

HF9117

TO-5 2 FORM C HERMETICALLY SEALED ELECTRO MAGNETIC RELAY WITH COIL TRANSIENT SUPPRESSION AND REVERSE POLARITY PROTECTION



Features

- Grid type output
- With coil transient suppression
- Failure rate level can be level M
- High ambient applicability
- All metal welded construction
- Fusing soldering and marked by laser

AMBIENT ADAPTABILITY

Ambient grade	I	II	III
Ambient temperature	-55 °C to 85 °C	-55 °C to 85 °C	-65 °C to 125 °C
Humidity			98 %, 40 °C
Low air pressure	58.53 kPa	4.39 kPa	4.39 kPa
Sine vibration	Frequency	10 Hz to 1000 Hz	10 Hz to 2000 Hz
	Acceleration	147 m/s ²	196 m/s ²
Shock resistance	490 m/s ²	735 m/s ²	735 m/s ²
Random vibration	—	20 (m/s ²)/Hz	40 (m/s ²)/Hz
Steady-state acceleration			490 m/s ²

CONTACT DATA

Ambient grade	I	II	III
Arrangement			2 C
Contact resistance	Initial max.	125 mΩ	100 mΩ
	After life max.	250 mΩ	200 mΩ

Contact ratings

Ambient grade	Contact load	Type	Electrical life min.
I	1 A 28 Vd.c.	Resistive	1 x 10 ⁵ OPS
	1 A 28 Vd.c.	Resistive	1 x 10 ⁵ OPS
II	0.2 A 28 Vd.c. 320 mH	Inductive	1 x 10 ⁵ OPS
	0.1 A 28 Vd.c.	Lamp load	1 x 10 ⁵ OPS
III	1 A 28 Vd.c.	Resistive	1 x 10 ⁵ OPS
	0.1 A 115 Va.c.	Resistive	1 x 10 ⁵ OPS
	0.2 A 28 Vd.c. 320 mH	Inductive	1 x 10 ⁵ OPS
	0.1 A 28 Vd.c.	Lamp load	1 x 10 ⁵ OPS
	50 μA 50 mVd.c.	Low level	1 x 10 ⁵ OPS

SPECIFICATION

Ambient grade		I	II	III
Insulation resistance min.		1000 MΩ (@ 500 Vd.c.)	10000 MΩ (@ 500 Vd.c.)	10000 MΩ (@ 500 Vd.c.)
Dielectric strength min. (Normal condition)	Between open contacts	500 Vr.m.s.	500 Vr.m.s.	500 Vr.m.s.
	Between contact & coil	500 Vr.m.s.	500 Vr.m.s.	500 Vr.m.s.
	Between contact & cover	500 Vr.m.s.	500 Vr.m.s.	500 Vr.m.s.
	Between contact group	500 Vr.m.s.	500 Vr.m.s.	500 Vr.m.s.
	Between coil & cover	500 Vr.m.s.	500 Vr.m.s.	500 Vr.m.s.
Dielectric strength min. (Low air pressure condition)		125 Vr.m.s.	125 Vr.m.s.	125 Vr.m.s.
Leakage rate max.		1 Pa·cm ³ /s	1 x 10 ⁻¹ Pa·cm ³ /s	1 x 10 ⁻³ Pa·cm ³ /s
Operate time max.		2 ms		
Release time max.		4 ms		
Mounting style		See the mounting dimension		
Terminals		See the terminal styles		
Work position		Random		
Weight max.		2.55 g		

COIL DATA

Normal coil power	Approx.0.64W
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Coil Version

Vd.c.

Order Number	Coil voltage		at 25 °C				-65°C to 125°C		
	Nominal voltage	Value max.	Coil resistance (1±10%) Ω	Pick-up voltage max.	Hold voltage max.	Drop-out voltage min.	Pick-up voltage max.	Hold voltage max.	Drop-out voltage min.
005	5	5.8	39	3.2	2.3	0.6	4.0	2.8	0.6
006	6	8	78	4.0	2.8	0.7	5.0	3.4	0.7
009	9	12	220	6.3	4.2	0.9	7.8	5.3	0.8
012	12	16	390	8.0	5.2	1.1	10.0	6.5	0.9
018	18	24	880	11.5	7.3	1.4	14.5	10.0	1.1
027	27	32	1560	15.2	9.5	1.8	19.0	13.0	1.4

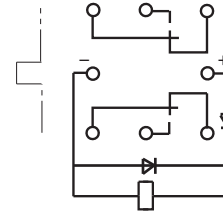
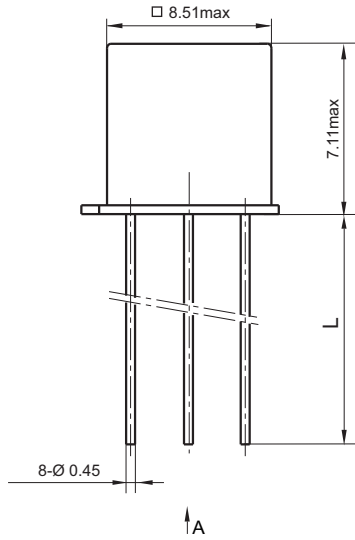
Notes: We can offer many kinds of of coil voltage under the requirement of users.

ORDERING INFORMATION

Type	HF9117	-012	M	-01	- I
Order Number	005、006、009、012、018、027				
Failure Rate	L: Failure rate level L (level III products available) ¹⁾ M: Failure rate level M (level III products available) ¹⁾ Nil: Without failure rate requirement(level I ,II ,IIIproducts available)				
Terminals Style	01、02、03 (See " Terminal styles " below)				
Ambient Grade	I : level I II : level II III: level III				

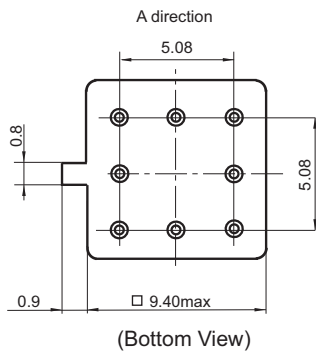
Notes: 1) For the failure rate of L or M ,the letter "III" of ambient grade level will not appear on relay cover.

Outline Dimension



Wiring Diagram
(Bottom View)

L	Terminal Styles Code
5.0 ±0.5	01
12.5min	02
38min	03



(Bottom View)

Disclaimer

This datasheet is for the customers' reference. All the specifications are subject to change without notice.

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