



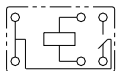
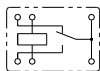

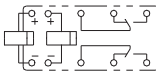
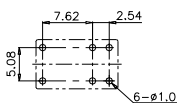
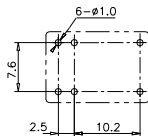
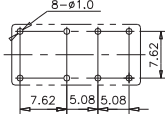
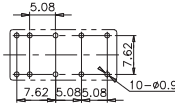






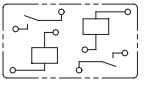
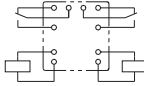
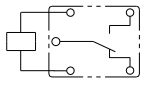
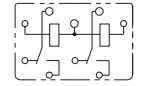
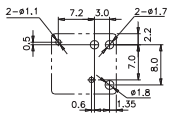
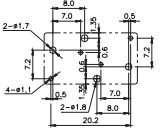
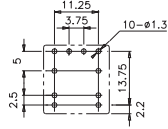
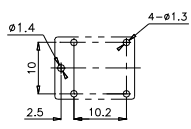
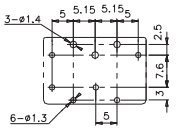





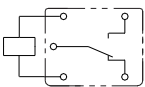
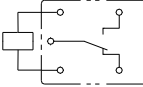
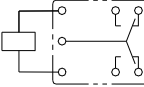
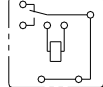
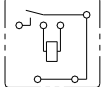
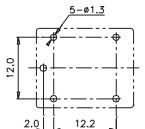
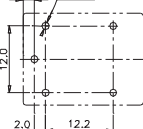
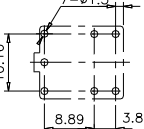
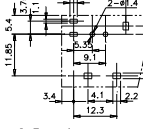
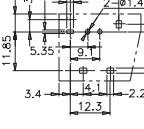





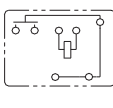
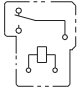
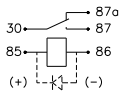
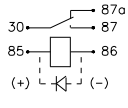
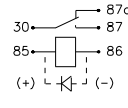
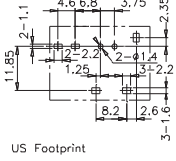
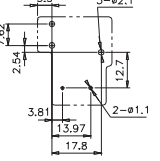
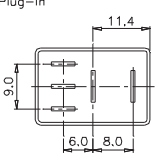
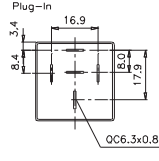
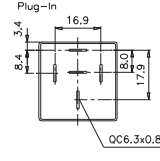



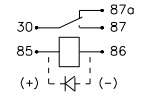
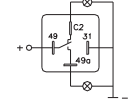

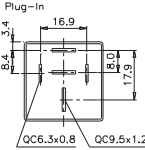
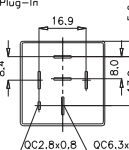
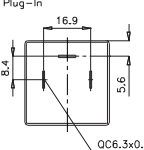








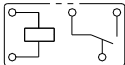

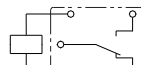
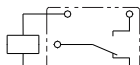
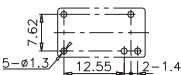
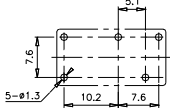
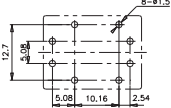
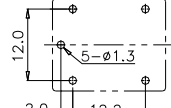
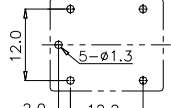
Classification		Telecom				
Model		HG4507	HG4100	HG4078B	HG4516	
Appearance						
Approximate Dimensions (L x W x H) & Weight	Open					
	Covered	12.5 x 7.5 x 10 mm 2.2 g	16 x 11 x 11.5 mm 4 g	20.2 x 9.9 x 12 mm 5 g	20.2 x 10 x 10.6 mm 8 g	
Features		<ul style="list-style-type: none"> <li>Ultra-miniature design</li> <li>Extremely light weight</li> <li>High coil sensitivity</li> </ul>	<ul style="list-style-type: none"> <li>Standard telecom oriented design</li> <li>Low profile and light weight</li> </ul>	<ul style="list-style-type: none"> <li>Standard telecom oriented design</li> <li>Highly reliable performance</li> </ul>	<ul style="list-style-type: none"> <li>Standard telecom oriented design</li> <li>Latching versions available</li> <li>Highly reliable performance</li> </ul>	
Contact	Form	1 Form C	1 Form C	2 Form C	2 Form C	
	Material	Ag Au plate Ag	Ag Au plate Ag	AgPd + Au clad AgNi + Au clad	Ag alloy + Au clad	
	Rating	0.5A, 125VAC 1A, 24VDC	1A, 120VAC/24VDC 5A, 120VAC/24VDC (S)	1mA - 1.25A 125VAC/150VDC	1A, 125VAC 2A, 30VDC	
	Max. Switching Current	1A	5A	2A	5A	
Coil	Nominal Voltage	3 to 24VDC	3 to 24VDC	4.5 to 48VDC	5 to 48VDC	
	Nominal Power	0.15 W	Standard: 0.36W Sensitive: 0.2W B: 0.45W	Standard: 0.515-0.56W Sensitive: 0.15-0.36W	Standard: 0.15-0.2W Sensitive: 0.075-0.1W	
Dielectric	Open Contacts	400 Vrms	500 - 750 Vrms	500 Vrms	1000 Vrms	
	Coil - Contacts	1000 Vrms	1250 Vrms	1000 Vrms	1500 Vrms	
	Others			1000 Vrms		
Surge Resistance		1500 V	1500 V	1500 V	1500 V	
Life (Ops)	Mechanical	$5 \times 10^6$	$10^7$	$2 \times 10^7$	$10^8$	
	Electrical	$10^5$	$10^5$	$1 - 2 \times 10^6$	$1 - 5 \times 10^5$	
Enclosure Type	Open					
	Dust Cover					
	Flux Free					
	Sealed	X	X	X	X	
Mounting & Termination		PCB	PCB	PCB	PCB	
Approvals		UL, CSA	UL, CSA	UL, CSA	UL, cUL	
Wiring Diagram						
Footprint (for other footprint please refer to detail specifications)						
Equivalence		Matsushita HY Omron G5V-1 Takamisawa SY OEG TSC	Omron G2E OEG OJAZ P&B T81 Zettler AZ951/952	Takamisawa RY Omron G5V-2 OEG OVR	Siemens D2 Takamisawa RY Omron G5V-2 OEG OVR	






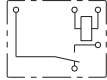
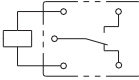
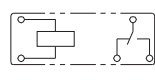
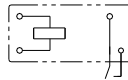
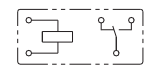
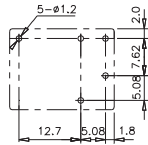
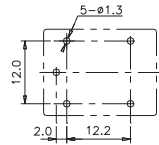
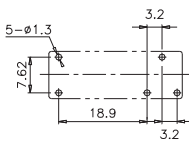
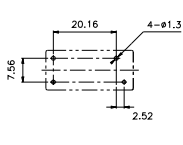
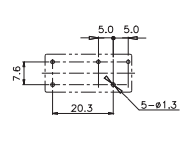
Classification		Automotive				
Model		HG4520	HG4527	HG4519	HG4181	HG4508
Appearance						
Approximate Dimensions (L x W x H) & Weight	Open					
	Covered	12.9 x 12 x 9.9 mm 4 g	23.6 x 12.9 x 9.9 mm 8 g	17.5 x 16.8 x 13.2 mm 10 g	15.7 x 12.3 x 13.7 mm 6 g	24.3 x 15.8 x 14 mm 13 g
Features		<ul style="list-style-type: none"> <li>Ultra-miniature design</li> <li>Extremely light weight</li> <li>Heavy duty</li> </ul>	<ul style="list-style-type: none"> <li>Two HG4520 in one cover</li> <li>Extremely space-saving design</li> <li>Ideal for motor polarity reversal</li> </ul>	<ul style="list-style-type: none"> <li>Ultra-miniature design</li> <li>Two independent relay in one package</li> <li>Ideal for motor polarity reversal</li> </ul>	<ul style="list-style-type: none"> <li>Small size, light weight</li> <li>Two contact gap version for choice</li> <li>Heavy duty</li> </ul>	<ul style="list-style-type: none"> <li>Small size, light weight</li> <li>Two HG4181 in one cover</li> <li>Ideal for motor polarity reversal</li> </ul>
Contact	Form	1 Form A 1 Form C	2 Form C	2 Form C	1 Form A 1 Form C 1 Form U	2 Form C
	Material	AgNi0.15 AgSnOInO	AgNi0.15 AgSnOInO	AgNi10 AgNi0.15 AgCdO AgSnOInO	AgNi10 AgNi0.15 AgCdO AgSnOInO	AgNi10 AgNi0.15 AgCdO AgSnOInO
	Rating	20A, 13.5VDC	20A, 13.5VDC	25A, 13.5VDC	20A, 14VDC	20A, 14VDC
	Max. Switching Current	Make 100A Break 30A	Make 100A Break 30A	Make 30A Break 30A	Make 60A Break 20A	Make 60A Break 20A
Coil	Nominal Voltage	6 to 24VDC	6 to 24VDC	6 to 24VDC	6 to 24VDC	6 to 24VDC
	Nominal Power	0.55 W	0.55 W	Standard: 0.8W Sensitive: 0.6W	Standard: 0.6W Big Gap: 0.8W	Standard: 0.6W Big Gap: 0.8W
Dielectric	Open Contacts	500 Vrms	500 Vrms	500 Vrms	500 Vrms	500 Vrms
	Coil - Contacts	500 Vrms	500 Vrms	500 Vrms	500 Vrms	500 Vrms
	Others					
Surge Resistance						
Life (Ops)	Mechanical	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
	Electrical	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Enclosure Type	Open					
	Dust Cover				X	
	Flux Free					
	Sealed	X	X	X	X	X
Mounting & Termination		PCB	PCB	PCB	PCB	PCB
Approvals						
Wiring Diagram						
Footprint (for other footprint please refer to detail specifications)						
http://www.tyhhk.com Equivalence		Siemens Micro K	Siemens DMK	Siemens DMR	Fujitsu FBR51-52	Fujitsu FBR510-520







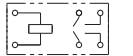
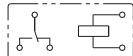
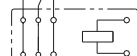
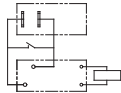
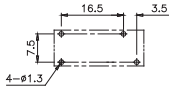
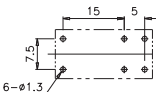
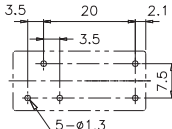
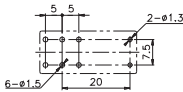
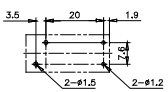
Classification		Automotive				
Model		HG4231A	HG4232A	HG4117	HG4119	HG4237
Appearance						
Approximate Dimensions (L x W x H) & Weight	Open			16 x 13.2 x 18 mm 8 g	25 x 21 x 20 mm 18 g	25 x 21 x 20 mm 18 g
	Covered	19 x 15.5 x 15 mm 10 g	22.5 x 16.5 x 17 mm 10 g	17.7 x 15.2 x 19.7 mm 12 g	26.5 x 21.5 x 21.5 mm 23 g	26.5 x 21.5 x 21.5 mm 23 g
Features		<ul style="list-style-type: none"> <li>Automotive version of submini power relay</li> <li>Universal footprint</li> <li>Economic automotive relay</li> </ul>	<ul style="list-style-type: none"> <li>Automotive version of submini power relay</li> <li>Universal footprint and package</li> </ul>	<ul style="list-style-type: none"> <li>Standard submini automotive relay</li> <li>Robust construction</li> <li>6 contact form options</li> </ul>	<ul style="list-style-type: none"> <li>Standard mini automotive power relay</li> <li>Robust construction</li> <li>2-footprint options</li> </ul>	<ul style="list-style-type: none"> <li>Improved contact capacity by new contacts design</li> <li>Two footprints for choice</li> </ul>
Contact	Form	1 Form A 1 Form C	1 Form A 1 Form C	1 Form A, 1 Form U 1 Form B, 1 Form V 1 Form C, 1 Form W	1 Form A 1 Form B 1 Form C	1 Form A
	Material	AgNi10 AgNi0.15 AgCdO AgSnOInO	AgNi10 AgNi0.15 AgCdO AgSnOInO	AgNi10 AgNi0.15 AgCdO AgSnOInO	AgNi10 AgNi0.15 AgCdO AgSnOInO	PdCu pair + AgNi10 pair
	Rating	20A, 16VDC	20A, 14VDC	10A, 15VDC	40A, 15VDC	70A, 15VDC
	Max. Switching Current	Make 60A Break 20A	Make 60A Break 20A	Make 100A (S) Break 20A	Make 180A (S) Break 60A	Make 160A Break 70A
Coil	Nominal Voltage	6 to 24VDC	6 to 24VDC	6 to 24VDC	6 to 24VDC	6 to 24VDC
	Nominal Power	0.8 W	0.8 W	1.1 W	1.5 W	1.6 W
Dielectric	Open Contacts	500 Vrms	500 Vrms	500 Vrms	500 Vrms	500 Vrms
	Coil - Contacts	500 Vrms	500 Vrms	500 Vrms	500 Vrms	500 Vrms
	Others					
Surge Resistance						
Life (Ops)	Mechanical	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
	Electrical	10 <sup>5</sup>	10 <sup>5</sup>	2 x 10 <sup>5</sup>	2 x 10 <sup>5</sup>	10 <sup>5</sup>
Enclosure Type	Open			X	X	X
	Dust Cover		X	X	X	X
	Flux Free					
	Sealed	X	X	X	X	X
Mounting & Termination		PCB	PCB	PCB	PCB	PCB
Approvals						
Wiring Diagram						
Footprint (for other footprint please refer to detail specifications)						
Equivalence			P&B T72M	Siemens Mini Power K P&B VKM	Siemens Power K P&B VKP	

Classification		Automotive				
Model		HG4504	HG4234A	HG4182	HG4185A	HG4185B
Appearance						
Approximate Dimensions (L x W x H) & Weight	Open	28 x 21 x 18 mm 20 g	28.9 x 23.3 x 15.6 mm 20 g			
	Covered	31.5 x 21.5 x 21.5 mm 25 g	31.7 x 26.9 x 19.1 mm 26 g	23 x 15.5 x 26 mm 14 g	28 x 28 x 25 mm 35 g	28 x 28 x 25 mm 35 g
Features		<ul style="list-style-type: none"> <li>Twin contacts design of automotive power relay</li> <li>Enlarged contact gap for heavy duty</li> </ul>	<ul style="list-style-type: none"> <li>Automotive version of US-style mini power relay</li> <li>Withstands rough environment</li> </ul>	<ul style="list-style-type: none"> <li>Micro plug-in/PCB automotive relay</li> </ul>	<ul style="list-style-type: none"> <li>Standard package automotive power relay</li> <li>Various mounting versions</li> </ul>	<ul style="list-style-type: none"> <li>Standard package automotive power relay</li> <li>Various mounting versions</li> </ul>
Contact	Form	1 Form U	1 Form A 1 Form B 1 Form C	1 Form A 1 Form B 1 Form C	1 Form A 1 Form C	1 Form A 1 Form C
	Material	AgNi10	AgNi10 AgNi0.15 AgCdO AgSnOInO	AgNi10 AgNi0.15 AgCdO AgSnOInO	AgNi10	AgCdO
	Rating	2 x 30A, 15VDC	30A, 15VDC	20A, 15VDC	20A, 15VDC	40A, 15VDC
	Max. Switching Current	Make 2 x 120A Break 2 x 40A	Make 60A Break 30A	Make 120A (S) Break 30A	Make 120A Break 40A	Make 120A Break 60A
Coil	Nominal Voltage	6 to 24VDC	6 to 24VDC	6 to 24VDC	6 to 24VDC	6 to 24VDC
	Nominal Power	2.25 W	1.5 W	1 Form A, B: 1.2W Form C: 1.5W With Resistor: 1.71W	1.6W With Resistor: 1.81W	1.6W With Resistor: 1.81W
Dielectric	Open Contacts	500 Vrms	500 Vrms	500 Vrms	500 Vrms	500 Vrms
	Coil - Contacts	500 Vrms	500 Vrms	500 Vrms	500 Vrms	500 Vrms
	Others					
Surge Resistance						
Life (Ops)	Mechanical	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
	Electrical	2 x 10 <sup>5</sup>	2 x 10 <sup>5</sup>	2 x 10 <sup>5</sup>	2 x 10 <sup>5</sup>	2 x 10 <sup>5</sup>
Enclosure Type	Open	X	X			
	Dust Cover	X	X	X	X	X
	Flux Free					
	Sealed	X	X	X		
Mounting & Termination		PCB	PCB	QC PCB	QC QC + Bracket PCB	QC QC + Bracket PCB
Approvals						
Wiring Diagram						
Footprint (for other footprint please refer to detail specifications)		 US Footprint			 OC6.3x0.8	 OC6.3x0.8
Equivalence		Siemens K-D	P&B T90H/T90R	Siemens Micro A P&B VFM	Siemens F2 P&B VF2	Siemens F4 P&B VF4











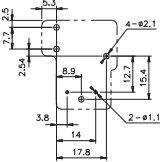
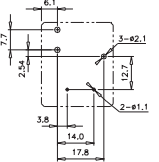
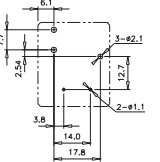
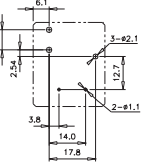
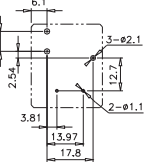
Classification		Automotive			
Model		HG4185C	HG4121	HG4143	
Appearance					
Approximate Dimensions (L x W x H) & Weight	Open				
	Covered	28 x 28 x 25 mm 38 g	30.5 x 30.5 x 42 mm 62 g	30 x 30 x 30 mm 42 g	
Features		<ul style="list-style-type: none"> <li>Standard package automotive power relay</li> <li>Various mounting versions</li> </ul>	<ul style="list-style-type: none"> <li>Interval wiper control relay package</li> <li>Just plug in and use it</li> </ul>	<ul style="list-style-type: none"> <li>Self functional flasher relay package</li> <li>Just plug in and use it</li> </ul>	
Contact	Form	1 Form A 1 Form C	1 Form C	1 Form A 1 Form C 2 Form A	
	Material	AgSnOInO	AgNi10	AgSnOInO	
	Rating	80A, 15VDC	40A, 14VDC	21W x 4 + 4W x 2 Lamp	
	Max. Switching Current	Make 240A Break 80A			
Coil	Nominal Voltage	6 to 24VDC	12VDC	12VDC	
	Nominal Power	1.6W With Resistor: 1.81W	1.6 W	1.8 W	
Dielectric	Open Contacts	500 Vrms	500 Vrms	500 Vrms	
	Coil - Contacts	500 Vrms	500 Vrms	500 Vrms	
	Others				
Surge Resistance					
Life (Ops)	Mechanical	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	
	Electrical	10 <sup>5</sup>	10 <sup>5</sup>	200hr + 36hr	
Enclosure Type	Open				
	Dust Cover	X	X	X	
	Flux Free				
	Sealed				
Mounting & Termination		QC QC + Bracket PCB	QC	QC	
Approvals					
Wiring Diagram					
Footprint (for other footprint please refer to detail specifications)					
Equivalence		Siemens F7 P&B VF7			







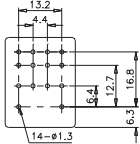
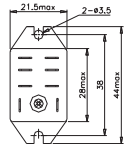
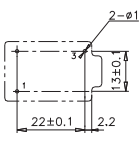
Classification		General Purpose				
Model		HG4183	HG4503	HG4137	HG4231	HG4232
Appearance						
Approximate Dimensions (L x W x H) & Weight	Open					
	Covered	18.2 x 10.2 x 14.9 mm 6 g	20.5 x 10.6 x 15.7 mm 7 g	22.5 x 16.8 x 18.8 mm 15 g	19 x 15.5 x 15 mm 10 g	22.5 x 16.5 x 17 mm 10 g
Features		<ul style="list-style-type: none"> <li>Submini power relay</li> <li>Small PCB area occupation</li> <li>High input-output separation</li> </ul>	<ul style="list-style-type: none"> <li>Submini power relay</li> <li>Small PCB area occupation</li> <li>High input-output separation</li> </ul>	<ul style="list-style-type: none"> <li>Small package for two pole power switching</li> </ul>	<ul style="list-style-type: none"> <li>Submini power relay</li> <li>Universal footprint</li> <li>Low cost, heavy duty</li> </ul>	<ul style="list-style-type: none"> <li>US-style submini power relay</li> <li>Universal footprint</li> <li>Low operate voltage</li> </ul>
Contact	Form	1 Form A 1 Form C	1 Form A 1 Form C	2 Form A 2 Form C	1 Form A 1 Form B 1 Form C	1 Form A 1 Form C
	Material	AgNi0.15 AgCdO AgSnOInO	AgCdO	AgCdO	AgNi10 AgNi0.15 AgCdO AgSnOInO	AgNi10 AgNi0.15 AgCdO AgSnOInO
	Rating	10A, 120VAC/28VDC TV-5, 125VAC	5A, 250VAC/30VDC 10A, 125VAC	2A, 24VDC	7A, 240VAC 12A, 120VAC/28VDC	7A, 240VAC 12A, 120VAC/28VDC
	Max. Switching Current	10A	10A	2A	12A	12A
Coil	Nominal Voltage	3 to 48VDC	3 to 24VDC	3 to 24VDC	3 to 48VDC	3 to 24VDC
	Nominal Power	Standard: 0.45W Sensitive: 0.2W	Standard: 0.45W Sensitive: 0.2W	0.5 W	Standard: 0.45W Sensitive: 0.36W	0.36 W
Dielectric	Open Contacts	750 Vrms	1000 Vrms	500 Vrms	1000 Vrms	1000 Vrms
	Coil - Contacts	3500 Vrms (1 Form A) 2800 Vrms (1 Form C)	4000 Vrms	500 Vrms	1000 Vrms	1500 Vrms
	Others					
Surge Resistance		5000V				
Life (Ops)	Mechanical	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
	Electrical	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Enclosure Type	Open					
	Dust Cover		X		X	X
	Flux Free	X			X	X
	Sealed	X	X	X	X	X
Mounting & Termination		PCB	PCB	PCB	PCB	PCB
Approvals		UL, CSA, TUV	UL, cUL		UL, CSA, TUV, VDE	UL, CSA
Wiring Diagram						
Footprint (for other footprint please refer to detail specifications)						
Equivalence		OEG OJ/OJE	Omron G5S Matsushita JQ Takamisawa JY		OEG PCE	P&B T72 Matsushita JS OEG PCE






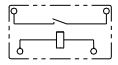
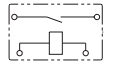
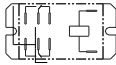
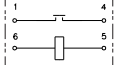

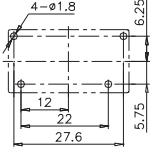
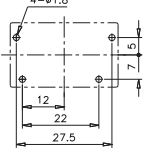
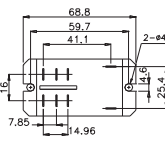
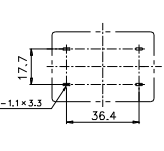
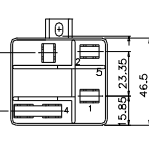
Classification		General Purpose				
Model		HG4233	HG4230	HG4518	HG4536	HG4509
Appearance						
Approximate Dimensions (L x W x H) & Weight	Open					
	Covered	21.5 x 16.5 x 15 mm 10 g	20.2 x 16.5 x 20.2 mm 12 g	28.5 x 10.1 x 12.3 mm 8.2 g	28 x 10.25 x 15.5 mm 10 g	29 x 12.7 x 15.7 mm 13.5 g
Features		<ul style="list-style-type: none"> <li>Submini power relay</li> <li>High input-output separation design</li> </ul>	<ul style="list-style-type: none"> <li>Submini power relay</li> <li>Universal footprint</li> <li>Low cost, heavy duty</li> </ul>	<ul style="list-style-type: none"> <li>Low profile, slim design</li> <li>High input-output separation</li> </ul>	<ul style="list-style-type: none"> <li>Low profile, slim design</li> <li>High input-output separation</li> <li>Various footprint options available</li> </ul>	<ul style="list-style-type: none"> <li>Low profile mini power relay</li> <li>Same PCB area occupation as standard HG4124</li> </ul>
Contact	Form	1 Form A 1 Form C	1 Form A 1 Form C	1 Form A 1 Form C	1 Form A 1 Form B 1 Form C	1 Form A, 2 Form A 1 Form B, 2 Form B 1 Form C, 2 Form C
	Material	AgNi0.15 AgCdO AgSnOInO	Ag AgCdO AgSnOInO	AgCdO	AgNi10 AgNi0.15 AgCdO AgSnOInO	AgNi10 AgCdO AgSnOInO
	Rating	10A, 120VAC/24VDC	12A, 120VAC/24VDC TV-5, 120VAC	8A, 250VAC 5A, 30VDC	8A, 250VAC	8-16A, 250VAC
	Max. Switching Current	10A	12A	10A	30A, 20ms	16A
Coil	Nominal Voltage	3 to 48VDC	3 to 48VDC	5 to 60VDC	5 to 48VDC	5 to 110VDC
	Nominal Power	Standard: 0.45W Sensitive: 0.33W	Standard: 0.45W Sensitive: 0.36W	0.22-0.25 W	0.4 W	0.4 W
Dielectric	Open Contacts	750 Vrms	1000 Vrms	1000 Vrms	1000 Vrms	1000 Vrms
	Coil - Contacts	2000 Vrms	1500 Vrms	5000 Vrms	5000 Vrms	5000 Vrms
	Others					2500 Vrms
Surge Resistance						
Life (Ops)	Mechanical	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
	Electrical	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Enclosure Type	Open					
	Dust Cover		X	X	X	X
	Flux Free		X			
	Sealed	X	X	X	X	X
Mounting & Termination		PCB	PCB	PCB	PCB	PCB
Approvals		UL, CSA	UL, CSA, TUV	UL, cUL	UL, CSA, VDE	UL, cUL, VDE
Wiring Diagram						
Footprint (for other footprint please refer to detail specifications)						
Equivalence		Takamisawa LZ Zettler AZ8	OEG SRUDH	Takamisawa JS Omron G6RN	Schrack RY	Schrack RT Zettler AZ742/763/764

Classification		General Purpose				
Model		HG4525	HG4526	HG4124	HG4124L	HG4515
Appearance						
Approximate Dimensions (L x W x H) & Weight	Open					
	Covered	24.5 x 10.5 x 24.5 mm 13 g	24.8 x 12.8 x 24.8 mm 13 g	29 x 13 x 25.5 mm 18 g	29 x 13 x 26.3 mm 18.5 g	29 x 12.6 x 24.8 mm 13 g
Features		<ul style="list-style-type: none"> <li>• Slimmer than HG4124</li> </ul>	<ul style="list-style-type: none"> <li>• 2 pole slim design</li> </ul>	<ul style="list-style-type: none"> <li>• Standard vertical mini power relay</li> <li>• One and two pole version available</li> </ul>	<ul style="list-style-type: none"> <li>• Standard vertical mini power relay</li> <li>• Heavy duty version of standard HG4124</li> </ul>	<ul style="list-style-type: none"> <li>• 16A contact capacity</li> <li>• 8mm spacing, 5KV dielectric</li> <li>• Upper Quick Connects</li> </ul>
Contact	Form	1 Form A 1 Form C	2 Form A	1 Form A, 2 Form A 1 Form C, 2 Form C	1 Form A 1 Form B 1 Form C	1 Form A
	Material	AgCdO AgSnInO	AgCdO AgSnInO	AgCdO	AgCdO	AgCdO AgSnInO
	Rating	10A, 250VAC/30VDC TV5	5A, 250VAC/30VDC	5-10A, 250VAC/30VDC	16A, 240VAC/24VDC 1HP, 240VAC	16A, 250VAC/30VDC
	Max. Switching Current	10A	5A	10A	20A	16A
Coil	Nominal Voltage	5 to 48VDC	5 to 48VDC	3 to 60VDC	5 to 60VDC	5 to 48VDC
	Nominal Power	Standard: 0.53W Sensitive: 0.25W	0.53 W	0.55 W	Standard: 0.72W Sensitive: 0.55W	0.54 W
Dielectric	Open Contacts	1000 Vrms	1000 Vrms	1000 Vrms	1000 Vrms	1000 Vrms
	Coil - Contacts	4000 Vrms (1 Form A) 3000 Vrms (1 Form A)	4000 Vrms	5000 Vrms	4000 Vrms	5000 Vrms
	Others		1000 Vrms	3000 Vrms		
Surge Resistance			1000 V			1000 V
Life (Ops)	Mechanical	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
	Electrical	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Enclosure Type	Open					
	Dust Cover	X	X	X	X	
	Flux Free					
	Sealed	X	X	X	X	X
Mounting & Termination		PCB	PCB	PCB	PCB	PCB
Approvals		UL, cUL	UL, cUL, TUV	UL, CSA, TUV	UL, CSA, TUV	UL, cUL
Wiring Diagram						
Footprint (for other footprint please refer to detail specifications)						
Equivalence		OEG SDT	OEG OSA OEG PCI	P&B RKA Omron G2R	P&B RKS Omron G2R	OEG OMIF



Classification		General Purpose				
Model		HG4115	HG4138	HG4138B	HG4138L	HG4234
Appearance						
Approximate Dimensions (L x W x H) & Weight	Open	30.5 x 23 x 17 mm 20 g	30.5 x 23.3 x 25.1 mm 28 g			28.9 x 23.3 x 15.6 mm 28.9 x 23.3 x 25.1 mm 20 g/24 g
	Covered	32.3 x 27.5 x 20.3 mm 26 g	32.2 x 27.5 x 28 mm 33 g	32.2 x 27.5 x 20 mm 30 g	32.2 x 27.5 x 28 mm 33 g	31.7 x 26.9 x 19.1 mm 32.2 x 27.5 x 27.5 mm 25g/33 g
Features		<ul style="list-style-type: none"> <li>US-style mini power relay</li> <li>DC and AC coil for choice</li> <li>UL508 and UL873 spacing version available</li> </ul>	<ul style="list-style-type: none"> <li>US-style mini power relay</li> <li>DC and AC coil for choice</li> <li>PCB and panel mounting version available</li> </ul>	<ul style="list-style-type: none"> <li>Low profile version of HG4138</li> </ul>	<ul style="list-style-type: none"> <li>Heavy duty version of HG4138</li> <li>Magnetic arc blowout</li> </ul>	<ul style="list-style-type: none"> <li>US-style mini power relay</li> <li>Improved version to HG4115 and HG4138</li> <li>DC and AC coil for choice</li> </ul>
Contact	Form	1 Form A 1 Form B 1 Form C	1 Form A 1 Form B 1 Form C	1 Form A 1 Form B 1 Form C	1 Form A 1 Form B 1 Form C	1 Form A 1 Form B 1 Form C
	Material	AgCdO AgSnOInO	AgCdO AgSnOInO	AgCdO AgSnOInO	AgCdO AgSnOInO	AgCdO AgSnOInO
	Rating	30A, 240VAC/28VDC	30A, 240VAC/28VDC	30A, 240VAC/28VDC	45A, 240VAC/28VDC	30A, 277VAC/30VDC
	Max. Switching Current	30A	30A	30A	45A	30A
Coil	Nominal Voltage	5 to 110VDC 12 to 220VAC	5 to 110VDC 12 to 220VAC	5 to 110VDC	5 to 110VDC	5 to 110VDC 12 to 220VAC
	Nominal Power	0.9W 2VA	0.9W 2VA	0.9W	0.9W	Standard: 1W, 2VA Sensitive: 0.9W
Dielectric	Open Contacts	1500 Vrms	1500 Vrms	1500 Vrms	1500 Vrms	1500 Vrms
	Coil - Contacts	1500 Vrms (UL508, AC Coil) 2500 Vrms (UL873, DC Coil)	1500 Vrms (AC Coil) 2500 Vrms (DC Coil)	2500 Vrms	1500 Vrms	1500 Vrms (AC Coil) 2500 Vrms (DC Coil)
	Others					
Surge Resistance						
Life (Ops)	Mechanical	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
	Electrical	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	1.5 x 10 <sup>4</sup>	10 <sup>5</sup>
Enclosure Type	Open	X	X			
	Dust Cover	X	X	X		X
	Flux Free					
	Sealed	X	X	X	X	X
Mounting & Termination		PCB	PCB + QC Panel Mount + QC	PCB + QC	PCB + QC	PCB PCB + QC Panel Mount + QC
Approvals		UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA
Wiring Diagram						
Footprint (for other footprint please refer to detail specifications)						
Equivalence		P&B T90 Matsushita JT Omron G8P	P&B T91 Matsushita JT Omron G7G		P&B T91E	P&B T9A Matsushita JT Omron G8P G7G

Classification		General Purpose			
Model		HG4104	HG4104L	HG4502	
Appearance					
Approximate Dimensions (L x W x H) & Weight	Open				
	Covered	28 x 21.5 x 35 mm 37 g	28 x 21.5 x 35 mm 37 g	31.5 x 19.3 x 42.2 mm 46 g	
Features		<ul style="list-style-type: none"> <li>• Clear cubic general purpose relay</li> <li>• DC and AC coil for choice</li> <li>• Various mounting choice</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy duty version of HG4104</li> <li>• DC and AC coil for choice</li> <li>• Various mounting choice</li> </ul>	<ul style="list-style-type: none"> <li>• Magnetic latching construction</li> <li>• Energy saving concept</li> <li>• Heavy duty</li> </ul>	
Contact	Form	2 Form C 3 Form C 4 Form C	1 Form C 2 Form C	1 Form A 1 Form B	
	Material	AgCe	AgCdO	AgCdO	
	Rating	3-7A, 220VAC/30VDC	10-15A, 220VAC/30VDC	60A, 220VAC	
	Max. Switching Current	7A	15A	60A	
Coil	Nominal Coil Voltage	5 to 110VDC 6 to 240VAC	5 to 110VDC 6 to 240VAC	5 to 24VDC	
	Nominal Power	0.9W 1.2VA	0.9W 1.2VA	Single Coil: 1W Dual Coil: 2W	
Dielectric	Open Contacts	1000 Vrms	1000 Vrms	2000 Vrms	
	Coil - Contacts	1500 Vrms	1500 Vrms	4000 Vrms	
	Others	1500 Vrms	1500 Vrms		
Surge Resistance					
Life (Ops)	Mechanical	$2 \times 10^7$	$2 \times 10^7$	$10^5$	
	Electrical	$1 - 2 \times 10^5$	$10^5$	$10^4$	
Enclosure Type	Open				
	Dust Cover	X	X		
	Flux Free				
	Sealed			X	
Mounting & Termination		PCB Soldering Tab Tab + Socket Panel Mount	PCB Soldering Tab Tab + Socket Panel Mount	PCB + Screw Tab	
Approvals		UL, cUL	UL, cUL	UL, cUL	
Wiring Diagram					
Footprint (for other footprint please refer to detail specifications)					
Equivalence		P&B KHA Omron MY	P&B K10 Omron LY		

Classification		Compressor Control				
Model		HG4239	HG4510	HG4236	HG4505	HG4506
Appearance						
Approximate Dimensions (L x W x H) & Weight	Open					
	Covered	30.5 x 16 x 26.5 mm 23 g	31 x 18.5 x 29 mm 42 g	52 x 34.5 x 26.4 mm 86 g	51.5 x 34.6 x 36 mm 90 g	51 x 46 x 35 mm 100 g
Features		<ul style="list-style-type: none"> <li>Motor switching oriented design</li> <li>Heavy duty</li> <li>High input-output separation</li> </ul>	<ul style="list-style-type: none"> <li>Motor switching oriented design</li> <li>Heavy duty</li> <li>High input-output separation</li> </ul>	<ul style="list-style-type: none"> <li>Motor switching oriented design</li> <li>Two pole heavy duty</li> <li>High input-output separation</li> </ul>	<ul style="list-style-type: none"> <li>Motor switching oriented design</li> <li>Enlarged contact gap for heavy duty</li> <li>High input-output separation</li> </ul>	<ul style="list-style-type: none"> <li>Motor switching oriented design</li> <li>Inner wired for motor starter capacitor switching</li> </ul>
Contact	Form	1 Form A	1 Form A	2 Form A 2 Form C	1 Form X 2 Form X	1 Form B
	Material	AgCdO AgSnOInO	AgCdO AgSnOInO	AgCdO	AgCdO AgSnOInO	AgCdO AgSnOInO
	Rating	20A, 250VAC/30VDC 1HP, 250VAC	20A 220VAC/30VDC 1.5HP, 220VAC	30A 277VAC 2.5HP, 250VAC	30A, 240VAC (1 Form X) 2 x 25A, 240VAC (2 Form X)	16A, 250VAC
	Max. Switching Current	20A	20A	30A	30A	35A
Coil	Nominal Voltage	5 to 24VDC	5 to 48VDC	6 to 110VDC 12 to 277VAC	3 to 220VDC 6 to 240VAC	
	Nominal Power	0.9W	0.9W	1.7W 4VA	1.9W 1.7-2.7VA	5VA
Dielectric	Open Contacts	1000 Vrms	1000 Vrms	1000 Vrms	2000 Vrms	1200 Vrms
	Coil - Contacts	4500 Vrms	2000 Vrms	4000 Vrms	4000 Vrms	
	Others			2000 Vrms	2000 Vrms	
Surge Resistance						
Life (Ops)	Mechanical	$5 \times 10^5$	$5 \times 10^6$	$5 \times 10^6$	$5 \times 10^6$	$5 \times 10^5$
	Electrical	$10^5$	$10^5$	$10^5$	$10^5$	$3 \times 10^5$
Enclosure Type	Open					
	Dust Cover		X	X	X	X
	Flux Free	X				
	Sealed	X	X	X	X	X
Mounting & Termination		PCB PCB + QC	PCB PCB + QC	PCB + QC Panel Mount + QC	PCB QC	Panel Mount + QC
Approvals		CSA (UL in progress)	UL, cUL (Pending)	UL, cUL	UL (In progress)	UL (Pending)
Wiring Diagram						
Footprint (for other footprint please refer to detail specifications)						
Equivalence		Omron G4A	Omron G4F Matsushita JM Takamisawa VH Zettler AZ760	P&B T92	Matsushita HE Omron G7L	Electrica RVA