Automotive Miniature PCB Power Relay — HG4119

FEATURES

- 30 to 45A continuous current capacity
- Available with two footprints
- Available with open, dust cover and sealed version
- Automotive-oriented design

TYPICAL AUTOMOTIVE APPLICATIONS

- Flasher
- Interval wiper control
- Fuel pump control
- Ventilation motor
- Alarm system
- Safety belt warning system
- Inertia valve control
- Automatic mirror adjustment
- Sliding roof control
- Hazard light
- Heater control
- Rear window heating
- Air conditioning
- Central door lock
- ABS
- Belt tension adjustment
- Power window
- Seat positioning

CONTACT DATA

Form		1 Form A (1H)	1 Form B (1D)	1 Form C (1Z)	
				NO	NC
Max. Switching Current	Make	100A (S: 180A)	30A	100A (S: 180A)	30A
	Break	60A	30A	60A	30A
Material		AgNi0.15, AgSnOInO			
Initial Contact Resistance		100 mΩ max. at 0.1A, 6VDC			
Max. Switching Voltage		See curve, current dependent			
Max. Continuous Current		45A	30A	45A	30A
Min. Load		0.5A, 12VDC			
Service Life	Mechancial	10^7 ops.			
	Electrical	2 x 10^5 ops, see Note 4			

COIL DATA

Coil Voltage Code	Nominal Voltage (VDC)	Resistance (Ω) ±10%	Must Operate Voltage max. (VDC)	Allowable Voltage (VDC)	Must Release Voltage min. (VDC)
006	6	19	3.3	8.9	0.6
012	12	90	6.8	19.3	1.2
024	24	362	13.9	38.7	2.4

CHARACTERISTICS

Operate Time	5 ms. typical
Release Time	3 ms. typical
Insulation Resistance	100 MΩ, at 500 VDC, 50%RH
Dielectric Strength	500 Vrms, 1 min.
Shock Resistance	20 g, 11 ms.
Vibration Resistance	DA 1.5mm, 20 - 200 Hz, functional
Drop Resistance	1 M height drop on concrete in final enclosure
Power Consumption	1.5W, approx.
Ambient Temperature	-40ºC to 125ºC operating; -40ºC to 155ºC storage
Weight	Open: 18 g; Covered: 23 g, approx.

ORDERING DESIGNATION

Example:	HG4119 /	012 -	1H	11	- 1	A

Model

Coil Voltage Code

Contact Form
1H: 1 Form A ; 1D: 1 Form B ; 1Z: 1 Form C

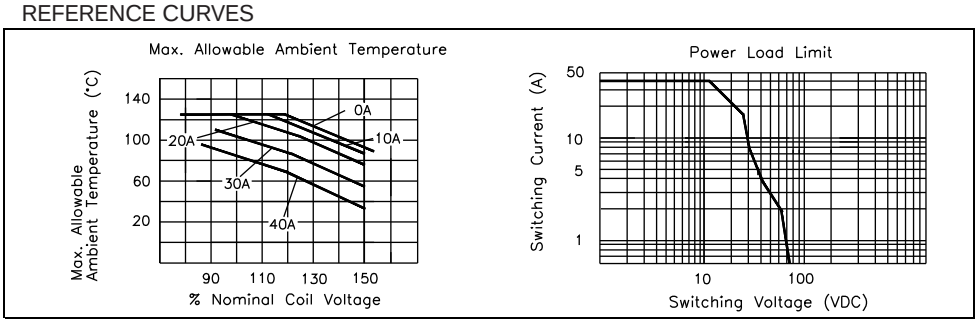
Footprint
8: US; 11: European

Version
Nil: Open; 1: Sealed; 2: Dust Cover

Contact Material
Nil: AgNi10; A: AgNi0.15; C: AgCdO; S: AgSnOInO

For Sealed or Dust Cover US Footprint
Nil: New Standard (with 1 common pin less); D: Old Style (Discontinued for New Designs)

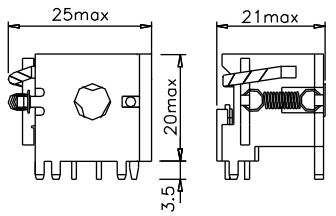
REFERENCE CURVES



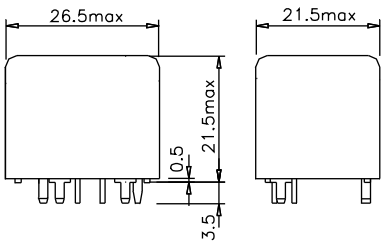
OVERALL DIMENSIONS, MOUNTING HOLES AND WIRING DIAGRAMS (mm)

Overall Dimensions

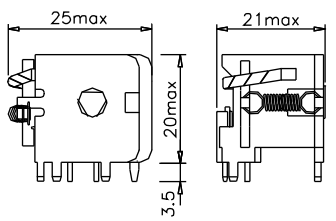
Open – European Footprint (11)



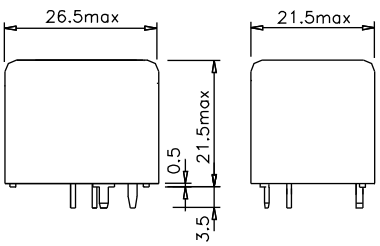
Covered – European Footprint (11)



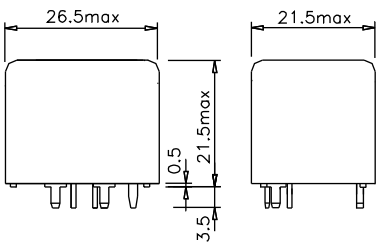
Open – US Footprint (8)



(New Standard) Covered – US Footprint (8)

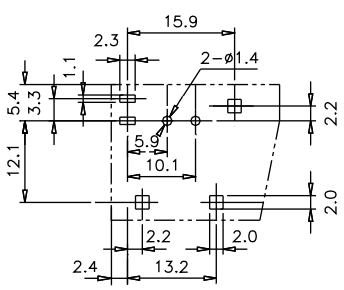


(Old Style) Covered – US Footprint (8)

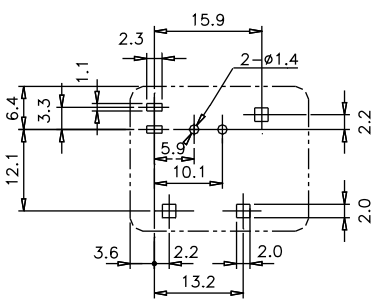


Mounting Holes (Bottem View)

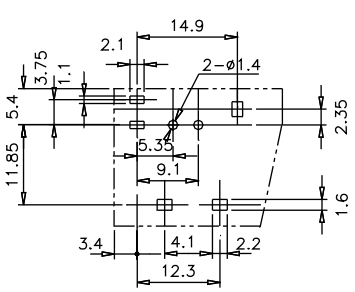
Open – European Footprint (11)



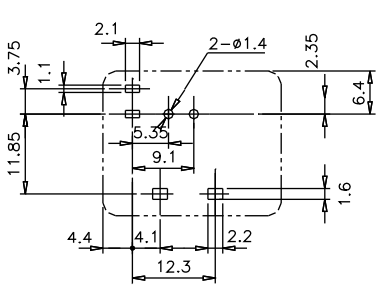
Covered – European Footprint (11)



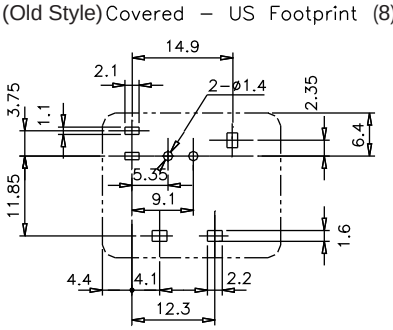
Open – US Footprint (8)



(New Standard) Covered – US Footprint (8)

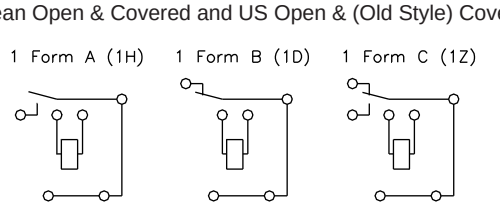


(Old Style) Covered – US Footprint (8)

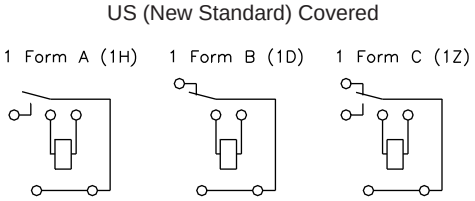


Wiring Diagrams (Bottom View)

European Open & Covered and US Open & (Old Style) Covered



US (New Standard) Covered



NOTES

1. All parameters, unless otherwise specified, are measured at ambient temperature 23ºC.
2. Maximum make current refers to inrush current of lamp load.
3. At ambient temperature of 85ºC, maximum allowable voltage should be reduced to 72%.
4. Electrical life obtained at resistive or inductive load at 40A, 15VDC with suitable arc-suppression circuit attached with operating frequency of 1 ops/sec.
5. Custom-made services available with operational quantity. Please let us know your special requirements.
6. Specifications subject to change without prior notice.

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