



特点 Features

- 计时计数器可用于工业控制上的场合, 具有计时功和计数两种工作模式, 可根据使用场景选择对应功能。
- One-shot输出时间, 以10ms为单位, 可设定0.01秒~99.99秒;
- Timing counter can be used in industrial control occasions, with timing work and counting two modes of work, can be selected according to the use of the scenario.
- One-shot output time, in the unit of 10ms, can be set 0.01 seconds to 99.99 seconds;

计数器模式

- 显示范围0.00001~99999.9;
- 9种输入模式, 11种输出模式可供选择;
- BATCH计数, 计数初始值设定功能;
- 最高可选10kCPS输入速度;

计时器模式

- 12种时间范围格式可选;
- 13种输出模式可选;
- 较宽的时间设定范围 (0.001秒~99999.9小时)
- 支持正向计时和倒计时;
- 断电记忆功能;

Counter mode

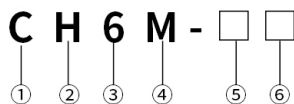
- Display range 0.00001~99999.9;
- 9 input modes, 11 output modes to choose from;
- BATCH count, count initial value setting function;
- Up to 10kCPS input speed is optional;

Timer mode

- 12 time range formats available;
- 13 output modes to choose from;
- Wide time setting range (0.001 s ~99999.9 h)
- Support forward timing and countdown;
- Power off memory function;



选型说明 Model Designation



序号 No	项目 Item	代号 Code	说明 Description
①	公司名称 Company name	C	昌得电气科技有限公司 CNTD
②	系列 Series	H	计数器/计时器 Counter/timer
③	显示位数 Display digits	6	999999(6位 digits)
		4	9999(4位 digits)
④	外形尺寸 Overall dimension	S	DIN W48xH48mm
		M	DIN W72xH72mm
⑤	输出 Output	1P	1段设置型 1 section setup type
		2P	2段设置型 2 section setup type
⑥	电源电压 Supply voltage	4	100-240VAC 50/60Hz
		2	24VAC 50/60Hz 24-48VDC

电气规格 Electrical Specification

电压 Voltage	AC电源型 AC power supply type	100-240VAC 50/60Hz
	Low-voltage supply	24VAC, 50/60Hz or 24-48VDC
消耗功率 Power consumption		≤12VA
INA/INB最大计数速度 INA/INB Maximum counting speed		1cps/30cps/1Kcps/5Kcps/10Kcps 可选用 Selectable
最小信号宽 Minimum signal width	计数器 Counter	Counter reset signal: 1ms or 20ms
	计时器 Timepiece	INA, RESET, INHIBIT, BATCH RESET 复位信号: 2ms, 20ms可选 Reset signal: 2ms, 20ms optional
输入方式 Input mode		NPN voltage-free / PNP voltage input
One-shot 输出时间 One-shot Indicates the output time		计数器, 计时器, 0.01秒~99.99秒 Counter, timer, 0.01 seconds ~99.99 seconds
记忆储存 Memory storage		10年(非易失半导体存储器) 10 years (non-volatile semiconductor memory)
接线方式 Connection mode		接线端子 Terminal
Operating temperature		-25~+70°C (未结冰状态 Unfrozen state)
储存温度 Storage temperature		-30~+80°C (未结冰状态 Unfrozen state)
湿度 Humidness		35-95%RH (non-condensing)

国际认证规格 International Certification Specifications

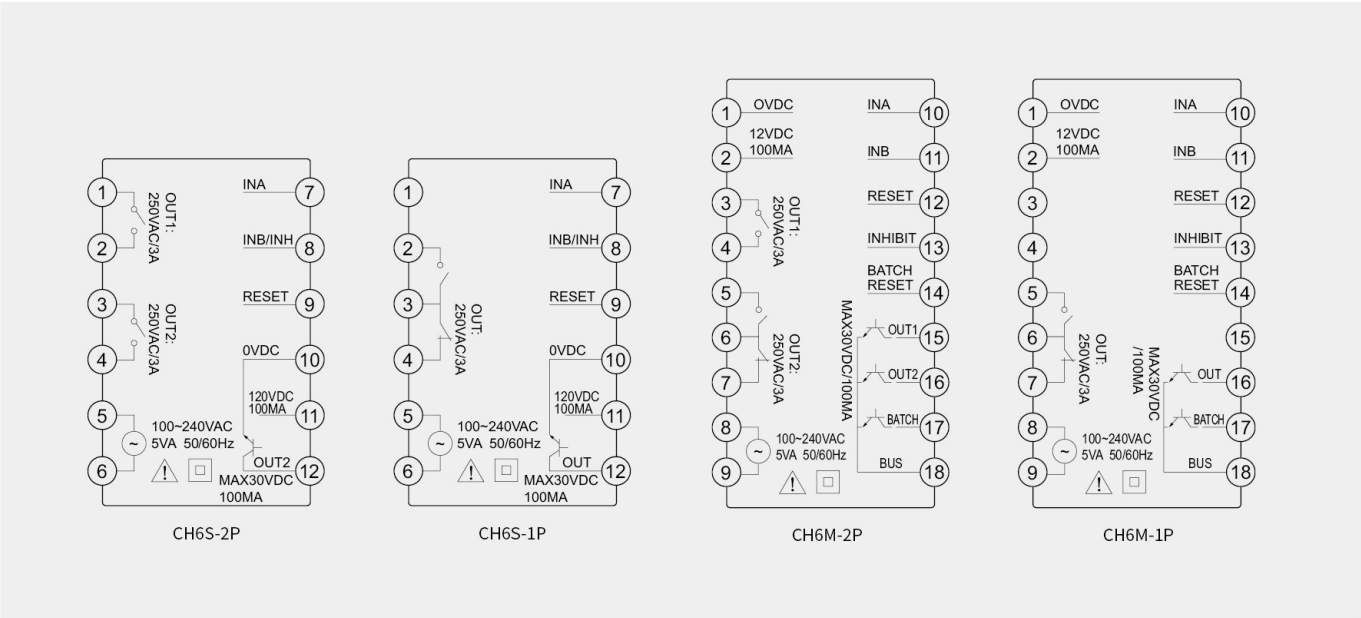
认证规格 Certification specifications	规格 Specifications	文件No. Document
CCC	GB/T 14048.5	请咨询昌得代表处 Please consult the CNTD Representative Office
CE	EN 60947-5-1	

安全规格认证额定值 Safety Specification Certification Rating

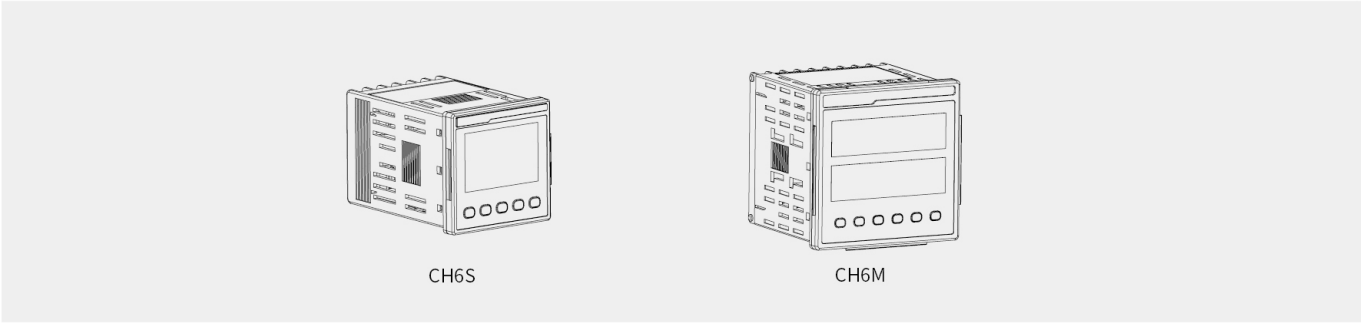
CCC(GB/T 14048.5)

类型与额定值 Type and Rating
AC-15, DC-13 Ue: AC380V、AC250V、DC24V~48V；Ie: 3A

接线图 Wiring Diagram



外形尺寸图 Dimensions



单位 :mm

型号 Model number	面板尺寸 Panel size	壳体尺寸 (长×宽×高) Shell size (length×width×height)	开孔尺寸 Opening size
CH6S	48×48	44.3×44.3×81	45×45
CH6M	72×72	67×67×81	68×68

输入模式(计数器) Input mode (counter)

输入模式 Input mode	时序图Timing diagram	输入模式 Input mode	时序图Timing diagram
UP (Up)		$dn-2$ (Down-2)	
$UP-1$ (Up-1)		$Ud-A$ (Up/Down-A)	
$UP-2$ (Up-2)		$Ud-b$ (Up/Down-B)	
dn (Down)		$Ud-C$ (Up/Down-C)	
$dn-1$ (Down-1)			

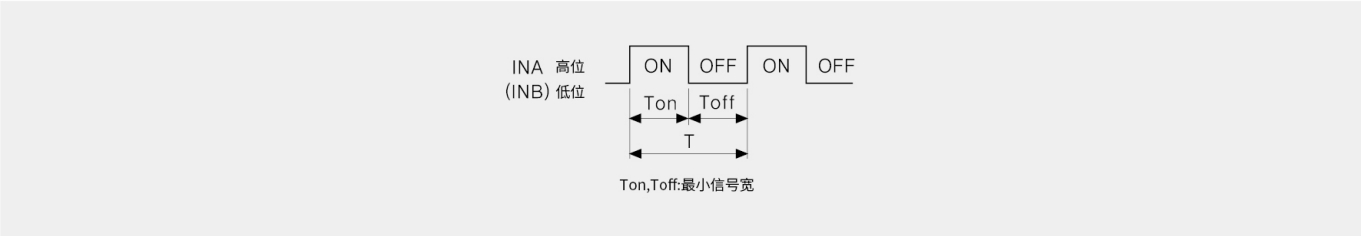
※ 最小信号宽度以上, 最小信号宽度的1/2以上,当小于此信号宽度以下时可能产生±1的计数误差。
※ ① is above the minimum signal width and ② is above 1/2 of the minimum signal width. When it is less than this signal width, a counting error of ±1 may occur.

※ 下表中的“H”和“L”的意思如下
※The meanings of “H” and “L” in the table below are as follows

	电压输入 (PNP)	无电压输入 (NPN)
H	5-30VDC	短路 (Short)
L	0-2VDC	开路 (Open)

※ 各计数速度的最小信号宽
※The minimum signal width of each counting speed

计数速度 Counting speed	最小信号宽 Minimum signal width
1cps	500ms
30cps	16.7ms
1kcps	0.5ms
5kcps	0.1ms
10kcps	0.05ms



输出模式(计数器) Output mode (counter)

输出模式 Output mode	时序图Timing diagram		
	Up, Up-1, 2	Down, Down-1, 2	Up/Down A,B,C
F (F)			
N (N)			
C (C)			
R (R)			
K (K)			
P (P)			
Q (Q)			
A (A)			

- ※1段设置型中的OUT输出与2段设置型中的OUT2输出相同。
- ※OUT1输出可在所有输出模式中设定为0,并输出对应的值。
- ※输出模式为C (C),R (R),P (P),Q (Q) 时,OUT2输出无法设定为0。
- ※The OUT output in the 1-stage setting type is the same as the OUT2 output in the 2-stage setting type.
- ※The OUT1 output can be set to 0 in all output modes, and the corresponding value can be output.
- ※When the output mode is C (C),R (R),P (P),Q (Q), the OUT2 output cannot be set to 0.

输出模式(计数器) Output mode (counter)

输出模式 Output mode	Up/Down -A,B,C
S (S)	
T (T)	
D (D)	

- ※1段设置型中的OUT输出与2段设置型中的OUT2输出相同。
- ※在2段设置型中OUT1可选择One-shot输出或Hold输出方式。
- ※OUT1在所有输出模式下,预设值都可设定为0,输出与预设值0所对应的状态一致。
- ※当输出模式为C (C),R (R),P (P),Q (Q) 时,OUT2输出无法设定为0。
- ※The OUT output in the 1-stage setting type is the same as the OUT2 output in the 2-stage setting type.
- ※In the 2-stage setting type, OUT1 can choose one-shot output or Hold output mode.
- ※OUT1 In all output modes, the preset value can be set to 0, and the output is consistent with the state corresponding to the preset value of 0.
- ※When the output mode is C (C),R (R),P (P),Q (Q), the OUT2 output cannot be set to 0.

输出模式(计时器) Output mode (timer)

输出模式 Output mode	时序图Timing diagram	输出模式 Output mode	时序图Timing diagram
ond (OND)	信号延迟(上电复位) Signal delay (power-on reset) 	ond.2 (OND.2)	上电延迟 (上电保持) Power-up delay (power-up hold)
ond.1 (OND.1)	信号延迟(上电复位) Signal delay (power-on reset) 	FLK (FLK)	闪烁 (上电复位) Flashing (power-on reset)
FLK.1 (FLK.1)	闪烁 (上电复位) Flashing (power-on reset) 	FLK.2 (FLK.2)	闪烁 (上电保持) Flashing (power-on hold)
Int (INT)	间隔 (上电复位) Interval (power-on reset) 	Int.2 (INT.2)	间隔2(上电复位) Interval 2 (power-on reset)
Int.1 (INT.1)	间隔1(上电复位) Interval 1 (power-on reset) 	nFd.1 (NFD.1)	ON-OFF延时1 (上电复位) ON-OFF delay 1 (power-on reset)
nFd (OFD)	信号OFF延时1 (上电复位) Signal OFF delay 1 (power-on reset) 	IntG (INTG)	积分时间 (上电复位) Integration time (power-on reset)
nFd (NFD)	ON-OFF延时 (上电复位) ON-OFF delay (power-on reset) 		

使用注意事项 Using Precautions

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- 要求极高安全性的应用场合，涉及人身安全与财产的情况。
- 苛刻条件、严酷环境的应用场合，包括室外、存在化学污染、电磁、振动或冲击影响的环境。
- 有火灾或爆炸风险的应用场合，包括存在易燃易爆性气体、强酸强碱化学品等物质的环境。
- 涉及军工用途、航天航空项目的应用场合。

The company's products are designed and produced as industrial products, in strict compliance with industrial product standards. We expressly declare that, unless specifically designed and expressly confirmed by us in writing, our products are not intended for the following applications:

- Applications that require high reliability, including nuclear, gas, electric and other systems that require long-term stable operation.
- Applications requiring very high security, situations involving personal safety and property.
- Applications in harsh conditions, harsh environments, including outdoor, chemical contamination, electromagnetic, vibration or shock effects.
- Applications where there is a risk of fire or explosion, including environments where flammable and explosive gases, strong acids and alkali chemicals are present.
- Applications involving military use and aerospace projects.

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