

SPECIFICATION FOR APPROVAL

1 产品类型 (TYPE MODEL)

1.1 型号 (TYPE) 及说明: NNC69KP-2Z-DC12V

NNC69KP - 2Z - 12A - S T F (XXX) / DC12V
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series 系列: 69KP

② Contact arrangement 触点类型:

2H=2 form H 2 组常开型; 2D=2 form B 2 组常闭; 2Z=2 form Z 2 组转换型。

③ Rating load current 额定负载电流: 12=12A 安培

④ Protect construction 保护结构: S=Plastic sealed 塑封型;

⑤ Contact material 触点材料: T=AgSnO₂ 银氧化锡

⑥ Insulation class 绝缘等级: F= Class F F 级

⑦ Special code 特性码:XXX=Special requirement code 客户特殊特性代码

⑧ Coil voltage 线圈电压: refer coil data sheet 参考线圈参数表

1.2 触点形式 (CONTACT ARRANGEMENT)

2Z, 2H, 2D

1.3 触点材料 (CONTACT MATERIAL)

银合金

2 线圈参数 (COIL PARAMETER)

额定电压 (RATED VOLTAGE) DC (V)	线圈电阻 (COIL RESISTANCE) ±10% (Ω)	线圈最大允许电压 (MAX. ALLOWABLE COIL VOLTAGE) (at 23°C) (V)	线圈消耗功率 (COIL OPERATING POWER) (W)
3	$17 \times (1 \pm 10\%)$	额定电压 X110% rated voltage X 110%	0.53
5	$47 \times (1 \pm 10\%)$		
6	$67 \times (1 \pm 10\%)$		
9	$152 \times (1 \pm 10\%)$		
12	$270 \times (1 \pm 10\%)$		
15	$420 \times (1 \pm 10\%)$		
18	$610 \times (1 \pm 10\%)$		
24	$1080 \times (1 \pm 10\%)$		
36	$2445 \times (1 \pm 10\%)$		
48	$4347 \times (1 \pm 10\%)$		
60	$6790 \times (1 \pm 10\%)$		
100/110	$18860 \times (1 \pm 10\%)$		

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额定电压 (RATED VOLTAGE) AC (V)	线圈电阻 (COIL RESISTANCE) ±10% (Ω)	线圈最大允许电压 (MAX. ALLOWABLE COIL VOLTAGE) (V)	线圈消耗功率 (COIL OPERATING POWER) (VA)
6	19×(1±10%)	额定电压 X110%	1.2
12	72×(1±10%)		
24	290×(1±10%)		
48	1200×(1±10%)		
60	1800×(1±10%)		
110	6000×(1±10%)		
120	6000×(1±10%)		
110/125	6000×(1±10%)		
220	23000×(1±10%)		
230	23000×(1±10%)		
240	23000×(1±10%)		
220/240	23000×(1±10%)		

注：线圈阻值按 23℃标准 $RT=R_{23}\{1+(T^{\circ}C-23^{\circ}C) \times 0.004\}$ (1±10%)

3 触点规格 (CONTACT SPECIFICATION)

3.1 触点额定值 (CONTACT RATING)

12A 277VAC/30VDC (阻性 Resistive)

3.2 触点额定电流 (RATED CONTACT CURRENT)

12A

3.3 最大分断能力 (MAX CONTACT CAPACITY)

277VAC/30VDC

4 性能 (PERFORMANCE)

4.1 接触电阻 (CONTACT RESISTANCE)

≤100mΩ (6VDC, 1A)

4.2 吸合电压 (OPERATE VOLTAGE)

DC: ≤80%×额定电压 The rated voltage (at 23℃)

AC: ≤80%×额定电压 The rated voltage (at 23℃)

4.3 释放电压 (RELEASE VOLTAGE)

DC: ≥5%×额定电压 The rated voltage (at 23℃)

AC: ≥10%×额定电压 The rated voltage (at 23℃)

4.4 动作时间 (OPERATE TIME) ≤15ms

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4.5 释放时间(RELEASE TIME) $\leq 8\text{ms}$

4.6 寿命(LIFE)

1) 电气寿命(ELECTRICALLY): 1×10^5 次(阻性负载, 15 次/每分钟)

$1 \times 10^5 \text{ ops min (Resistive load, 15 ops/minute)}$

2) 机械寿命(MECHANICALLY): 1×10^7 次(无负荷下, 300 次/每分钟)

$1 \times 10^7 \text{ ops min (At no load, 300 ops/minute)}$

4.7 介质耐压(DIELECTRIC STRENGTHS)漏电流 1mA (LEAK CURRENT 1mA)

1) 触点与触点间(BETWEEN CONTACTS): 1000VAC, 1minute

2) 线圈与触点间(BETWEEN COIL TO CONTACTS): 5000VAC, 1minute

4.8 绝缘电阻(INSULATION RESISTANCE)

1) 触点与触点间(BETWEEN CONTACTS): $100\text{M}\Omega$

2) 线圈与触点间(BETWEEN COIL TO CONTACTS): $100\text{M}\Omega$

4.9 耐冲电压(SURGE RESISTIVE NESS)

3) 线圈与触点间(BETWEEN COIL TO CONTACTS): 1800VAC, 1minute

4.10 温升(TEMPERATURE RISE)

1) 线圈(COIL): 阻性法: 测试时环境温度 40°C , 线圈加 1.1 倍额定电压, 触点电流通 5A, 温度 $\leq 155^\circ\text{C}$ 。

155°C Max.by resistance method, Test ambient temperature 40°C , 1.1 times rated coil voltage and contact current 5A

2) 触点(CONTACT): 测温法: 线圈加 1.1 倍额定电压, 触点电流通 5A, 温升 $\leq 70^\circ\text{C}$ 。

70°C Max .by temperature measuring method at Contact:5A, Coil: 1.1 times rated voltage

4.11 振动(VIBRATION)

1) 误动作(ERROR OPERATION): 以三个方向振动 5 分钟, 误动不超过 1ms (振幅 1mm, 10~55Hz)。

No error operation than 1ms Max. when vibrate it from 3 directions for 5 minutes (Amplitude 1mm, 10~55Hz).

2) 振动耐久性(ENDURANCE): 以三个方向振动 2 小时, 无结构故障(振幅 1mm, 10~55Hz)。

No construction trouble when vibrate it from 3 directions for 2 hours (Amplitude 1mm, 10~55Hz).

4.12 冲击(HOCK)

1) 误动作(ERROR OPERATION): 以三个方向冲击 3 次, 触点误动作不超过 1ms (最高加速度 98m/s^2 持续时间 11ms)。

No error operation by contact more than 1ms Max. When shocks is from 3 directions 3 times (at peak acceleration 98 m/s^2 Duration 11ms).

2) 耐冲击(ENDURANCE): 以三个方向冲击 3 次, 无结构故障(最高加速度 980m/s^2 持续时间 6ms)。

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No construction trouble when shocks is from 3 directions 3 times(at peak acceleration 980 m/s^2 Duration 6ms).

4.13 引脚强度 (TERMINAL STRENGTH)

在任何引脚上施加 5N 的力, 持续 10 秒, 表面及结构上应无损伤。

No construction and exterior trouble when push into any terminals by 5N for 10esc.

4.14 高温试验 (THERMAL PROOF)

在 70°C 恒温状态下放置 24 小时, 然后在常温下放置 2 小时, 无结构及性能损伤。

Not any trouble on construction and characteristic when leave in 70°C 24 hours after that , leave it in standard condition for 2 hours .

4.15 低温试验 (COLD PROOF)

在 -55°C 恒温状态下放置 24 小时, 然后在常温下放置 2 小时, 无结构及性能损伤。

Not any trouble on construction and characteristic when leave in -55°C 24 hours after that , leave it in standard condition for 2 hours .

4.16 潮湿试验 (HUMIDITY PROOF)

在 40°C , 湿度 90% 恒温状态下放置 24 小时, 然后在常温下放置 2 小时, 无结构及性能损伤, 绝缘电阻 $\geq 10 \text{ M}\Omega$ 。

Insulation resistance $10 \text{ M}\Omega \text{ min}$. Not any troubles on construction and characteristic when leave in 40°C , humidity 92% 24 hours after that , leave it in standard condition for 2 hours .

4.17 温度急变试验 (THERMAL SHOCK)

在温度 -40°C 及 70°C 恒温状态下各放置 1 小时为 1 个循环, 共 10 个循环后在正常环境下放置 2 小时, 无结构及性能损伤。

Not any troubles on construction and characteristic when leave it in -40°C and 70°C temp. room for 1h each. That is one cycle. After 10 cycles has done, Leave it on standard condition for 2 hours.

4.18 耐焊接热 (SOLDERING THERMAL)

在 $350 \pm 10^\circ\text{C}$ 的锡温中浸锡 3.5 ± 0.5 秒或在 $260 \pm 5^\circ\text{C}$ 锡温中浸锡 10 ± 1 秒, 无结构及性能损伤。

Not any troubles on construction and characteristic. When dipped into soldering bath $350 \pm 10^\circ\text{C}$ $3.5 \pm 0.5 \text{ sec}$ or $260 \pm 5^\circ\text{C}$ $10 \pm 1 \text{ sec}$.

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4. 19 可焊性 (SOLDERABILITY)

在 $235\pm5^{\circ}\text{C}$ 的锡温中浸锡 2 ± 0.5 秒, 试验后焊锡的浸锡面积应大于 95%。

Not any problems solder dipped at $235\pm5^{\circ}\text{C}$ $2\pm0.5\text{sec}$.

5 标志 (MARKING)

5. 1 外壳颜色 (CRUST COLOR)

防焊剂型: 透明/塑封型: 黑色

5. 2 标志位置 (MARKING POSITION)

顶面 (Top Surface) 和背面 (Side of behind)

5. 3 字符颜色 (INK COLOR)

激光刻字

6 测试条件 (STANDARDS TEST CONDITION)

6. 1 温度 (TEMPERATURE)

$-40^{\circ}\text{C}\sim85^{\circ}\text{C}$

6. 2 湿度 (HUMIDITY)

$45\%\sim85\%$

6. 3 测试方向 (DIRECTION OF MEASUREMENT)

引线脚向下 (Terminal down position is standard position)

7 使用条件 (OPERATING CONDITION)

7. 1 温度 (TEMPERATURE)

$-40\sim+85^{\circ}\text{C}$, 无冻结、凝露环境 (However, no freeze and no dew condensation)

7. 2 湿度 (HUMIDITY)

$5\sim85\%$

7. 3 安装方向 (MOUNTING DIRECTION)

引脚向下 (Terminal down position is standard position)

8 储存条件 (STORAGE CONDITION)

8. 1 温度 (TEMPERATURE)

$-40\sim+85^{\circ}\text{C}$, 无冻结、凝露环境 (However, no freeze and no dew condensation)

8. 2 湿度 (HUMIDITY)

$5\sim85\%$

8. 3 环境 (ENVIRONMENT)

- 1) 产品或包装箱避免放置在有腐蚀性的气体中, 如硫化氢气体或含盐空气中。

Store in locations where the product or container is not expose to corrosive gas such As hydrogen sulfide gas or salty air.

- 2) 无尘场所。

Store in location where no visible dust exists.

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3) 避免阳光直射。

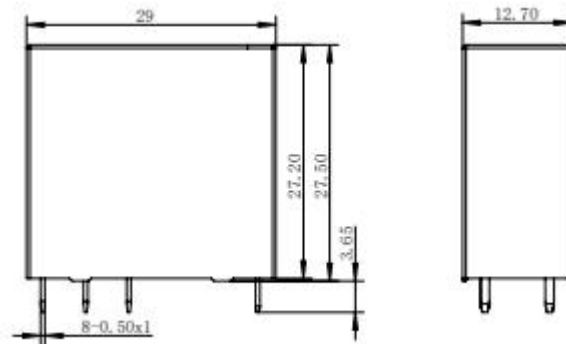
Store in location not subject to direct sunlight.

附：外形尺寸安装与印字图

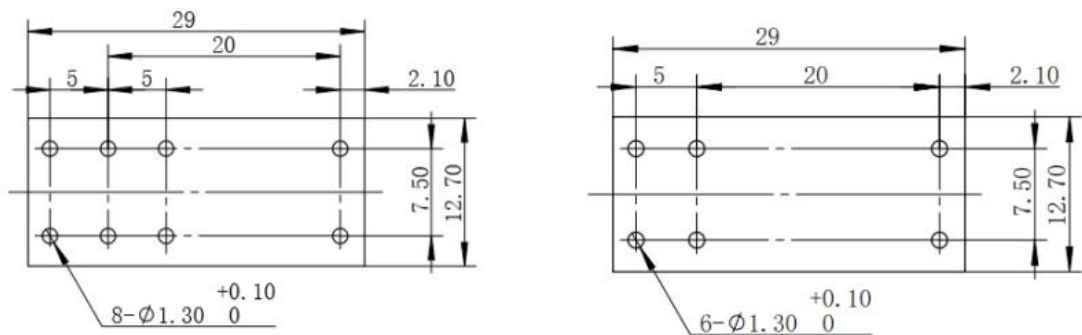
(Overall dimensions、mounting dimensions and the circuit diagram)

外形图：

PCB 式：



安装尺寸图：



接线图（底视）：

