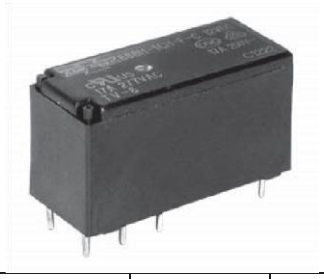
HOS
الحمـــادي للألكترونيـــات
ALHAMMADI FOR ELECTRONICS

Features

ɞHigh rating miniature PCB Relay. ɞAC & DC coil are both available. ɞUL/CUL and VDE approved.



ɞ17A 277VAC SPDT. ɞLow profile 15.7mm and high insulation system Class F. ɞHigh CTI 250 material or product comply with IEC 60335-1 are available.

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

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

Type List

ɞStandard Type

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

ɞHigh 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)		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-2 CH-F-V	888N-2CH-F-S

ϭHigh 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贠888AφSpecial 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

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)
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)
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

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

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

8. Blank -- Standard type E1 -- Comply with IEC 60335-1
   IR -- 888 Inrush type (only for Hx 1A/1C type)

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

Type	1P			2P
	888x888N	888N1	888Hx888HN	888x888N
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

(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)

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				

Specification

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 癸(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

梯+85°C

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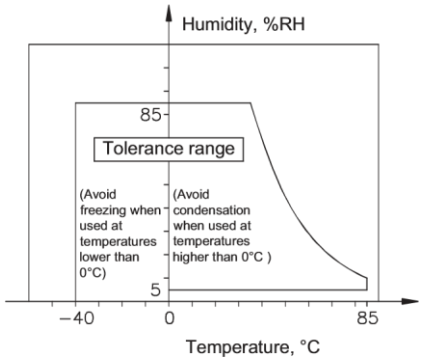
#

Certified	UL / CUL	VDE
File No.	E88991	40006746

$## '*; <## =$ > 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 ty pe)
Insulation of IEC 61810-1		
Clearance / creepage distances	Between coil to contact	: Reinforce, ʁ!6.0mm / ʁ!8.0 mm
	Between open contact	: Functiona l
Rated insulation voltage	250V	

Rated impulse withstand voltage	4000V
Pollution degree	3
Rated voltage	230 / 400V
Overvoltage category	II

Note：(1) Initial value.

Safety Approval

Safety Approval Rating (VDE)

‹ DC coil

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

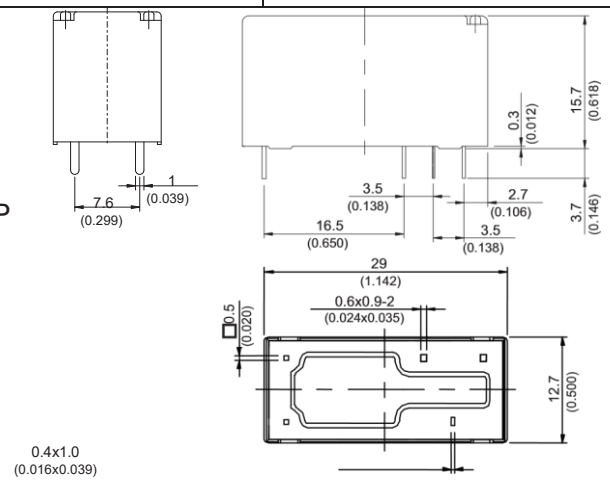
‹ AC coil

Safety Approval Rating (UL/CUL)

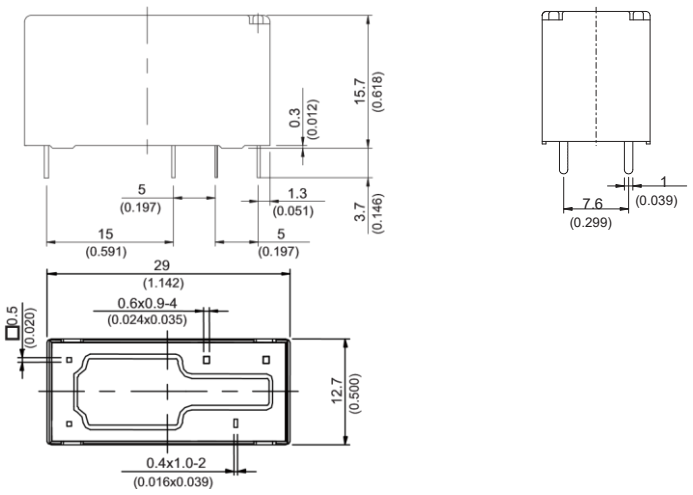
888 (1P)		888 (2P)	888N1
CâCA	HâHA		
NO/NC: 17A 277VAC NO:12A 30VDC 1HP 480VAC NC: 1/2HP 120/240/480VAC	NO/NC: 17A 277VAC 1HP 120/240/480VAC! NO: TV-8 NC: 12A 30VDC 1/2HP 120/240/480VAC	NO/NC: 12A 277VAC NO: 1/2HP 120/240VAC TV-5 (HâHA type only) NC: 1/3HP 120/240VAC	17A 277VAC 12A 30VDC

Outline Dimensions

‹888 1P

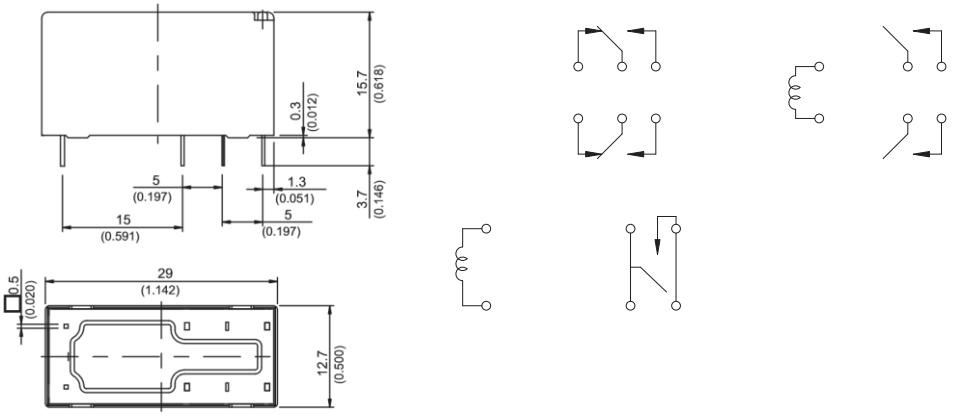


‹888H 1P



6888 2P

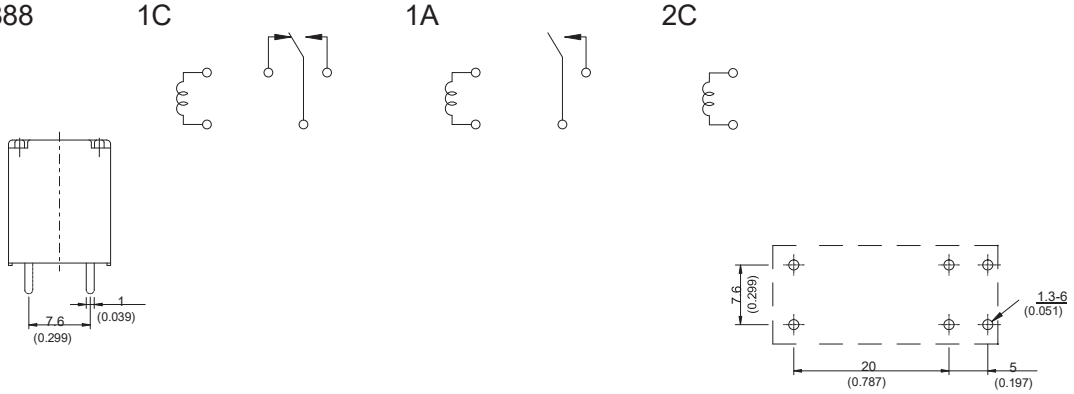
2A



Wiring Diagram

BOTTOM VIEW

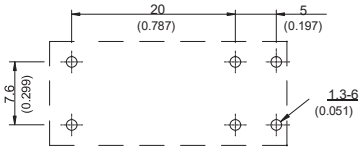
6888 1C 1A 2C



TOLERANCE:

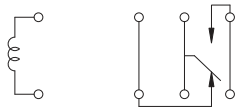
LESS THAN: 1(0.039) ±0.1(0.004) 5(0.197) ±0.3(0.012)
20(0.787) ±0.5(0.020)

MORE THAN: 20(0.787) ±1(0.039)



G888H

1C



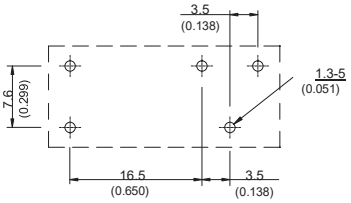
1A

PC Board Layout

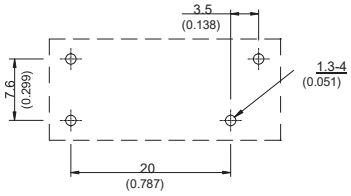
BOTTOM VIEW

G2888

1C

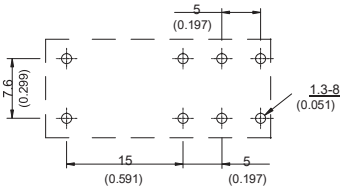


1A

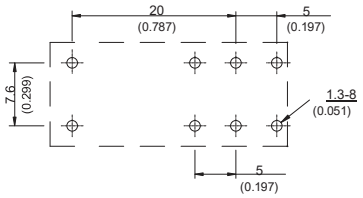


2A

2C



1C

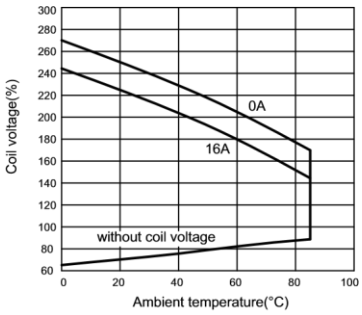


G2888H

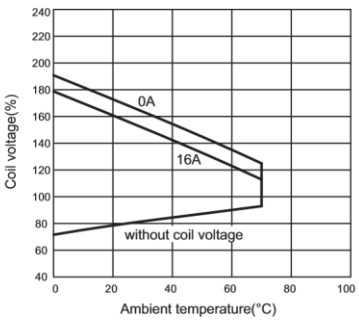
1A

Engineering Data

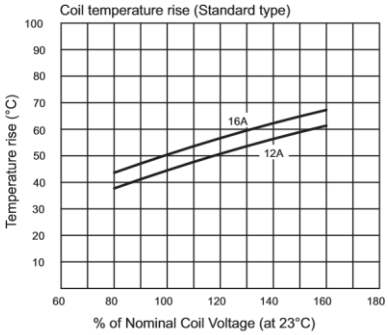
Coil operating range DC (888HN)



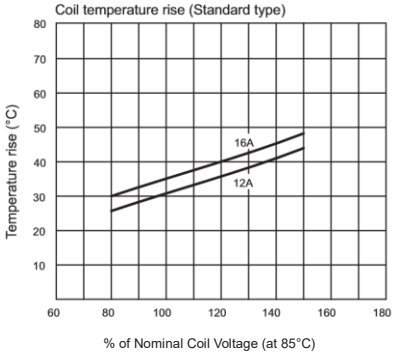
Coil operating range AC (Standard type)



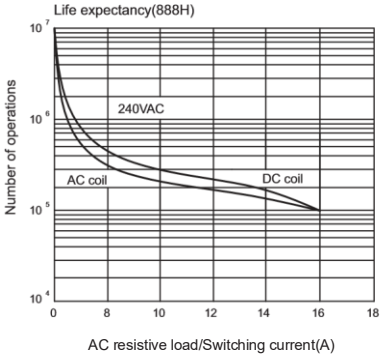
Coil temperature rise (Standard type)



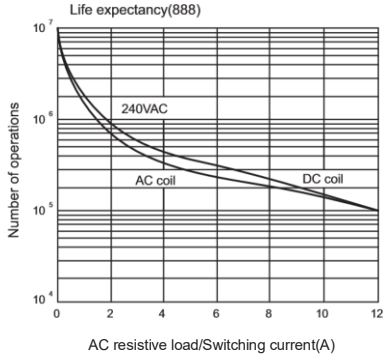
Coil temperature rise (Standard type)

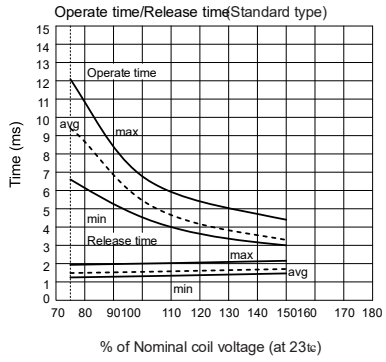


Life expectancy(888H)

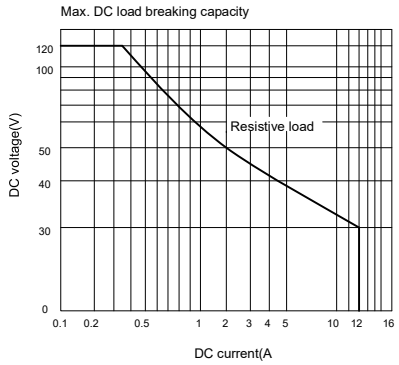


Life expectancy(888)




Operate time/Release time(Standard type)
Time (ms)
Operate time
avg
max
min
Release time
max
avg
min
% of Nominal coil voltage (at 23℃)

б·888 / 888H


Max. DC load breaking capacity
DC voltage(V)
Resistive load
DC current(A