

HF9211

1/5 CRYSTAL CAN 2 FORM C HERMETICALLY SEALED
ELECTRO MAGNETIC RELAY WITH COIL TRANSIENT SUPPRESSION



- Features
- With coil transient suppression
 - Load can be 2A 28Vd.c.
 - Failure rate level can be level M
 - High ambient applicability
 - Diode inside
 - 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	10 Hz to 3000 Hz
	Acceleration	147 m/s ²	196 m/s ²	294 m/s ²
Shock resistance		490 m/s ²	735 m/s ²	980 m/s ²
Random vibration		10 (m/s ²) ² /Hz	20 (m/s ²) ² /Hz	40 (m/s ²) ² /Hz
Steady-state acceleration		147 m/s ²	735 m/s ²	980 m/s ²

CONTACT DATA

Ambient grade		I	II	III
Arrangement		2C		
Contact resistance	Initial max.	50 mΩ		
	After life max.	150 mΩ		
Failure level		Level L、M		

Contact ratings

Ambient grade	Contact load	Type	Electrical life min.
I	1 A 28 Vd.c.	Resistive	1 x 10 ⁵ OPS
	2 A 28 Vd.c.	Resistive	5 x 10 ⁴ OPS
II	1 A 28 Vd.c.	Resistive	1 x 10 ⁵ OPS
	0.125 A 115 Va.c.	Resistive	1 x 10 ⁵ OPS
	0.3 A 28 Vd.c. 200 mH	Inductive	1 x 10 ⁵ OPS
III	2 A 28 Vd.c.	Resistive	5 x 10 ⁴ OPS
	1 A 28 Vd.c.	Resistive	1 x 10 ⁵ OPS
	0.125 A 115 Va.c.	Resistive	1 x 10 ⁵ OPS
	0.3 A 28 Vd.c. 200 mH	Inductive	1 x 10 ⁵ OPS
	0.1 A 28 Vd.c.	Lamp load	1 x 10 ⁵ OPS
	50 μA 50m Vd.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.	750 Vr.m.s.	750 Vr.m.s.
	Between contact & cover	500 Vr.m.s.	750 Vr.m.s.	750 Vr.m.s.
	Between contact group	500 Vr.m.s.	750 Vr.m.s.	750 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)		300 Vr.m.s.	350 Vr.m.s.	350 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.		6 ms	4 ms	4 ms
Release time max.		6 ms		
Mounting style		See the mounting dimension		
Terminals		See the terminal styles		
Work position		Random		
Weight max.		4.8 g		

COIL DATA	
Normalinal coil power	Approx. 0.69W

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.		Drop-out voltage min.
				I	II , III			I	II , III	
005	5	7	44	3.3	2.4	1.45	0.26	3.7	3.3	0.16
006	6	8	56	3.9	2.7	1.60	0.30	4.5	3.8	0.18
009	9	12	140	5.9	4.4	2.60	0.50	6.8	6.0	0.30
012	12	16	210	7.8	5.4	3.20	0.60	9.0	7.4	0.36
018	18	24	650	11.7	9.5	5.60	1.00	13.5	12.8	0.60
027	27	35	1350	17.6	13.5	8.10	1.50	20.2	18.0	0.90
036	36	46	2245	23.4	17.1	13.70	1.90	27.0	23.0	1.20

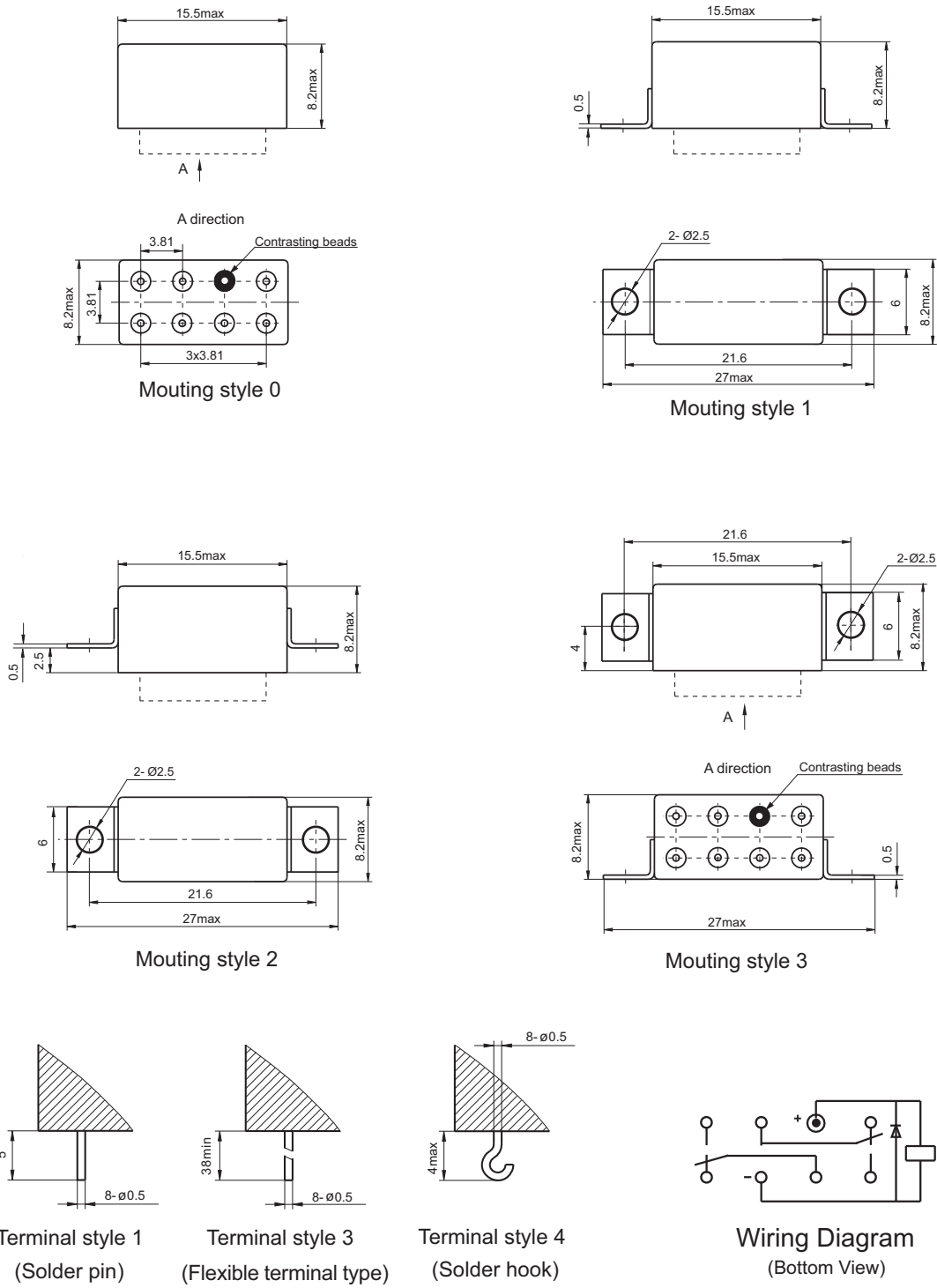
Notes: We can offer many kinds of coil voltage under the requirement of users.

ORDERING INFORMATION						
Type	HF9211	-012	M	-0	1	- I
Order Number	005、006、009、012、018、027					
Failure Rate	L: Failure rate level L (level III products available) M: Failure rate level M (level III products available) Nil: Without failure rate requirement(level I ,II products available)					
Mounting Style	0, 1, 2, 3 (See the mounting dimension)					
Terminals Style	1, 3, 4 (See " Terminal styles " below)					
Ambient Grade	I : level I II : level II Nil: level III (with failure rate requirement)					

OUTLINE DIMENSIONS AND WIRING DIAGRAM

Unit:mm

Outline Dimension



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

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