

KKA-A8

70A Automotive Relay

Features

- 70A switching capability, 26*26mm size
- 1 Form A & 1 Form C contact arrangement
- Plug in and PCB terminals for option
- Resistor and diode available
- Comply with RoHS, ELV directive

Typical Application

Applicable to automotive grade 70A circuits: ABS control, cooling fan, power management, engine control, glow plugs, heated front windshield, ignition, lights: headlights, taillights, fog lights, main switch/power relay.



ORDERING GUIDE

	KKAA8	-012	1H	23	-R	(XXX)
Type	A8 - cubic shell A8 - with iron bracket					
Coil Voltage	012:12VDC 024:24VDC					
Contact Form	1H:1 Form A					
Terminal Type	23: brass coil pin,copper working pin, default tinned					
Parallel Coil Components	Nil: without parallel component R: parallel transient suppression resistors D1:parallel transient suppression diode, with anode connected to terminal #85 D2:parallel transient suppression diode, with anode connected to terminal #86					
Special Code	(XXX):customer special requirement Nil: Standard					

CHARACTERISTICS

Contact arrangement	SPST-NO(1H)
Voltage drop	Typ.20mV,250mV max. (at 10A)
Max.continuous current ¹⁾¹⁰⁾	70A(at 23°C),50A(at 85°C),30A(at 125°C)
Max.switching current ¹⁰⁾	Make(NO):200A ²⁾ Break(NO):70A(Resistive,13.5VDC)
Min.contact load	1A 6VDC
Electrical endurance	See "CONTACT DATA"
Mechanical endurance	1x10 ⁸ OPS (300OPS/min)
Insulation resistance	100M Ω (at 500VDC)
Dielectric strength ³⁾	500VAC
Operate time ¹⁰⁾	Max.:10ms (at nomi.vol.)
Release time ¹⁰⁾	Max.:10ms
Ambient temperature	-40°C to 125°C
Vibration resistance ⁵⁾¹⁰⁾	5Hz to 22.3Hz 10mm DA 22.3Hz to 500Hz 98m/s ²
Shock resistance ⁵⁾¹⁰⁾	294m/s ²
Flammability ⁶⁾	UL94-HB or better(meets FMVSS 302)
Termination	QC ¹¹⁾ , PCB ⁷⁾
Construction	Plastic sealed,Dust protected
Unit weight	Approx.38g
Mechanical data ⁸⁾	housing retention (pull & push):200N min. terminal retention(pull & push):100N min. Terminal resistance to bending (front & side):10N min ⁹⁾

1)Measured when applying 100% rated voltage on coil.

2)Inrush peak current under lamp load, at 13.5VDC.

3)1min, leakage current less than 1mA

4)The value is measured when voltage drops suddenly from nominal voltage to 0 VDC and coil is not paralleled with suppression circuit.

5)When energized, opening time of NO contacts shall not exceed 100μs.

6)FMVSS: Federal Motor Vehicle Safety Standard.

7)Since it is an environmental friendly product, please select lead-free solder when welding. The recommended soldering temperature and time is(250±3)°C,(5±0.3)s.

8)Only valid for QC version.

9)Test point is at 2mm away from terminal end, and after removing testing force, the terminal transfiguration shall not exceed 0.3mm.

10)Only for the 12VDC coil voltage type.

11)Do NOT knock on relays with hard objects such as rubber rod and rubber hammer during mounting, which might lead to relay damage.

COIL DATA

at 23°C

Nominal voltage VDC	Pick-up voltage VDC max.	Drop-out voltage VDC min.	Coil resistance x(1±10%)Ω	Parallel Resistance ²⁾ x(1±5%)Ω	Equivalent resistance Ω	Power consumption W	Max.allowable overdrive voltage ¹⁾ VDC	
							at 23°C	at 85°C
12	7.2	1.2	90			1.6	20.2	15.7
12	7.2	1.2	90	680	79.5	1.8	20.2	15.7
24	16	2.4	320			1.8	40.5	31.5
24	16	2.4	320	2700	286	2.0	40.5	31.5

1)Max.allowable overdrive voltage is stated with no load applied.

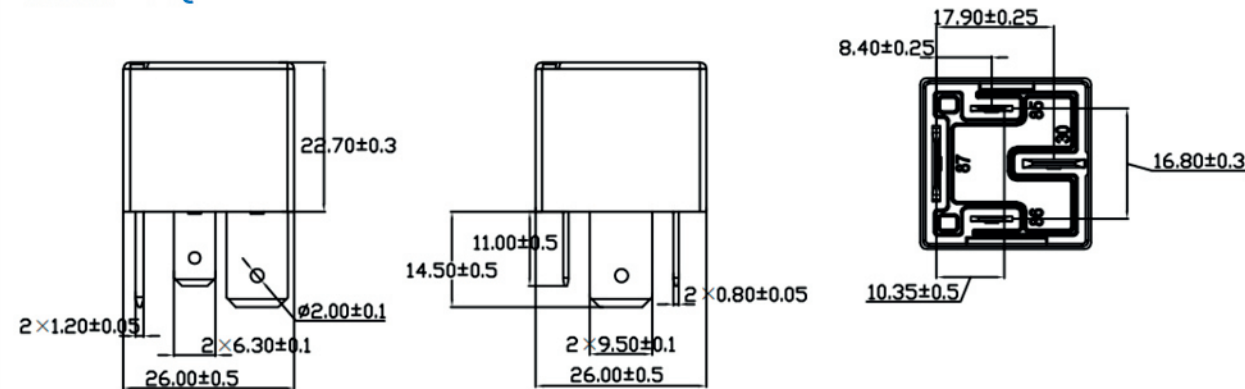
2)with the type with parallel resistor (680Ω,12V),(2700Ω,24V).

CONTACT DATA

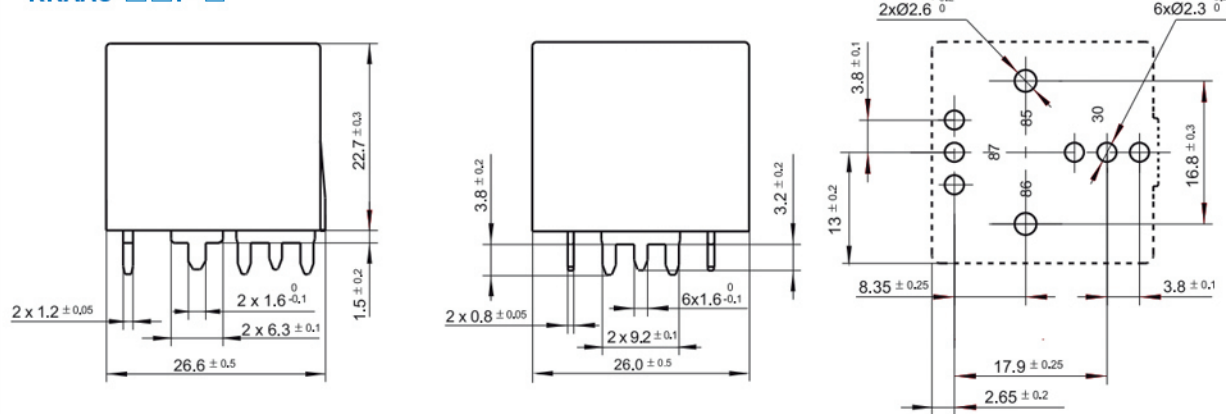
Load voltage	Load type		Load current (A)	On/Off ratio		Electrical EnduranceOPS	Contact Material	Ambient tem
				OnS	OffS			
13.5 VDC	Resistive	Make	70	2	2	1×10 ⁵	AgSnO ₂	See Ambient Temp. Curve
		Break	70					
	Lamp	Make	200	2	2	1×10 ⁵	AgSnO ₂	
		Break	40					
	Inductive	Make	150	2	2	1×10 ⁵	AgSnO ₂	
		Break	50					
27VDC	Resistive	Make	40	2	2	1×10 ⁵	AgSnO ₂	
		Break	40					

DIMENSION

KKAA8-□□Q-□



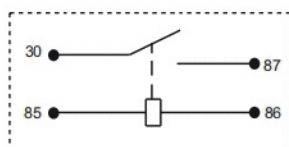
KKAA8-□□P-□



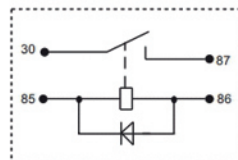
Remark: In case of no tolerance shown in outline dimension: outline dimension≤1mm, tolerance should be ±0.2mm;
Outline dimension>1mm and≤5mm, tolerance should be ±0.3mm; outline dimension>5mm, tolerance should be ±0.4mm.

WIRING DIAGRAM

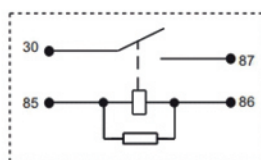
KKAA8-□1H□-□



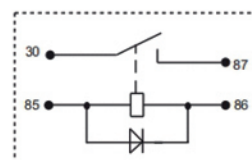
KKAA8-□1H□-D1



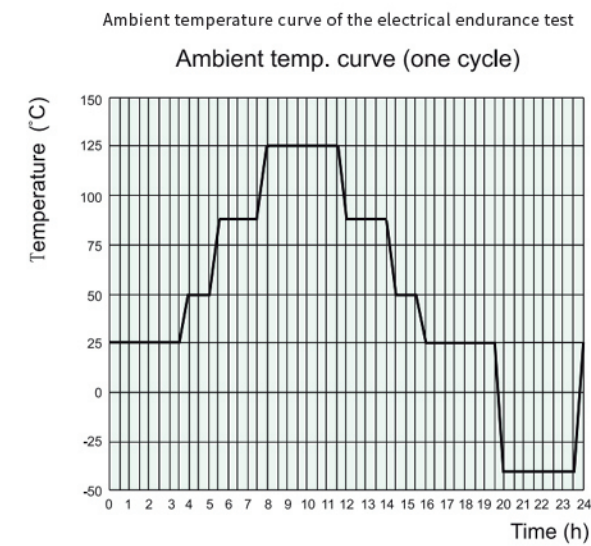
KKAA8-□1H□-R



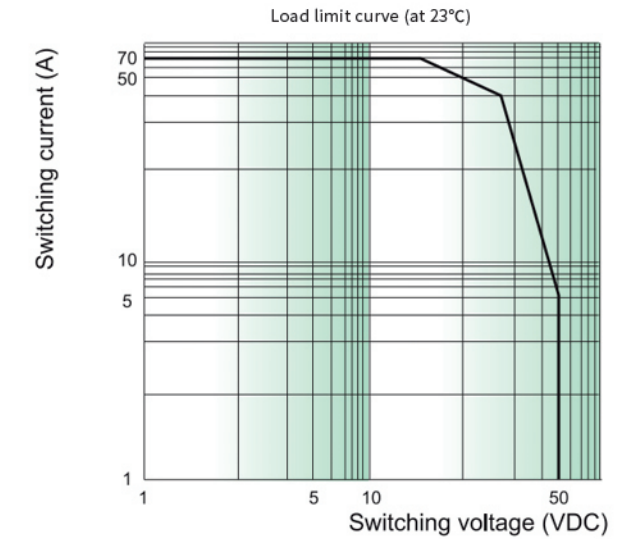
KKAA8-□1H□-D2



CHARACTERISTICS CURVES



- 1)The minimum temperature is -40°C .
- 2)The maximum temperature is 125°C .



- 1)This chart takes NO contact,resistive load as example.
- 2)The load and electrical endurance tests are made according to "CONTACT DATA" parameters' table. If actual load voltage, current, or operate frequency is different from "CONTACT DATA" table, please arrange corresponding tests for confirmation.

