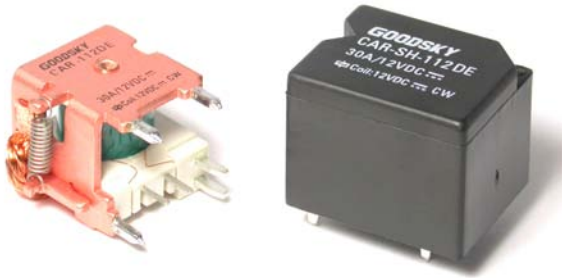


Main Feature



1. European and American footprints available offer different market selections.
2. Customer can choose different construction version according to various manufacturing process from Open Type (without dust cover), Flux Solder type which can protect the Relays from dust, and Epoxy Resin Sealed type for PCB washing procedure.
3. Special contact FE130 material is applied which creates the maximum 30~40 Amp rated current.

Contact Rating

Load Type	CAR (DM)	CAR (DB)	CAR (D)
Rated Load (Resistive)	NO: 40A 12VDC	NC: 40A 12VDC	NO: 40A 12VDC NC: 30A 12VDC
Rated Carrying Current	NO: 40A	NC: 40A	NO: 40A NC: 30A
Max. Allowable Voltage	DC 60V	DC 60V	DC 60V
Max. Allowable Current	40A	40A	NO:40A NC:30A
Max. Allowable Power Force	480W	480W	NO: 480W NC: 360W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST	SPDT

Load Type	CAR (LM)	CAR (LB)	CAR (L)
Rated Load (Resistive)	30A 12VDC	30A 12VDC	30A 12VDC
Rated Carrying Current	30A	30A	30A
Max. Allowable Voltage	DC 60V	DC 60V	DC 60V
Max. Allowable Current	30A	30A	30A
Max. Allowable Power Force	360W	360W	360W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST	SPDT

Application

Car Control Switching Box (Car Alarm, Center door lock system, Blinkers, ...etc.)

Performance (at Initial Value)

- Contact Resistance 100mΩ Max. @1A,6VDC
- Operate Time..... 10 mSec. Max.
- Release Time 10 mSec. Max.
- Insulation Resistance 100 MegaΩ Min. at 500VDC.
- Dielectric Strength:
 - Between Coil & Contact.....1,200VAC at 50 Hz for one minute
 - Between Contacts 750VAC at 50 Hz for one minute

- Max. On/Off Switching:
 - Electrical 20 Ops per Minute.
 - Mechanical 300 Ops per Minute.
- Humidity Range..... 95% at 20°C.
- Temperature Range..... -40~85°C
- Life Expectancy :
 - Mechanical 10⁷ Operations at No Load condition.
 - Electrical 10⁵ Operations at Rated Resistive Load.
- Contact Material Ag Alloy.
- Weight About 20.2 g.

Safety Standard & Its File Number

- NIL.

Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
CAR-D/DM/DB (Europe)	6	315.7	19	Abt.1.89	70% Maximum	5% Minimum	160%
	12	133.3	90	Abt.1.59			
	24	66.2	362				
	36	44	816				
	48	33	1450				
CAR-L/LM/LB (Europe)	6	100	60	Abt.0.6	75% Maximum	10% Minimum	160%
	12	50	240				
	24	25	960				
	36	16.7	2160				
	48	12.5	3840				
CAR-D/DM/DB (U.S.A.)	6	315.7	19	Abt.1.89	70% Maximum	5% Minimum	160%
	12	133.3	90	Abt.1.59			
	24	66.2	362				
	36	44	816				
	48	33	1450				
CAR-L/LM/LB (U.S.A.)	6	100	60	Abt.0.6	75% Maximum	10% Minimum	160%
	12	50	240				
	24	25	960				
	36	16.7	2160				
	48	12.5	3840				

Further coils for motor vehicle applications on request.

The operating voltage limits U_{min} and U_{max} depend on temperature in accordance with the following formula:

$$U_{min tu} = K_i \times U_{min 20^\circ C} \quad \text{and} \quad U_{max tu} = K_u \times U_{max 20^\circ C}$$

t_u = ambient temperature

$U_{min tu}$ = minimum voltage at ambient temperature t_u

$U_{max tu}$ = maximum voltage at ambient temperature t_u

K_i and K_u = factors

t_u	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C	80°C	85°C
K_i	0.764	0.804	0.843	0.882	0.921	0.961	1.000	1.039	1.079	1.118	1.157	1.197	1.236	1.255
K_u	1.081	1.069	1.056	1.043	1.029	1.014	1.000	0.985	0.969	0.953	0.935	0.917	0.897	0.887

Ordering Information

CAR - SS - 1 12 D M E	Terminal Size:	E: Europe Version
		U: U.S.A. Version
	Contact Form:	Nil: One Form C
		M: One Form A
		B: One Form B
	Coil Type:	D: Standard DC Coil
		L: High Sensitivity DC Coil
	Coil Voltage:	06:6V, 12:12V, 24:24V, 36:36V, 48:48V
	Number of Pole:	1: One Pole
	Type of Sealing:	Nil : RT 0 Unclosed Relays
		SS: RT II Flux Proofed Relays
		SH: RT III Wash Tight Relays
	Type:	CAR

Classification

Model	CAR		
Terminal Size	Europe Version		
Coil Sensitivity	Standard DC Coil		
Contact Form	1C	1A	1B
Unclosed Relay	CAR-1□□DE	CAR-1□□DME	CAR-1□□DBE
Flux Proofed Relay	CAR-SS-1□□DE	CAR-SS-1□□DME	CAR-SS-1□□DBE
Wash Tight Relay	CAR-SH-1□□DE	CAR-SH-1□□DME	CAR-SH-1□□DBE

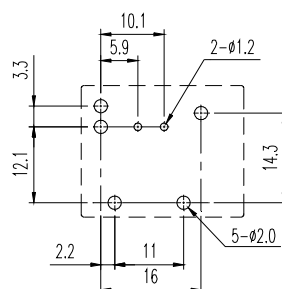
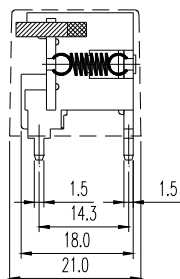
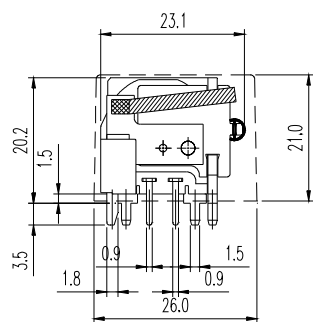
Model	CAR		
Terminal Size	Europe Version		
Coil Sensitivity	High Standard DC Coil		
Contact Form	1C	1A	1B
Unclosed Relay	CAR-1□□LE	CAR-1□□LME	CAR-1□□LBE
Flux Proofed Relay	CAR-SS-1□□LE	CAR-SS-1□□LME	CAR-SS-1□□LBE
Wash Tight Relay	CAR-SH-1□□LE	CAR-SH-1□□LME	CAR-SH-1□□LBE

Model	CAR		
Terminal Size	U.S.A. Version		
Coil Sensitivity	Standard DC Coil		
Contact Form	1C	1A	1B
Unclosed Relay	CAR-1□□DU	CAR-1□□DMU	CAR-1□□DBU
Flux Proofed Relay	CAR-SS-1□□DU	CAR-SS-1□□DMU	CAR-SS-1□□DBU
Wash Tight Relay	CAR-SH-1□□DU	CAR-SH-1□□DMU	CAR-SH-1□□DBU

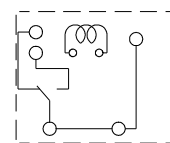
Model	CAR		
Terminal Size	U.S.A. Version		
Coil Sensitivity	High Standard DC Coil		
Contact Form	1C	1A	1B
Unclosed Relay	CAR-1□□LU	CAR-1□□LMU	CAR-1□□LBU
Flux Proofed Relay	CAR-SS-1□□LU	CAR-SS-1□□LMU	CAR-SS-1□□LBU
Wash Tight Relay	CAR-SH-1□□LU	CAR-SH-1□□LMU	CAR-SH-1□□LBU

Dimension

EUROPE

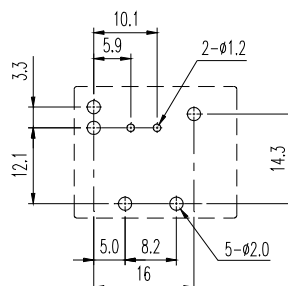
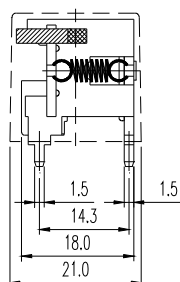
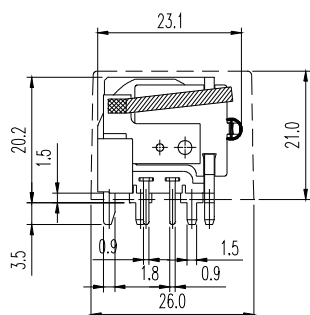


P.C.B. Layout

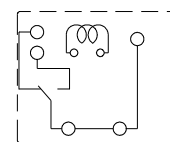


BOTTOM VIEW

U.S.A.



P.C.B. Layout



BOTTOM VIEW

