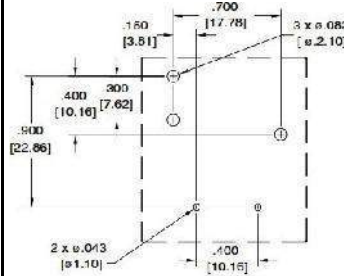
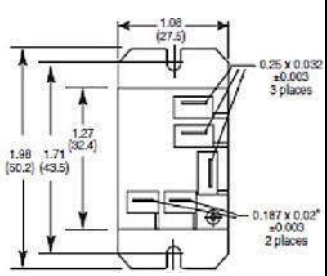
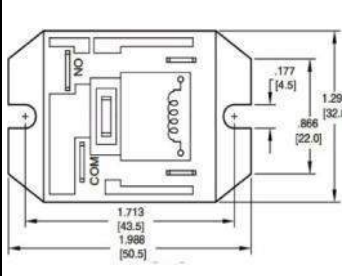
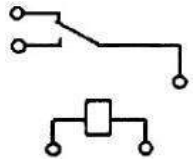
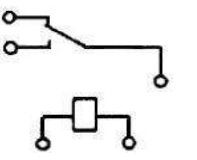
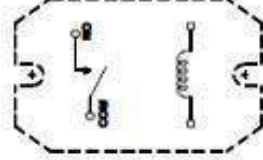
Mid Power relays			
SERIES	AZ576	AZ762	AZ762H
			
Dimensions LxWxH mm	29.5 x 13.2 x 16.2	29.5 x 13.2 x 16.2	29 x 12.7 x 15.7
FEATURES	20A switching, 50K cycles High inrush to 120A 105°C operating temp. Class F insulation std.	Dielectric strength 5kVrms AC and DC coils High inrush to 80A Isolation spacing >10mm	105°C operating temp. Dielectric strength 5kVrms DC coil only Isolation spacing >10mm
Approvals	 TUV	 VDE	 VDE
Contact Arrangement	SPST-NO or NC, SPDT	SPST-NO or NC, SPDT	SPST-NO or NC, SPDT
Contact Material	Ag alloy	AgCdO, AgSnO ₂ , AgNi, Au	AgNi, Au
Max Switching Power	510W / 5540VA	480W / 4432VA	4000VA
Max Switching Voltage	30VDC / 277VAC	150VDC / 400VAC	125VDC / 440VAC
Max Switching Current	20A	16A	16A
Safety Approved Contact Ratings	20A@277VAC 17A@277VAC/30VDC 1HP@120/240/480VAC 5A@120/277VAC pilot duty 16A@240VAC gen purpose	16A@277VAC 1HP@250VAC 1/2HP@125VAC TV-5@125VAC	16A@277VAC
Coil Voltages	DC: 5 ~ 110	DC: 5 ~ 110, AC: 24 ~ 230	DC: 5 ~ 60
Nominal Coil Power	0.40W	0.40W / 0.75VA	0.25W, 0.40W
Insulation Resistance	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
Dielectric Strength	Contact to Coil	5000VAC 1 min	5000VAC 1 min
	Open Contacts	1000VAC 1 min	1000VAC 1 min
Ambient Temperature	-40°C ~ 105°C	-40°C ~ 100°C	-40°C ~ 105°C
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			

Mid Power relays









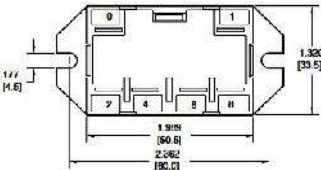
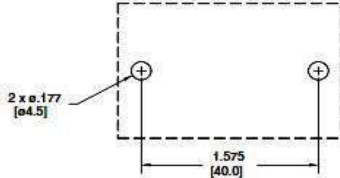
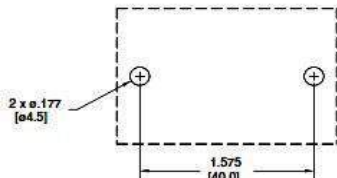
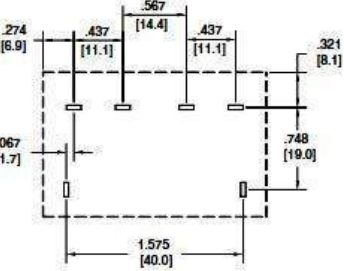
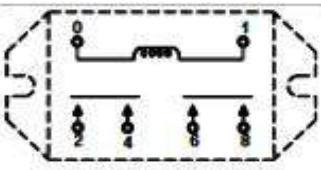
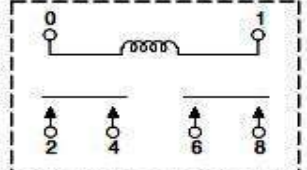
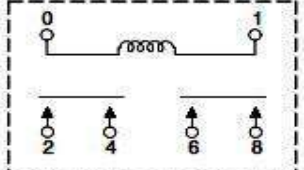
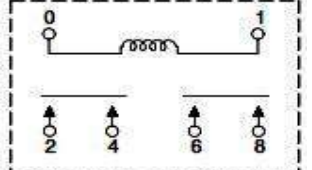
AZ942H	AZ932	AZ755	AZ7555
			
22 X 16.3 X 16.5	20.2 x 16.5 x 20.2	29 x 13 x 26.8	29.2 x 12.8 x 20.6
16A ratings @ 85°C IEEE 587 6kV surge	Ideal for photocontrols Meets ANSI C136.10 1000W Tungsten capable NC contact ballast ratings Class F insulation avail.	Dielectric strength 5kVrms Isolation spacing >8mm Class F insulation avail.	Super sensitive 120mW coil 20A switching Dielectric strength 5kVrms Isolation spacing >5mm Class F insulation avail.
 VDE		 TUV	 TUV
SPST-NO, SPDT	SPST-NO, -NC, SPDT	SPST-NO or NC, SPDT	SPST-NO, SPDT
AgCdO, AgSnO ₂	AgSnO ₂ (Au plating optional)	AgCdO, AgSnO ₂	AgSnO ₂
280W / 4000VA	210W / 2400VA	480W / 5540VA	480W / 4000VA
150VDC / 300VAC	30VDC / 300VAC	150VDC / 380VAC	30VDC / 250VAC
16A	15A AC, 7A DC	20A	20A
16A@250VAC 10A@277VAC 1/2HP@125/250VAC	SPST-NO: 15A@125VAC SPST-NC: 1000VA ballast 8A@120VAC/3A@277VAC EB 1800VA MB (120/277VAC) SPDT: 10A@120VAC	20A@277VAC 20A@24VDC 1HP@240VAC TV-8@120VAC	Std/sens: 20A@125/250VAC 1/6HP@250VAC Sup Sens: 15A@277VAC/30VDC 480VA@277VAC pilot/std ballast 600W@120VAC Tungsten
DC: 3 ~ 48	DC: 3 ~ 48	DC: 5 ~ 110	DC: 3 ~ 110
0.36W	0.36W	0.52W	0.12W, 0.53W, 0.72W
100M (at 500VDC)	100M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
3000VAC 1 min	1500VAC 1 min	5000VAC 1 min	5000VAC 1 min
1000VAC 1 min	932	1000VAC 1 min	1000VAC 1 min
-40°C ~ 85°C	-40°C ~ 80°C	-40°C ~ 90°C	-40°C ~ 110°C
			
			







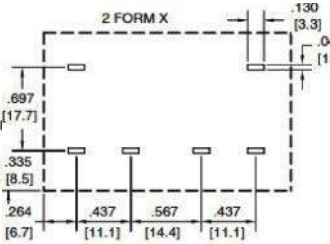
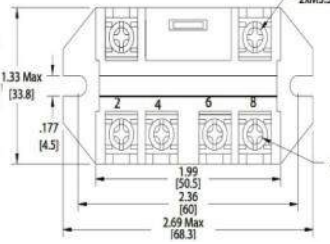
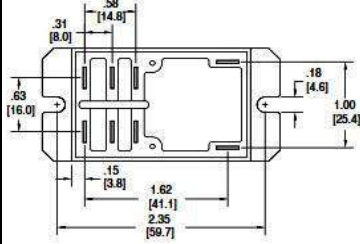
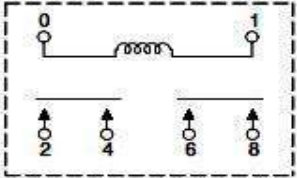
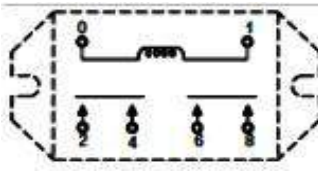
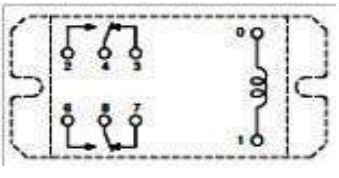
Mid Power relays			
SERIES	AZ756	AZ757	AZ762F
			
Dimensions LxWxH mm	29.4 x 13 x 24.6	22.8 x 12.3 x 24.4	29 x 13 x 16
FEATURES	Dielectric strength 5kVrms Isolation spacing >8mm	Dielectric strength 5kVrms 10kV surge	Dielectric strength 5kVrms 10kV surge High temperature 125°C
Approvals	 TUV		 VDE
Contact Arrangement	SPST-NO	SPST-NO	SPST-NO or NC
Contact Material	AgSnO ₂	AgSnO ₂	AgNi, Au available
Max Switching Power	480W / 4000VA	480W / 5000VA	600W / 5540VA
Max Switching Voltage	150VDC / 277VAC	150VDC / 400VAC	150VDC / 440VAC
Max Switching Current	20A	20A	20A
Safety Approved Contact Ratings	20A@125VAC 16A@250VAC 16A@30VDC	20A@250VAC 16A@30VDC 1.5HP@250VAC	20A@277VAC 12A@400VAC
Coil Voltages	DC: 5 ~ 48	DC: 5 ~ 24	DC: 5 ~ 60
Nominal Coil Power	0.53W	0.50W	0.40W
Insulation Resistance	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
Dielectric Strength	Contact to Coil	5000VAC 1 min	5000VAC 1 min
	Open Contacts	1000VAC 1 min	1000VAC 1 min
Ambient Temperature	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 125°C
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			

Mid Power relays		High Power relays	
AZ9321	GP10	AZ7695	AZ2200
			
21 x 16 x 20.3	19.5 x 16 x 17.1	30.1 x 15.7 x 23.3	32.4 x 27.5 x 27.8
High inrush design 20A contact rating IEEE 587 6kV surge Class F insulation avail.	20A contact rating TV-8 rating	80A inrush current QC and PCB terminals Class F insulation avail.	Forms A, B or C available AC and DC coils available Class F insulation std.
 TUV	 TUV	 TUV	 VDE
SPST-NO, SPDT	SPST-NO or NC, SPDT	SPST-NO	SPST-NO or NC, SPDT
AgSnO ₂ , AgNi, Au available	AgSnO ₂	AgSnO ₂	AgCdO, AgSnO ₂
480W / 4709VA	3840VA	6250VA	840W / 8310VA
30VDC / 277VAC	250VAC	30VDC / 250VAC	28VDC / 277VAC
20A	20A	25A	30A
20A@125VAC 17A@277VAC 1HP@250VAC TV-8@125VAC	20A@125VAC 16A@277VAC 1HP@250VAC TV-8@125VAC	25A@250VAC 2HP@250VAC 25A@30VDC	30A@277VAC 2HP@250VAC 1HP@125VAC 20/60 (FLA/LRA)@277VAC
DC: 5 ~ 48	DC: 3 ~ 48	DC: 5 ~ 48	DC: 5 ~ 48, AC: 12 ~ 277
0.36W	0.45W	0.90W	DC: 0.93W, AC: 2.3VA
100M (at 500VDC)	250M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
3000VAC 1 min	2500VAC 1 min	5000VAC 1 min	2500VAC 1 min
1000VAC 1 min	1000VAC 1 min	1000VAC 1 min	1500VAC 1 min
-40°C ~ 95°C	-40°C ~ 85°C	-40°C ~ 110°C	-55°C ~ 85°C
			
			









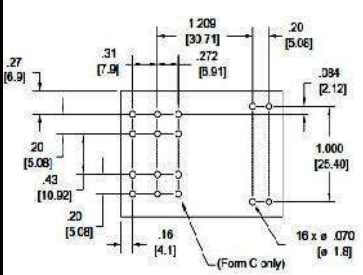
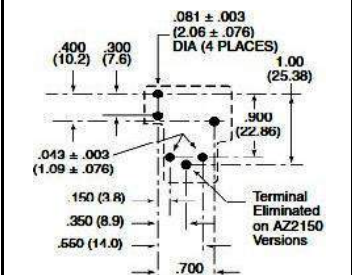
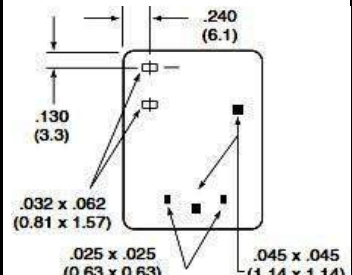
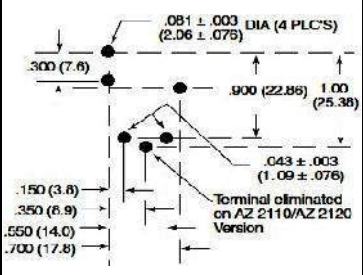
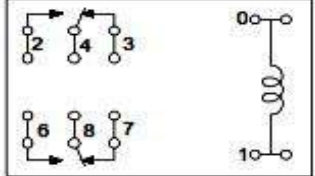
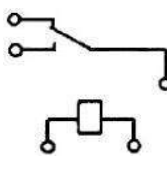
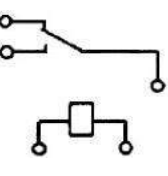
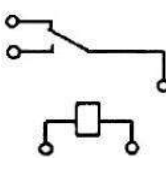
High Power relays			
SERIES	AZ2270	AZ2280	AZ2310
			
Dimensions LxWxH mm	32.4 x 27.5 x 27.8	50.2 x 27.5 x 27.8	50.5 x 32.8 x 24.5
FEATURES	30A switching OCT w/PCB pins Dielectric strength 4kVrms Class F insulation std. AC and DC coils	30A switching AC and DC coils Class F insulation std.	30A switching 70A inrush Creepage distance >8 mm
Approvals	 VDE(DC coil)	 VDE(DC coil)	
Contact Arrangement	SPST-NO or NC, SPDT	SPST-NO or NC, SPDT	SPST-NO
Contact Material	AgSnO ₂ , AgCdO ₂	AgSnO ₂ , AgCdO ₂	AgSnO ₂
Max Switching Power	840W / 8310VA	840W / 8310VA	7500VA
Max Switching Voltage	28VDC / 277VAC	28VDC / 277VAC	250VAC
Max Switching Current	30A	30A	30A
Safety Approved Contact Ratings	30A@277VAC 20FLA / 60LRA@277VAC	30A@277VAC 20FLA / 60LRA@277VAC	30A@250VAC 2 HP@125/250VAC TV-15@120VAC
Coil Voltages	DC: 5 ~ 110, AC: 12 ~ 277	DC: 5 ~ 110, AC: 12 ~ 277	DC: 3 ~ 60
Nominal Coil Power	DC: 0.93W, AC: 2.3VA	DC: 0.93W, AC: 2.3VA	1.25W
Insulation Resistance	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
Dielectric Strength	Contact to Coil	4000VAC 1 min	4000VAC 1 min
	Open Contacts	1500VAC 1 min	1200VAC 1 min
Ambient Temperature	-55°C ~ 85°C	-55°C ~ 85°C	-40°C ~ 70°C
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			

High Power relays


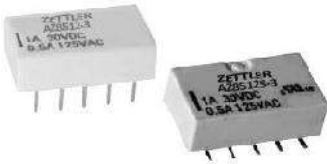




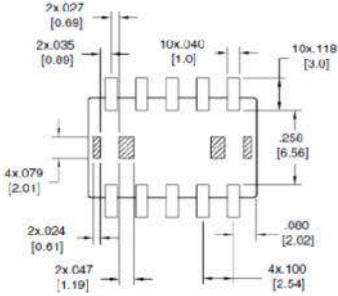
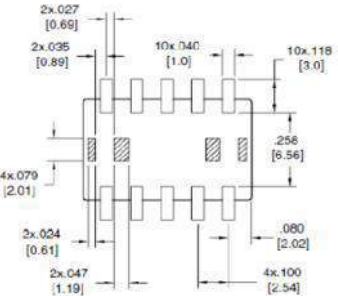
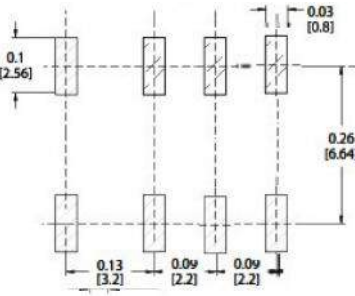
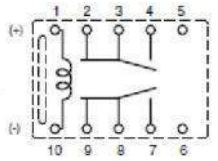
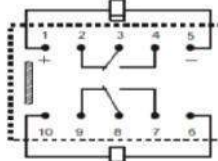
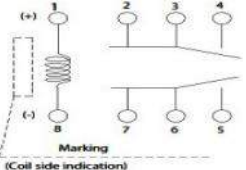
AZ2700	AZ2701	AZ2702	AZ2703
			
68 x 33.5 x 36	52.5 x 33.5 x 36	51.5 x 34.9 x 36	51.5 x 34.9 x 36
30A switching Class B insulation std Class F insulation avail. Dielectric Strength 4kVrms 3.0mm contact gap avail	30A switching Class B insulation std Class F insulation avail. Dielectric Strength 4kVrms 3.0mm contact gap avail	30A switching Class B insulation std Class F insulation avail. Dielectric Strength 4kVrms 3.0mm contact gap avail	30A switching Class B insulation std Class F insulation avail. Dielectric Strength 4kVrms 3.0mm contact gap avail
 TUV	 TUV	 TUV	 TUV
SPST-DM-NO, DPST-DM-NO	SPST-DM-NO, DPST-DM-NO	SPST-DM-NO, DPST-DM-NO	SPST-DM-NO, DPST-DM-NO
AgSnO ₂ , AgCdO ₂	AgSnO ₂ , AgCdO ₂	AgSnO ₂ , AgCdO ₂	AgSnO ₂ , AgCdO ₂
840W / 8310VA	840W / 8310VA	840W / 8310VA	840W / 8310VA
150VDC / 400 VAC	150VDC / 400 VAC	150VDC / 400 VAC	150VDC / 400 VAC
30A	30A	30A	30A
30A@277VAC 3 HP@240VAC TV-10@120VAC TUV: 27A@240VAC cos phi = 0.8	30A@277VAC 3 HP@240VAC TV-10@120VAC TUV: 27A@240VAC cos phi = 0.8	30A@277VAC 3 HP@240VAC TV-10@120VAC TUV: 27A@240VAC cos phi = 0.8	30A@277VAC 3 HP@240VAC TV-10@120VAC TUV: 27A@240VAC cos phi = 0.8
DC: 3 ~ 200, AC: 6 ~ 240	DC: 3 ~ 200, AC: 6 ~ 240	DC: 3 ~ 200, AC: 6 ~ 240	DC: 3 ~ 200, AC: 6 ~ 240
DC: 1.92W, AC:2.2VA	DC: 1.92W, AC:2.2VA	DC: 1.92W, AC:2.2VA	DC: 1.92W, AC:2.2VA
1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
4000VAC 1 min	4000VAC 1 min	4000VAC 1 min	4000VAC 1 min
2000VAC 1 min	2000VAC 1 min	2000VAC 1 min	2000VAC 1 min
-40°C ~ 105°C	-40°C ~ 105°C	-40°C ~ 105°C	-40°C ~ 105°C
			
			

High Power relays			
SERIES	AZ2704	AZ2705	AZ2800
			
Dimensions LxWxH	50.5 x 33.5 x 36	68.3 x 33.8 x 51.3	68.4 x 34.5 x 26.4
FEATURES	30A switching Class B insulation std Class F insulation avail. Dielectric Strength 4kVrms 3.0mm contact gap avail	30A switching Class B insulation std Class F insulation avail. Dielectric Strength 4kVrms 3.0mm contact gap avail	30A switching Meets 8mm creepage Class F insulation std.
Approvals	 TUV	 TUV	 VDE
Contact Arrangement	SPST-DM-NO, DPST-DM-NO	SPST-DM-NO, DPST-DM-NO	DPST-NO, DPDT
Contact Material	AgSnO ₂ , AgCdO ₂	AgSnO ₂ , AgCdO ₂	AgSnO ₂ , AgCdO ₂
Max Switching Power	840W / 8310VA	840W / 8310VA	560W / 8310VA
Max Switching Voltage	150VDC / 400 VAC	150VDC / 400 VAC	30VDC / 600VAC
Max Switching Current	30A	30A	30A
Safety Approved Contact Ratings	30A@277VAC 3 HP@240VAC TV-10@120VAC TUV: 27A@240VAC cos phi = 0.8	30A@277VAC 3 HP@240VAC TV-10@120VAC TUV: 27A@240VAC cos phi = 0.8	NO: 30A@277VAC NO (DC coil only): 25.3FLA/110LRA@240VAC 2.5HP@240VAC
Coil Voltages	DC: 3 ~ 200, AC: 6 ~ 240	DC: 3 ~ 200, AC: 6 ~ 240	DC: 6 ~ 110, AC: 12 ~ 277
Nominal Coil Power	DC: 1.92W, AC: 2.2VA	DC: 1.92W, AC: 2.2VA	DC: 1.68W, AC: 4.08VA
Insulation Resistance	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
Dielectric Strength	Contact to Coil	4000VAC 1 min	4000VAC 1 min
	Open Contacts	2000VAC 1 min	1500VAC 1 min
Ambient Temperature	-40°C ~ 105°C	-40°C ~ 105°C	DC: -40°C ~ 85°C
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			







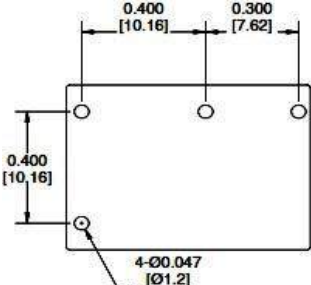
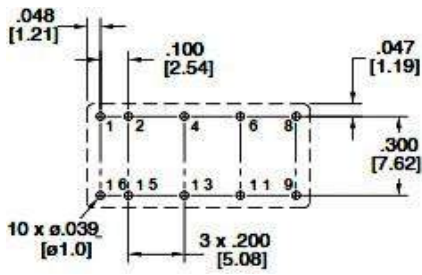
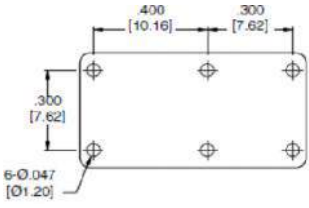
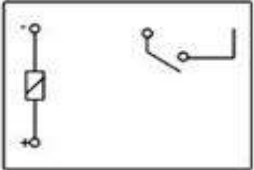
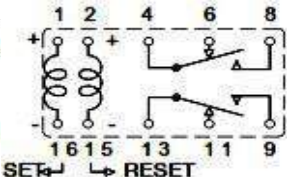
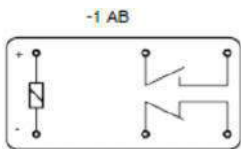
High Power relays







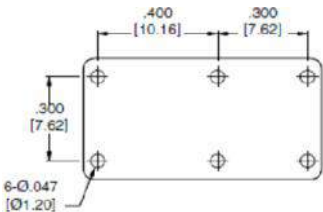
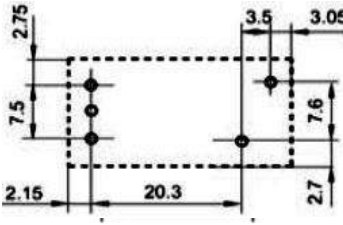
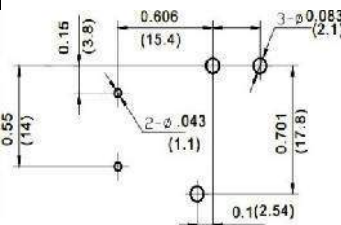
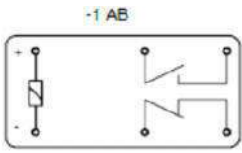
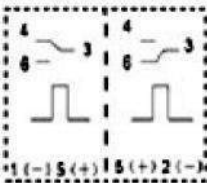
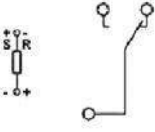
AZ2850	AZ2150	AZ2100	AZ2110/AZ2120
			
52.6 x 34.8 x 26.4	31.8 x 26.9 x 19.1	32.2 x 27.4 x 27.9	30.5 x 24.65 x 15.7
30A switching Meets 8mm creepage Class F insulation std.	40A switching Class B insulation std. Class F insulation avail. (PTI/CTI) 175	40A switching Class B insulation std. Class F insulation avail. (PTI/CTI) 175	40 Amp switching Class B insulation std. Class F insulation avail. PC / track-saver terminals (PTI/CTI) 175
 VDE	 VDE	 VDE	 VDE
DPST-NO, DPDT	SPST-NO or NC, SPDT	SPST-NO or NC, SPDT	SPST (NO) or (NC), SPDT
AgSnO ₂ , AgCdO ₂	AgCdO ₂	AgCdO ₂	AgCdO ₂
560W / 8310VA	900W / 10000VA	900W / 10000VA	900 W or 10000 VA
30VDC / 600VAC	30VDC / 300VAC	30VDC / 300VAC	30 VDC or 300 VAC
30A	40A	40A	40A
NO: 30A@277VAC NO (DC coil only): 25.3FLA/110LRA@240VAC 2.5 HP@240VAC	40A@250VAC 96LRA / 30FLA@125VAC 3HP@240VAC TV-5@120VAC	40A@250VAC 96LRA / 30FLA@125VAC 3HP@240VAC TV-5@120VAC	40A@250VAC 96LRA / 30FLA@125VAC 3HP@240VAC TV-5@120VAC
DC: 6 ~ 110, AC: 12 ~ 277	DC: 5 ~ 110	DC: 5 ~ 110	DC: 5 ~ 110
DC: 1.68W, AC: 4.08VA	0.9W	0.9W	0.9W
1000M (at 500VDC)	1000M (at 500VDC)	100M (at 500VDC)	1000M (at 500VDC)
4000VAC 1 min	2500VAC 1 min	2500VAC 1 min	2500VAC 1 min
1500VAC 1 min	1500VAC 1 min	1500VAC 1 min	1500VAC 1 min
DC: -40°C ~ 85°C	-55°C ~ 125°C	-55°C ~ 125°C	-55°C ~ 125°C
			
			






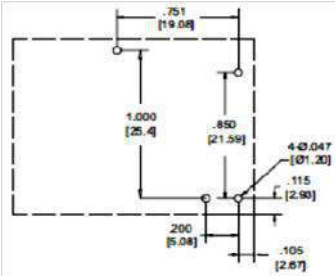
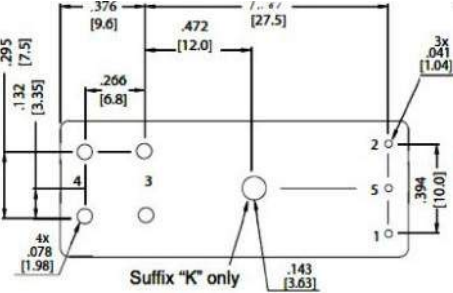
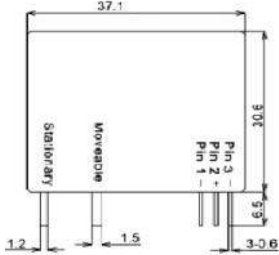
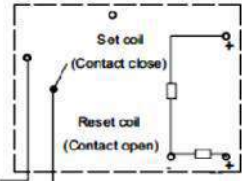
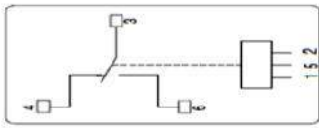
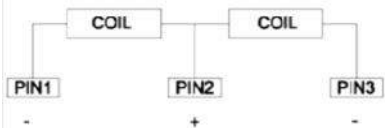
Latching Relays

SERIES		AZ850/AZ851	AZ8512	AZ852
				
Dimensions LxWxH mm		14 x 9 x 5	14.0 x 9 x 5.4	10.6 x 7.2 x 5.2
FEATURES		High sensitivity Single or dual coil Meets FCC part 68.302 Layout fits 10 pin IC socket	THT or SMT ("L" terminal) Meets FCC part 68.302 Monostable or bistable	High dielectric / surge voltage Monostable or bistable Low power consumption Stable contact resistance
Approvals				
Contact Arrangement		DPDT (Bifurcated crossbar)	DPDT	DPDT (Bifurcated crossbar)
Contact Material		AgPd; Au clad	AgNi with Au plating	Ag Alloy, Au clad
Max Switching Power		30W / 62.5VA	30W / 62.5VA	60W / 62.5VA
Max Switching Voltage		220VDC / 250VAC	110VDC / 125VAC	220VDC / 250VAC
Max Switching Current		1A	2A	2A
Safety Approved Contact Ratings		1A@30VDC 0.5A@125VAC	0.5A@125VAC 2A@30VDC	0.5A@125VAC 2A@30VDC 0.3A@110VDC
Coil Voltages		DC: 3 ~ 48	1.5 ~ 24VDC	DC: 1.5 ~ 24
Nominal Coil Power		0.1W, 0.2W	0.1W, 0.14W, 0.2W	0.1W, 0.14W
Insulation Resistance		1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
Dielectric Strength	Contact to Coil	1000VAC 1 min	1000VAC 1 min	1500VAC 1 min
	Open Contacts	1000VAC 1 min	750VAC 1 min	1000VAC 1 min
Ambient Temperature		-40°C ~ 70°C	-40°C ~ 70°C	-40°C ~ 85°C
Mounting Layout (Bottom View) (mm)				
Wiring Diagram (Bottom View)				







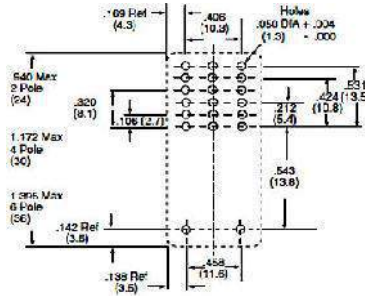
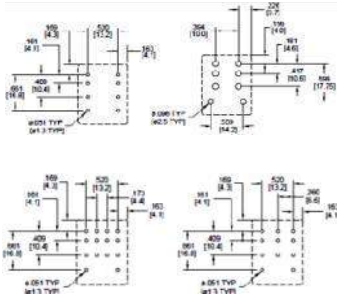
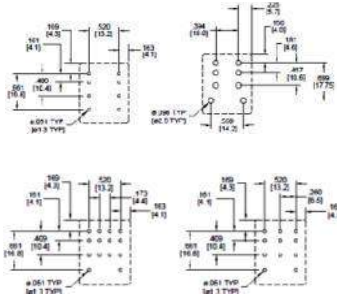
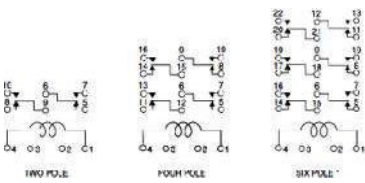
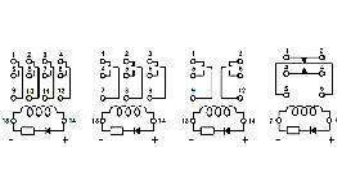
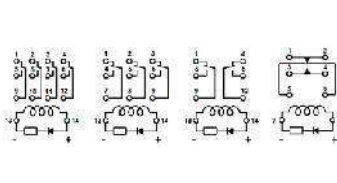
Latching Relays

AZ880	AZ832P	AZ881
		
20 x 15 x 10.2	20.2 x 10 x 10.7	20.2 x 11 x 10
10A switching Dielectric strength 4kVrms Single or dual coil	Low profile DIP package Single or dual coil Fits standard 16 pin IC socket	8A switching Dielectric strength 3kVrms Single or dual coil
		
SPST/DPST-NO, DPST-NO+NC	DPDT (Bifurcated crossbar)	SPST-NO, DPST-NO, DPST-NO+NC
AgNi, AgSnO ₂ , Au plating	Au plated Ag	AgNi, Au plating optional
300W, 2.5kVA(S); 240W, 2kVA(D)	60W / 62.5VA	SPST: 150W/2000VA, DPST: 150W/1250VA
150 VDC or 380 VAC	220VDC / 250VAC	150VDC / 380VAC
10A	3A	8A
10A@250VAC 1/3 HP@250VAC B300 Pilot duty	3A@30VDC/125VAC	8A@30VDC /250VAC 1/6HP@250VAC
DC: 3 ~ 24 (single) 0.2W, (dual) 0.3W	DC: 3 ~ 24 0.1W - 0.2W	DC: 3 ~ 24 (single) 0.15W, (dual) 0.3W
1000M (at 500VDC) 4000VAC 1 min(1P), 3000VAC 1 min(2P)	1000M (at 500VDC) 1500VAC 1 min 1000VAC 1 min	1000M (at 500VDC) 3000VAC 1 min 1000VAC 1 min
-40°C ~ 70°C	-40°C ~ 85°C	-40°C ~ 70°C
		
		









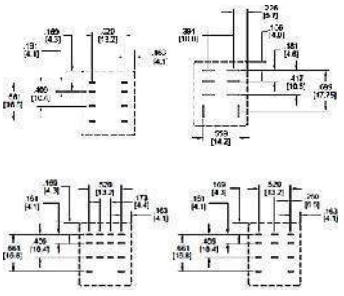
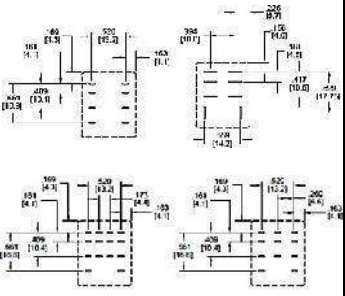
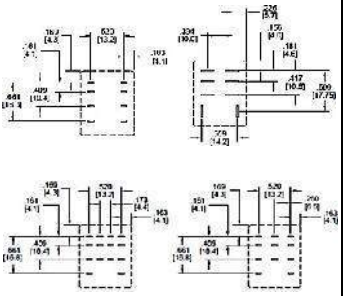
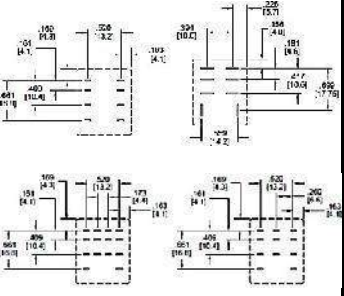
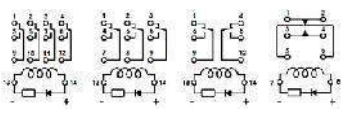
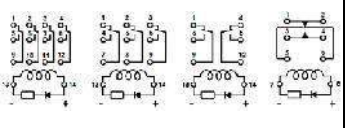
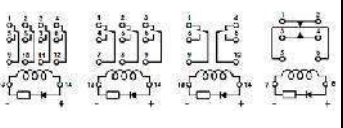
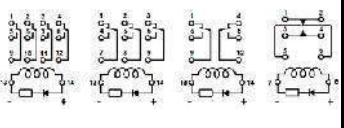
Latching Relays				
SERIES	AZ888	AZ762P	AZ21501P	
				
Dimensions LxWxH mm	20.2 x 11.3 x 11.5	29 x 12.7 x 15.7	32.5 x 27.6 x 20.5	
FEATURES	8A switching Dielectric strength 3kVrms Single or dual coil latching	20A switching Tungsten premake option High inrush 500A / 2ms 3.5mm or 5.0mm pin spacing Single or dual coil	30-50A switching Manual override option Designed to meet UL20 Dielectric Strength 4kVrms	
Approvals				
Contact Arrangement	SPST-NO, SPDT, DPST (1A+1B)	SPST-NO or NC, SPDT	SPST-NO or NC, SPDT	
Contact Material	AgSnO (Au plating optional)	AgSnO ₂ , Tungsten/AgSnO ₂	AgSnO ₂	
Max Switching Power	SP: 150W/2000VA, DP: 150W/1250VA	5000VA	1200W / 13850VA	
Max Switching Voltage	240VDC / 380VAC	250VAC	110VDC / 277VAC	
Max Switching Current	8A	20A	50A	
Safety Approved Contact Ratings	SPST: 8A@125/250VAC DPST: 5A@125/250VAC, 30VDC DPST (1A+1B): 5A@125/250VAC 5A@30VDC	20A@250VAC 1.5 HP@250VAC motor T' High inrush version: 3300W@277VAC elec. ballast 3000W@220VAC Tungsten	50A@277VAC 40A@277VAC 30A@277VAC	
Coil Voltages	3 ~ 24VDC	DC: 3 ~ 24	DC: 5 ~ 48	
Nominal Coil Power	(mono/dual) 0.2W, (single) 0.1W	(single) 0.4W, (dual) 0.6W	0.9W (30A/40A), 1.5W (50A)	
Insulation Resistance	1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)	
Dielectric Strength	Contact to Coil	3000VAC 1 min	4400VAC 1 min	2500VAC 1 min
	Open Contacts	1000VAC 1 min	1000VAC 1 min	1500VAC 1 min
Ambient Temperature	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C	
Mounting Layout (Bottom View) (mm)				
Wiring Diagram (Bottom View)				







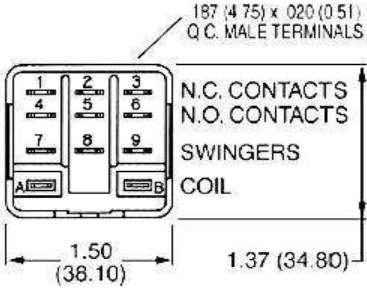
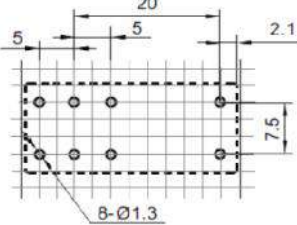
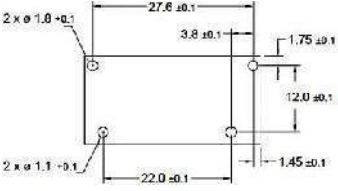
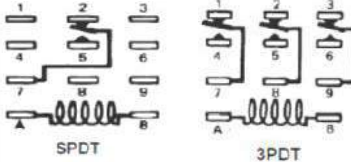
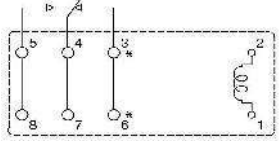
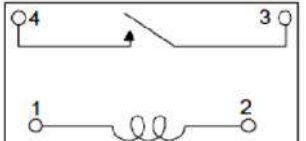
Latching Relays		
AZ2500	AZ2501	AZ2505
		
38.3 x 16.3 x 30.3	39.3 x 15.3 x 30.5	37.1 x 17.2 x 33.5
60A switching Dielectric Strength 4kVrms Braided leads available	50A switching Inrush current 500A / 2ms max 1.5mm contact gap available Dielectric Strength 4kVrms	120A switching Heavy loads to 30000VA Dielectric Strength 4kV Single or dual coil latching Multiple termination styles
		UL Pending
SPST-NO	SPST-NO, SPDT	SPST-NO or NC
AgSnO ₂ , AgCdO ₂	AgSnO ₂	Silver alloy
15000VA	13850VA	30000VA
400VAC	440VAC	250VAC
60 A	50A	120A
60A@250VAC	50A@277VAC 5540W@277VAC Tungsten 20A@120/277VAC Ballast 20FLA / 120LRA@120VAC 40A@277VAC	120A@250VAC 100A@250VAC 80A@250VAC 60A@250VAC
DC: 5 ~ 48 (single) 1.0W, (dual) 2.1W	DC: 6 ~ 48 (single) 1.5 W, (dual) 3.0 W	DC: 5 ~ 24 1.0W (single), 2.0W (dual)
1000M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)
4000VAC 1 min	4000VAC 1 min	4000VAC 1 min
1500VAC 1 min	1500VAC 1 min	1500VAC 1 min
-40°C ~ 70°C	-40°C ~ 70°C	-40°C ~ 85°C
		
		

Plug-In Relays








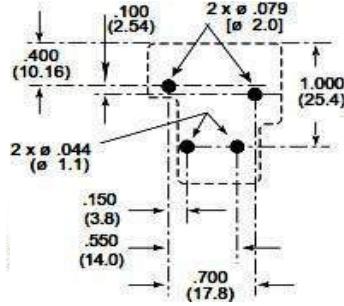
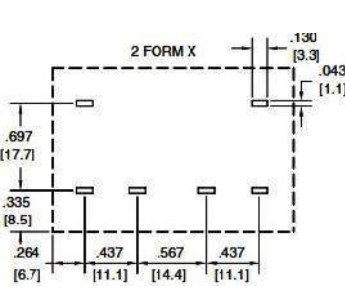
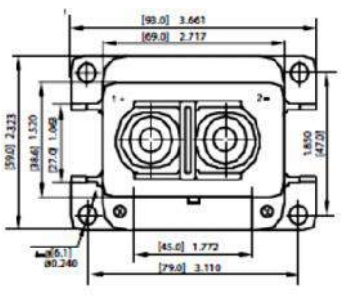
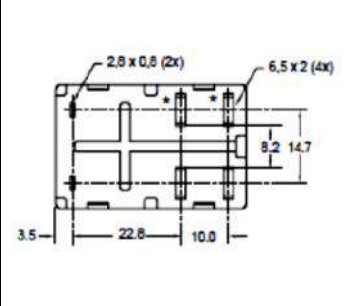
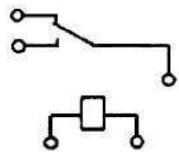
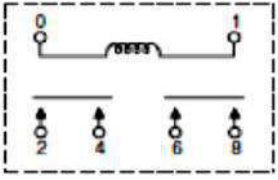
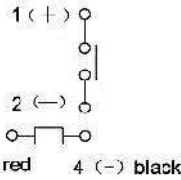
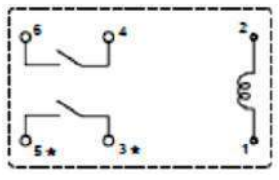
SERIES		AZ420	AZ164	AZ1641
				
Dimensions LxWxH mm		24.9 x 19 x 30.5	28 x 21.5 x 35	28 x 21.5 x 35
FEATURES		High reliability Coil power to 25mW / pole 6 poles < 1 cu. in. Dry circuit to 5A switching PC/solder/plug-in	PC terminals High switching capacity AC and DC coils Push to test lever available	PC terminals High switching capacity AC and DC coils
Approvals			 CE	
Contact Arrangement		DPDT, 4PDT, 6PDT	SPDT, DPDT, 3PDT, 4PDT	SPDT, DPDT, 3PDT, 4PDT
Contact Material		Fine Ag or AgCdO ₂ , Au plated	AgCdO ₂ , AgCe	AgCdO ₂
Max Switching Power		56 ~ 225W / 230 ~ 870VA	450W / 3750VA	560W / 5540VA
Max Switching Voltage		150VDC / 300VAC	30VDC / 250VAC	30VDC / 250VAC
Max Switching Current		5A	15A	20A
Safety Approved Contact Ratings		40LUS,10LUS: 2A@26VDC/115VAC 4LUS,1LUS: 2A@28VDC/115VAC 4HUS,1HUS: 5A@28VDC/115VAC	SPDT: 15A@250VAC DPDT: 10A@30VDC/250VAC 1/3HP@120/240VAC 3PDT, 4PDT: 5A@30VDC 5A@250VAC	SPDT: 20A@28VDC/277VAC DPDT: 10A@28VDC/277VAC 1/2HP(9.8A)@125VAC 3PDT: 10A@28VDC/220VAC 4PDT: 5A@28VDC/220VAC
Coil Voltages		DC: 3 ~ 115	DC: 5 ~ 110, AC: 6 ~ 240	DC: 6 ~ 110, AC: 6 ~ 240
Nominal Coil Power		0.1W ~ 0.9W	0.9W, 1.2VA	0.9W, 1.2VA
Insulation Resistance		1000M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)
Dielectric Strength	Contact to Coil	1500VAC 1 min	1500VAC 1 min	1500VAC 1 min
	Open Contacts	1000VAC 1 min	1000VAC 1 min	1000VAC 1 min
Ambient Temperature		-55°C ~ 80°C	-50°C ~ 70°C	-50°C ~ 70°C
Mounting Layout (Bottom View) (mm)				
Wiring Diagram (Bottom View)				




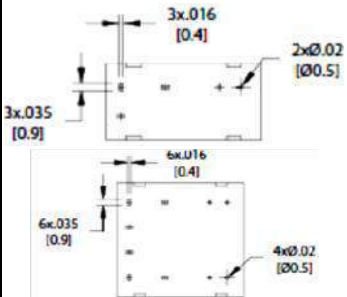
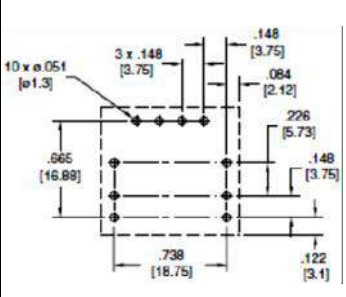
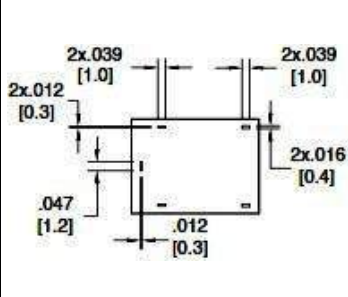
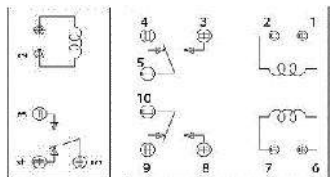
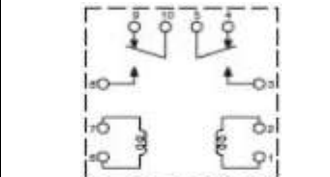
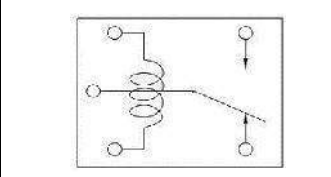
Plug-In Relays

AZ165	AZ1651	AZ166	AZ1661
			
28 x 21.5 x 35	28 x 21.5 x 35	43 x 21.5 x 35	43 x 21.5 x 35
Plug in / solder terminals High switching capacity AC and DC coils Push to test lever available	Plug in / solder terminals High switching capacity AC and DC coils	Top panel mount High switching capacity AC and DC coils	Top panel mount High switching capacity AC and DC coils
			
SPDT, DPDT, 3PDT, 4PDT	SPDT, DPDT, 3PDT, 4PDT	SPDT, DPDT, 3PDT, 4PDT	SPDT, DPDT, 3PDT, 4PDT
AgCdO ₂ , AgCe	AgCdO ₂	AgCdO ₂ , AgCe	AgCdO ₂
450W / 3750 VA	560W / 5540VA	450W / 3750 VA	560W / 5540VA
30VDC / 250VAC	28VDC / 277VAC	30VDC / 250VAC	28VDC / 277VAC
15A	20A	15A	20A
SPDT: 15A@250VAC DPDT: 10A@30VDC/250VAC 1/3HP@120/240VAC 3PDT, 4PDT: 5A@30VDC 5A@250VAC	SPDT: 20A@28VDC/277VAC DPDT: 10A@28VDC/277VAC 1/2HP(9.8A)@125VAC 3PDT: 10A@28VDC/220VAC 4PDT: 5A@28VDC/220VAC	SPDT: 15A@250VAC DPDT: 10A@30VDC/250VAC 1/3HP@120/240VAC 3PDT, 4PDT: 5A@30VDC 5A@250VAC	SPDT: 20A@28VDC/277VAC DPDT: 10A@28VDC/277VAC 1/2 HP(9.8A)@125VAC 3PDT: 10A@28VDC/220VAC 4PDT: 5A@28VDC/220VAC
DC: 5 ~ 110, AC: 6 ~ 240	DC: 6 ~ 110, AC: 6 ~ 240	DC: 5 ~ 110, AC: 6 ~ 240	DC: 6~110, AC: 6~240
0.9W, 1.2VA	0.9W, 1.2VA	0.9W, 1.2VA	0.9W, 1.2VA
100M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)
1500VAC 1 min	1500VAC 1 min	1500VAC 1 min	1500VAC 1 min
1000VAC 1 min	1000VAC 1 min	1000VAC 1 min	1000VAC 1 min
-50°C ~ 70°C	-50°C ~ 70°C	-50°C ~ 70°C	-50°C ~ 70°C
			
			





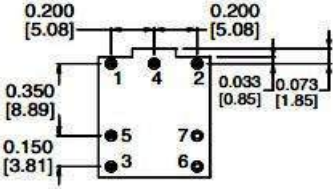
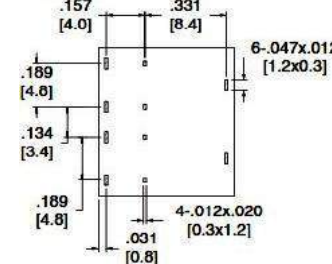
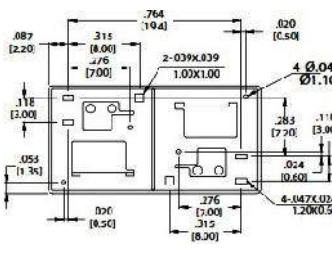
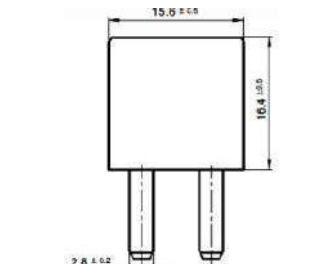
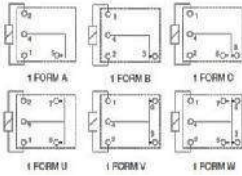
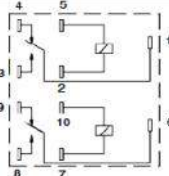
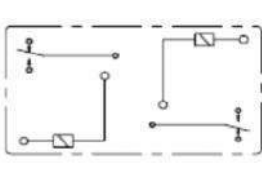
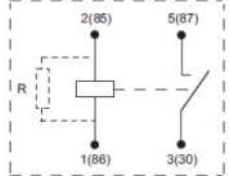
Plug-In Relays		Solar Relays		
SERIES	AZKUP	AZ733W/AZ733WC	AZSR126	
				
Dimensions LxWxH mm	38.1 x 34.8 x 55.9	29.0 x 13 x 25.9	30.4 X 15.9 X 23.3	
FEATURES	Plug-in/solder terminals High switching capacity AC and DC coils Class F insulation std.	Dielectric strength 5kVrms Wide gap: 1.5mm or 2mm 10A switching Class F insulation avail.	31A switching Contact gap > 1.5mm Dielectric Strength 4.5kVrms	
Approvals		 TUV		
Contact Arrangement	SPDT, DPDT, 3PDT	DPST-NO, DPDT	SPST-NO	
Contact Material	AgCdO ₂ , Au+Ag	AgCdO, AgSnO ₂ , AgNi, Au available	AgSnO ₂	
Max Switching Power	280W / 3600 VA	300W / 2500VA	8587VA	
Max Switching Voltage	28VDC / 600VAC	150VDC / 400VAC	277VAC	
Max Switching Current	13A	10A	31A	
Safety Approved Contact Ratings	13A@120VAC 3A@600VAC 1/2HP@277VAC 10A@28VDC B600 Pilot duty	10A@250VAC/30VDC 10A@250VAC gen use TV-3@125VAC	26A@277VAC 22A@250VAC	
Coil Voltages	DC: 12 ~ 110, AC: 12 ~ 240	DC: 3 ~ 60	DC: 9 ~ 24	
Nominal Coil Power	1.2W, 2.2VA	0.8W	1.4W	
Insulation Resistance	100M (at 500VDC)	1000M (at 500VDC)	1000M (at 500VDC)	
Dielectric Strength	Contact to Coil	2200VAC 1 min	5000VAC 1 min	4500VAC 1 min
	Open Contacts	800VAC 1 min	1000VAC 1 min	2500VAC 1 min
Ambient Temperature	DC: -55°C~70°C; AC: -45°C~55°C	-40°C ~ 80°C	-40°C ~ 85°C	
Mounting Layout (Bottom View) (mm)				
Wiring Diagram (Bottom View)				




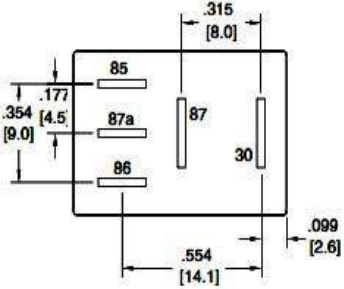
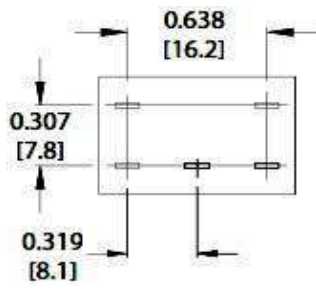
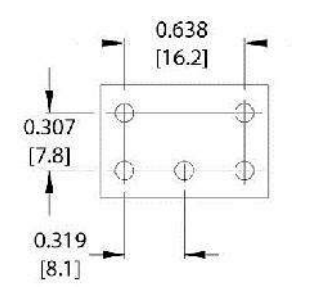
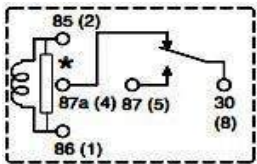
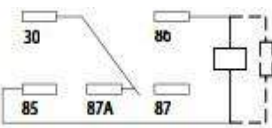
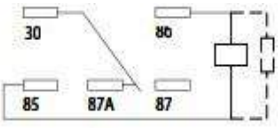
Solar Relays

AZ2150W	AZ2704	AZDC	AZSR235/250
			
32.2 x 27.0 x 20.1	50.5 x 33.5 x 36.0	77.6 x 40.0 x 75.6	40 x 25 x 49.2
1.75mm contact gap Epoxy sealed available 30A switching 3kVrms dielectric avail.	30A switching Class B insulation std Class F insulation avail. Dielectric Strength 4kVrms 3.0mm contact gap avail	IN DEVELOPMENT 1000VDC switching 80A - 300A switching Dielectric Strength 2.5kVrms Hermetically sealed	50A switching Contact gap: 1.85mm (50A) Contact gap: 1.85mm (35A) Holding power <100mW Isolation spacing >10mm
 VDE	 TUV	UL Pending	 VDE
SPST-NO	SPST-DM-NO, DPST-DM-NO	SPST-DM-NO	SPST-NO, DPST-NO
AgSnO ₂	AgSnO ₂ , AgCdO ₂	Cu Alloy	AgSnO ₂
900W / 8310VA	840W / 8310VA	750kW	1500W / 13850VA
240VDC / 440VAC	150VDC / 400VAC	1000VDC	150VDC / 440VAC
30A	30A	2500A	50A
30A@277VAC	30A@277VAC 3HP@240VAC TV-10@120VAC 10A@120VAC Tungsten	80A@400VDC 120A@400VDC 300A@400VDC	35A@277VAC 50A@277VAC
DC: 5 ~ 48	DC: 3 ~ 200, AC: 6 ~ 240	DC: 12, 24	DC: 5~24
1.1W	DC: 1.9W AC: 2.2VA	4.5W	0.3W
1000M (at 500VDC)	1000M (at 500VDC)	100M (at 500VDC)	1000M (at 500VDC)
2500VAC 1min	4000VAC 1min	2500VAC 1min	5000VAC 1min
1500VAC 1min	2000VAC 1min	2500VAC 1min	2500VAC 1min
-40°C ~ 85°C	-40°C ~ 105°C	-40°C ~ 85°C	-40°C ~ 85°C
			
		 1 (+) red 2 (-) black 3 (+) red 4 (-) black	





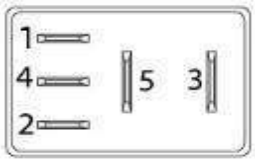
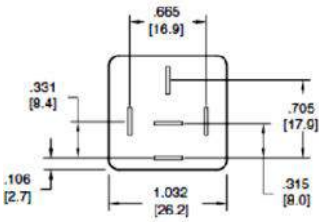
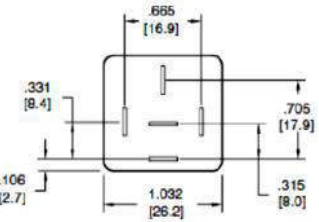
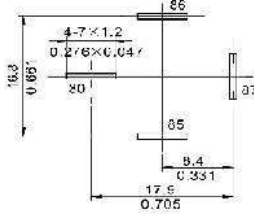
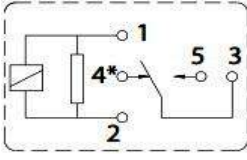
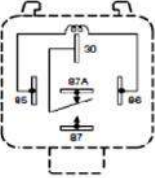
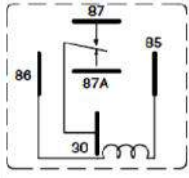
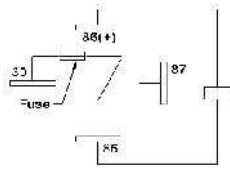
Automotive Relays			
SERIES	AZ934	AZ935	AZ9471
			
Dimensions LxWxH mm	17.8 x 9.6 (17.1) x 13.5	23 x 22.5 x 21	15.5 x 12.3 x 14
FEATURES	25A switching Sealed Quiet operation Vibration / shock resistant	25A switching Sealed Quiet operation Vibration / shock resistant	25A switching Contact gap 0.3mm Low profile, small footprint
Certifications	ISO/TS	ISO/TS	ISO/TS
Contact Arrangement	SPDT, DPDT	DPDT (2X1 form C)	SPDT
Contact Material	AgSnO ₂	AgSnO ₂	AgSnO ₂
Max Switching Power	280W	280W	210W
Max Switching Voltage	100VDC	100VDC	30VDC
Max Switching Current	(Make/Break) 25A/20A	(Make/Break) 25A/20A	25A
Contact Ratings	Continuous 20A	Continuous 20A	20A@14VDC motor (make) 4A@14VDC motor (break) Max. carry: 35A/10 min. Max. surge: 60A/1 sec.
Coil Voltages	DC: 12	DC: 12	DC: 6 ~ 24
Nominal Coil Power	0.6W	0.6W	0.6W
Insulation Resistance	100M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)
Dielectric Strength	Contact to Coil	500VAC 1 min	500VAC 1 min
	Open Contacts	500VAC 1 min	500VAC 1 min
Ambient Temperature	-40°C ~ 100°C	-40°C ~ 100°C	-40°C ~ 85°C
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			


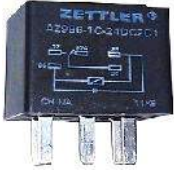

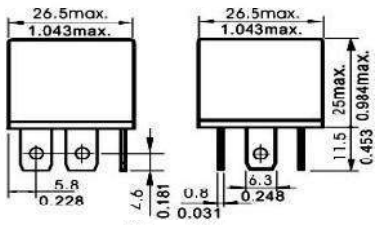
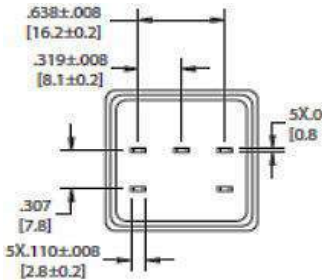
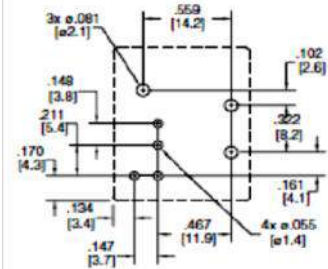
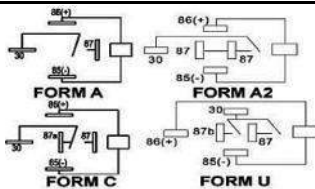
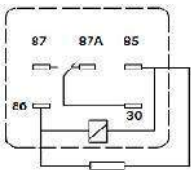
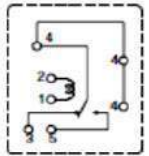
Automotive Relays

AZ975/AZ976	AZ989	AZ987	AZ992
			
15.2 x 17.7 x 19.7	14.3 x 7.5 x 13.8	12.3 x 13.2 x 10.2	15.6 x 15.2 x 16.4
60A switching Vibration / shock resistant High inrush application Dual make/break avail.	25A switching Compact size Single / dual versions	30A switching Single / dual versions High inrush application	100A switching Vibration / shock resistant High inrush application Coil suppression available
ISO/TS	ISO/TS	ISO/TS	ISO/TS
SPST-NO, -NC, SPDT	SPDT-NO, DPDT (twin)	SPST/DPST-NO, SPDT, DPDT	SPST-NO
AgSnO ₂	AgSnO ₂	AgSnO ₂	AgSnO ₂
200W / 500VA	400W	480W	280W
100VDC	16VDC	16VDC	50VDC
60A	25A	30A	100A
(make/break), continuous 60A/20A, 15A	25A@16VDC, locked motor	30A@16VDC	20A@13.5VDC 40A@13.5VDC Inductive 100A@13.5VDC Lamp
DC: 6 ~ 24	DC: 12	DC: 6 ~ 12	DC: 12
6V: 1.3W; 12, 24V: 1.1W	0.64W / 0.8W	0.6W	0.9W
100M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)
500VAC 1 min	500VAC 1 min	500VAC 1 min	500VAC 1 min
500VAC 1 min	500VAC 1 min	500VAC 1 min	500VAC 1 min
-40°C ~ 115°C	-40°C ~ 105°C	-40°C ~ 105°C	-40°C ~ 125°C
	 Dual package shown	 Dual package shown	
			





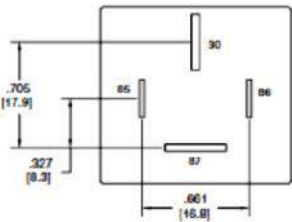
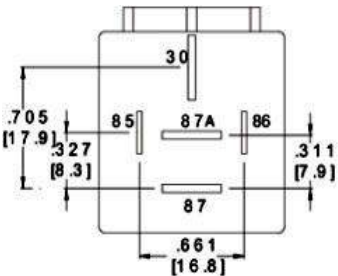
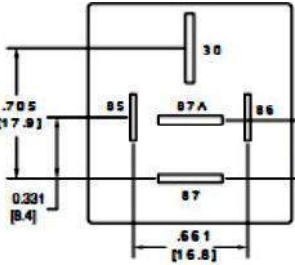
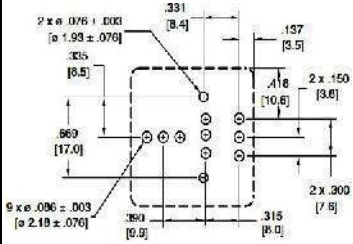
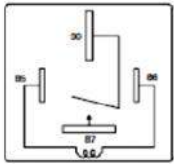
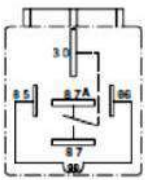
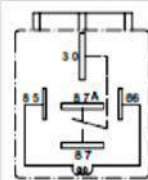
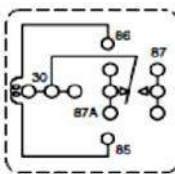
Automotive Relays				
SERIES	AZ977	AZ984	AZ9841	
				
Dimensions LxWxH mm	23 x 15.5 x 26	23 x 15.51 x 25.7	23 x 15.5 x 25.7	
FEATURES	20A switching Small footprint Vibration / shock resistant Cost effective High inrush application	20A switching Packard 280 footprint Vibration / shock resistant High inrush application Coil suppression available	40A switching Vibration / shock resistant High inrush applications Coil suppression avail.	
Certifications	ISO/TS	ISO/TS	ISO/TS	
Contact Arrangement	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, SPDT	
Contact Material	AgSnO ₂	AgSnO ₂	AgSnO ₂	
Max Switching Power	280W	270W	560W	
Max Switching Voltage	150VDC	40VDC	75VDC	
Max Switching Current	20A	20A	40A	
Contact Ratings	20A@14VDC	20A@13.5VDC	SPST-NO: 35A@14VDC SPST-NC: 25A@14VDC	
Coil Voltages	DC: 6 ~ 24	DC: 12 ~ 24	DC: 6 ~ 24	
Nominal Coil Power	Std/Sensitive: 1.5W/1.2W	1.6W	0.9W / 1.33W	
Insulation Resistance	100M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)	
Dielectric Strength	Contact to Coil	1000VAC 1 min	500VAC 1 min	500VAC 1 min
	Open Contacts	500VAC 1 min	500VAC 1 min	500VAC 1 min
Ambient Temperature	-40°C ~ 115°C	-40°C ~ 125°C	-40°C ~ 125°C	
Mounting Layout (Bottom View) (mm)				
Wiring Diagram (Bottom View)				





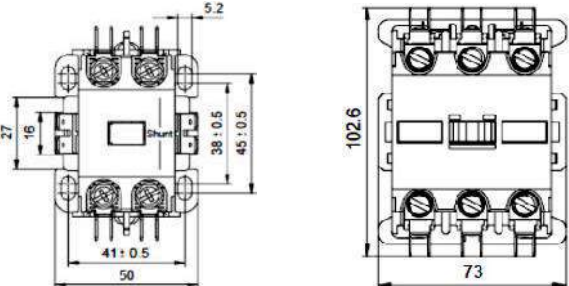
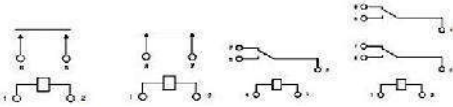
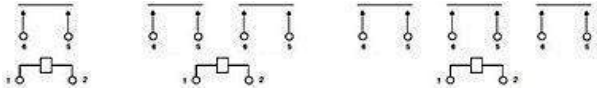
Automotive Relays

AZ988	AZ973	AZ974	AZ9731F
			
23.1 x 15.6 x 25.3	26.2 x 26.2 x 23.7	26.5 x 26.5 x 24	26.5 x 26.5 x 24
30A switching Plug-in / PCB terminals High inrush applications Coil suppression avail.	40A switching High operating temp. Shrouded cover option Coil suppression avail. Plastic / steel bracket avail.	40A switching PCB terminals High operating temp. Coil suppression avail.	30A switching Plug-in Blade-type fuse Steel bracket
ISO/TS	ISO/TS	ISO/TS	ISO/TS
SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO
AgSnO ₂	AgSnO ₂	AgSnO ₂	AgSnO ₂
540W	NO: 560W, NC: 420W	NO: 560W, NC: 420W	420W
27VDC	75VDC	75VDC	75VDC
30A	40A	40A	30A
SPST-NO: 30A@12VDC SPST-NO: 120A make(lamp) SPDT-NO: 20A@12VDC SPDT-NO: 40A make(motor) SPDT-NC: 10A@12VDC	40A@14VDC	40A@14VDC	30A@14VDC
DC: 12 ~ 24	DC: 6 ~ 24	DC: 6 ~ 24	DC: 6 ~ 24
1.2W / 1.6W	1.7W	1.7W	1.8W
500M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)
500VAC 1 min	500VAC 1 min	500VAC 1 min	750VAC 1 min (50Hz)
500VAC 1 min	500VAC 1 min	500VAC 1 min	500VAC 1 min (50Hz)
-40°C ~ 125°C	-55°C ~ 110°C	-55°C ~ 125°C	-40°C ~ 105°C
			
			

Automotive Relays			
SERIES	AZ9731T	AZ986	AZ970 / AZ971
			
Dimensions LxWxH mm	26.5 x 26.5 x 25.0	28.5 x 28.5 x 25.5	21.1 x 26.2 x 21.1
FEATURES	50A switching Double-make, tied pin opt. 125°C operating temp. Coil suppression avail. Plastic / steel bracket avail.	40A switching Packard 280 footprint Shrouded cover option Coil suppression avail.	45A switching High inrush applications Open, covered, or sealed US or Euro footprint
Certifications	ISO/TS	ISO/TS	ISO/TS
Contact Arrangement	SPST-NO, SPDT	SPST-NO, SPDT	SPST-NO, -NC, SPDT
Contact Material	AgSnO ₂	AgSnO ₂	AgSnO ₂
Max Switching Power	NO: 700W, NC: 560W	NO: 560W, NC: 420W	560W / 420W
Max Switching Voltage	75VDC	75VDC	150VDC
Max Switching Current	50A	40A	45A
Contact Ratings	SPST-NO: 50A@14VDC SPDT: 50A/40A@14VDC SPST-NO-DM: 2x25A@14VDC	40A@14VDC	40A@14VDC
Coil Ratings			
Coil Voltages	DC: 6 ~ 24	DC: 12 ~ 24	DC: 6 ~ 24
Nominal Coil Power	1.7W	1.6W	1.6W / 1.9W
Insulation Resistance	100M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)
Dielectric Strength	Contact to Coil	750VAC 1 min	500VAC 1 min
	Open Contacts	500VAC 1 min	500VAC 1 min
Ambient Temperature	-40°C ~ 125°C	-55°C ~ 125°C	-40°C ~ 125°C
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			

Automotive Relays

AZ9801	AZ979	AZ980	AZ983
			
26.2 x 26.2 x 24.9	29 x 33.4 x 41	35 x 33 x 35	29 x 29 x 28
70A switching High carry current 500A 125°C operating temp. Plug-in terminals	80A switching High carry current 500A High operating temp. Quick connect terminals	80A switching High carry current 500A High operating temp. Quick connect terminals	80A switching High carry current 500A High operating temp. PCB terminals
ISO/TS	ISO/TS	ISO/TS	ISO/TS
SPST-NO	SPST-NO, -NC, SPDT	SPST-NO, -NC, SPDT	SPST-NO, -NC, SPDT
AgSnO ₂	AgSnO ₂	AgSnO ₂	AgSnO ₂
980W	SPST: 1120W, SPDT-NO: 840W	SPST: 1120W, SPDT-NO: 840W	SPST: 1120W, SPDT-NO: 840W
50VDC	30VDC	30VDC	75VDC
70A	80A	80A	80A
70A@14VDC	80A@14VDC	80A@14VDC	80A@14VDC
DC: 6 ~ 24	DC: 6 ~ 24	DC: 6 ~ 24	DC: 6 ~ 24
1.6W / 2.0W	1.8W	1.6W - 1.8W	1.8W
100M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)	100M (at 500VDC)
500VAC 1 min	500VAC 1min	500VAC 1min	500VAC 1min
500VAC 1 min	500VAC 1min	500VAC 1min	500VAC 1min
-40°C ~ 125°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C
			
			

Contactors		
SERIES	AZPRD	XMCO
		
Dimensions LxWxH mm	63.5 x 63.5 x 55.9	81 x 50 x 59
FEATURES	Up to 50A switching Box lugs or screw terminals AC and DC coils Blowout magnet option Class F insulation std.	Up to 90A switching Universal mounting plate; box lugs or OCT Thermoset plastic optional Interlock and aux contacts avail. Class F insulation std.
Approvals		
Contact Arrangement	SPST-NO/NC, SPST-NO-DM, SPST-NC-DB, DPST-NO/NC, SPDT, DPDT	1-3 pole NO-DM, 1 pole with shunt
Contact Material	AgCdO ₂	AgCdO ₂ , AgSnO ₂
Max Switching Power	840W / 12000VA	Varies based on load type and frame size
Max Switching Voltage	600VAC / 28VDC	600VAC
Max Switching Current	50A	90 FLA
Safety Approved Contact Ratings	30A@240VAC 2HP@240VAC 3600VA@120 VAC/240VAC ballast 30A@28VDC (PRDE/PRDR 50A@277VAC)	25~90 Full Load Amps (FLA) 32~120 Resistive Load Amps (RLA) 150~540 Locked Rotor Amps (LRA)@240VAC 100~360 Locked Rotor Amps (LRA)@600VAC
Coil Voltages	DC: 6 ~ 110 AC: 6 ~ 480	AC: 12 ~ 600
Nominal Coil Power	DC: 2.0W, AC: 9.5VA	6.0 ~ 33.0 sealed VA / 3.5 ~ 12.0 sealed W
Insulation Resistance	100M (at 500VDC)	Rated Insulated Voltage: 690Vrms
Dielectric Strength	Contact to Coil	2200VAC 1 min
	Open Contacts	2200VAC 1 min
Ambient Temperature	-45°C ~ 115°C	-25°C ~ 70°C
Mounting Layout (Bottom View) (mm)		
Wiring Diagram (Bottom View)		

When suffix "E" is specified for Epoxy Seal, refer to AZ "Relay Technical Notes" on AZ website-Product Resources. Consult factory for other PCB process conditions that may apply.

See Key Points Below:

Preheating

In order to improve the soldering performance, recommended temperature and time for preheat is 100°C (212°F) or less for duration of approximately 1 minute. Exposing relays to high temperatures for long periods of time may affect relay characteristics.

Soldering

Precautions in soldering seen in table below.

Automatic Soldering	Manual Soldering
<ul style="list-style-type: none"> To maintain soldering stability, the suggested soldering method is wave solder. Adjust the height of the flux liquid level as to prevent overflow of the PCB. A solder temperature not to exceed 270°C (518°F) Max. 	<ul style="list-style-type: none"> Always keep the tip of the soldering iron clean to prevent contamination of the solder. Suggested soldering conditions: <ul style="list-style-type: none"> Wattage range 30 -60W Temperature approximately 300° (572°F) Soldering duration approximately 3 seconds Rosin flux recommended

Cooling

Prompt air cooling is recommended as it prevents deterioration of the relay due to the soldering heat. Avoid immersing a relay into cold liquids immediately after soldering as it may damage the hermetic characteristics of the relay.

Cleaning

Please select the cleaning method in the table below when cleaning.

Dust Protected Type	Flux Proofed Type	Plastic Sealed Type
<ul style="list-style-type: none"> Cleaning by immersion is not recommended. 		<ul style="list-style-type: none"> Sealed relays can be safely cleaned by immersion. Use of pressure or agitation water wash must use extreme care. Ultrasonic cleaning is not recommended as it may cause problems such as breaks in the coil or slight sticking of the contacts.

More details available on AZ website under http://www.azettler.com/pdfs/technical_notes.pdf

Suggested Equivalents

Panasonic

NAIS (Aromat)	Zettler
AEP	AZHVDC
AGQ	AZ852/AZ8521
ALD	AZ9375
ALF	AZ697/AZ6975
ALZ	AZ762
	AZ576
DK/DSP	AZ880/AZ881/AZ888
CB 40 amp	AZ973/AZ974
	AZ9731/AZ9741
	AZ989/AZ9891J
CJ	AZ988
CM	AZ934/AZ935
CT5	AZ830/AZ832
DS2	AZ830P/AZ832P
DS2 Latching	AZ830/AZ832
DS2Y	AZ955/AZ957/AZ9571
HD	AZ164/AZ1641
HC/HJ/HL	AZ165/AZ1651
	AZ166/AZ1661
K 2-Pole	AZ420/AZ428
K 4-Pole	AZ421/AZ429
K 6-Pole	AZ431/AZ439
	AZ2428/AZ2429
LF-G	AZSR126
JJM	AZ947/AZ9471
JQ	AZ940/AZ9405
JR	AZ755/AZ7555
JS	AZ942/AZ943/AZ942H
JSM	AZ942A
JT-G	AZ2150W
JTN/JTV	AZ2110/AZ21101/
	AZ2210
	AZ2150/AZ21501
	AZ2250
JTN1	AZ2270
JV	AZ9481
JW1	AZ755/7555/AZ576
	AZ761/AZ762
JW2	AZ733/AZ743/AZ7335
LD	AZ921
LK	AZ673
PA	AZ921
PC1	AZ987/AZ9871
PE/PF	AZ6991
PQ	AZ940/AZ9405
SW2-DIE	SGC-4F
TQ2	AZ847/AZ850
	AZ851/AZ8512
TW	AZ8462
TX2	AZ8462

Fujitsu-

Takamisawa	Zettler
A	AZ850/AZ851/AZ8512
FBR10	AZ8462
FBR51	AZ947/AZ9471
FBR160	AZ942/AZ943/AZ942H
FBR210	AZ951/AZ952/
	AZ954X/AZ954Y
FBR240	AZ822/AZ8222
FBR610-K	AZ755/AZ7555
FBR610	AZ697/AZ6975
FBR620	AZ733/AZ743/AZ7335
FRL	AZ971/AZ9711
FTR-B3	AZ852/AZ8521
FRT-C1	AZ8462
FTR-F1	AZ742/AZ743
FTR-F4G	AZ733W
FTR-H1	AZ761/AZ576
FTR-K1	AZ762/AZ576
FTR-K3	AZSR126
FTR-P2	AZ934/AZ935
FTR-LY	AZ6991
JS	AZ696/AZ6961/AZ6962
LZ	AZ8/AZ8A
MZ	AZ951X/AZ954X
NA	AZ8462
NY	AZ921
RA	AZ822/AZ8222/AZ832
RY	AZ822/AZ8222/AZ832
SY	AZ951Y/AZ955/
	AZ957/AZ9571
VS	AZ697/AZ6975
	AZ761/AZ762/AZ576

Hasco

Zettler
2KLT
AZ945
BAS-111
AZ952/AZ954Y
BAS-511
AZ952/AZ954Y
CAR
AZ973/AZ9731
CAS212
AZ822/AZ8222
HAS-115
AZ822/AZ8222
HAS-211
AZ952
HAS-212
AZ822/AZ8222
AZ830/AZ832
HAT-901
AZ2150/AZ21501/
AZ2151
HAT-904
AZ2800/AZ2850
HBS
AZ957/AZ9571
HPR
AZ940/AZ9405
KLT
AZ942/AZ943/AZ942H
KSD
AZ946
MHR
AZ9481
SLT
AZ947/AZ9471
SSD
AZ8/AZ8A
T
AZ850/AZ850P

Idec

Zettler
RW
AZ830/AZ832
RQ
AZ761/AZ762/AZ576
AZ742/AZ743
RH
AZ164/AZ1641
AZ165/AZ1651
AZ166/AZ1661
RCN
AZ942/AZ943
RT
AZ420

Magnecraft

(MSD)	Zettler
Class 67	AZ420/AZ421/AZ431
Class 76/277	AZ697/AZ6975
	AZ761/AZ762/AZ576
	AZ733/AZ743/AZ7335
	AZ755/AZ7555
Class 78	AZ164/AZ1641
	AZ165/AZ1651
Class 90	AZ2110/AZ21101/
	AZ2120/
	AZ2150/AZ21501
Class 91	AZ2100/AZ21001
	AZ2280/AZ22801
Class 92	AZ2800/AZ2850
Class 178	AZ942/AZ943/AZ942H
Class 199/MGN	AZPRD
Class 272	AZ822/AZ8222
Class 232	AZ951/AZ952/
	AZ954X/AZ954Y
Class 270	AZ942/AZ943
Class 281	AZ164/AZ1641
	AZ165/AZ1651
Class 283	AZKUP
Class 725	AZ2700

Mid-Tex (CII)

Zettler
156/158
AZ164/AZ1641
AZ165/AZ1651
AZ166/AZ1661
157
AZKUP
190/MD
AZ822/AZ8222
191
AZ955/AZ957/AZ9571
258
AZ164/AZ1641
AZ165/AZ1651
AZ166/AZ1661
327
AZ830/AZ832
AZ830P/AZ832P
410
AZ420
500
AZ766
501
AZ770/AZ7705/AZ7709
496
AZ942/AZ943 /AZ942H
596
AZ943
597
AZ932
498
AZ755/AZ7555
AZ761/AZ762
491
AZ2100/AZ21001
AZ2120/
AZ2280/AZ22801
590
AZ2150/AZ21501
AZ2110/
MQP
AZ850/AZ851/AZ8512
MN
AZ8462
MS
AZ952/AZ954Y
V4
AZ973/AZ9731
VM
AZ975/AZ976
AZ9751/AZ9761

American Zettler, Inc. offers this list of suggested equivalents by its own and other relay manufacturer's part numbers as a guideline for possible interchangeability. Because critical parameters such as coil resistance, must operate voltage, terminal footprint, etc. may differ slightly, a detailed comparison between data sheets should be done before selecting a particular relay as an exact cross reference. Due to rapid addition, deletion, and revision of its own and competitive relays, American Zettler, Inc. cannot guarantee the total accuracy of this list. Questionable interchangeability of products should be referred to American Zettler, Inc. for clarification.

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www.azettler.com

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Suggested Equivalents

NEC	Zettler	OEG	Zettler
EA2	AZ850	OJ/OJE	AZ770/AZ7705/AZ7709
EB2	AZ851	OMI/OMIH	AZ755/AZ7555
EC2/EE2	AZ8462/AZ8512		AZ761/AZ762/AZ576
MR301	AZ942/AZ943/AZ942H	OMIT	AZ697/AZ6975
MR31	AZ942/AZ943/AZ942H	ORW	AZ942/AZ943/AZ942H
MR602	AZ822/AZ8222	ORWH/PCE	AZ932
MR602	AZ830/AZ832	ORZ	AZ828/AZ8222
MR602	AZ830P/AZ832P		AZ830/AZ832
MR612	AZ830/AZ832	OSA	AZ673
	AZ830P/AZ832P	OUA/OUAT	AZ951/
MR62	AZ822/AZ8222		AZ954X
	AZ830/AZ832	OUAZ	AZ951/
MR622	AZ830/AZ832		AZ954X
MR71	AZ697/AZ6975	OUDT/OUDTM	AZ8/AZ8A
	AZ761/AZ762/AZ576	OUDE	AZ8/AZ8A
MR72	AZ733/AZ743	OZ	AZ755/AZ7555
UC2/UD2	AZ852		AZ762/AZ576
		OZF	AZ756
		PCD	AZ9481
		SRET	AZ164/AZ1641
			AZ165/AZ1651
			AZ166/AZ1661
		SRW	AZ942/AZ943/AZ942H
		SRU/SRUT	AZ942/AZ943
Omron	Zettler	Schrack	Zettler
G2R	AZ755/AZ7555	RP	AZ697/AZ6975
G2RK	AZ762P		AZ733/AZ743/AZ7335
G2RL	AZ742/AZ743/AZ576		AZ761/AZ762/AZ576
	AZ761/AZ762	RS	AZ763/AZ764
G4A	AZ769/AZ7695		AZ822/AZ8222
G5C	AZ9481		AZ830/AZ832
G5L/LE	AZ942H/AZ943		AZ830P/AZ832P
G5N	AZ6951	RT1	AZ762/AZ762P/AZ576
G5Q	AZ940/AZ9405	RT2/RTD/RTE	AZ742/AZ743/
G5V-1	AZ955/AZ957/AZ9571		AZ761/AZ762
G5V-2	AZ822/AZ8222	RY	AZ696/AZ6961/AZ6962
G6A	AZ830/AZ832	SNR	AZ6991
	AZ830P/AZ832P	TD	AZ2110/AZ21101/
G6B/C	AZ881/AZ888		AZ2111/
G6D	AZ6951		AZ2150/AZ21501
G6H	AZ850/AZ851/AZ8512/AZ8521		AZ2151/
G6K	AZ852/AZ8512	TE	AZ2100/AZ21001
G6R	AZ696/AZ6961/AZ6962		AZ2280/AZ22801
G6S	AZ8462	TF	AZ942/AZ943/AZ942H
G7L	AZ2700	TN	AZ942/AZ943
G8H	AZ988	TP	AZ8/AZ8A
G8J	AZ974/AZ9741	ZD	AZ2110/AZ21101
G8JN	AZ973/AZ9731		AZ2111
G8JR	AZ979/AZ980		AZ2150/AZ21501
G8N	AZ989/AZ9891		AZ2151
G8P	AZ2110/AZ21101/	ZF	AZ942/AZ943
	AZ2111/	ZK	AZ420/AZ421/
	AZ2270		AZ428/AZ429/
	AZ2280/AZ22801		AZ431/AZ439
	AZ2150/AZ21501	ZL	AZ420/AZ421/
	AZ2150W		AZ428/AZ429/
G8PE	AZ987/AZ9871		AZ431/AZ439
G8PT	AZ2151/		
	AZ21501		
G8QN	AZ9471		
G8SN	AZ9421A		
G8W	AZ986		
G8V	AZ984/AZ9841		
G9E	AZHVDC		
LY/MY	AZ164/AZ1641	Sanyou	Zettler
	AZ165/AZ1651	DSY2Y	AZ822/AZ8222
	AZ166/AZ1661	SARL	AZ973/AZ9731
MHS	AZ420/AZ421/	SARS	AZ988
	AZ428/AZ429	SFK	AZ769/AZ7695
MHQ	AZ2428/AZ2429	SJ	AZ770/AZ7705/AZ7709
		SLA	AZ2150/AZ21501
		SLC	AZ2100/AZ21001

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Suggested Equivalents

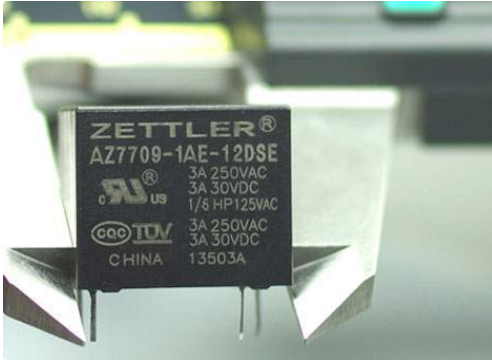
Sanyou	Zettler	Tyco (P&B)	Zettler
SMA	AZ673	3100	XMCO
SME/SMET	AZ164/AZ1641	K10	AZ164/AZ1641
	AZ165/AZ1651		AZ165/AZ1651
	AZ166/AZ1661		AZ166/AZ1661
SRB	AZ9375 SRD/	KUP	AZKUP
SRDH	AZ942/AZ943	PCJ	AZ9375
SYS1K	AZ954X/	PRD	AZPRD
SYS1	AZ954Y	PCFN	AZSR126
		RKA/RKS	AZ697/AZ6975
Song Chuan	Zettler		AZ742/AZ743
109	AZ989/AZ9891J		AZ761/AZ762/AZ576
110	AZSR126		AZ763/AZ764
202/202HT	AZ9375		AZ755/AZ7555
207/875	GP10	R10	AZ420/AZ421/
301	AZ984/AZ9841		AZ428/AZ429/
303	AZ992		AZ431/AZ439
307/899	AZ943	R10R	AZ2428/AZ2429
507/888H	AZ761/AZ762/AZ576	RT	AZ742/AZ743/AZ576
	AZ742/AZ743		AZ761/AZ762
731/	AZKUP	SSRT	SGX-1505FB
792	AZ973/AZ9731	TB1	AZ989/AZ9891J
792H	AZ973/AZ9731	T70	AZ942/AZ943
793	AZ697/AZ6975	T7C	AZ942/AZ943/AZ942H
	AZ755/AZ7555	T7N	AZ942/AZ943
	AZ733/AZ7335	T72	AZ942/AZ943
801H/A	AZ942/AZ943	T72J/K/M	AZ942A/AZ9421A/
812H	AZ932/AZ943/AZ942H		AZ947/AZ9471
812HM	AZ942A/AZ9421A	T73	AZ8/AZ8A
821	AZ769/AZ7695	T75	AZ696/AZ6962
822	AZ970/AZ9701	T77	AZ770/AZ7705/AZ7709
	AZ971/AZ9711	T81	AZ951/AZ954X
832A	AZ2150/AZ21501	T82	AZ822/AZ8222
833H	AZ942/AZ942H/AZ943	T83	AZ830/AZ832
834	AZ766	T85	AZ822/AZ8222
835	AZ770/AZ7705/AZ7709	T90	AZ2110/AZ21101
841	AZ2702		AZ2111/AZ2150/
842	AZ954Y		AZ21501 AZ2151
842A	AZ954X	T91	AZ2100/AZ21001
845	AZ742/AZ743/		AZ2101/
	AZ761/AZ762/AZ576		AZ2200
855AWP	AZ2270/	T9A	AZ2100/AZ21001
	AZ2280		AZ2150/AZ21501
861	AZ975/AZ9751		AZ2270/AZ2280/
	AZ976/AZ9761		AZ22801
871	AZ988	T92	AZ2800/
882	AZ6991		AZ2850
892/892H	AZ940/AZ9405	V23026	AZ956/AZ956P
895	AZ2100/AZ21001	V23042	AZ830/AZ832
896	AZ9731	V23084	AZ934/AZ935
897	AZ979/AZ980 898	V23086	AZ987/AZ9871
AZ986		V23079	AZ8462
SCL/SCL-1	AZ164/AZ1641	V23105	AZ822/AZ8222
	AZ165/AZ1651	V23106	AZ850/AZ851/AZ8512
SCLA	AZ164/AZ1641	VF4/23134A	AZ973/AZ9731
	AZ165/AZ1651		AZ974/AZ9741
SCLB/SCLD	AZ164/AZ1641	VF7/23134J	AZ979/980
	AZ165/AZ1651	VF28	AZ986
		VJ28	AZ984/AZ9841
Telemecanique	Zettler	VFM	AZ988
DR	AZ822/AZ8222	VKM/23072	AZ975/AZ9751
DRS	AZ830/AZ832		AZ976/AZ9761
T154	AZ420/AZ421/	VKP	AZ9701/AZ9711
	AZ428/AZ429/	VM	AZ984/AZ9841
	AZ431/AZ439		
T163	AZ420/AZ421/		
	AZ428/AZ429/		
	AZ431/AZ439		

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электронно-механическое реле have been one of the original components designed, manufactured and sold in ZETTLER Group's long history, making products in this category a well-known and respected mainstay within the Group's worldwide product portfolio.



With one of the broadest product ranges in the industry, ZETTLER relays continue to supply both commercial and industrial sectors with application engineering and product designs that provide customers with the optimal technical solutions they desire.

Multiple combinations of relay series by mounting styles, coil types, силовое, мощное, ranges, single/double pole contacts, contact ratings, latching and non-latching, and other special features are available for 'Parametric Part Searches' in ZETTLER relay data bases.



Because of their high reliability characteristics, ZETTLER relays are used in a wide spectrum of applications, including **Solar and Electric Vehicle Charging, силовое, мощное, HVAC/R, Energy Management, Lighting, Metering, автомобильное, Industrial, телекоммуникационное, для телекоммуникаций, Security, Home Appliances, Medical**, and many other types of electric and electronic equipment.



ZETTLER relays highly respected production capability is an industry-unique blend of skilled craftsmanship and engineering competence, combined with state-of-the-art assembly equipment automation, and high-precision quality control techniques that result in an unmatched standard of product reliability.



- AZ762P 20A SPDT миниатюрное силовое, мощное, реле



- AZ762H 16A SPDT миниатюрное TEMPERATURE силовое, мощное, реле



- AZ21501 40A миниатюрное силовое, мощное, реле



- AZ9481F 16A LOW PROFILE силовое, мощное, реле



- AZ9481 16A LOW PROFILE силовое, мощное, реле



- AZ9431 15A миниатюрное PC BOARD реле



- AZ9405 10A миниатюрное силовое, мощное, реле



- AZ9375 SENSITIVE субминиатюрное реле



- AZ9321 20A миниатюрное PC BOARD реле



- AZ7709 субминиатюрное силовое, мощное, реле



- AZ7695 25 AMP миниатюрное силовое, мощное, реле



- AZ7671 SPDT субминиатюрное силовое, мощное, реле



- AZ7335 DPDT миниатюрное силовое, мощное, реле



- AZ6975 10 AMP миниатюрное силовое, мощное, реле



- AZ6962 10 AMP субминиатюрное силовое, мощное, реле



- AZ6951 SENSITIVE субминиатюрное реле



- AZ2850 30A миниатюрное силовое, мощное, реле



- AZ2800 30A силовое, мощное, реле



- AZ2705 30A силовое, мощное, реле



- AZ2704 30A силовое, мощное, реле



- AZ2703 30A силовое, мощное, реле



- AZ2702 30A силовое, мощное, реле



- AZ2701 30A силовое, мощное, реле



- AZ2700 30A силовое, мощное, реле



- AZ2310 30A миниатюрное силовое, мощное, реле



- AZ2300 20A миниатюрное силовое, мощное, реле



- AZ2280 30A миниатюрное силовое, мощное, реле



- AZ2270 30A миниатюрное силовое, мощное, реле



- AZ2150W 30A миниатюрное силовое, мощное, реле



- AZ2150/2151 40A миниатюрное силовое, мощное, реле



- AZ2110/AZ2120 40A миниатюрное силовое, мощное, реле



- AZ2100 40A миниатюрное силовое, мощное, реле



- AZ948 16A LOW PROFILE силовое, мощное, реле



- AZ947 20A субминиатюрное PCB силовое, мощное, реле FOR AUTOMATIC USE



- AZ946 миниатюрное PC BOARD реле



- AZ943T 20A субминиатюрное PC BOARD реле



- AZ943S 15A(SMT) миниатюрное PC BOARD реле



- AZ943 15A миниатюрное PC BOARD реле



- AZ942H 16A миниатюрное PC BOARD реле



- AZ942 16A миниатюрное PC BOARD реле



- AZ940 10A миниатюрное силовое, мощное, реле



- AZ937 SENSITIVE субминиатюрное реле



- AZ932 15A миниатюрное PC BOARD реле



- AZ888 8A SPST/5A DPST POLARIZED субминиатюрное силовое, мощное, реле



- AZ881 8A SPST/5A DPST POLARIZED субминиатюрное силовое, мощное, реле



- AZ880 10A SPST/8A DPST POLARIZED субминиатюрное силовое, мощное, реле



- AZ770 SPDT субминиатюрное силовое, мощное, реле



- AZ769 25AMP SPDT субминиатюрное силовое, мощное, реле



- AZ767 SPDT субминиатюрное силовое, мощное, реле



- AZ766 SPST субминиатюрное силовое, мощное, реле



- AZ765 SPST субминиатюрное силовое, мощное, реле



- AZ764 16A SPDT миниатюрное силовое, мощное, реле



- AZ762T 16A HIGH INRUSH миниатюрное силовое, мощное, реле



- AZ763 12A SPDT миниатюрное силовое, мощное, реле



- AZ762H 16A SPDT миниатюрное TEMPERATURE силовое, мощное, реле



- AZ762F 20A SPST миниатюрное силовое, мощное, реле WITH QUICK CONNECTS



- AZ762 16A SPDT миниатюрное силовое, мощное, реле



- AZ761 12A SPDT миниатюрное силовое, мощное, реле



- AZ757 20A миниатюрное силовое, мощное, реле



- AZ756 20A миниатюрное силовое, мощное, реле



- AZ755 20A миниатюрное силовое, мощное, реле



- AZ743 10A DPDT миниатюрное силовое, мощное, реле



- AZ742 10A DPDT миниатюрное силовое, мощное, реле



- AZ734 DPST миниатюрное силовое, мощное, реле



- AZ733WC DPDT миниатюрное силовое, мощное, реле



- AZ733W DPST миниатюрное силовое, мощное, реле



AZ733 DPDT миниатюрное силовое, мощное, реле



AZ732 миниатюрное силовое, мощное, реле



AZ725 миниатюрное силовое, мощное, реле



AZ697 10 AMP миниатюрное силовое, мощное, реле



AZ696 10 AMP субминиатюрное силовое, мощное, реле



AZ692/AZ2692 10 AMP миниатюрное силовое, мощное, реле



AZ673 миниатюрное силовое, мощное, реле



AZ8A миниатюрное PC BOARD реле



- AZ8 миниатюрное PC BOARD реле



- AZ9891 30A SUB-MICRO автомобильное реле



- AZ9871 30A MICRO автомобильное реле



- AZ9841 40A 280-ISO автомобильное реле



- AZ9831 70A MINI-ISO автомобильное реле



- AZ9801 70A SUPER-ISO автомобильное реле



- AZ9741 40A MINI-ISO автомобильное реле



- AZ9731 40A MINI-ISO AUTOMATIC реле



- AZ9701E/AZ9711E 45A автомобильное реле



- AZ9701/AZ9711 45A автомобильное реле



- AZ9471 25A субминиатюрное AUTOMATIC реле



- AZ9421A 20A миниатюрное автомобильное реле



- AZ9731 40A MINI-ISO AUTOMATIC реле



- AZ992 20A автомобильное реле



- AZ989 25A SUB-MICRO автомобильное реле



- AZ988 30A MICRO-ISO автомобильное реле



- AZ987 30A MICRO автомобильное реле



- AZ986 40A 280-ISO автомобильное реле



- AZ984 20A 280-ISO автомобильное реле



- AZ983 80A MINI-ISO автомобильное реле



- AZ980 80A MINI-ISO автомобильное реле



- AZ979 80A MINI-ISO автомобильное реле



- AZ978 20A миниатюрное PCB силовое, мощное, реле FOR автомобильное USE



- AZ977 20A MICRO-ISO автомобильное реле



- AZ975/976 20A миниатюрное автомобильное реле



- AZ974 40A MINI-ISO автомобильное реле



- AZ973 40A MINI-ISO автомобильное реле



- AZ970E/AZ971E 45A автомобильное реле



- AZ970/AZ971 40A автомобильное реле



- AZ947 20A субминиатюрное PCB силовое, мощное, реле FOR AUTOMATIC USE



- AZ935 20A миниатюрное DUAL автомобильное реле-QUIET



- AZ934 20A миниатюрное автомобильное реле



- AZSR235 35A миниатюрное силовое, мощное, реле



- AZHVDC HIGH VOLTAGE DC реле



- AZ21501P 50A миниатюрное LATCHING силовое, мощное, реле



- AZ21001 40A миниатюрное силовое, мощное, реле



- AZ7705 субминиатюрное силовое, мощное, реле



- AZ6961 10A субминиатюрное силовое, мощное, реле



- AZ900 30A HEAVY DUTY силовое, мощное, реле



- AZ166 миниатюрное силовое, мощное, реле



- AZ165 миниатюрное силовое, мощное, реле



- AZ164 миниатюрное силовое, мощное, реле



- AZSR250 50A миниатюрное силовое, мощное, реле



- AZ9831 70A MINI-ISO автомобильное реле



- AZ9801 70A SUPER-ISO автомобильное реле



- AZ9701E/AZ9711E 45A автомобильное реле



- AZ9471 25A субминиатюрное AUTOMATIC реле



- AZ9421A 20A миниатюрное автомобильное реле



- AZPRD 50A HEAVY DUTY силовое, мощное, реле



- AZKUP 13A GENERAL PURPOSE силовое, мощное, реле



- AZ7555 20A миниатюрное силовое, мощное, реле



- AZ6991 SENSITIVE субминиатюрное реле



- AZ2511 120A миниатюрное HIGHсиловое, мощное, LATCHING реле



- AZ2505 120A LATCHING силовое, мощное, реле



- AZ2501L 60A LATCHING силовое, мощное, реле



- AZ2501 50A LATCHING силовое, мощное, реле



- AZ2500 60A LATCHING силовое, мощное, реле



- AZ986 40A 280-ISO автомобильное реле



- AZ983 80A MINI-ISO автомобильное реле



- AZ980 80A MINI-ISO автомобильное реле



- AZ979 80A MINI-ISO автомобильное реле



- AZ978 20A миниатюрное PCB силовое, мощное, реле FOR автомобильное USE



- AZ977 20A MICRO-ISO автомобильное реле



- AZ975/976 20A миниатюрное автомобильное реле



- AZ974 40A MINI-ISO автомобильное реле



- AZ973 40A MINI-ISO автомобильное реле



- AZ970E/AZ971E 45A автомобильное реле



- AZ970/AZ971 40A автомобильное реле



- AZ935 20A миниатюрное DUAL автомобильное реле-QUIET



- AZ934 20A миниатюрное автомобильное реле SINGLE OR DUAL



- AZ1651 миниатюрное силовое, мощное, реле



- AZ1641 миниатюрное силовое, мощное, реле



- AZ21501 40A миниатюрное силовое, мощное, реле



- AZ9481F 16A LOW PROFILE силовое, мощное, реле



- AZ9481 16A LOW PROFILE силовое, мощное, реле



- AZ9431 15A миниатюрное PC BOARD реле



- AZ9405 10A миниатюрное силовое, мощное, реле



- AZ9321 20A миниатюрное PC BOARD реле



- AZ7709 субминиатюрное силовое, мощное, реле



- AZ6795 25 AMP миниатюрное силовое, мощное, реле



- AZ7671 SPDT субминиатюрное силовое, мощное, реле



- AZ6975 10 AMP миниатюрное силовое, мощное, реле



- AZ6962 10 AMP субминиатюрное силовое, мощное, реле



- AZ6951 SENSITIVE субминиатюрное реле



- AZ2850 30A миниатюрное силовое, мощное, реле



- AZ2800 30A силовое, мощное, реле



- AZ2705 30A силовое, мощное, реле



- AZ2704 30A силовое, мощное, реле



- AZ2703 30A силовое, мощное, реле



- AZ2702 30A силовое, мощное, реле



- AZ2701 30A силовое, мощное, реле



- AZ2700 30A силовое, мощное, реле



- AZ2310 30A миниатюрное силовое, мощное, реле



- AZ2280 30A миниатюрное силовое, мощное, реле



- AZ2270 30A миниатюрное силовое, мощное, реле



- AZ2150W 30A миниатюрное силовое, мощное, реле



- AZ2150/2151 40A миниатюрное силовое, мощное, реле



- AZ2110/AZ2120 40A миниатюрное силовое, мощное, реле



- AZ2100 40A миниатюрное силовое, мощное, реле



- AZ948 16A LOW PROFILE силовое, мощное, реле



- AZ943T 20A субминиатюрное PC BOARD реле



- AZ943S 15A(SMT) миниатюрное PC BOARD реле



- AZ943 15A миниатюрное PC BOARD реле



- AZ942H 16A миниатюрное PC BOARD реле



- AZ942 16A миниатюрное PC BOARD реле



- AZ940 10A миниатюрное силовое, мощное, реле



- AZ932 15A миниатюрное PC BOARD реле



- AZ888 8A SPST/5A DPST POLARIZED субминиатюрное силовое, мощное, реле



- AZ881 8A SPST/5A DPST POLARIZED субминиатюрное силовое, мощное, реле



- AZ880 10A SPST/8A DPST POLARIZED субминиатюрное силовое, мощное, реле



- AZ770 SPDT субминиатюрное силовое, мощное, реле



- AZ769 25AMP SPDT субминиатюрное силовое, мощное, реле



- AZ767 SPDT субминиатюрное силовое, мощное, реле



- AZ766 SPST субминиатюрное силовое, мощное, реле



- AZ765 SPST субминиатюрное силовое, мощное, реле



- AZ764 16A SPDT миниатюрное силовое, мощное, реле



- AZ763 12A SPDT миниатюрное силовое, мощное, реле



- AZ762T 16A HIGH INRUSH миниатюрное силовое, мощное, реле



- AZ762F 20A SPST миниатюрное силовое, мощное, реле WITH QUICK CONNECTS



- AZ762 16A SPDT миниатюрное силовое, мощное, реле



- AZ761 12A SPDT миниатюрное силовое, мощное, реле



- AZ757 20A миниатюрное силовое, мощное, реле



- AZ756 20A миниатюрное силовое, мощное, реле



- AZ755 20A миниатюрное силовое, мощное, реле



- AZ743 10A DPDT миниатюрное силовое, мощное, реле



- AZ742 10A DPDT миниатюрное силовое, мощное, реле



- AZ734 DPST миниатюрное силовое, мощное, реле



- AZ733WC DPDT миниатюрное силовое, мощное, реле



- AZ673 миниатюрное силовое, мощное, реле



- AZ696 10 AMP субминиатюрное силовое, мощное, реле



- AZ697 10 AMP миниатюрное силовое, мощное, реле



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- ■ AZPRD 50A HEAVY DUTY силовое, мощное, реле



- AZKUP 13A GENERAL PURPOSE силовое, мощное, реле



- AZ7555 20A миниатюрное силовое, мощное, реле



- AZ6991 SENSITIVE субминиатюрное реле



- AZ2800 30A силовое, мощное, реле



- AZ1661 миниатюрное силовое, мощное, реле



- AZ1651 миниатюрное силовое, мощное, реле



- AZ1641 миниатюрное силовое, мощное, реле



- AZ762 16A SPDT миниатюрное силовое, мощное, реле



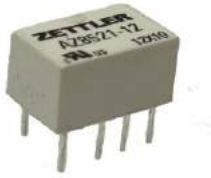
- AZ761 12A SPDT миниатюрное силовое, мощное, реле



- AZ743 10A DPDT миниатюрное силовое, мощное, реле



- AZ742 10A DPDT миниатюрное силовое, мощное, реле



AZ8521 субминиатюрное SIGNAL реле



AZ8463 MICROMINIATURE POLARIZED реле



AZ8462 MICROMINIATURE POLARIZED реле



AZ8461 MICROMINIATURE POLARIZED реле



AZ2511 120A миниатюрное HIGHсиловое, мощное, LATCHING реле



AZ2505 120A LATCHING силовое, мощное, реле



AZ2501L 60A LATCHING силовое, мощное, реле



AZ2501 50A LATCHING силовое, мощное, реле



- AZ2500 60A LATCHING силовое, мощное, реле



- AZ888 8A SPST/5A DPST POLARIZED субминиатюрное силовое, мощное, реле



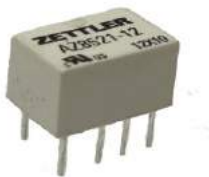
- AZ881 8A SPST/5A DPST POLARIZED субминиатюрное силовое, мощное, реле



- AZ880 10A SPST/8A DPST POLARIZED субминиатюрное силовое, мощное, реле



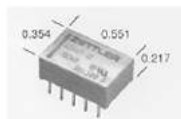
- AZ853 MICRO миниатюрное POLARIZED реле



- AZ852 MICRO миниатюрное POLARIZED реле



- AZ850 MICRO миниатюрное POLARIZED реле



- AZ847 MICROMINIATURE POLARIZED реле



- AZ832P POLARIZED DIP реле BISTABLE(LATCHING)



- AZ830P POLARIZED DIP реле BISTABLE(LATCHING)
- AZ847 MICROMINIATURE POLARIZED реле



- AZ832 POLARIZED DIP реле SINGLE SIDE STABLE



- AZ830 POLARIZED DIP реле SINGLE SIDE STABLE



- AZ826 субминиатюрное ULTRA-SENSITIVE DIP реле



- AZ822 субминиатюрное DIP реле



- AZ421/AZ429/AZ2429 миниатюрное GENERAL PURPOSE реле



- AZ420/AZ428/AZ2428 миниатюрное GENERAL PURPOSE реле



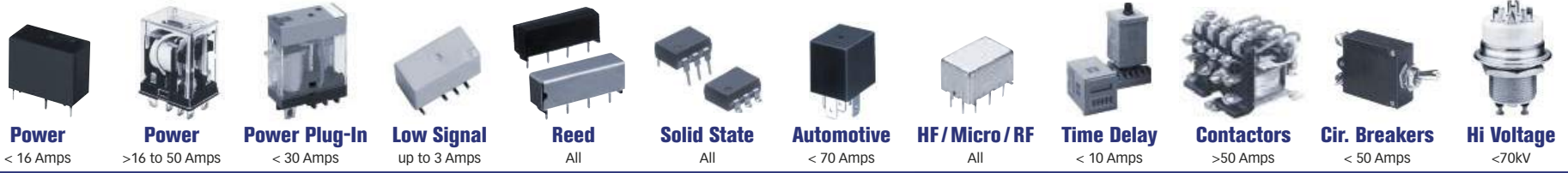
AZ832P POLARIZED DIP реле BISTABLE(LACTHING)



AZ830P POLARIZED DIP реле BISTABLE(LATCHING)

Электро-
механические
реле ZETTLER
(Electromechanical
relays ZETTLER)

	AZ956 серия ZETTLER			AZ957 серия ZETTLER	
	AZ822 серия ZETTLER			AZ832P, AZ832 серии ZETTLER	
	AZ6991 серия ZETTLER			AZ7709 серия ZETTLER	
	AZ940 серия ZETTLER			AZ943 серия ZETTLER	
	AZ9405 серия ZETTLER			AZ742 серия ZETTLER	
	AZ696 серия ZETTLER			AZ763 серия ZETTLER	
	AZ764 серия ZETTLER				



Heilind Products	Power < 16 Amps	Power >16 to 50 Amps	Power Plug-In < 30 Amps	Low Signal up to 3 Amps	Reed All	Solid State All	Automotive < 70 Amps	HF/Micro/RF All	Time Delay < 10 Amps	Contactors >50 Amps	Cir. Breakers < 50 Amps	Hi Voltage <70kV
Agastat (Tyco)									◆			
Aromat	◆	◆		◆		◆	◆	◆		◆		
Axicom (Tyco)				◆				◆				
CII (Tyco)	◆	◆	◆	◆		◆		◆				
Deltrol	◆	◆	◆							◆		
Fujitsu	◆	◆		◆		◆	◆	◆				
Hamlin					◆							
Kilovac (Tyco)										◆		◆
OEG (Tyco)	◆	◆	◆	◆	◆							
Omron	◆	◆	◆	◆		◆	◆	◆				
P&B (Tyco)	◆	◆	◆	◆	◆	◆			◆	◆	◆	
Schrack (Tyco)	◆	◆	◆									
Tyco							◆					

Part Families

Agastat (Tyco)									7000, VTM, SSC, SCE			
Aromat	DSP, JQ, ALZ, LK, JS, JTN, JTV, JW, ST	DJ, DQ, HE, HG, JH, JM, JR, JTN, JTV, LE, LF, LZ	AHK, AHN, HJ	DS2, DS4, TN, TQ2, TX, AGN, AGQ		APT, AQH, AQK, AQN, AQS, AQV, AQW, AQY, AQZ	CA, CB, CF, CM, CP, CQ, CR, CT, CY, CV, EV, JSM, JJM	ARJ, ARX, RP, ARA, ARE, RK		AEP, AEJ		
Axicom (Tyco)				IM, V23079, FP2, MT2, V23105				HF3				
CII (Tyco)	07, FCA, FCB	FCA	07, FCA, FCB	FW, HFW, (J)MG, (J)MA, (J)MS, 3SBC, 3SBH		PS12, DS11, DS13, DS9		MW3, MW4, MW6	6001, 1800			
Deltrol	100, 105, 160, 165, 166, 260, 263, 268	177, 270, 275, 375, 900	105, 160, 265, 166, 263, 268, 375							900		
Fujitsu	F3, F4, JY, JS, LZ, 160, NY, LY, MY, VE, F2, H2, H1, F1	K1, K2, VSB, JR, VF		SY, MZ, B3, B4, A, NA, C1, C2, RA, RA4, RY		SJ, SE, SG, SN, SL	51, 53, 512, P2, P3, P4, P5, P6	UM1				
Hamlin					HE2, HE3, HE4, HE7							
Kilovac (Tyco)										EV200, FM200, CAP200		HC-1, HC3, K41, K43, K61, K81, KC-2 PD, S05
OEG (Tyco)	PCI, PCJ, OJ, PCH, PCD, OMI	OZ, PCK, PCFN	PCI, PCLH	OUAZ, TSC	OL, OMR							
Omron	G2R, G2RL, G4A, G4W, G5B, G5LE, G5Q, G6B, G6C, G6R	G2R, G4A, G8P	G2R, G6B, LY, MY, MK, MGN, MJN, G7L	G5V, G6A, G6H, G6J, G6L, G6S, G6W, G6Y, G6Z		G3VM, G3MB, G3MC, G3R, G3M, G3TB, G3TC, G3NE, G3NA, G3PB	G8QN, G8QW, G6JN, G8W, G8H, G8HN	G5Y, G6K-RF, G6W, G6Y, G6Z				
P&B (Tyco)	T73, T77, T7C, T7N	T9A, 491, T92	R10, K10, KHAU, KU, KRPA	T81	JWS, JWD	SSRT, SSR, SSRD, SSRQ, IAC, OAC, IDC, ODC			CN, CL, CU	PRD, P30, P40, P31, P41	W51, W57, W54, W58, W33, W6, W9	
Schrack (Tyco)	PE, RE, RY11, RT	RP11, 0410, 0430	PT, RM, MT, 0419									
Tyco							V23086, T72M, VKP, VF4, VF7					

Competitors

Airpax											◆	
American Zettler	◆		◆	◆		◆	◆					
Carlingswitch											◆	
Coto					◆							
CP Clare					◆	◆						
Crouzet						◆		◆				
Crydom						◆						
Duetsch	◆	◆	◆	◆				◆				
Fumas										◆		
Gigavac												◆
Good Sky	◆			◆								
Gordos						◆						
Grayhill						◆						
Hasco	◆	◆			◆		◆					
Heinemann											◆	
Idec	◆		◆			◆		◆				
Jennings												◆
Leach	◆	◆	◆	◆				◆		◆		
Magnecraft	◆	◆	◆		◆	◆		◆		◆		
NEC				◆		◆						
Opto 22						◆						
Song Chuan			◆									
Stetron		◆										
Teledyne	◆	◆	◆	◆		◆		◆				

Major Markets

Appliance	Appliance	Computers	Computer Peripherals	Medical	ATM	ATV's	A/V Broadcast	Automation	Appliance	Appliance	Aerospace
Garage Door	Garage Door	Elevator Control	Door Openers	Security	Automotive	Construction Equipment	CATV	Elevator Control	Door Operation	Aviation	Automotive
HVAC	HVAC	Fan/Motor Control	Medical	Telecom	Elevator Control	Emergency Equipment	Medical	HVAC	Elevator Control	Commercial Lighting	Battery Switching
Industrial	Industrial	HVAC	Security	Test & Measure	Industrial Control	Handicap Equipment	Satellite Equipment	Lighting Control	HVAC	HVAC	Circuit Protection
Office Equipment	Office Equipment	Industrial Automation	Telecom		Mil-Aero	Industrial	Telecom	Pump Control	Industrial	Office Equipment	Industrial
Power Supplies	Power Supplies	Medical	Test & Measure		Office Equipment	Lawn Care Equipment	Test & Measure	Test & Measure	Medical	UPS	Medical
Spa/Pool	Spa/Pool	Office Equipment	Thermostat		Robotics	Marine		Welding Equipment	Office Equipment	Vending Machine	Safety
		Test & Measure			Telecom	Refrigeration			Pump/Motor		Test & Measure
		Welding Equipment				RV's			Spa/Pool		
									Vending Machine		
									Welding Equipment		

Authorized Distributor for													
Manufacturer	Electro - mechanical	Solid State	Automotive	High Frequency	High Voltage	Signal (Dry to 3 A)	Medium Power (3 A to 19.9 A)	Power (20 A to 99.9 A)	High Power (100 A to 500 A)	Contactors	Reed	Timing	Mil/ Aero High Reliability
Amperite	•	•	•				•					•	
American Zettler	•	•	•			•	•	•	•	•			
Coto Technology	•	•		•	•						•		
Crydom		•					•	•	•	•		•	
Cynergy3 Components	•			•	•						•		
Detrol	•						•	•					
Idec	•	•				•	•					•	
Hasco	•		•			•	•	•			•		
Magnecraft	•	•				•	•	•			•	•	
Meder Electronic	•			•	•						•		
Omron Electronics	•	•	•	•		•	•	•	•			•	
Panasonic EW/Aromat	•	•	•	•		•	•	•	•	•		•	
Song Chuan	•		•			•	•	•					
TE / Agastat Brand	•											•	
TE / CII Brand	•	•				•	•	•				•	•
TE / Kilovac Brand	•	•		•	•	•	•	•		•		•	
TE / P&B Brand	•	•	•			•	•	•	•	•	•	•	
Teledyne Relays	•	•		•		•	•						•
World Products / NEC	•		•			•	•	•					

Реле ZETTLER Минск т.80447584780

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email minsk17@tut.by tel.+375 29 758 47 80 МТС

Реле ZETTLER, каталог, описание, технические, характеристики, datasheet, параметры, маркировка, габариты, фото, даташит,

AMERICAN ZETTLER, INC.

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RELAY SELECTOR GUIDE

QR код



реле zettler az2100-1a-24de
реле zettler az6962-1ce-24d купить
реле zettler az2100-1a-12de
реле zettler az6962-1ce-24d 200
реле zettler каталог
реле zettler aze31-08-100
реле zettler az8-1c-12de
реле zettler az2100-1c-12de купить
реле zettler az8-1ch-12de