

الحمادي للإلكترونيات
ALHAMMADI FOR ELECTRONICS

»» Features

High rating miniature PCB Relay. AC & DC coil are both available. UL/CUL and VDE approved.



17A 277VAC SPDT. Low profile 15.7mm and high insulation system Class F. High CTI 250 material or product comply with IEC 60335-1 are available.

Special version for inrush rating application is available. (888-IR type) Complies with RoHS-Directive 2011/65/EU. Optional for halogen free version. Optional for explosion-proof version.

Type List

Standard Type

Terminal style	Contact form	UL Insulation system approval	Designation (provided with)			
			Flux tight	Sealed type	Sealed type washable	
PCB terminal	1A (SPNO)	F	888H-1AC-F-C	888H-1AC-F-V	888H-1AC-F-S	
			888H-1AH-F-C	888H-1AH-F-V	888H-1AH-F-S	
	1C (SPDT)	F	888H-1CC-F-C	888H-1CC-F-V	888H-1CC-F-S	
			888H-1CH-F-C	888H-1CH-F-V	888H-1CH-F-S	
	PCB terminal	2A (DPNO)	F	888-2AC-F-C	888-2AC-F-V	888-2AC-F-S
				888-2AH-F-C	888-2AH-F-V	888-2AH-F-S
		2C (DPDT)	F	888-2CC-F-C	888-2CC-F-V	888-2CC-F-S
				888-2CH-F-C	888-2CH-F-V	888-2CH-F-S

High Sensitivity Type (N) / Ultra-Sensitivity Type (N1)

PCB terminal	1A (SPNO)	F	888N-1AC-F-C	888N-1AC-F-V	888N-1AC-F-S
			888N1-1AC-F-C	888N1-1AC-F-V	888N1-1AC-F-S
			888N-1AH-F-C	888N-1AH-F-V	888N-1AH-F-S
			888N1-1AH-F-C	888N1-1AH-F-V	888N1-1AH-F-S

	1C (SPDT)	F	888N-1CC-F-C	888N-1CC-F-V	888N-1CC-F-S
			888N1-1CC-F-C	888N1-1CC-F-V	888N1-1CC-F-S
			888N-1CH-F-C	888N-1CH-F-V	888N-1CH-F-S
			888N1-1CH-F-C	888N1-1CH-F-V	888N1-1CH-F-S
	2A (DPNO)	F	888N-2AC-F-C	888N-2AC-F-V	888N-2AC-F-S
			888N-2AH-F-C	888N-2AH-F-V	888N-2AH-F-S
	2C (DPDT)	F	888N-2CC-F-C	888N-2CC-F-V	888N-2CC-F-S
			888N-2CH-F-C	888N-2CH-F-V	888N-2CH-F-S

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High Power Type

High Power Type*High Sensitivity Type

PCB terminal	1A (SPNO)	F	888HN-1AC-F-C	888HN-1AC-F-V	888HN-1AC-F-S
			888HN-1AH-F-C	888HN-1AH-F-V	888HN-1AH-F-S
	1C (SPDT)	F	888HN-1CC-F-C	888HN-1CC-F-V	888HN-1CC-F-S
			888HN-1CH-F-C	888HN-1CH-F-V	888HN-1CH-F-S

Note 888A Special footprint 5.0mm pinning version can be selected.

Inrush Type (only for 0.53W)

PCB terminal	1A (SPNO)	F	888H-1AH-F-C IR	888H-1AH-F-V IR	888H-1AH-F-S IR
	1C (SPDT)		888H-1CH-F-C IR	888H-1CH-F-V IR	888H-1CH-F-S IR

Ordering Information

888 - 1C C - - C
 1 2 3 4 5 6 7

3. Blank -- Standard type
 (DC: 0.53 W) (AC: 0.75 VA)
 N -- High sensitivity type (0.40 W)
 N1 -- Ultra-sensitivity type (0.25 W)
 (only for 1P type)

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1. 888 -- Basic series designation
 2. Blank -- Standard type
 (1P - Terminal pitch 3.5mm)
 (2P - Terminal pitch 5.0mm)
 A -- Standard type and special terminal pitch
 (1P - Terminal pitch 5.0mm)
 H -- High power type (only for 1P type)

4. 1A -- Single pole normally open
 1B -- Single pole normally closed
 1C -- Single pole double throw
 2A -- Double pole normally open
 2B -- Double pole normally closed

Contact Rating

8 9

- 2C -- Double pole double throw

5. C -- Contact material AgNi H -- Contact material AgSnO

8. Blank -- Standard type E1 --
Comply with IEC 60335-1



6. Blank -- Standard type
F -- Class F

IR -- 888 Inrush type (only for H^x
1A/1C type)

7. C -- Flux tight V -- Sealed type
S -- Sealed type washable

9. -- Coil voltage (please refer to
the coil rating data for the availability)

Type	1P			2P
	888*888N	888N1	888H*888HN	888*888N
Rated load (resistive)	12A 240VAC	10A 240VAC	16A 240VAC	8A 240VAC
Max. switching current	12A	10A	17A	8A
Max. switching voltage	277VAC	277VAC	277VAC	277VAC
Max. switching capacity	2880VA	2400VA	4080VA	1920VA

Inrush type

Tungsten Lamp	NO: 1500W 240VAC (Inrush 110A), 30K op s.
Halogen Lamp	NO: 1500W 240VAC (Inrush 110A), 30K op s.

Coil Rating (DC)

Standard Type

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 85°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
3	176	17	150 % of rated voltage	75 % of rated voltage	10 % of rated voltage	approx. 0.53W
5	106	47				
6	88	68				
9	59	153				
12	44	272				
15	35	425				
18	29	611				
24	22	1,087				
36	15	2,445				
48	11	4,347				

High Sensitivity Type (N)

Rated voltage	Rated current ±10 % at 23°C	Coil resistance ±10 % at 23°C	Max. continuous voltage	Pick up voltage(Max.)	Drop out voltage(Min.)	Power consumption at rated
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(V)	(mA)	(Ω)	at 85°C	at 23°C	at 23°C	voltage
3	133	22.5	150 % of rated voltage	70 % of rated voltage	10 % of rated voltage	approx. 0.40W
5	80	62				
6	67	90				
9	44	203				
12	33	360				
18	23	771				
24	17	1,440				
36	11	3,240				
48	9	5,520				

Ultra-Sensitivity Type (N1)

Rated voltage (V)	Rated current ± 10 % at 23°C (mA)	Coil resistance ± 10 % at 23°C (Ω)	Max. continuous voltage at 85°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
3	83	36	150 % of rated voltage	75 % of rated voltage	10 % of rated voltage	approx. 0.25W
5	50	100				
6	42	144				
9	28	324				
12	21	576				
18	14	1,296				
24	10	2,304				
36	7	5,184				

Coil Rating (AC) Specification

Rated voltage (V)	Rated current ±10% at 23°C (mA)	Coil resistance ±10% at 23°C (Ω)	Max. continuous voltage at 70°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
6	124	18.8	110 % of rated voltage	80 % of rated voltage	15 % of rated voltage	approx. 0.75VA
12	62.5	79.8				
24	31.2	334				
42	17.9	966				
48	15.5	1,340				
100/110	7.53	6,840				
110/120	6.8	7,360				
200/220	3.75	23,800				
220/240	3.4	27,400				
Contact material		AgNi / AgSnO alloy				
Contact resistance ⁽¹⁾		100mΩ Max. (at 1A/6VDC by 4-wire resistance measurement)				
Operate time ⁽¹⁾		20ms Max.				
Release time ⁽¹⁾		10ms Max.				
Vibration resistance		Operating extremes	10~ 55Hz , amplitude 1.5 mm			
		Damage limits	10~55Hz , amplitude 1.5 mm			
Shock resistance		Operating extremes	10G			
		Damage limits	100G			
Life expectancy		Mechanical	30,000,000 ops. (frequency 72,000 ops./hr) 5,000,000 ops. (for 2P AC type) (frequency 18,000 ops./hr)			
		Electrical	100,000 ops. (frequency 360 ops./hr)			
Operating ambient temperature		DC coil	-40 ~+85°C (no freezing) ⁽²⁾			
		AC coil	-40 ~+70°C (no freezing)			
Weight		Approx. 10 g				

Note 燵(1) Initial value. Operate and release time excluding contact bounce.

(2) Special version of high temperature 105°C can be selected.

(3) Unless otherwise specified, all tests are under room temperature and humidity.

(4) Consider the heat of PCB is necessary, please check the actual condition of PCB.

(5) Applying no diode to this relay. The life expectancy will be lower when a diode is used. To use a varistor (ZNR) could absorb the coil surge of relay that is recommended.

(6) Do not use the relay exceeding the coil rating, contact rating and life expectancy, or this may cause the risk of overheating.

(7) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.

(8) Do not switch the contacts without any load as the contact resistance may become increased rapidly.(9) Flux tight version is recommended. If there is cleaning process and sealed type is selected, the vent-hole should be removed after the process.

(10) Usage, transport and storage conditions

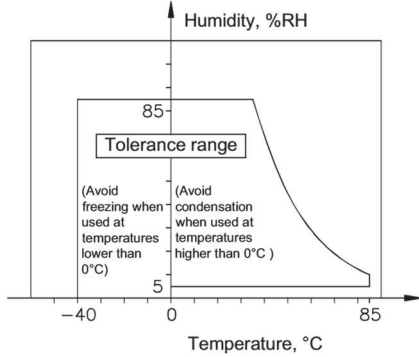
燵+85°C

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Certified	UL / CUL	VDE
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File No.	E88991	40006746
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" # \$\$\$ *'; <### = \$ > within the range indicated in the graph below.



(11) Please contact Song Chuan for the detailed information. >>> Insulation

Data

Insulation resistance ⁽¹⁾	1000MΩ Min. (DC 500V)	
Surge voltage withstand ⁽¹⁾	Between contact and coil	: 10KV (1.2X50)S
Dielectric strength ⁽¹⁾	Between open contact	: AC 1000V, 50/60Hz 1 min.
	Between contact and coil	: AC 5000V, 50/60Hz 1 min.
	Between contact circuits	: AC 3000V, 50/60Hz 1 min. (for 2P DC type) AC 2500V, 50/60Hz 1 min. (for 2P AC type)
Insulation of IEC 61810-1		
Clearance / creepage distances	Between coil to contact	: Reinforce, ⌀16.0mm / ⌀18.0 mm
	Between open contact	: Functiona I
Rated insulation voltage	250V	
Rated impulse withstand voltage	4000V	
Pollution degree	3	
Rated voltage	230 / 400V	
Overtoltage category	II	

Note: (1) Initial value.

>>> Safety Approval

Safety Approval Rating (VDE)

DC coil

AC coil

888H*888HN	888*888N*888N1	888*888N	888H	888
	1P	2P		
17A 250VAC T105	12A 250VAC T105	10A 250VAC T105	17A 250VAC T85	1P: 12A 250VAC T85 2P: 10A 250VAC T85

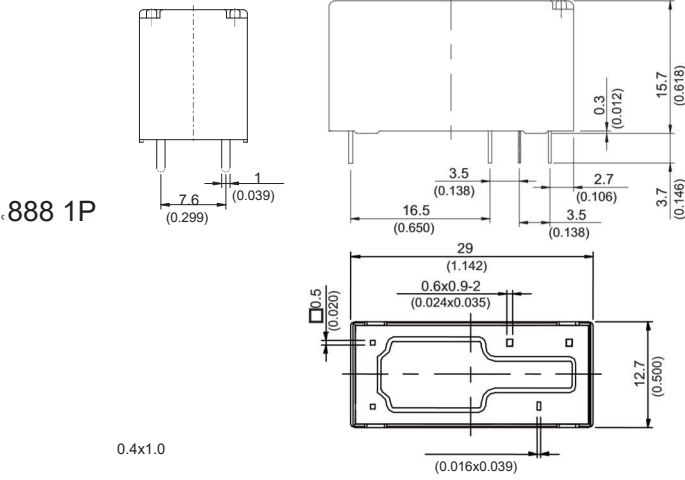
Safety Approval Rating (UL/CUL)



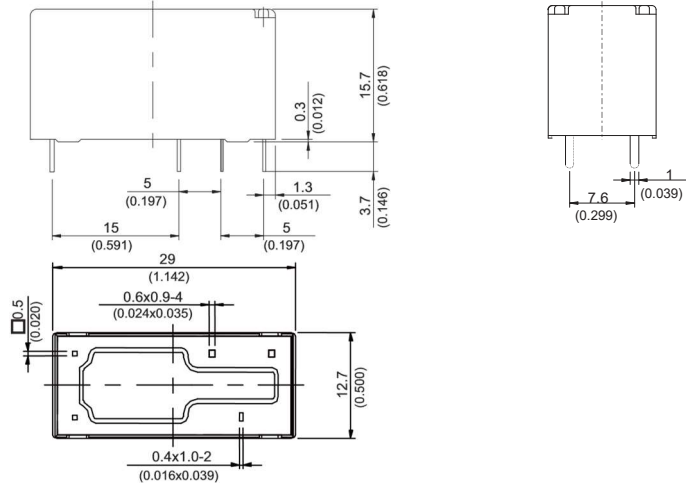
888 (1P)		888 (2P)	888N1
CaCA	HâHA		
NO/NC: 17A 277VAC NO:12A 30VDC 1HP 480VAC NC: 1/2HP 120/240/480VAC	NO/NC: 17A 277VAC 1HP 120/240/480VAC! NO: TV-8 NC: 12A 30VDC 1/2HP 120/240/480VAC	NO/NC: 12A 277VAC NO: 1/2HP 120/240VAC TV-5 (HâHA type only) NC: 1/3HP 120/240VAC	17A 277VAC 12A 30VDC

Outline

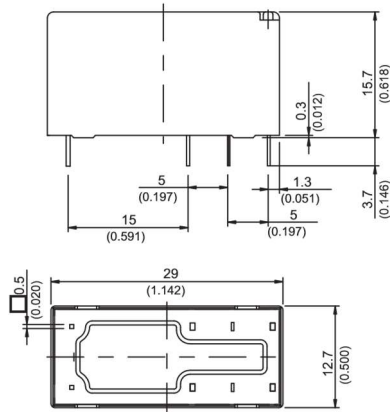
Dimensions



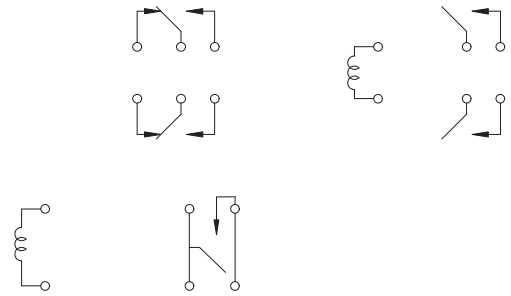
888H 1P



6888 2P



2A



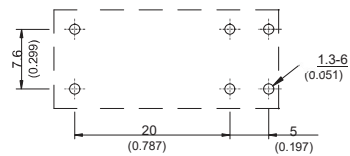
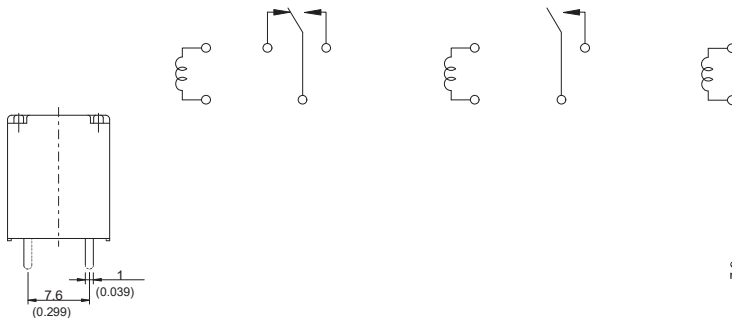
»» Wiring Diagram
BOTTOM VIEW

6888

1C

1A

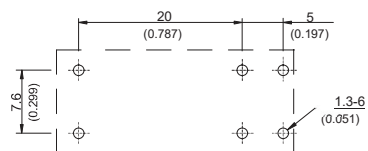
2C



TOLERANCE:

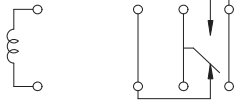
LESS THAN: 1(0.039) ±0.1(0.004) 5(0.197) ±0.3(0.012)
20(0.787) ±0.5(0.020)

MORE THAN: 20(0.787) ±1(0.039)



888H

1C

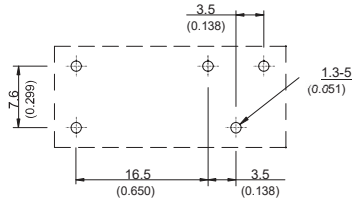


1A

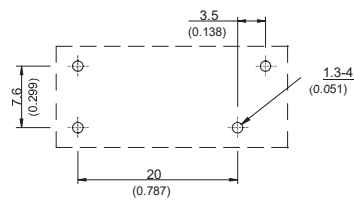
» PC Board Layout
BOTTOM VIEW

888

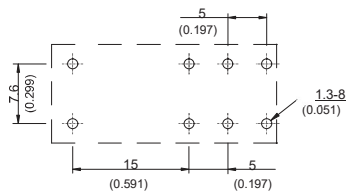
1C



1A

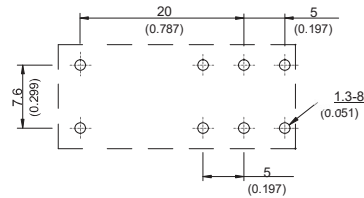


2C



2A

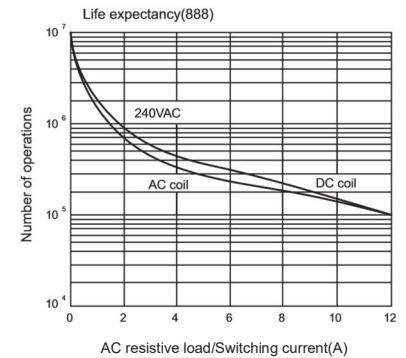
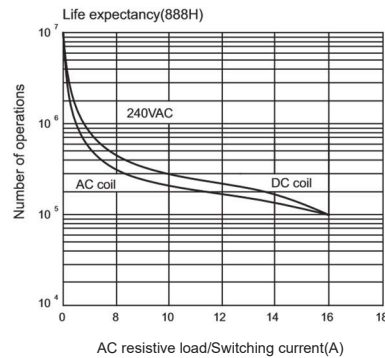
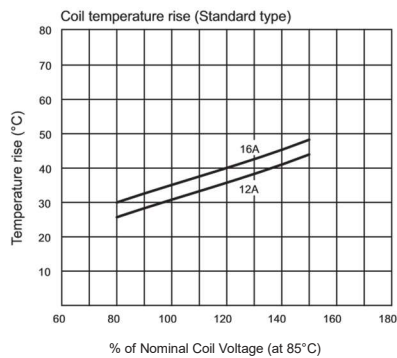
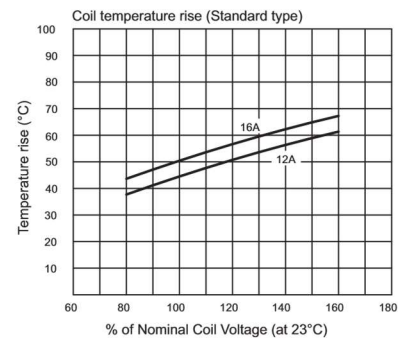
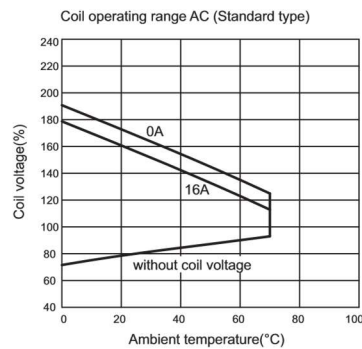
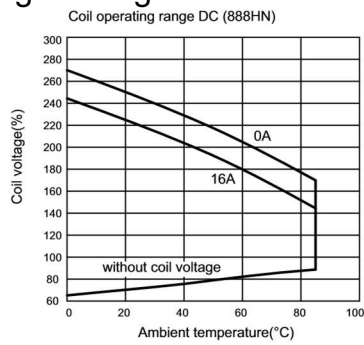
1C

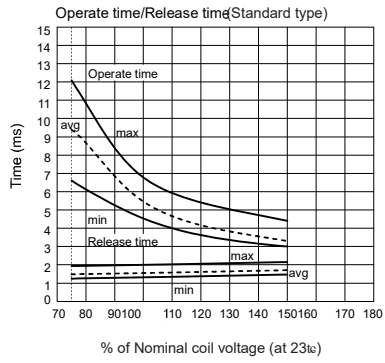


1A

888H

Engineering Data





6888 / 888H

