Category		SIGNAL RELAY	
Product Model	HRA	HRB1	HRS1
Relay Picture	A CONTROL OF THE PROPERTY OF T		AST NO SECOND SE
Dimensions L×W×H (mm)	10.2×7.4×10.0	12.3×7.3×10.2	15.6×10.6×11.8
Safety Standards	⊕ .₹\ us	su UR o ®	c RU us 🛕 œ
Characteristics	■ Microminiature relay ■ Light weight ■ Contact: 1 Form C (SPDT)	■ Microminiature relay ■ Light weight ■ Contact: 1 Form C ■ High sensitivity 150mW	 Microminiature relay High sensitivity Contact: 1 Form C Max. Switching capacity 3A
Contact Form	1C	1C	1C
Contact Rating (Resistive Load)	1A 120VAC/24VDC	1A 125VAC/24VDC 2A 125VAC/24VDC	1A 120VAC/24VDC 3A 120VAC/24VDC
Max. Switching Voltage	120VAC/30VDC	125VAC/30VDC	220VAC/30VDC
Max. Switching Current	2A	2A	3A
Max. Switching Power	120VA,30W	250VA,48W	360VA,72W
Min. Switching Load	5VDC,10mA	5VDC,10mA	5VDC,10mA
Coil Voltage	3∼24VDC	3~24VDC	3~24VDC
Coil Power (mW)	330mW,450mW	150mW	200mW,360mW
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 500VAC,1min ② 500VAC,1min	① 500VAC,1min ②1,000VAC,1min	① 750VAC,1min ② 1,000VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000(1A 120VAC/24VDC) 50,000(3A 120VAC/24VDC)
Operating Temperature	-25°C to +70°C	-40°C to +70°C	-25°C to +70°C
Terminal Type	PCB	PCB	PCB
Terminal Layout (Bottom View) (mm)	1.5±0.3 2.54±0.1 5.08±0.1 1	12540.3 25440.1 7.6240.1 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	254401 10.16±0.1 1.3±0.3
Weight (Approximately)	1.7g	2.2g	4.0g
Page	31	34	37

Category	SIGNAL RELAY			
Product Model	HRS1K	HRS2H		
Relay Picture	Marie	ATE OF MAN		
Dimensions L×W×H (mm)	15.6×10.6×11.8	20.5×9.9×11.4		
Safety Standards	c Al us 🛕 œ	cac 🛕 cac		
Characteristics	 Microminiature relay High sensitivity Contact: 1 Form C Dielectric strength of 2500V between coil and contacts 	 Microminiature relay High sensitivity 2 Form C contacts (DPDT) 		
Contact Form	1C	2C		
Contact Rating (Resistive Load)	1A 120VAC/24VDC 3A 120VAC/24VDC	1A 120VAC/24VDC 2A 120VAC/24VDC		
Max. Switching Voltage	220VAC/30VDC	125VAC/30VDC		
Max. Switching Current	3A	2A		
Max. Switching Power	360VA,72W	240VA,48W		
Min. Switching Load	5VDC,10mA	5VDC,10mA		
Coil Voltage	3~24VDC	3∼24VDC		
Coil Power (mW)	200mW,360mW	150mW、200mW、360mW、450mW		
DielectricStrength: ① Open Contacts ② Coil and Contacts	0 750VAC,1min②Standard: 1,500VAC, 1 min②E: 2,500VAC, 1 min	500VAC,1min1,000VAC,1min		
Electrical Life (ops.)	100,000次 (1A 120VAC/24VDC) 50,000次 (3A 120VAC/24VDC)	100,000		
Operating Temperature	-25℃ to +70℃	-25°C to +70°C		
Terminal Type	PCB	PCB		
Terminal Layout (Bottom View) (mm)	5-Φ10 ¹⁰ 0.1 	8-Φ10 ^{+0.1} 1		
Weight (Approximately)	4.0g	5.0g		
Page	40	43		

Category		POWER RELAY	
Product Model	HRS1KH3	HRS3	HRS3F
Relay Picture	MATERIAL STATES		
Dimensions L×W×H (mm)	15.6×10.6×11.8	18.6×10.4×15.8	18.2×10.2×15.5
Safety Standards	(P) . (P) US (COC)	③ . ™	cac <u>∆</u> ≈ ∠ ∠ cac
Characteristics	 Microminiature relay High sensitivity Contact: 1 Form A Switching capacity 3A 	 Microminiature relay Max. Switching capacity: 10A Contact: 1 Form A, 1 Form C 	 Microminiature relay 5A switching capacity Contact: 1 Form A Reinforced insulation between coil and contact
Contact Form	1A	1A,1C	1A
Contact Rating (Resistive Load)	3A 220VAC/30VDC	A:10A125VAC,5A250VAC/28VDCC:NO/NC:5A/3A250VAC/28VDC	5A 250VAC/30VDC Horsepower: 1/3HP 240VAC(0.45W) 1/4HP 240VAC
Max. Switching Voltage	220VAC/30VDC	250VAC/28VDC	277VAC/30VDC
Max. Switching Current	3A	10A	5A
Max. Switching Power	660VA,90W	1,250VA,280W	1,250VA,150W
Min. Switching Load	5VDC,100mA	5VDC,100mA	5VDC,100mA
Coil Voltage	3∼24VDC	3~24VDC	5∼24VDC
Coil Power (mW)	200mW	200mW,450mW	200mW,450mW
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 750VAC,1min ②1,000VAC,1min	① 1,000VAC,1min ② A: 3,500VAC,1 min ② C: 2,500VAC,1 min	① 1,000VAC,1min ② 4,000VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-25℃ to +70℃	-40°C to +85°C	-40°C to +85°C
Terminal Type	PCB	PCB	PCB
Terminal Layout (Bottom View) (mm)	2.54±0.1, 10.16±0.1 , 1.3±0.3	5-Ø13 ⁺ 0 ¹ 1,46±0.1 1,27±0.1 2,54±0.1	4-Ø1.3 ^{10.1} 1.7±0.3 12.7±0.1 2.54±0.1
Weight (Approximately)	4.0g	6.0g	6.0g
Page	47	50	54

SELECTI	ON CHART		
Category		POWER RELAY	
Product Model	HRS3FN	HRS3T	AC5
Relay Picture		17. 00 00 1 m.	
Dimensions L×W×H (mm)	18.2×10.2×15.5	20.9×10.2×15.5	20.4×7.0×15.4
Safety Standards	cec 🛕 cec	∞ <u>∆</u> ≈ ∪ R ∘	. A U us 🏤 🚥
Characteristics	 Microminiature relay 10A switching capacity Contact: 1 Form A Reinforced insulation between coil and contact 	 Microminiature relay Max. Switching capacity: 10A Contact: 1 Form A, 1 Form C 	Microminiature relay Slim type, 7mm width High mounting density High sensitivity 200mW
Contact Form	1A	1A,1C	1A
Contact Rating (Resistive Load)	10A250VAC Horsepower:1/3HP 240VAC(0.45W) 1/4HP 240VAC(0.45W)	A:5A250VAC/28VDC C:NO/NC:5A/3A 250VAC/28VDC	5A 250VAC
Max. Switching Voltage	277VAC/30VDC	250VAC/28VDC	250VAC/30VDC
Max. Switching Current	10A	10A	5A
Max. Switching Power	2,500VA,300W	1,250VA,280W	1,250VA,150W
Min. Switching Load	5VDC,100mA	5VDC,100mA	5VDC,100mA
Coil Voltage	5∼24VDC	3~48VDC	5∼24VDC
Coil Power (mW)	200mW,450mW	200mW,450mW	200mW
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 1,000VAC,1min ② 4,000VAC,1min	① 1,000VAC,1min ② A: 3,500VAC,1 min ② C: 2,500VAC,1 min	① 750VAC,1min ② 4,000VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Terminal Type	PCB	PCB	PCB
Terminal Layout (Bottom View) (mm)	4.Ø13 *0.1 1.7±0.3	5-Ø13 ^{+0.1} 1.6±0.3 10.2±0.1 1.6±0.3	4-Ø1.1+01 Q Q 15±0.1
Weight (Approximately)	6.0g	7.0g	3.0g
Page	56	58	61
			TVC - Outputting Object 7

Category		POWER RELAY	
Product Model	AC5N	HRS4	HRS4F
Relay Picture	The state of the s	### 100 mm 100 m	THE STATE OF THE S
Dimensions L×W×H (mm)	20.4×7.0×15.4	19.0×15.5×15.8	19.0×15.5×15.8
Safety Standards	ALUS 🔐 🚥	◎ △ □ □	. M us @
Characteristics	 Microminiature relay Slim type, 7mm width High mounting density High sensitivity 200mW 	 Miniature relay Contact: 1 Form A, 1 Form B, 1 Form C TV-5 rating UL Class F insulation 	 Miniature relay Dielectric strength of 2500V between coil and contacts Contact: 1 Form A,1 Form C
Contact Form	1A	1A,1B,1C	1A,1C
Contact Rating (Resistive Load)	5A 250VAC	A:15A 125VAC, 10A 250VAC C: N0:10A 250VAC/24VDC NC:6A 250VAC/24VDC TV-5 125VAC	10A 250VAC/30VDC
Max. Switching Voltage	250VAC/30VDC	250VAC/28VDC	250VAC/30VDC
Max. Switching Current	5A	15A	10A
Max. Switching Power	1,250VA,150W	2,500VA,280W	2,500VA,300W
Min. Switching Load	5VDC,100mA	5VDC,100mA	5VDC,100mA
Coil Voltage	5∼24VDC	3~48VDC	3~48VDC
Coil Power (mW)	200mW	360mW,450mW	360mW,450mW
① Open Contacts ② Coil and Contacts	① 750VAC,1min ② 4,000VAC,1min	① 750VAC,1min ② 1,500VAC,1min	① 1,000VAC,1min ② 2,500VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-40℃ to +85℃	-40°C to +85°C	-40℃ to +85℃
Terminal Type	PCB	PCB	PCB
Terminal Layout (Bottom View) (mm)	4-01.1°0.1 	5-Ø1.3 ^{+0.1} 5-Ø1.3 ^{+0.1} 5-Ø1.3 ^{+0.1} 5-Ø1.3 ^{+0.1} 2 0±0.1 12.2±0.1 3.5±0.3	1.75±0.3 5-Ø1.3 ^{+0.1} 5-Ø1.3 ^{+0.}
Weight (Approximately)	3.0g	10.0g	11.0g
Page	63	65	69

Product Model	Category	POWER RELAY	
Dimensions L×W×H(mm)	Product Model	HRS4N	HRS4T
Safety Standards A	Relay Picture	The state of the s	AS mustacity A in figure or in figure again
# Max. 20A switching capability # High temperature load: 17A 277VAC at 105°C # Available for single pin and double pins terminal # Compliance to standard EN 60335-1 # Compliance to RoHS Directive # UL Insulation system: F Class Contact Form 1A,1B,1C 1A,1B,1C Contact Rating (Resistive Load) A: 20A 125VAC 17A 277VAC 10A 250VAC/24VDC Max. Switching Voltage 400VAC/28VDC 250VAC/28VDC Max. Switching Current 4,700VA 2,500VA,280W Min. Switching Load 5VDC,100mA 5VDC,10	Dimensions L×W×H (mm)	21.0×16.0×20.8	20.0×16.3×20.2
# High temperature load: 17A 277VAC at 105 °C	Safety Standards		c Al us 🛕 œ
Contact Rating (Resistive Load) A: 20A 125VAC CNO:17A 277VAC NC:7A 2	Characteristics	 ■ High temperature load: 17A 277VAC at 105°C ■ Available for single pin and double pins terminal ■ Compliance to standard EN 60335-1 ■ Compliance to RoHS Directive 	■ Contact: 1 Form A, 1 Form B, 1 Form C
17A 277VAC 10A 250VAC/24VDC 10A 250VAC/24VDC 10A 250VAC/24VDC 10A 250VAC/24VDC 10A 250VAC/24VDC 10A 250VAC/24VDC 10A 250VAC/28VDC 250VAC/28VDC 250VAC/28VDC 15A 1	Contact Form	1A,1B,1C	1A,1B,1C
Max. Switching Current 20A(A),17A(C) 15A Max. Switching Power 4,700VA 2,500VA,280W Min. Switching Load 5VDC,100mA 5VDC,100mA Coil Voltage 3~48VDC 3~48VDC Coil Power (mW) 360mW 360mW,450mW DielectricStrength: ② Coil and Contacts ② Coil and Contacts ① 1,000VAC,1min ② 1,500VAC,1min ① 1,000VAC,1min ② 1,500VAC,1min Electrical Life (ops.) 100,000 100,000 Operating Temperature -40°C to +85°C (Single pin), -40°C to +105°C (Double pin) -40°C to +85°C Terminal Type PCB PCB Weight (Approximately) 14.0g 12.0g		17A 277VAC NC:7A 277VAC	10A 250VAC/24VDC
Max. Switching Power 4,700VA 2,500VA,280W Min. Switching Load 5VDC,100mA 5VDC,100mA Coil Voltage 3~48VDC 3~48VDC Coil Power (mW) 360mW 360mW,450mW DielectricStrength: ① Open Contacts ② Coil and Contacts ① 1,000VAC,1min ② 1,500VAC,1min ① 1,000VAC,1min ② 1,500VAC,1min Electrical Life (ops.) 100,000 100,000 Operating Temperature -40°C to +85°C (Single pin), -40°C to +105°C (Double pin) -40°C to +85°C Terminal Type PCB PCB Weight (Approximately) 14.0g 12.280.1 14.0g 12.0g	Max. Switching Voltage	400VAC/28VDC	250VAC/28VDC
Min. Switching Load Coil Voltage 3 ~ 48VDC 3 ~ 48VDC 3 ~ 48VDC 3 60mW 360mW 360mW,450mW DielectricStrength: ① Open Contacts ② Coil and Contacts ② Coil and Contacts Electrical Life (ops.) Operating Temperature Terminal Type PCB Single pin version Double pin version Double pin version Double pin version Terminal Layout (Bottom View) (mm) Weight (Approximately) Weight (Approximately) 14.0g 15VDC,100mA 5VDC,100mA 5VDC,100mA 3 ~ 48VDC 5 00mW,450mW 10,000VAC,1min ② 1,000VAC,1min ② 1,000VAC,1min ② 1,500VAC,1min ② 1,500V	Max. Switching Current	20A(A),17A(C)	15A
Coil Voltage 3~48VDC 3~48VDC Coil Power (mW) 360mW 360mW DielectricStrength:	Max. Switching Power	4,700VA	2,500VA,280W
Coil Power (mW) 360mW 360mW,450mW DielectricStrength:	Min. Switching Load	5VDC,100mA	5VDC,100mA
DielectricStrength: ① 1,000VAC,1min ② 1,000VAC,1min ② 1,500VAC,1min ③ 1,500VAC,1min ③ 1,500VAC,1min ③ 1,500VAC,1min ③ 1,500VAC,1min ③ 1,500VAC,1min ③ 1,500VAC,1min ④ 1,500VAC,1min ④ 1,500VAC,1min ④ 1,500VAC,1min ④ 1,500VAC,1min ④ 1,5	Coil Voltage	3~48VDC	3~48VDC
① Open Contacts ② Coil and Contacts ② 1,500VAC, 1min ② 1	Coil Power (mW)	360mW	360mW,450mW
Operating Temperature -40 °C to +85 °C (Single pin), -40 °C to +105 °C (Double pin) -40 °C to +85 °C Terminal Type PCB PCB Terminal Layout (Bottom View) (mm) Weight (Approximately) 14.0g 14.0g 14.0g 15.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	① Open Contacts		
Terminal Type Single pin version Double pin version	Electrical Life (ops.)	100,000	100,000
Single pin version Double	Operating Temperature	-40 $^{\circ}\mathrm{C}$ to +85 $^{\circ}\mathrm{C}$ (Single pin),-40 $^{\circ}\mathrm{C}$ to +105 $^{\circ}\mathrm{C}$ (Double pin)	-40°C to +85°C
Terminal Layout (Bottom View) (mm) Weight (Approximately) 14.0g 12.2e0.1	Terminal Type	PCB	PCB
	(Bottom View)	2.0±0.1 12.2±0.1 5.Ø1.3*0.1 2.0±0.1 12.2±0.1 6.Ø1.3*0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	120001
Page 72 75	Weight (Approximately)	14.0g	12.0g
	Page	72	75

Cotogon		POWER RELAY	
Category Product Model	V6	V6T	HRM
Relay Picture	INC. COLOR SAME	INI: VoT.S.DC12V	TRIM TO THE PARTY OF THE PARTY
Dimensions L×W×H (mm)	23.0×16.1×10.2	23.0×16.1×10.2	29.0×12.6×20.8
Safety Standards	③ △ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	s 	
Characteristics	 Low profile, flat type relay Max. Switching capacity: 15A Tungsten lamp load: 10A 125VAC High sensitivity 200mW 	 Low profile, flat type relay Max. Switching capacity: 16A Lever type(Manual Operation) High sensitivity 200mW 	 General purpose power relay TV-5 rating Creepage distance: 8mm
Contact Form	1A	1A	1A,1C
Contact Rating (Resistive Load)	15A125VAC 10A 250VAC/24VDC	16A 250VAC 16A 30VDC	10A 250VAC/30VDC, TV-5 Inductive: 5A 240VAC (COSΦ=0.4) 16A 250VAC(For T type)
Max. Switching Voltage	250VAC/30VDC	250VAC/30VDC	250VAC/30VDC
Max. Switching Current	16A	16A	16A
Max. Switching Power	4,000VA,480W	4,000VA,480W	2,500VA,300W
Min. Switching Load	5VDC,100mA	5VDC,100mA	5VDC,100mA
Coil Voltage	3~48VDC	3~48VDC	3~48VDC
Coil Power (mW)	200mW	200mW	540mW,720mW
① Open Contacts ② Coil and Contacts	① 750VAC,1min ② 2,500VAC,1min	① 750VAC,1min ② 2,500VAC,1min	① 1,000VAC,1min ② 4,000VAC,1min
Electrical Life (ops.)	100,000	50,000	100,000
Operating Temperature	-40°C to +85°C	-40°C to +85°C	-30~+55°C(720mW) -30~+70°C(540mW)
Terminal Type	PCB	PCB	PCB
Terminal Layout (Bottom View) (mm)	17.78±0.1 17.78±0.1 2.40±1.0°0.1 2.40±1.0°0.1 2.40±1.0°0.1 1.5±0.3	2-91.5 °6 1 17.8±0.1 3.0±0.3 1 17.8±0.1 1 17	HRM 18±0.3 16.6±0.1 3.5±0.1 3.5±0.1 1 3.5±0.1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Weight (Approximately)	9.00g	10.00g	13.00g
Page	79	82	84

SELECTI	ON CHART		
Category		POWER RELAY	
Product Model	HRM1	HRM2	HRM3
Relay Picture	Children of the Control of the Contr	The state of the s	12 m
Dimensions L×W×H (mm)	29.0×12.6×20.8	29.0×12.6×20.8	Sealed: 24.6×10.6×25.0 Unsealed: 24.0×10.0×25.0
Safety Standards			♠ ♠ ↓ ↓ ↓
Characteristics	 Slim type Contact: 2 Form A, 2 Form C Dielectric strength of 4000V between coil and contacts Creepage distance: 8mm 	 General purpose power relay Contact: 1 Form A, 1 Form C Dielectric strength of 4000V between coil and contacts 16A contact current Creepage distance: 8mm 	Available in sealed and unsealed versions High sensitivity type with power consumption of 250mW 1 form A contact configuration Comply with TV-5 standards required for TV and audio power supplies
Contact Form	2A,2C	1A,1C	1A
Contact Rating (Resistive Load)	5A 250VAC/24VDC, TV-5 Inductive Load 5A 250VAC/24VDC (COSΦ=0.4,L/R=7ms)	16A 250VAC/30VDC, TV-8 Inductive Load 8A 250VAC/30VDC (COSΦ=0.4,L/R=7ms)	10A 250VAC/30VDC,TV-5
Max. Switching Voltage	250VAC/30VDC	250VAC/30VDC	250VAC/30VDC
Max. Switching Current	5A	16A	10A
Max. Switching Power	1,250VA,150W	4,000VA,480W	2,500VA,300W
Min. Switching Load	5VDC,100mA	5VDC,100mA	5VDC,100mA
Coil Voltage	3~48VDC	3~48VDC	3~48VDC
Coil Power (mW)	540mW,720mW	540mW,720mW	150mW,250mW,540mW
① Open Contacts ② Coil and Contacts	① 1,000VAC,1min ② 4,000VAC,1min	① 1,000VAC,1min ② 4,000VAC,1min	① 1,000VAC,1min ② 4,000VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-30∼+55℃(720mW) -30∼+70℃(540mW)	-30~+55°C(720mW) -30~+70°C(540mW)	-40°C to+70°C
Terminal Type	PCB	PCB	PCB
Terminal Layout (Bottom View) (mm)	1.8±0.3 15.24±0.1 5.08±0.1	1.8±0.3 15.24±0.1 5.08±0.1 1.8±0.3 15.24±0.1 5.08±0.1	4-Ø1.3°0.1 26±0.3 10 10 10 10 10 10 10 10 10 10
Weight (Approximately)	13.0g	13.0g	10.0g
Page	88	92	96

Category	POWER RELAY		
Product Model	HRM4	НСР1	НСР2
Relay Picture			The second of th
Dimensions L×W×H (mm)	Sealed: 24.4×12.9×24.8 Unsealed: 23.5×12.0×24.8	29.0×12.6×15.8	29.0×12.6×15.8
Safety Standards	<u> </u>	™ ∞ ♦ ∞ №	. Al us 🛕 🍩 🏝
Characteristics	 Small size Sealed and unsealed versions 5A contact current 2 form A contact configuration Creepage distance: 6mm Cross bar or rivet contacts 	 Low profile,height 15.8mm Switching capacity 12A Contact: 1 Form A, 1 Form C Sensitivity 400mW Insulation: 5KV Creepage:10mm 	 Low profile, height 15.8mm Switching capacity 8A Contact: 2 Form A, 2 Form C Sensitivity 400mW Insulation: 5KV Creepage:10mm
Contact Form	2A	1A,1C	2A,2C
Contact Rating (Resistive Load)	5A 250VAC/30VDC,TV-5 3A 125VAC/30VDC(SP)	12A 250VAC/30VDC Inductive load 5A 250VAC Cosφ=0.4	8A 250VAC/30VDC Inductive load 4A 250VAC Cosp=0.4
Max. Switching Voltage	250VAC/30VDC	440VAC/120VDC	440VAC/120VDC
Max. Switching Current	5A	12A	8A
Max. Switching Power	1,250VA,150W	3,000VA,360W	2,000VA,240W
Min. Switching Load	5VDC,100mA	5VDC,100mA	5VDC,100mA
Coil Voltage	3~48VDC	5~48VDC	5~48VDC
Coil Power (mW)	250mW,540mW	400mW	400mW
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 1,000VAC,1min ② 4,000VAC,1min	① 1,000VAC,1min ② 5,000VAC,1min	① 1,000VAC,1min ② 5,000VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-30°C to +70°C	-40°C to +85°C	-40°C to +85°C
Terminal Type	PCB	PCB	PCB
Terminal Layout (Bottom View) (mm)	6-Ø13 °0.1 1.95±0.3	5.08±0.1 5.08±0	8-\(\phi\)1.3\(\frac{10.1}{0}\) 5.08±0.1 5.08±0.1 5.08±0.1 5.08±0.1 5.08±0.1 1.00 1.
Weight (Approximately)	13.0g	13.00g	13.0g
Page	100	104	108

Category	egory POWER RELAY			
Product Model	НСР3	НСР4		
Relay Picture		A Control of the Cont		
Dimensions L×W×H (mm)	29.0×12.6×15.8	28.4×10.0×12.7		
Safety Standards	c ¶ us 🛕 ጩ 🏠	cas 🚵 coc		
Characteristics	 Low profile, height 15.8mm Switching capacity 16A Contact: 1 Form A, 1 Form C Sensitivity 400mW Insulation: 5KV Creepage:10mm 	Slim type, width 10.0mm Contact: 1 Form A, 1 Form C		
Contact Form	1A,1B,1C	1A,1C		
Contact Rating (Resistive Load)	16A 250VAC/30VDC Inductive load 8A 250VAC Cosφ=0.4	8A 250VAC/30VDC		
Max. Switching Voltage	440VAC/120VDC	440VAC/30VDC		
Max. Switching Current	16A	10A		
Max. Switching Power	4,000VA,480W	2,000VA,240W		
Min. Switching Load	5VDC,100mA	5VDC,100mA		
Coil Voltage	3~48VDC	5~48VDC		
Coil Power (mW)	250m,400mW	0.22W		
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 1,000VAC,1min ② 5,000VAC,1min	① 1,000VAC,1min ② 5,000VAC,1min		
Electrical Life (ops.)	100,000	100,000		
Operating Temperature	-40°C to +85°C	-40°C to +85°C		
Terminal Type	PCB	PCB		
Terminal Layout (Bottom View) (mm)	5.08±0.1 5.08±0.1 5.08±0.1 5.08±0.1 1.1±0.3	C(3 2mm) A(5.0mm) 3.15±0.3 A(5.0mm) A(5		
Weight (Approximately)	13.0g	8.00g		
	111	114		

Category	POWER RELAY		
Product Model	F5	F6	
Relay Picture	FRHDC12V-P1 US 28VAC BL. A B A DC USA	FKE F6-S-DC12V-A 252 250VAC № COLOR SEE 100	
Dimensions L×W×H (mm)	24.2×12.3×20.1	30.5×16.0×20.1	
Safety Standards		A US COC	
Characteristics	 Compact and small in size Switching capacity: 20A Dielectric strength of 5000V between coil and contacts Available in PCB or quick connect terminals Ideal for switching magnetron and heater loads in microwave oven 	Miniature relay with high switching contact capacity, 20A/Z50VAC and 25A/Z50VAC. Low profile, height 16mm Dielectric strength of 5000V between coil and contacts Ideal for switching compressor and inverter loads Available in both PCB and quick connect terminals Applications: Air conditioners, refingerators, OA equipment, etc	
Contact Form	1A	1A	
Contact Rating (Resistive Load)	16A 250VAC, 20A 125VAC	F6:25A 250VAC F6-P:20A 250VAC 20 FLA/80 LRA 120VAC	
Max. Switching Voltage	250VAC/30VDC	250VAC	
Max. Switching Current	20A	25A	
Max. Switching Power	4,000VA/480W	6,250VA	
Min. Switching Load	5VDC,100mA	5VDC,100mA	
Coil Voltage	3~48VDC	5∼24VDC	
Coil Power (mW)	500mW,400mW	900mW	
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 1,000VAC,1min ② 5,000VAC,1min	① 1,500VAC,1min ② 5,000VAC,1min	
Electrical Life (ops.)	100,000(16A 250VAC)	100,000	
Operating Temperature	-40°C to +85°C	-40°C to +85°C	
Terminal Type	PCB, Quick connect	PCB, Quick connect	
Terminal Layout (Bottom View) (mm)	P1	27.6±0.1 2.0±1.8*0.1 2.0±1.5*0.1 2.0±0.1 3.8±0.1	
Weight (Approximately)	10.00	18.0g	
Page	117	121	

■ Switching capacity: 20A ■ PCB or quick connect terminals ■ Class F insulation ■ Contact Form ■ 1A ■ PCB terminal ■ Class F insulation ■ TA,1C ■ PCB or quick connection terminals ■ Available in exposed or concealed terminals ■ TA,1C ■ T	SELECTI	ON CHART		
Dimensions L×W×H(mm)	Category		POWER RELAY	
Dimensions L×W×H(mm)	Product Model	СМР6	СМР7	СМР8
Safety Standards	Relay Picture	RE STATE OF A MA	14.6 -30 % 10 10 10 4 -30 % 10 10 10 4 -30 % 10 % -40 % 10 %	
Safety Standards	Dimensions L×W×H (mm)	QC:30.4×15.9×23.4 P:30.4×15.9×26.4	31.8×27.4×20.0	Exposed: 31.8×27.4×19.8 Concealed: 31.8×27.4×27.7
Switching capacity: 20A	Safety Standards		② △ □ △	
Contact Rating (Resistive Load) A : 30A 250VAC/24VDC A : 30A 250VAC/24VDC C : NO : 20A 250VAC/24VDC NC : 15A 250VAC/24VDC N	Characteristics	■ PCB or quick connect	■ PCB terminal	 Dielectric strength of 2500V between coil and contacts PCB or quick connection terminals Available in exposed or
Inrush Current: 80A Break Current: 20A C: NO: 220A 250VAC/24VDC NC: 15A 250VAC/24VDC CT: NO: 40A 250VAC/24VDC NC: 15A 250VAC/24VDC	Contact Form	1A	1A,1C	1A,1C
Max. Switching Current 20A 40A(T) 30A 30A Max. Switching Power 5,000VA,600W 7,500VA,560W 7,500VA,560W Min. Switching Load 5VDC,100mA 5VDC,100mA 5VDC,100mA Coil Voltage 5~24VDC 5~48VDC 5~48VDC Coil Power (mW) 900mW 900mW 900mW DielectricStrength: 0 1,000VAC,1min 0 1,500VAC,1min 0 1,500VAC,1min © Coil and Contacts 4,500VAC,1min 0 100,000 100,000 Operating Temperature -20°C to +55°C -40°C to +85°C -40°C to +85°C Terminal Type PCB, Quick connect PCB PCB, Quick connect PCB PCB, Quick connect PCB, Quick connect	· ·	Inrush Current: 80A	C:NO:20A 250VAC/24VDC NC:15A 250VAC/24VDC	A: 30A 250VAC/24VDC C: NO:20A 250VAC/24VDC NC:15A 250VAC/24VDC
Max. Switching Power 5,000VA,600W 7,500VA,560W 7,500VA,560W Min. Switching Load 5VDC,100mA 5VDC,100mA 5VDC,100mA Coil Voltage 5~24VDC 5~48VDC 5~48VDC Coil Power (mW) 900mW 900mW 900mW DielectricStrength: ① Open Contacts ② Coil and Contacts ① 1,000VAC,1min ② 4,500VAC,1min ① 1,500VAC,1min ② 2,500VAC,1min ① 1,500VAC,1min ② 2,500VAC,1min ② 2,500VAC,1min Electrical Life (ops.) 100,000 100,000 100,000 100,000 Operating Temperature -20°C to +55°C -40°C to +85°C -40°C to +85°C Terminal Type PCB, Quick connect PCB, Quick connect PCB, Quick connect	Max. Switching Voltage	250VAC/30VDC	250VAC/28VDC	250VAC/28VDC
Min. Switching Load 5VDC,100mA 5VDC,100mA 5VDC,100mA Coil Voltage 5~24VDC 5~48VDC 5~48VDC Coil Power (mW) 900mW 900mW 900mW DielectricStrength: ② Open Contacts ② Coil and Contacts ① 1,000VAC,1min ② 4,500VAC,1min ① 1,500VAC,1min ② 2,500VAC,1min ① 1,500VAC,1min ② 2,500VAC,1min ② 2,500VAC,1min Electrical Life (ops.) 100,000 100,000 100,000 Operating Temperature -20°C to +55°C -40°C to +85°C -40°C to +85°C Terminal Type PCB, Quick connect PCB, Quick connect **Teminal Layout (Bottom View) (mm) **Weight (Approximately)** **Description of the provided in the	Max. Switching Current	20A	40A(T) 30A	30A
Coil Voltage 5~24VDC 5~48VDC 5~48VDC Coil Power (mW) 900mW 900mW 900mW DielectricStrength: ① Open Contacts ② Coil and Contacts ② Coil and Contacts Electrical Life (ops.) 100,000 100,000 Operating Temperature -20°C to +55°C -40°C to +85°C -40°C to +85°C Terminal Type PCB, Quick connect PCB PCB, Quick connect Terminal Layout (Bottom View) (mm) Terminal Layout (Bottom View) (mm) Weight (Approximately) 21.0g 27.0g 29.0g 29.0g	Max. Switching Power	5,000VA,600W	7,500VA,560W	7,500VA,560W
Coil Power (mW) 900mW 900mW 900mW DielectricStrength:	Min. Switching Load	5VDC,100mA	5VDC,100mA	5VDC,100mA
DielectricStrength: ① 1,000VAC,1min ② 1,500VAC,1min ② 1,500VAC,1min ② Open Contacts ② 4,500VAC,1min ② 2,500VAC,1min ② 2,500VAC,1min ② Electrical Life (ops.) 100,000 100,000 100,000 Operating Temperature -20°C to +55°C -40°C to +85°C -40°C to +85°C Terminal Type PCB, Quick connect PCB PCB, Quick connect Terminal Layout (Bottom View) (mm) 1880.1 17,880.1 18,880.3 17,880.1 17,880.1 18,880.3 17,880.1 17,880.1 18,880.1 17,880.1 18,880.1 18,880.1 18,880.1 18,880.1 18,880.1 18,880.1 18,880.1 18,880.1 18,880.1 18,880.1 18,880.1	Coil Voltage	5∼24VDC	5∼48VDC	5∼48VDC
① Open Contacts ② Coil and Contacts ② 4,500VAC,1min ③ 2,500VAC,1min ③ 2,500VAC,1min ⑤ 2,500VAC,1min ⑤ 2,500VAC,1min ⑤ 2,500VAC,1min ⑥ 1,500VAC,1min ⑥ 1,500VAC,1min ⑥ 1,500VAC,1min ⑥ 1,500VAC,1min ⑥ 1,500VAC,1min ⑥ 2,500VAC,1min ⑥ 1,500VAC,1min ⑥ 1,500VA	Coil Power (mW)	900mW	900mW	900mW
Operating Temperature -20°C to +55°C -40°C to +85°C -40°C to +85°C Terminal Type PCB, Quick connect PCB PCB, Quick connect Terminal Layout (Bottom View) (mm) 5.3±0.3 17.8±0.1 1/2	① Open Contacts			
Terminal Type PCB, Quick connect PCB PCB, Quick connect Terminal Layout (Bottom View) (mm) 1840.1 170.060.1 1.458	Electrical Life (ops.)	100,000	100,000	100,000
Terminal Layout (Bottom View) (mm) 1840.1 1 22.0±0.1 1 5.6±0.1 1 1.6±0.1 1	Operating Temperature	-20°C to +55°C	-40°C to +85°C	-40°C to +85°C
Terminal Layout (Bottom View) (mm) 1840.1 1200.1 1400.1 1400.1 170.0 170.	Terminal Type	PCB, Quick connect	PCB	PCB, Quick connect
	(Bottom View)	1.8±0.1 12.0±0.1 1.55.65±0.1	4.021+01 192	38401 43001 58803
Page 124 127 132	Weight (Approximately)	21.0g	27.0g	29.0g
	Page	124	127	132

EXE SELECTION CHART

Category	tegory POWER RELAY		
Product Model	L	н	
Relay Picture			
Dimensions L×W×H (mm)	27.6×21	1.6 ×35.0	
Safety Standards	Ro	U us	
Characteristics	 Switching capacity: 15A Contact: 1 Form, 2 Form Transparent cover AC/DC Coil 		
Contact Form	1A, 1B, 1C	2A, 2B, 2C	
Contact Rating (Resistive Load)	15A 220VAC/28VDC	10A 220VAC/28VDC	
Max. Switching Voltage	250VAC/30VDC	250VAC/30VDC	
Max. Switching Current	15A	10A	
Max. Switching Power	3300VA/420W	2200VA/280W	
Min. Switching Load			
Coil Voltage	5~110VDC,6~240VAC 5~110VDC,6~240VAC		
Coil Power (mW)	900mW, 1100mW, 1200mVA 900mW, 1100mW, 1200mVA		
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 1,000VAC,1min ② 1,500VAC,1min	① 1,000VAC,1min ② 1,500VAC,1min	
Electrical Life (ops.)	100,000	100,000	
Operating Temperature	-40°C to +70°C	40°C to +70°C	
Terminal Type	PCB, Quick connect	PCB, Quick connect	
Terminal Layout (Bottom View) (mm)	10.0 14.2	10.0 14.2	
Weight (Approximately)	PCB: 37g ,Quick connect: 37g		
Page	137		
KE Selection Chart-1	6		

Product Model LT Paley Picture			
Polou Picture			
Relay Picture			
Dimensions L×W×H (mm) 27.6×21.6×35.0	27.6×21.6×35.0		
Safety Standards			
 Dimensions: 27.6×21.6×35.0(mm) Available in various types mounting terminals Contact form: 2A, 2B, 2C; 3A, 3B, 3C; 4A, 4B, 4C Transparent cover AC/DC Coil 	 Available in various types mounting terminals Contact form: 2A, 2B, 2C; 3A, 3B, 3C; 4A, 4B, 4C Transparent cover 		
Contact Form 2A, 2B, 2C 3A, 3B, 3C 4A, 4B, 4	4C		
Contact Rating 5A 220VAC/28VDC 5A 220VAC/28VDC 3A 220VAC/ (Resistive Load) 7A 220VAC/28VDC 7A 220VAC/28VDC 5A 220VAC/			
Max. Switching Voltage 250VAC/30VDC 250VAC/30VDC 250VAC/30VDC	VDC		
Max. Switching Current 5A, 7A 5A, 7A 3A, 5A			
Max. Switching Power 5A: 1100VA/140W 7A: 1540VA/196W 5A: 1100VA/140W 3A: 660VA 7A: 1540VA/196W 5A: 1100VA	/84W /140W		
Min. Switching Load — — — — —			
Coil Voltage 5~110VDC,6~240VAC 5~110VDC,6~240VAC 5~110VDC,6~	-240VAC		
Coil Power (mW) 900mW, 1100mW,1200mVA			
DielectricStrength: ① 1,000VAC,1min ① 1,000VAC,1min ① 1,000VAC,1min ① 1,000VAC,1min ① 5,000VAC,1min ② 5,00			
Electrical Life (ops.) 100,000 100,000 100,000	0		
Operating Temperature -40°C to $+70^{\circ}\text{C}$ -40°C to $+70^{\circ}\text{C}$ to $+70^{\circ}\text{C}$	70℃		
Terminal Type PCB, Quick connect PCB, Quick connect PCB, Quick	connect		
Terminal Layout (Bottom View) (mm)	6.64		
Weight (Approximately) PCB: 37g ,Quick connect: 37g			
Page 140			

SELECTION CHART			
Category		AUTOMOTIVE RELAY	
Product Model	CMA1	CMA2	CMA31
Relay Picture	Sharkes a		HKE AND CAMASTA COM DECAY COM SEAS COME SEAS C
Dimensions L×W×H(mm)	19.0×15.5×15.8	Sealed:17.3×14.8×19.5 Open:15.7×12.7×17.7	27.8×27.8×24.6
Characteristics	 Miniature automotive relay High Switching capacity 20A Available in 3 contact configurations, 1 Form A, B and C Applications: car alarm, central locking system, power windows, seat control, etc 	 Miniature automotive relay Available in both open frame and plastic sealed package Numerous contact arrangements High switching capacity 20A 	 Heavy duty general purpose automotive relay Switching capacity 40A Available in 2 mounting options, socket or bracket mount Applications: air compressor, heater, fan motor, blower fan, defogger, etc
Contact Form	1A,1B,1C	1A,1C,1U,1V,1W	1A,1B,1C
Contact Rating (Resistive Load)	15A 14VDC(B、C) 20A 14VDC(A)	A:15A 14VDC C:NO/NC:15A/10A 14VDC W:NO/NC:2×7A/2×5A 14VDC U:2×10A 14VDC V:2×7A 14VDC	12VDC: 40A 14VDC (A) 30A 14VDC (B) 30A 14VDC (C) 24VDC: 20A 28VDC (A) 10A 28VDC (B) NONC: 20A/10A 28VDC(C)
Max. Switching Voltage	75VDC	75VDC	75VDC
Max. Switching Current	20A	20A	40A
Max. Switching Power	280W	280W	420W(C) ,560W(A)
Coil Voltage	6∼24VDC	3~24VDC	6∼24VDC
Coil Power (W)	0.8W,0.36mW	1.1W	1.6W,1.8W
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 750VAC,1min ② 1,000VAC,1min	① 550VAC,1min ②1,000VAC,1min	① 550VAC,1min ② 550VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-40°C to +85°C	-40℃ to +85℃	-40℃ to +85℃ -40℃ to +125℃(T)
Terminal Type	PCB	PCB	Quick Connect
Terminal Layout (Bottom View) (mm)	1.75±0.3 5-91.3 ^{+0.1} 9 9 10 2.0±0.1 12.2±0.1 3.5±0.3	7-Ø13 *0.1 A B B 21±0.1	98 98 98 10 1 16.8±0.1
Weight (Approximately)	10.0g	sealed :12.0g,open:8.0g	Bracket : 37.0g Without Bracket: 32.0g
Page	146	149	152
DZC			



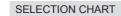
Category	AUTOMOTIVE RELAY			
Product Model	CMA31(A1/B1)	CMA32	4133	
Relay Picture	TKE RD CMA31-B1 COLLOCIEVE SOA 14V/DC SOA 14	Control of the state of the sta	## 180 *180 00 00 00 00 00 00 00 00 00 00 00 00 0	
Dimensions L×W×H (mm)	27.9×27.9×25.0	27.8×27.8×24.6	20.4×15.1×22.0	
Characteristics	 Automotive relay Switching capacity: 40A Contact: 1 Form A,1 Form B 	 Heavy duty general purpose automotive relay Available in 2 mounting options, with bracket or without bracket Two contact configurations, 1 Form A and 2 Form A 	 Miniature heavy duty general purpose automotive relay Switching capacity 35A 1 Form A and C contact configurations Operating ambient temperature: 125°C Applications: air compressor, heater, fan motor, blower fan, defogger, etc 	
Contact Form	1A,1B	1A,1U	1A,1C	
Contact Rating (Resistive Load)	12VDC:40A 14VDC(A1) 30A 14VDC(B1) 24VDC:20A 28VDC(A1) 10A 28VDC(B1)	12VDC: 30A 14VDC(A) 2×20A 14VDC(U) 24VDC: 10A 28VDC(A) 2×10A 28VDC(U)	12VDC:NO:35A 14VDC NC:20A 14VDC 24VDC:NO:15A 28VDC NC: 8A 28VDC	
Max. Switching Voltage	75VDC	75VDC	28VDC	
Max. Switching Current	40A	30A	35A	
Max. Switching Power	420W	420W	490W(12V),420W(24V)	
Coil Voltage	12~24VDC	12~24VDC	12~24VDC	
Coil Power (W)	1.6W	1.6W,1.8W	1.5W,1.7W,1.8W,2.0W	
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min	
Electrical Life (ops.)	50,000	100,000	100,000	
Operating Temperature	-40°C to +85°C	-40℃ to +85℃	-40℃ to +125℃	
Terminal Type	Quick Connect	Quick Connect	Quick Connect	
Terminal Layout (Bottom View) (mm)	8 440.1 16.8±0.1 16.8±0.1	108+0.1 108+0.1 108+0.1 108+0.1	4.1±0.1	
Weight (Approximately)	Bracket : 26.0g Without Bracket: 23.0g	Bracket : 37.0g Without Bracket: 32.0g	18.0g	
Page	155	157	160	

Category	AUTOMOTIVE RELAY		
Product Model	4133W	CMA34	CMA35
Relay Picture	MAGE 1150 1150ma de Stados	IKE OMM SCINCR OMM SCINCR OCEAN OCEAN OURS OURS	HE CAMENICATION OF THE CONTROL OF TH
Dimensions L×W×H(mm)	20.4×15.1×23.0	22.5×15.0×25.0	26.0×26.0×24.8
Characteristics	Miniature heavy duty general purpose automotive relay Switching capacity 30A 1 Form A and C contact configurations Operating ambient temperature: 125°C Applications: air compressor, heater, fan motor, blower fan, defogger, etc	■ Microminiature automotive relay ■ 125°C of operating ambient temperature ■ 2.8mm of Flat quick connection terminal ■ Compliance to Rohs、ELV Directive	 Heavy duty general purpose automotive relay 70A of contact switching capacity 125°C ofworking temperature Normal open contact configuration Availlable for Plastic sealed and unsealed type Quick Connect Terminals and PCB Terminals
Contact Form	1A,1C	1A,1C	1A
Contact Rating (Resistive Load)	12VDC:NO:30A 14VDC NC:20A 14VDC 24VDC:NO:15A 28VDC NC: 8A 28VDC	12VDC:NO:35A 14VDC NC:20A 14VDC 24VDC:NO:20A 28VDC NC:10A 28VDC	6V,12VDC: 70A 14VDC 24VDC: 40A 28VDC
Max. Switching Voltage	28VDC	40VDC	50VDC
Max. Switching Current	30A	Make(NO):150A, Break(NO):35A	70A
Max. Switching Power	490W(12V),420W(24V)	490W(12V),560W(24V)	1120W
Coil Voltage	12~24VDC	12∼24VDC	6∼24VDC
Coil Power (W)	1.5W,1.7W,1.8W,2.0W	1.2W, 1.4W,1.6W	1.6W, 1.8W
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-40°C to +125°C	-40℃ to +125℃	-40°C to +125°C
Terminal Type	Quick connect	Quick connect	Quick connect,PCB
Terminal Layout (Bottom View) (mm)	4.1±0.1 (65) (87	3.15±0.1 3.15±0.1 3.15±0.1 3.15±0.1 3.15±0.1 1.62±0.1	10 mm 1 m
Weight (Approximately)	18.0g	20.0g	38.0g
Page	163	166	169

Category	AUTOMOTIVE RELAY		
Product Model	CMA36	CMA36N	CMA39
Relay Picture	BER COMMANDED TO CO. THE CO. THE CO. THE CO.	HE SHARE STATE OF THE SHARE STAT	
Dimensions L×W×H (mm)	26.0×26.0×22.7	26.6×26.0×22.7	28.0×28.0×25.0
Characteristics	■ 50A of switching capacity ■ 125°C of operating ambient temperature ■ SPST and SPDT contact form ■ Compliance to Rohs ELV Directive ■ Availlable for Plastic sealed and unsealed type	 General purpose automotive relay 70A of switching capability Contact:1 Form A Availlable for Plastic sealed and unsealed type Quick Connect Terminals and PCB Terminals 125°C of operating ambient temperature 	■ 2.8mm of quick flat connection terminal ■ Contact: 1 Form A, 1 Form C ■ 125°C of working temperature ■ Available for Sealed type or bayonet-type ■ Compliance for Rohs and ELV directive
Contact Form	1A,1C	1A	1A,1C
Contact Rating (Resistive Load)	Standard: NO:40A/14VDC,NC:30A/14VDC NO:20A/28VDC,NC:10A/28VDC T: NO:50A/14VDC,NC:30A/14VDC NO:30A/28VDC,NC:10A/28VDC	Resistive: NO:70A/14VDC NO:40A/28VDC Inductive: Make150A/14VDC break50A/14VDC Lamp: Surge200A/14VDC break40A/14VDC	NO: 35A 14VDC NC: 20A 14VDC
Max. Switching Voltage	28VDC	Refer to 'Max.switching power curve'	30VDC
Max. Switching Current	Make: 150A (NO, surge) Break: 50A (steady-state)	Make(NO,lamp)200A Break (steady state) 70A (res, 13.5V)	Make:150A(lamp),Break:35A
Max. Switching Power	640W	640W	490W
Coil Voltage	12~24VDC	12~24VDC	12~24VDC
Coil Power (W)	1.6W,1.8W,2.0W,2.2W	1.6W,1.8W,2.0W	1.6W,1.8W
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-40°C to +125°C	-40℃ to +125℃	-40°C to +125°C
Terminal Type	Quick connect,PCB	Quick connect,PCB	Quick connect
Terminal Layout (Bottom View) (mm)	2.00.1 2.00.1	27033 2703 27033 270	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Weight (Approximately)	35.0g	38.0g	35.0g
Page	172	176	180



Category	AUTOMOTIVE RELAY		
Product Model	CM	IA4	CMA51
Relay Picture	HKE GE CMMA-S-CE COIL-DCICV 30A 14/DC 15/3/3/2	A Marie Barrier	Cast in the Cast of the Cast o
Dimensions L×W×H(mm)	Sealed: 25.8×20.6×21.0	Open: 18.0×23.4×17.9	15.6×12.2×13.7
Characteristics	 General purpose auto Available in open fram High contact capacity USA or European foo 	ne and plastic sealed packages 40A	■ Compact microminiature general purpose automotive relay ■ High inrush capability: 60A ■ Contains no lead and features cadmium-free contacts ensuring environment-friendly use ■ Applications: car alarm, power window, central locking system, seat adjustment control, etc
Contact Form	1A,1C	1A,1C	1A,1B,1C
Contact Rating (Resistive Load)	30A 14VDC (C) 40A 14VDC (A)	30A 14VDC (C) 40A 14VDC (A)	A: 20A 14VDC B\ C: 15A 14VDC
Max. Switching Voltage	75VDC	75VDC	30VDC
Max. Switching Current	40A	40A	35A
Max. Switching Power	560W	560W	280W
Coil Voltage	6∼24VDC	6∼24VDC	6∼24VDC
Coil Power (W)	1.6W	1.6W	0.6W,0.8W
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-40°C to +85°C	-40℃ to +85℃	-40°C to +85°C
Terminal Type	PCB	PCB	PCB
Terminal Layout (Bottom View) (mm)	European footprint: 50003 50001 50	USA footprint: 6.440.3 5.3550.1 14.8860.1 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0	2.5±0.1 10.2±0.1 1.1±0.3 1.1±0.3 1.1±0.3
Weight (Approximately)	Sealed::21.0g	Open:15.0g	6.0g
Page	1	83	187



KE SELECTION	ON CHART		
Category	AUTOMOTIVE RELAY		
Product Model	CMA512		B/CMA532
Relay Picture	MAC SSSS "Winn CARGO TO B DO CALC	OME TO COME THE PARTY OF THE PA	CARE OLA GERELO ERIC NO CON A MORE MINISTERIOR MINISTE
Dimensions L×W×H (mm)	23.2×16.0×14.1	CMA53: 13.0×12.0×10.0	CMA532:23.6×13.0×10.0
Characteristics	 Miniature automotive twin relay High inrush capability: 60A Contains no lead and features cadmiumfree contacts ensuring environment-friendly use Applications: car alarm, power window, central locking system, seat adjustment control, etc 	Small and compact Available in single and twin relay CMA53 - single relay CMA532 - twin relay High contact capacity 30A Low noise operation Contains no lead and features cadmium-free contacts ensuring environment-friendly use Applications: car alarm, power window, central locking system, seat adjustment control, sunroof motor control, wiper, etc	
Contact Form	2×1C	1A, 1C	2×1A, 2×1C
Contact Rating (Resistive Load)	15A 14VDC	NO/NC:20A/15A 14VDC	NO/NC:20A/15A 14VDC
Max. Switching Voltage	30VDC	16VDC	16VDC
Max. Switching Current	35A	30A	30A
Max. Switching Power	280W	280W	280W
Coil Voltage	6∼24VDC	6∼24VDC	6∼24VDC
Coil Power (W)	0.6W	0.55W,0.8W	0.55W,0.8W
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-40℃ to +85℃	-40℃ to +105℃	-40℃ to +105℃
Terminal Type	PCB	PCB	PCB
Terminal Layout (Bottom View) (mm)	1.5x0.3 5x0.1 5.15x0.1 5.15x0.1 5x0.1 0 3 7 2 7 2 7 2 7 2 7 2 7 2 7 2 7 2 7 2 7	CMA53 8.0101 7.0101 2.1103 3.018 0.1 1.01 2.1103 3.018 0.1 2.1103 3.018 0.1 2.1103 3.018 0.1 2.1103 3.018 0.1 2.1103	CMA532 21403 19440.1 0.540.
Weight (Approximately)	12.0g	CMA53:4.0g	CMA532:8.0g
Page	191	19	3
			Soloction Chart 23



Product Model	Category	AUTOMOTIVE RELAY		
Dimensions L×W×H(mm)	Product Model	CMA54/	CMA542	CMA55
# Small and compact # Available in single and twin relay CMA542 twin relay CMA542 single relay CMA542 twin relay CMA542 dimensions: 17 8×16.9×13.2(mm) # High contact capacity 25 12.2 mm # Contact Form Contains no lead and features cadmium-free contacts ensuring environment Friendly use # Contact Form Contacts in so lead and features cadmium-free contacts ensuring environment Friendly use # Contact Rating (Resistive Load) **Contact Rating (Resistive Load) **Max. Switching Voltage AUVDC 4VDC 14VDC **Max. Switching Voltage AUVDC 4VDC 14VDC **Max. Switching Power 280W 2×280W 2×81W **Coil Voltage 12VDC 12VDC 6~24VDC **Coil Voltage 12VDC 12VDC 6~24VDC **Coil Power (W) 0.56W 0.56W 1.0W **DielectricStrength: 0.0pen Contacts 0.0pen	Relay Picture	AG COUNTRY OF THE COU	OM Grand Grand	Children of Clarks The State
# Available in single and twin relay CMA542 - CMA542 - CMA542 - CMA542 - Single relay, CMA542 - CMA542	Dimensions L×W×H(mm)	CMA54:17.5×9.2×13.2	CMA542:17.5×16.9×13.2	15.6×12.2×13.7
Contact Rating (Resistive Load) Max. Switching Voltage 40VDC 40VDC 40VDC 14VDC Max. Switching Current 25A 2×25A 2×10A Max. Switching Power 280W 2×280W 2×280W 2×81W Coil Voltage 12VDC 12VDC 6~24VDC Coil Power (W) 0.56W 0.56W 1.0W DielectricStrength: 0 Open Contacts 0 Col and Contacts 0 Col and Contacts 0 Col and Contacts 100,000 Operating Temperature -40°C to +85°C -40°C	Characteristics	Small and compact Available in single and twin relay CMA54 - single relay, CMA542 - twin relay CMA54 dimensions: 17.5×9.2×13.2(mm) CMA542 dimensions: 17.5×16.9×13.2(mm) High contact capacity 25A Low noise operation Contains no lead and features cadmium-free contacts ensuring environment-friendly use Applications: car alarm, power window, central locking system. seat adjustment control, sunroof		automotive relayDouble make contactApplications:car alarm,
Max. Switching Voltage 40VDC 40VDC 14VDC Max. Switching Current 25A 2×25A 2×10A Max. Switching Power 280W 2×280W 2×81W Coil Voltage 12VDC 12VDC 6~24VDC Coil Power (W) 0.56W 0.56W 1.0W DielectricStrength:	Contact Form	1C	2×1C	2A
Max. Switching Current 25A 2×25A 2×10A Max. Switching Power 280W 2×280W 2×81W Coil Voltage 12VDC 12VDC 6~24VDC Coil Power (W) 0.56W 0.56W 1.0W DielectricStrength: ① Open Contacts ② Coil and Contacts ① 550VAC,1min ② 550VAC,1min ① 550VAC,1min ② 550VAC,1min ① 550VAC,1min ② 550VAC,1min ① 550VAC,1min ② 550VAC,1min © Departing Temperature -40°C to +85°C -40°C to +85°C -40°C to +85°C Terminal Type PCB PCB PCB PCB PCB PCB PCB PCB PCB Weight (Approximately) CMA542 2840.3 (13.7540.1 (13.754	<u> </u>	20A14VDC	2×20A 14VDC	2×6A 13.5VDC
Max. Switching Power 280W 2×280W 2×81W Coil Voltage 12VDC 6~24VDC Coil Power (W) 0.56W 0.56W 1.0W DielectricStrength: ① Open Contacts ② Coil and Contacts ① 550VAC, 1min ② 550VAC, 1min ② 550VAC, 1min ① 550VAC, 1min ② 550VAC, 1min ① 550VAC, 1min ② 550VAC, 1min ② 550VAC, 1min ② 550VAC, 1min © Poerating Temperature -40°C to +85°C -40°C to +85°C -40°C to +85°C Terminal Type PCB PCB PCB PCB PCB PCB CMA54 CMA542 CMA542 28803 13.75801 22803 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580 37580	Max. Switching Voltage	40VDC	40VDC	14VDC
Coil Voltage 12VDC 12VDC 6~24VDC Coil Power (W) 0.56W 0.56W 1.0W DielectricStrength:	Max. Switching Current	25A	2×25A	2×10A
Coil Power (W) 0.56W 0.56W 1.0W DielectricStrength:	Max. Switching Power	280W	2×280W	2×81W
DielectricStrength: ① 550VAC, 1min ② 550VAC, 1min ③ 550VAC, 1min ③	Coil Voltage	12VDC	12VDC	6∼24VDC
① Open Contacts ② Coil and Contacts ② 550VAC, 1min	Coil Power (W)	0.56W	0.56W	1.0W
Operating Temperature -40 °C to +85 °C -40 °C to +85 °C -40 °C to +85 °C Terminal Type PCB PCB PCB CMA542 CMA542 CMA542 CMA542 Terminal Layout (Bottom View) (mm) CMA542 CMA542 CMA542 Weight (Approximately) CMA54:5.0g CMA542:10.0g 6.0g	Open Contacts			
Terminal Layout (Bottom View) (mm) CMA54 CMA54 CMA54 CMA54 CMA54 CMA542 28±0.3 13.75±0.1 22±0.3 25±0.1 10.2±0.1 25±0.1 10.2±0.1 25±0.1 10.2±0.1 25±0.1 10.2±0.1 25±0.1 10.2±0.1 25±0.1 10.2±0.1 10	Electrical Life (ops.)	100,000	100,000	100,000
Terminal Layout (Bottom View) (mm) Weight (Approximately) CMA54 CMA542 CMA	Operating Temperature	-40°C to +85°C	-40°C to +85°C	-40℃ to +85℃
Terminal Layout (Bottom View) (mm) 28:03 13.75:0.1 22:0.3 28:0.3 13.75:0.1 22:0.3 28:0.3 13.75:0.1 22:0.3 25:0.1 10.22:0.1 25:0.1	Terminal Type	PCB	PCB	PCB
	(Bottom View)	28±0.3 13.75±0.1 2±0.3 2±0.3 2±0.3 2±0.3	2.8±0.3 13.75±0.1 2.2±0.3 14.00.0°61 15.75±0.1 2.2±0.3 15.75±0.1 15.75	10000
107	Weight (Approximately)	CMA54:5.0g	CMA542:10.0g	6.0g
Page 197 200	Page	19	7	200

Category	AUTOMOTIVE RELAY		
Product Model	CMA56	/CMA562	CMA57
Relay Picture	O flatering	Sun CO	TAR SECTION OF THE PROPERTY OF
Dimensions L×W×H (mm)	CMA56:14×7.2×13.7 CMA56T:14×7.2×14.2	CMA562: 14×15.4×13.7 CMA562T: 14×15.4×14.2	15.6×15.2×16.5
Characteristics	Miniature aut25A of MotorSingle relay of	Load	 125°C of operating ambient temperature 2.8mm of Flat quick connection terminal Compliance to Rohs ELV Directive
Contact Form	1C	2×1C	1A
Contact Rating (Resistive Load)	Motor:25A(Inrush) 14VDC Resistance:20A 14VDC	Motor:2×25A(Inrush) 14VDC Resistance:2×20A 14VDC	20A 14VDC
Max. Switching Voltage	16VDC	16VDC	16VDC
Max. Switching Current	30A	2×30A	Make:100A Break:30A
Max. Switching Power	350W	2×350W	320W
Coil Voltage	6∼24VDC	6∼24VDC	12VDC
Coil Power (W)	0.64W,0.8W	0.64W,0.8W	0.95W,1.1W
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min
Electrical Life (ops.)	100,000	100,000	100,000
Operating Temperature	-40°C to +105°C (Standard) -40°C to +125°C (Reflow)	-40℃ to +105℃ (Standard) -40℃ to +125℃ (Reflow)	-40°C to +125°C
Terminal Type	PCB	PCB	PCB
Terminal Layout (Bottom View) (mm)	CMA56 8.4±0.1 8.4±0.1 0.8±0.3 2.Φ1.0.*62 2.Φ1.0.*62	CMA562	5 2
Weight (Approximately)	CMA56:4.0g	CMA562:8.0g	10.0g
Page	20)2	206
			Soloction Chart 25

	OLLEGIION GIPANI			
Category	AUTOMOT	TIVE RELAY		
Product Model	CMA58	CMA59		
Relay Picture	And a second sec	CASE - CA		
Dimensions L×W×H (mm)	17.0×13.0×16.0	20.4×15.1×22.0		
Characteristics	 Reduction of 20dB sound pressure Saving Space Plastic Cover Sealed Compliance to Rohs ELV Directive 	■ Automative Mute Relay ■ 100,000operations for 25A 14VDC (Locked rotor current) ■ Quick-Flat connection terminal ■ sound pressure≤50dB ■ Compliance to RoHS and ELV		
Contact Form	1C	1A,1C		
Contact Rating (Resistive Load)	NO/NC:20A/10A 14VDC	A(Resistive): 20A 14VDC C(Resistive): NO:20A 14VDC NC:10A 14VDC Motor: 25A (peak) 14VDC		
Max. Switching Voltage	16VDC	16VDC		
Max. Switching Current	20A	30A		
Max. Switching Power	320W	480W		
Coil Voltage	12VDC	12VDC		
Coil Power (W)	0.64W	0.64W,0.85W		
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 550VAC,1min ② 550VAC,1min	① 550VAC,1min ② 550VAC,1min		
Electrical Life (ops.)	100,000	100,000		
Operating Temperature	-40°C to +85°C	-40℃ to +125℃		
Terminal Type	PCB	Quick connect		
Terminal Layout (Bottom View) (mm)	2.5±0.1 10.2±0.1 1.5±0.3 1.5±0.3	4.1±0.1		
Weight (Approximately)	6.5g	11.6g		
Page	208	211		



Category	MAGNETIC LATCHING RELAY			
Product Model	HKE16	HKE17		
Relay Picture	No. of the last of			
Dimensions L \times W \times H (mm)	29.0×12.7×16.0	24.0×1	0.0×18.8	
Safety Standards	c M us		_	
Characteristics	 DPST 16A Magnetic latching relay Max.Surge Current 350A/2ms Energy-saving and Environmental Friendly product(RoHS Compliant) 	 Magnetic Latching Relay SPST 16A Magnetic latching relay Max.Surge Current 100A/2ms Comply to IEC 60335-1:household and similar electrical appliances-safety Impulse voltage is 12000V,Dielectric strength is 5000V 		
Contact Form	2A	1.	A	
Contact Rating (Resistive Load)	16A 250VAC,5×10 ⁴ (Res) 20A 250VAC,2×10 ⁴ (Res) 1.5HP 250VAC,3×10 ⁴ (HP) 8A 220VAC,cosφ0.4,3×10 ⁴ 3300W 277VAC,2×10 ⁴ (Electronic Ballast)	Standard: 8A 250VAC T: 16A 277VAC		
Max. Switching Voltage	277VAC	250VAC	277VAC	
Max. Switching Current	20A	8A	16A	
Max. Switching Power	5000VA	2000VA	4432VA	
Coil Voltage	3~48VDC	3~24	1VDC	
Coil Power (W)	0.6W,0.8W,1.2W	0.2W,0.4W,	0.6W,1.0W	
DielectricStrength: ① Open Contacts ② Coil and Contacts	① 1,000VAC,50/60Hz,1min ② 4,000VAC,50/60Hz,1min		50/60Hz,1min 50/60Hz,1min	
Electrical Life (ops.)	Refer to 'contact load'	Refer to	o P215	
Operating Temperature	-40°C to +85°C	-40℃ -40℃ to +70	to +85℃(8A) ℃(8A∼16A)	
Terminal Type	PCB	PC		
Terminal Layout (Bottom View) (mm)	3.Ø1.0*8² 4.Ø1.5*8² 2.1 16.6±0.1 7.0±0.1	17.5±		
Weight (Approximately)	12.0g	3	3.0g	
Page	214	2	217	

Category	FLASHER	
Product Model	CMAF01	CMAF01L
Relay Picture	HAE CHANGE FEASING 137 21W-150W	FEATURE TO THE TOTAL TO THE TOTAL TO
Dimensions L×W×H (mm)	30.0×30.0×40.0	30.0×30.0×30.0
Characteristics	Special integrate circuit, stable reliable performance Use of special high performance contacts, ultra-long electrical endurance Surface mounting technology, advanced technology Solid base design, stable structure Protection IP50 Steering light of the automobile control, Hazard waming flash lamp control	Special integrate circuit, stable reliable performance Use of special high performance contacts, ultra-long electrical endurance Surface mounting technology, advanced technology Solid base design, stable structure Protection IP50 Steering light of the automobile control, Hazard warning flash lamp control
Norminal Load	2×21W+5W Turning Mode	2×21W+5W Turning Mode
	2×(2×21W+5W) Hazard warning mode	2×(2×21W+5W) Hazard warning mode
	21W+5W Failure mode	21W+5W Failure mode
Norminal Voltage	12VDC,24VDC	12VDC
Flash Frequency	(60∼110)ops/min	(60∼110)ops/min
Lamp Failure Flash Frequency	(140~230)ops/min	(140~230)ops/min
Duty cycle	30%~70%	30%~70%
Electrical Endurance	12V:1000h(Turning15s on / 15s off) 360h(hazard warning continuously) 24V:400h(Turning15s on / 15s off) 200h(hazard warning continuously)	1000h(Turning15s on / 15s off) 360h(hazard warning continuously)
Ambient temperature	-40℃~85℃	-40℃~85℃
Terminal Layout (Bottom View) (mm)	30.0±0.3 16.9±0.2 49.(E) (B).31 49.(E) (C).49a (C).49a (B).51	30.0±0.3 16.9±0.2 49 (E) (B) 31 (L) 49a (L) 49a
Wiring Diagram (Bottom View)	49a 49 31 L B E E E E E E E E E E E E E E E E E E	49a 49 31 B E 反极性
Weight (Approximately)	40g	30g
Page	221	221



Category HV DIRECT DURRENT RELAY			
Product M	ct Model HEV200		
Relay Picture			
Dimensions L×W×H (mm)		80.0×62.3×72.3	
Characteristics		 Compact,light weight,low cost for enclosure,high current HV relay Able to attach energy saving module for coil Optional auxiliary contact,monitor the status of main contact in real time Highly sealed,safe and reliable because fully insulated from coil and contacts Availiable for multiple coil supply mode Compliance with ROHS 	
Contact Fo	orm	1 Form A	
Contact Resistance		Typical 0.2mΩ(@200A)	
Coil Voltage		DC9~36V,DC32V~95V,DC48~95V	
Rated switching load(Res)		200A 12~900VDC	
Rated swit	ching current(Res)	200A	
Rated switching voltage		12~900VDC	
Max.switching current		Make500A,Break2000A@320VDC	
Insulation Resistance		Min.100MΩ 500VDC	
Dielectric	Between open contacts	2,200VAC,50/60Hz,1min	
Strength	Between coil and contacts	2,200VAC,50/60Hz,1min	
Ambient to	mbient temperature 40°C to +85°C		
Relative Humidity		5∼85%RH(no dew and frost at low temp) , 40 $^{\circ}\mathrm{C}$	
Vibration resistance		Sine wave80-2000Hz peak, ≤20G	
Shock resistance		11ms,1/2Sine wave peak,≤20G	
Electrical (Res 200A)		1×10 ⁵ cycles(28VDC) 25000cycles(120VDC) 10000cycles(270VDC) 3000cycles(400VDC) 800cycles(600VDC) 150cycles(900VDC)	
Mechanical		1×10 ⁶	
Weight (Approximately)		43g	
Page		225	